FEDERAL REGISTER

Vol. 81 Friday,
No. 223 November 18, 2016

Book 1 of 3 Books

Pages 81641–82270

OFFICE OF THE FEDERAL REGISTER

The **FEDERAL REGISTER** (ISSN 0097–6326) is published daily, Monday through Friday, except official holidays, by the Office of the Federal Register, National Archives and Records Administration, Washington, DC 20408, under the Federal Register Act (44 U.S.C. Ch. 15) and the regulations of the Administrative Committee of the Federal Register (1 CFR Ch. I). The Superintendent of Documents, U.S. Government Publishing Office, Washington, DC 20402 is the exclusive distributor of the official edition. Periodicals postage is paid at Washington, DC.

The **FEDERAL REGISTER** provides a uniform system for making available to the public regulations and legal notices issued by Federal agencies. These include Presidential proclamations and Executive Orders, Federal agency documents having general applicability and legal effect, documents required to be published by act of Congress, and other Federal agency documents of public interest.

Documents are on file for public inspection in the Office of the Federal Register the day before they are published, unless the issuing agency requests earlier filing. For a list of documents currently on file for public inspection, see *www.ofr.gov.*

The seal of the National Archives and Records Administration authenticates the Federal Register as the official serial publication established under the Federal Register Act. Under 44 U.S.C. 1507, the contents of the **Federal Register** shall be judicially noticed.

The **Federal Register** is published in paper and on 24x microfiche. It is also available online at no charge at *www.fdsys.gov*, a service of the U.S. Government Publishing Office.

The online edition of the **Federal Register** is issued under the authority of the Administrative Committee of the Federal Register as the official legal equivalent of the paper and microfiche editions (44 U.S.C. 4101 and 1 CFR 5.10). It is updated by 6:00 a.m. each day the **Federal Register** is published and includes both text and graphics from Volume 59, 1 (January 2, 1994) forward. For more information, contact the GPO Customer Contact Center, U.S. Government Publishing Office. Phone 202-512-1800 or 866-512-1800 (toll free). E-mail, *gpocusthelp.com.*

The annual subscription price for the **Federal Register** paper edition is $749 plus postage, or $808, plus postage, for a combined **Federal Register, Federal Register** Index and List of CFR Sections Affected (LSA) subscription; the microfiche edition of the **Federal Register** including the **Federal Register** Index and LSA is $165, plus postage. Six month subscriptions are available for one-half the annual rate. The prevailing postal rates will be applied to orders according to the delivery method requested. The price of a single copy of the daily **Federal Register,** including postage, is based on the number of pages: $11 for an issue containing less than 200 pages; $22 for an issue containing 200 to 400 pages; and $33 for an issue containing more than 400 pages. Single issues of the microfiche edition may be purchased for $3 per copy, including postage. Remit check or money order, made payable to the Superintendent of Documents, or charge to your GPO Deposit Account, VISA, MasterCard, American Express, or Discover. Mail to: U.S. Government Publishing Office—New Orders, P.O. Box 979050, St. Louis, MO 63197-9000; or call toll free 1-866-512-1800, DC area 202-512-1800; or go to the U.S. Government Online Bookstore site, see *bookstore.gpo.gov.*

How To Cite This Publication: Use the volume number and the page number. Example: 81 FR 12345.

Postmaster: Send address changes to the Superintendent of Documents, Federal Register, U.S. Government Publishing Office, Washington, DC 20402, along with the entire mailing label from the last issue received.

SUBSCRIPTIONS AND COPIES

PUBLIC

Subscriptions:

Paper or fiche	**202–512–1800**
Assistance with public subscriptions	**202–512–1806**
General online information	**202–512–1530; 1–888–293–6498**
Single copies/back copies:	
Paper or fiche	**202–512–1800**
Assistance with public single copies	**1–866–512–1800 (Toll-Free)**

FEDERAL AGENCIES

Subscriptions:

Assistance with Federal agency subscriptions:

Email	*FRSubscriptions@nara.gov*
Phone	**202–741–6000**

Contents

Federal Register

Vol. 81, No. 223

Friday, November 18, 2016

Separate Parts In This Issue

Reader Aids

Consult the Reader Aids section at the end of this issue for phone numbers, online resources, finding aids, and notice of recently enacted public laws.

To subscribe to the Federal Register Table of Contents electronic mailing list, go to https://public.govdelivery.com/accounts/USGPOOFR/subscriber/new, enter your e-mail address, then follow the instructions to join, leave, or manage your subscription.

CFR PARTS AFFECTED IN THIS ISSUE

A cumulative list of the parts affected this month can be found in the Reader Aids section at the end of this issue.

Rules and Regulations

Federal Register
Vol. 81, No. 223
Friday, November 18, 2016

OFFICE OF GOVERNMENT ETHICS

5 CFR Part 2635

RIN 3209–AA04

Standards of Ethical Conduct for Employees of the Executive Branch; Amendment to the Standards Governing Solicitation and Acceptance of Gifts from Outside Sources

AGENCY: Office of Government Ethics (OGE).

ACTION: Final rule.

SUMMARY: The U.S. Office of Government Ethics is issuing a final rule revising the portions of the Standards of Ethical Conduct for Executive Branch Employees that govern the solicitation and acceptance of gifts from outside sources. The final rule modifies the existing regulations to more effectively advance public confidence in the integrity of Federal officials. The final rule also incorporates past interpretive guidance, adds and updates regulatory examples, improves clarity, updates citations, and makes technical corrections.

DATES: This final rule is effective January 1, 2017.

FOR FURTHER INFORMATION CONTACT: Leigh J. Francis, Assistant Counsel, or Christopher J. Swartz, Assistant Counsel, Office of Government Ethics, Suite 500, 1201 New York Avenue NW., Washington, DC 20005–3917; Telephone: 202–482–9300; TTY: 800–877–8339; FAX: 202–482–9237.

SUPPLEMENTARY INFORMATION:

I. Rulemaking History

On November 27, 2015, the U.S. Office of Government Ethics (OGE) published for public comment a proposed rule setting forth comprehensive revisions to subpart B of the Standards of Ethical Conduct for Employees of the Executive Branch (Standards of Ethical Conduct), 5 CFR part 2635. 80 FR 74004 (Nov. 27, 2015). Subpart B of part 2635 contains the regulations governing the solicitation and acceptance of gifts from outside sources by officers and employees of the Executive Branch. These regulations implement the gift restrictions set forth in 5 U.S.C. 7353 and section 101(d) of Executive Order 12674, as modified by Executive Order 12731. The proposed rule was issued following OGE's retrospective review of the regulations found in subpart B, pursuant to section 402(b)(12) of the Ethics in Government Act of 1978, Public Law 95–521, codified at 5 U.S.C. Appendix IV, sec. 402(b)(12). Prior to publishing the proposed rule, OGE consulted with the Office of Personnel Management and the Department of Justice in accordance with section 402(b) of the Ethics in Government Act and section 201(a) of Executive Order 12674, as modified by Executive Order 12731, and with other officials throughout the Federal Government.

The proposed rule provided a 60-day comment period, which ended on January 26, 2016. OGE received ten timely and responsive comments, which were submitted by four individuals, three professional associations, two Federal agencies, and a law firm. After carefully considering all comments and making appropriate modifications, and for the reasons set forth below and in the preamble to the proposed rule at *https://www.gpo.gov/fdsys/pkg/FR-2015-11-27/pdf/2015-29208.pdf,* OGE is publishing this final rule.

II. Summary of Comments and Changes to Proposed Rule

General Comments

OGE received one comment from an individual observing that various references to spousal and dating relationships in the examples used dual-gendered relationships and gender-specific pronouns. The commenter expressed concern that such examples could be read as excluding same-sex marriages or relationships. OGE treats same-sex spouses the same as opposite-sex spouses for the purposes of all of its regulations. OGE Legal Advisory LA–13–10 (Aug. 19, 2013). OGE has therefore reviewed the examples highlighted by the commenter and has replaced the terms ''husband'' and ''wife'' with the gender-neutral term ''spouse.''

Various commenters suggested that one or more of the proposed amendments to the rule might negatively impact the ability of the public to interact with Federal employees. These commenters pointed out the beneficial impact of this interaction and encouraged OGE to consider this equity in drafting gift regulations. As a general matter, OGE agrees with the commenters' proposition that communication between the Government and the public is vital to ensuring that Government decisions are responsive to citizen needs. Public interaction done in a non-preferential manner may: (1) Provide executive branch decisionmakers with information and data they may not otherwise possess; (2) identify policy options and alternatives that may not have been raised internally; and (3) produce better and more thoughtful decisions. These interactions must, however, occur in an environment that promotes the public's confidence in the integrity of Government decisionmaking. When Federal employees accept or solicit gifts from members of the public who have interests that are affected by the employee's agency, the public's confidence can be eroded as ''[s]uch gifts may well provide a source of illicit influence over the government official; in any case they create a suspicious and unhealthy appearance.'' *The Association of the Bar of the City of New York, Conflict of Interest and Federal Service* 219 (1960). When drafting this final rule, OGE has carefully considered the commenters' concerns in light of the important objective of promoting the public's confidence in the impartial administration of the Government.

§ 2635.201 Overview and Considerations for Declining Otherwise Permissible Gifts

OGE received comments from three sources on proposed § 2635.201(b)(1). Section 2635.201(b)(1) establishes a non-binding standard that can assist employees in considering whether to decline an otherwise permissible gift. The standard encourages employees to consider whether their acceptance of a gift that would otherwise be permissible to accept would nonetheless create the appearance that their integrity or ability to act impartially may be compromised. The duty to avoid such appearances is a responsibility of all executive branch employees. *See* 5 CFR 2635.101(b)(1); (14).

Based on past experience with executive branch agencies applying subpart B of part 2635, OGE is concerned that employees and ethics officials may not be sufficiently analyzing appearance concerns and, instead, may be focusing exclusively on whether a gift can be accepted under a regulatory gift exception. This kind of analysis may unintentionally overlook other important considerations, such as ''whether acceptance of the gift could affect the perceived integrity of the employee or the credibility and legitimacy of [an] agency's programs.'' 80 FR 74004, 74004 (Nov. 27, 2015). The non-binding standard in § 2635.201(b)(1) was explicitly included in subpart B to correct for this tendency and to enhance the overall quality of employees' ethical decisionmaking.

Commenters on this section raised concerns with the new standard and the factors for applying the standard. OGE appreciates the concerns raised by commenters, which are examined in detail below. OGE has addressed these concerns by making appropriate adjustments to the standard, rather than adopting some of the commenters' requests for the outright removal of this section. The changes make the standard easier for employees to understand and apply.

A few commenters suggested that ethics training would be more effective than a regulatory change in ensuring that employees consider appearance issues before accepting gifts. OGE fully agrees with the commenters' suggestions that ethics education is important. Without this amendment of the regulation, however, there would not be a uniform standard upon which to base ethics training regarding appearance issues in connection with gifts. Prior to this amendment, the regulation cautioned only that ''it is never inappropriate and frequently prudent for an employee to decline a gift,'' but the regulation did not articulate an applicable standard or any factors for employees to use in identifying the frequently arising circumstances when it would be prudent to decline a gift. OGE believes it is imperative that the regulatory framework itself enable and encourage employees to meaningfully consider the appearances of accepting gifts. By articulating the standard and relevant factors, the amended § 2635.201(b)(1) will increase the value and uniformity of agency ethics training because that standard and those factors will become a focus of ethics training.

One commenter believed that the proposed standard creates confusion because it moves away from the previous system of bright-line rules regarding gift acceptance. Specifically, the commenter requested that OGE amend the regulation in a way that sets out definitive rules as to whether ''a gift is simply permissible or impermissible, without further parsing the permissible gifts into additional categories, *i.e.,* technically permissible and actually permissible.'' OGE does not believe that the non-binding standard will create confusion because OGE has maintained the clear, uniform, and objective rules that are found in the current regulation. Section 2635.201(b)(1) augments those rules by encouraging employees to consider the appearances of their actions. The posited distinction between ''technically permissible'' and ''actually permissible'' is inaccurate because an employee will not face disciplinary action in the event that someone later subjectively disagrees with the employee's analysis. The bright-line rules provide a floor for ethical behavior, and the appearance analysis under § 2635.201(b) provides a mechanism with which to reach for a stronger, values-based ethical culture. This framework provides the certainty and uniformity of the existing rules, while furthering the underlying objective of increasing public trust by improving the ethical decisionmaking of employees.

The commenters also suggested that employees will feel compelled by this non-binding standard to always decline legally permissible gifts. OGE does not agree that the standard creates a presumption that all legally permissible gifts should be declined. Although some employees will decline legally permissible gifts after carefully analyzing them under the standard that § 2635.201(b)(1) establishes, the standard does not change the fact that the determination as to whether a legally permissible gift should be accepted is the employee's to make. Section 2635.201(b)(1) is designed to increase uniformity and promote public trust by articulating factors, which are informed by the ethical values consistent with the executive branch's Principles of Ethical Conduct, in order to guide the employee's decisionmaking process. This section provides employees an effective means of adequately assessing whether, notwithstanding a gift exception, the specific factual circumstances may raise appearance concerns weighing against acceptance of a gift.

In light of the comments referenced above, however, OGE has streamlined the language of § 2635.201(b). OGE has also clarified the overarching objective of that provision by placing the emphasis in § 2635.201(b)(1) on an assessment as to whether ''a reasonable person with knowledge of the relevant facts would question the employee's integrity or impartiality.'' In the proposed rule, substantially similar language appeared in the list of factors in § 2635.201(b)(2). Because this language articulates the standard to be applied, however, it is more appropriately included in paragraph (b)(1), which establishes the standard, than in paragraph (b)(2), which provides factors for determining whether the standard has been met. Using this ''reasonable person'' language in the articulated standard has the added benefit of addressing a commenter's concern regarding the potential for confusion, as executive branch employees have extensive experience applying this particular standard, which has long been used to address appearance concerns under § 2635.502. At the end of § 2635.201(b)(1), OGE has also added ''as a result of accepting the gift'' in order to tie the appearance concerns to the specific action giving rise to them.

As a final note, one commenter was concerned that the application of the reasonable person standard could vary, resulting in the ''unequal application'' of the standard. Reliance on a reasonable person standard, however, is not a novel approach in Government ethics. The Standards of Ethical Conduct at part 2635 have successfully employed the reasonable person standard for over two decades. *See* 5 CFR 2635.101(b)(14); 2635.502(a); *cf.* 2635.702(b) (''that could reasonably be construed''). In fact, when OGE first proposed the Standards of Ethical Conduct in 1991, OGE noted that the use of the reasonable person standard reflected both ''case law and longstanding practice,'' which ''temper the appearance standard by reference to the perspective of a reasonable person with knowledge of the relevant facts.'' 56 FR 33778, 33779 (July 23, 1991). OGE explained that the use of the reasonable person standard ''is intended to ensure that the conduct of employees is judged by a standard of reasonableness.'' *Id.* That reasoning continues to hold today.

Factors for Applying the § 2635.201(b)(1) Standard

Two commenters requested that OGE remove § 2635.201(b)(2), which sets out factors that employees may consider when determining whether to decline an otherwise permissible gift. These commenters requested the factors be removed because of their concern that the factors listed in § 2635.201(b)(2) are too complex and confusing, and will inevitably lead employees to decline permissible gifts. OGE is sensitive to these concerns and has revised the language to address them.

OGE reviewed each of the proposed factors closely to determine whether any could be removed, streamlined, or changed to eliminate unnecessary complexity or confusion. OGE removed several factors that appeared in the proposed rule on the basis that clarification of the reasonable person standard in § 2635.201(b)(1) in the final rule has rendered them unnecessary:

- Whether acceptance of the gift would lead the employee to feel a sense of obligation to the donor;
- Whether acceptance of the gift would cause a reasonable person to question the employee's ability to act impartially; and
- Whether acceptance of the gift would interfere with the employee's conscientious performance of official duties.

See 80 FR 74004, 74010 (Nov. 27, 2015). At the same time, OGE has added a straightforward factor focusing on whether ''[t]he timing of the gift creates the appearance that the donor is seeking to influence an official action,'' in order to provide a concrete example intended to remind employees that the timing of a gift can create the appearance that a person is seeking to influence the decisionmaking process.

OGE has also revised the factor articulated at § 2635.201(b)(2)(iv). The proposed language read: ''Whether acceptance of the gift would reasonably create an appearance that the employee is providing the donor with preferential treatment or access to the Government.'' OGE's intent was that the word ''preferential'' would be read to modify both ''treatment'' and ''access.'' In light of concerns the commenters expressed regarding the clarity of § 2635.201(b)(2) generally, OGE has determined that the proposed language could have been clearer in this respect. In reviewing this language, OGE also noted that the phrase ''preferential treatment'' is redundant of the phrase ''preferential . . . access to the Government,'' in that the specific preferential treatment at issue is the preferential access that the donor may be perceived as having received. The concern is that a donor may offer a gift that, by its nature, would provide the donor with significantly disproportionate access to the employee. This concern can arise in connection with gifts such as frequent lunches, trips, social invitations, free attendance at widely attended gatherings, and other items. If such gifts were to result in an employee spending considerable time with a donor, the donor may appear to have inordinate opportunities to discuss matters of interest to the donor and, thereby, unduly influence the employee. Accordingly, OGE has simplified this language and made it more specific. The language at § 2635.201(b)(2)(iv) now reads: ''Acceptance of the gift would provide the donor with significantly disproportionate access.'' This language should not be read as discouraging employees from attending events merely because they present opportunities to discuss official business. There is no requirement to provide exact parity in all cases with regard to the level of access afforded to those with competing viewpoints, but there is a value in guarding against any person, or multiple persons with a common interest or viewpoint, from enjoying significantly disproportionate access as a result of having given gifts to employees. An employee who is concerned about the level of access provided to those with a particular viewpoint may choose to decline the offered gifts or may take steps to ensure that those with different viewpoints are able to communicate with the employee, such as by taking their telephone calls, agreeing to meet with them in the employee's office, or convening a public forum.

OGE has also removed the following two factors:

- With regard to a gift of free attendance at an event, whether the Government is also providing persons with views or interests that differ from those of the donor with access to the Government;
- With regard to a gift of free attendance at an event, whether the event is open to interested members of the public or representatives of the news media.

80 FR 74004, 74010 (Nov. 27, 2015). Although OGE continues to believe these factors are important when an employee considers any gift of free attendance, their inclusion in § 2635.201(b)(2) is unnecessary given their more limited application. Furthermore, these factors often are most relevant to free attendance at widely attended gatherings under § 2635.204(g), where similar factors already exist.

OGE believes that these changes to § 2635.201(b)(2) diminish the potential for confusion created by the longer list of factors included in the proposed rule while continuing to provide guidance as to how employees should apply the standard in § 2635.201(b)(1) in the areas that OGE believes raise the greatest potential for appearance problems.

Receipt of Independent Advice From an Ethics Official Under § 2635.201(b)(4)

One commenter raised a concern about the language OGE used in § 2635.201(b)(4), which reminds employees to contact an appropriate agency ethics official if they have questions regarding whether acceptance of a gift is permissible and advisable. The commenter was concerned that the statement ''[e]mployees who have questions regarding . . . whether the employee *should* decline a gift that would otherwise be permitted under an exception [emphasis in original],'' seemed to indicate that there are ''right and wrong'' conclusions. OGE has not deleted the reference to advice from an ethics official because the regulation is sufficiently clear that the decision to decline or accept an otherwise permissible gift is the employee's to make. Although consulting an ethics official may assist the employee in making that decision, the regulation does not require such consultation. Section 2635.201(b)(3) explicitly states that an employee who does not decline a permissible gift under § 2635.201(b) has not violated the Standards of Ethical Conduct. At the same time, OGE believes that the reminder as to the availability of ethics advice will prove helpful to employees. Ethics officials can provide employees with valuable insights and guidance in assessing the reasonable person standard in individual cases because they possess experience in Government ethics, awareness as to how the Standards of Ethical Conduct are applied across the agency and across the executive branch, and knowledge of circumstances relevant to evaluating the effect on the public's trust of accepting certain gifts.

Nevertheless, to partly address the commenter's concern, OGE has deleted the reference to § 2635.107(b) at the end of § 2635.201(b)(4). After considering the commenter's concern, OGE recognized that the reference to § 2635.107(b) was potentially confusing because that section provides a safe harbor against disciplinary action in certain circumstances when an employee has consulted an agency ethics official. As § 2635.201(b)(3) makes clear, however, employees may not be disciplined under this provision and have no need for the safe harbor provision in connection with the appearance analysis under § 2635.201(b).

Examples to § 2635.201(b)

One commenter suggested that OGE should add examples to the regulation to indicate how to apply new § 2635.201(b). OGE has added Example 1 to paragraph (b) in order to illustrate how an employee may use the standard and factors found in § 2635.201(b). The same commenter also suggested that OGE provide additional guidance documents to further assist agency officials and employees in understanding how to apply the standard found in § 2635.201(b). OGE intends to provide additional guidance and training as needed on an ongoing basis.

5 CFR 2635.202 General Prohibition on Solicitation or Acceptance of Gifts

OGE received no comments on § 2635.202. OGE is adopting the amendments to this section as proposed for the reasons described in the preamble to the proposed rule. A small change to Example 1 to paragraph (c) was made after the Supreme Court's recent decision in *McDonnell* v. *United States,* 579 U.S. __1 195 L. Ed. 2d 639 (2016), which limited the scope of the term ''official act'' as used in 18 U.S.C. 201(a)(3).

5 CFR 2635.203 Definitions

OGE received a number of comments on the definitions of the terms ''gift,'' ''market value,'' ''indirectly solicited or accepted,'' and ''free attendance.'' In regard to the definition of ''gift,'' all comments focused on the exclusions to the definition. The comments for these terms are separately addressed in greater detail below.

Definition of ''Gift'': Exclusion for Modest Items of Food and Refreshment

OGE received three comments on proposed Example 1 to § 2635.203(b)(1). Section 2635.203(b)(1) explains that the definition of ''gift'' for purposes of subpart B excludes ''[m]odest items of food and refreshments, such as soft drinks, coffee and donuts, offered other than as part of a meal.'' Proposed Example 1 to paragraph (b)(1) was included for the purpose of making explicit OGE's longstanding interpretation that alcohol is not a modest item of refreshment under § 2635.203(b)(1). Because none of the beverages currently listed in the regulation are alcoholic and the exclusion specifically refers to ''soft,'' meaning non-alcoholic drinks, OGE has long treated alcoholic beverages as not being part of the class of modest refreshments covered by the exclusion.

All three of the commenters were concerned that the example seemed to indicate that attendance at an event where alcohol is served is *per se* ''improper.'' To address this concern, OGE has removed the example altogether and amended the regulatory text of § 2635.203(b)(1) to exclude from the definition of ''gift'' ''[m]odest items of food and non-alcoholic refreshments, such as soft drinks, coffee and donuts, offered other than as part of a meal.'' This amendment codifies the interpretation that was previously set out in the proposed example. Although the carve-out from the definition of ''gift'' at § 2635.203(b)(1) for modest refreshments is limited to non-alcoholic beverages, this limitation does not impact the gift exceptions at 5 CFR 2635.204.

Definition of ''Gift'': Exclusion for Greeting Cards and Presentation Items With Little Intrinsic Value

OGE received two comments on the proposed revisions to § 2635.203(b)(2). The first comment, from a professional association, was in favor of the proposal to modify the exclusion for presentation items. The second comment, from an individual, requested that OGE further amend the regulation to state that ''items with little intrinsic value . . . intended primarily for presentation'' are excluded from the definition of ''gift'' only if they ''do not have significant independent use.'' The individual noted that OGE used this phrase in proposed Example 2 to paragraph (b)(2) when explaining why a $25 portable music player would not be excluded from the definition of ''gift'' under this provision. OGE has decided not to adopt this change. As evidenced by the example, the fact that an item lacks other uses is a legitimate consideration in support of a finding that the item is intended ''primarily for presentation.'' The regulation does not, however, require that an item lack any potential other use in order to qualify as an item intended ''primarily for presentation.''

Definition of ''Gift'': Exclusion for Items Purchased by the Government or Secured Under Government Contract

OGE received one comment on the proposed example to § 2635.203(b)(7), which states that Federal employees may retain certain ''travel promotional items, such as frequent flyer miles, received as a result of [] official travel, if done in accordance with 5 U.S.C. 5702, note, and 41 CFR part 301–53.'' The commenter explained: (1) That employees who receive such frequent flyer miles should be encouraged to use such frequent flyer miles for subsequent official travel; and (2) that no personal use should be allowed for employees of the Federal Aviation Administration. OGE has not changed the substance of this example. As explained in the example, Congress passed a statute specifically permitting employees to accept these types of travel-related benefits. The General Services Administration (GSA) has primary authority for implementing that statute, and has done so through regulations found at 41 CFR part 301–53. To partly address the commenter's concern, however, OGE revised the language ''if done in accordance with 5 U.S.C. 5702, note, and 41 CFR part 301–53,'' to read ''to the extent permitted by 5 U.S.C. 5702, note, and 41 CFR part 301–53,'' in order to clarify that OGE's regulation does not create any new authority for accepting these travel related benefits beyond what Congress and GSA provided for in the statute and the regulation.

Definition of ''Gift'': Exclusion for Free Attendance Provided to Employees Speaking in Their Official Capacity and Extension to Personal Capacity Speaking Events

One commenter requested that OGE expand § 2635.203(b)(8) to exclude from the definition of ''gift'' free attendance at events where employees are speaking in their personal capacity on matters that are unrelated to their duties. The commenter noted that § 2635.203(b)(8) excludes free attendance in connection with official speaking engagements and requested a parallel exclusion for personal speaking engagements. OGE has not adopted this change. Normally, the Standards of Ethical Conduct would not prohibit an employee from accepting free attendance at an event at which the employee has a *bona fide* arrangement to speak in a personal capacity. This subject is addressed in § 2635.807(a)(2)(iii)(B), which permits employees to accept a waiver of attendance fees for speeches related to their official duties, and OGE has traditionally applied § 2635.202 consistently with that provision of § 2635.807 for speeches unrelated to official duties.

Definition of ''Market Value''

OGE received two comments on the proposed amendments to the definition of ''market value,'' as used throughout the regulation, as well as the examples following the definition. OGE proposed to amend ''market value'' to mean ''the cost that a member of the general public would reasonably expect to incur to purchase the gift.'' One commenter was generally in favor of the amendment, as well as the examples illustrating how the definition would be applied in various circumstances. The other commenter noted that Example 4 to paragraph (c) did not explicitly state that the tickets offered to the employee lacked a face value. OGE has amended Example 4 to indicate that the tickets provided to the employee in the example do not have a face value, and therefore the general rule used for calculating the market value of a ticket would not apply. OGE also amended Example 4 to further clarify the method of calculating the market value of such tickets.

Definition of ''Indirectly Solicited or Accepted''

OGE received one comment on § 2635.203(f), which establishes when a gift will be deemed to have been accepted or solicited indirectly. The commenter was in favor of OGE's amendment at § 2635.203(f)(2). OGE has adopted the language as proposed for the reasons set forth in the preamble to the proposed rule.

Definition of ''Free Attendance''

OGE received two comments in favor of the proposed subpart-wide definition of ''free attendance'' at § 2635.203(g). Both commenters supported OGE's amendment allowing employees who are presenting at an event to accept attendance at ''speakers' meals'' provided by the sponsor of the event. OGE has adopted the language as proposed for the reasons set forth in the preamble to the proposed rule.

§ 2635.204 Exceptions to the Prohibition for the Acceptance of Certain Gifts

Although OGE did not receive a specific comment on the title of the regulation, OGE has made a technical change to the title of this section for clarity and to more closely track the substance of the regulation.

OGE has also revised the introductory text to remind employees to consider the standard found in § 2635.201(b) when determining whether to rely on an exception. The revised language is modeled on the introductory text found in the current version of § 2635.204, but cross-references § 2635.201(b).

Gifts of $20 or Less

OGE received two comments requesting that OGE raise the regulatory dollar thresholds found in the gift exception at § 2635.204(a). Pursuant to § 2635.204(a), an employee may accept otherwise prohibited gifts not exceeding $20 per occasion so long as he or she does not accept more than $50 worth of gifts from the same person per year. In support of this request, one commenter pointed out the effect that inflation has had on the value of this *de minimis* threshold.

OGE carefully considered these commenters' suggestions. As OGE explained when it issued the final gift regulations, the *de minimis* exception was included to remove the need for a ''laundry list of exceptions for small, unobjectionable gifts.'' 57 FR 35006, 35016 (Aug. 7, 1992). The *de minimis* exception was intended to provide a uniform means for employees to accept only inexpensive and innocuous gifts on an infrequent basis. *Id.* OGE believes that the current dollar threshold continues to meet that narrow objective. OGE is concerned that raising the *de minimis* would encourage employees to accept, and private citizens to give, more expensive and more frequent gifts than employees are currently able to accept. Although some gifts that once fell at the higher end of the spectrum may now be precluded, OGE believes that the $20 threshold continues to be workable, permitting employees to accept on an infrequent basis most of the types of items that can be characterized as inexpensive and innocuous. In addition, the existing exclusions and exceptions from the gift rules permit employees to accept targeted items that are over $20 in carefully restricted circumstances (*e.g.,* a gift from an employee's spouse). *See* 5 CFR 2635.204(b). Although $20 may not buy the sort of lunch that it bought in 1992 when the regulation was issued, no compelling argument has been made to support a conclusion that raising the cap on the blanket *de minimis* exception, in order to allow employees to accept more expensive and more frequent gifts, would strengthen the integrity of the executive branch's operations. Accordingly, OGE has decided not to adopt the commenters' suggestions to increase the cap.

Gifts Based on a Personal Relationship

OGE received one comment in support of the new Example 3 to § 2635.204(b), which provides guidance on assessing whether a gift provided by a social media contact falls within the bounds of the gift exception. OGE has adopted the text of § 2635.204(b) substantially as proposed for the reasons set forth in the preamble to the proposed rule.

Awards and Honorary Degrees

OGE did not make changes based on comments received from two individuals on proposed § 2635.204(d). Section 2635.204(d) permits employees to accept gifts of certain awards and honorary degrees, including items incident to such awards and degrees. The first commenter suggested that OGE relocate the two examples following paragraph (d)(1) so that they would appear after paragraph (d)(2). OGE has not adopted the suggestion. These examples address paragraph (d)(1), which establishes the several requirements for accepting awards, and do not specifically address paragraph (d)(2), which defines the term ''established program of recognition.''

The second commenter addressed the acceptance of qualifying honorary degrees from certain ''foreign institution[s] of higher education.'' *See* 80 FR 74004, 74007 (Nov. 27, 2015). The commenter suggested that OGE clarify the basis of the Government's concerns regarding the acceptance of emoluments from foreign governments. OGE has not adopted this change because the prohibition stems from the Emoluments Clause of the United States Constitution. *See* U.S. Const., art. 1, sec. 9, cl. 8. OGE is not the appropriate authority to delineate the basis for specific provisions of the Constitution.

Gifts Based on Outside Business or Employment Relationships

OGE received one comment on the proposed amendments to § 2635.204(e), which sets forth various exceptions to the general prohibitions on accepting and soliciting gifts when such gifts are offered as a result of an outside business or employment relationship. The commenter was generally in favor of the amendments. OGE has retained the exception as proposed for the reasons set out in the preamble to the proposed rule.

Gifts of Free Attendance to Widely Attended Gatherings

OGE received a number of comments related to the exception at § 2635.204(g), permitting employees to accept offers of free attendance to widely attended gatherings (WAGs) if certain criteria are met. In the proposed rule, OGE presented a number of amendments to the WAG, including changes to: (1) Make it clear that an event does not qualify as a WAG if it does not present ''an opportunity to exchange ideas and views among invited persons''; (2) require employees to obtain written authorizations before accepting gifts of free attendance at WAGs; and (3) require agency designees to weigh the agency's interest in employees' attendance at WAGs against the possibility that acceptance of gifts of free attendance will influence their decisionmaking or create the appearance that they will be influenced in their decisionmaking.

One commenter expressed concern about the proposed amendment to the definition of ''widely attended gatherings.'' The proposed language clarifies that events do not qualify as WAGs unless there is ''an opportunity to exchange ideas and views among invited persons.'' The commenter suggested that this language would narrow the rule to apply to only ''panel or roundtable events.'' OGE believes that this is a mischaracterization of the regulatory amendment. Nothing in the amendment would narrow the definition exclusively to roundtable or panel events. The amendment reflects only OGE's longstanding interpretation that the event must present an opportunity for an ''exchange'' or ''interchange'' of ideas among attendees. *See* OGE Informal Advisory Opinion 07 x 14 (Dec. 5, 2007).

Several commenters objected to the change requiring written authorizations because it might increase the workload of ethics officials. Three commenters raised workload concerns in connection with the requirement that an employee obtain a written authorization from an agency designee prior to accepting free attendance to a WAG, though one commenter acknowledged that a requirement to obtain written authorization ''protects both the employee and the private sector sponsors.'' OGE has not eliminated the requirement to obtain written authorization before an employee attends a WAG. Any additional burden on ethics officials will not be so substantial as to outweigh the potential benefits of recording WAG authorizations. In this regard, it is worth noting that agency ethics officials have long been required to make several of the findings required by § 2635.204(g)(3), as proposed. In addition, some agencies have already adopted the practice of recording all WAG authorizations in writing. In any case, most of the work required of ethics officials under the amended regulation will stem from the requirement to make a number of determinations that have always been required under the regulation. After making these determinations, ethics officials have discretion to determine the level of detail to include in the written authorization. The amended regulation does not, however, require a ''formal written opinion'' as one commenter suggested.

One commenter noted that the amended rule requires agencies to determine in all cases whether ''[t]he agency's interest in the employee's attendance outweighs the concern that the employee may be, or may appear to be, improperly influenced in the performance of [his or her] official duties.'' The regulation did not previously require this determination in every case, but agency officials have always been charged with evaluating ''all the relevant circumstances of any proposed WAG before an employee is authorized to accept free attendance.'' OGE Informal Advisory Opinion 07 x 14 (Dec. 5, 2007). The determination now required in all cases is consistent with this preexisting requirement, inasmuch as improper influence, or the appearance of improper influence, would necessarily have been a relevant circumstance to be analyzed under the regulation even prior to the current amendment.

Two commenters expressed concern that ethics officials will approve attendance at fewer events for substantive reasons. However, the new regulation does not significantly change the substantive analysis, which remains focused, as it always has been, on the potential for improper influence and the appearance of improper influence. Disapproval of a gift of free attendance, when an agency has determined that an employee's acceptance of the gift would result in improper influence or the appearance of improper influence, is a proper outcome under any responsible ethics regime.

OGE received two additional comments related to § 2635.204(g). One commenter posited a hypothetical case under § 2635.204(g)(1). OGE is not in a position to assess the interests of a hypothetical agency or other relevant factual circumstances not specified in the commenter's hypothetical. At the request of the other commenter, however, OGE has inserted a reference to the written determination requirement in proposed Example 4 to paragraph (g).

Social Invitations

OGE received one comment from an agency on proposed § 2635.204(h), which permits an employee and accompanying guests to accept certain benefits that are provided at a ''social event'' so long as the person extending the invitation is not a prohibited source. The proposed rule added a requirement that employees receive a written determination that such attendance would not cause a reasonable person to question the employee's integrity if the event is sponsored by, or the invitation is from, an organization. The commenting agency questioned the purpose of this amendment and suggested that it could increase the workload of agency ethics officials.

Although OGE understands the programmatic consideration raised by the commenter, OGE does not believe that those concerns weigh significantly against the written determination requirement. In many cases, OGE believes that the analysis as to whether a reasonable person would question the employee's integrity or impartiality in attending will be relatively easy to assess, particularly given that the offeror cannot be a prohibited source. Likewise, the standard should be easier to meet if the circumstances indicate that the event is for purely social reasons or is open to a wide variety of attendees. Moreover, ethics officials have discretion to determine the level of detail to include in the written authorization and to choose an appropriate means, such as email, for transmitting the authorization. OGE does not, therefore, believe that the amended regulation will substantially increase the burden on ethics officials. At the same time, there is a heightened risk for, at a minimum, an appearance that the motivation for the gift is to advance a business objective when the sponsor of the event, or offeror of the invitation, is an organization. For this reason, OGE believes that the additional requirement with regard to organizations is warranted.

OGE has made three technical changes to the language of this exception for consistency with other sections and for clarity. First, OGE added the phrase ''with knowledge of the relevant facts'' to the language in § 2635.204(h)(3), which establishes a reasonable person standard for consistency with the wording of the reasonable person standard in § 2635.201(b) and elsewhere in the Standards of Ethical Conduct. *See* 5 CFR 2635.101(b)(14); 2635.501; 2635.502(a); 2635.502(c). Second, OGE changed ''makes'' to ''has made'' in § 2635.204(h)(3) in order to clarify that the determination to allow an employee to attend the social event must be made before the employee actually attends the event. Third, OGE replaced the legal citation to § 2635.201(b) at the end of the social invitations exception with the following plain language phrase: ''consistent with § 2635.201(b).'' None of these three technical changes alters what OGE intended to be the substantive meaning of the regulation.

Gifts Accepted Under Specific Statutory Authority

OGE has made a technical correction to § 2635.204(l)(1) so that the language tracks the interpreting regulation for 5 U.S.C. 4111 at part 410 of this title.

Informational Materials

Two professional associations and an individual commented on the new exception at § 2635.204(m). The exception permits employees to accept qualifying gifts of informational materials. The exception also sets out certain procedural safeguards and defines what constitutes ''informational materials'' for the purposes of this provision.

One professional association welcomed the addition of the new exception on the basis that it will allow a flow of useful information to employees. The second professional association also supported the new exception, but requested that OGE amend the rule in two ways: (1) Clarify that the rule would permit the acceptance of ''marketing and promotional materials''; and (2) clarify that when a gift of informational materials exceeds $100, an agency may authorize the employee to accept the gift on behalf of the agency if the agency has separate statutory authority. OGE has decided not to revise the proposed exception to include ''marketing and promotional materials'' as a specific category of acceptable informational materials. Whether an item qualifies for the exception will depend on whether the factual circumstances support a determination that the item offered meets the specific criteria set forth in § 2635.204(m). OGE has likewise decided not to amend the regulatory text to clarify that agencies may accept gifts of informational materials when the gift exceeds $100. Agencies with gift acceptance authorities have established their own procedures and policies regarding the acceptance of such gifts consistent with their interpretations of those authorities, and OGE is not in a position to direct another agency on the use of its gift acceptance authority.

Another commenter raised two general concerns with the regulatory exception. The first concern is that employees who accept informational materials might sell them. Although it might prove somewhat difficult to sell used informational materials, OGE is generally sensitive to the underlying concern expressed by the commenter. To address this concern, OGE has amended the regulation to add an additional limitation on the use of this exception. As revised, the exception will now require employees to obtain written authorization from the agency designee before accepting informational materials from a single person that in the aggregate exceed $100 in a calendar year. The commenter's other concern is that gifts relating to an employee's official duties, the agency's mission, or a subject matter of interest to the agency ''ought to be a gift to the Agency.'' The commenter questions whether such gifts might be construed as augmenting an agency's appropriations. Such gifts would not implicate augmentation concerns, however, because, as with all of OGE's regulatory gift exceptions, the items accepted are for personal use, not the agency's use.

Following careful review of the regulation, OGE has also reorganized § 2635.204(m) to move the limitations on what constitutes permissible ''informational materials'' to § 2635.204(m)(2), which contains the definition of ''informational materials.'' OGE refined the language indicating that, to qualify as ''informational material,'' an item must be ''primarily provided for educational or instructive purposes,'' changing it to state more clearly that the item must be ''educational or instructive in nature.'' As previously written, the regulation could have been misconstrued as requiring employees to ascertain the donor's intent in offering an item. As modified, the regulation now makes clear that the focus is on the objective nature of the gift, and not the subjective intent of the donor. A corresponding change replaces ''not including,'' with ''Are not primarily,'' at the beginning of the phrase ''Are not primarily created for entertainment, display, or decoration.'' This change is intended to avoid excluding items that are clearly educational or instructive in nature but may have some tangential or incidental qualities that could arguably be characterized as entertaining or visually attractive. OGE believes this modification will make the rule easier to understand and apply.

OGE further reorganized the exception to reduce its structural complexity. As proposed, § 2635.204(m) had several tiers, including: a first tier denoted by numbers, such as the number ''(2)''; a second tier denoted by lowercase roman numerals, such as the numeral ''(ii)''; a third tier denoted by capital letters, such as the letter ''(B)''; and a fourth tier denoted again by numbers, such as the number ''(2).'' By reorganizing the language of this section, OGE was able to eliminate the fourth tier.

OGE has made four other technical changes for consistency and clarity. First, OGE used the word ''person'' in paragraphs (m)(1)(i) and (ii) to be consistent with the language in § 2635.204(a), when aggregating gifts. Second, OGE changed the language ''an agency designee makes a written determination that,'' at § 2635.204(m)(1)(ii)(B) of the proposed rule, to ''an agency designee has made a written determination after finding that,'' now at § 2635.204(m)(1)(ii). The change makes the language of this paragraph consistent with the language used in § 2635.204(g)(3) and § 2635.204(h)(3). Third, OGE has added ''provided that'' to the opening language of § 2635.204(m)(1) in order to clarify that the $100 limit in § 2635.204(m)(1)(i) applies in every case unless an employee first obtains a written determination under § 2635.204(m)(1)(ii). Fourth, OGE has revised the reference to ''programs and operations'' of the agency so that it reads ''programs or operations'' of the agency. It was not OGE's intention to require that the subject matter relate to both a program and an operation, or to require that employees somehow distinguish ''programs'' from ''operations.''

5 CFR 2635.205 Limitations on Use of Exceptions

OGE received no comments on § 2635.205. OGE is adopting the amendments to this section as proposed for the reasons set forth in the preamble to the proposed rule. OGE, however, has replaced the period with a semi-colon in the phrase: ''Accept a gift in violation of any statute; relevant statutes applicable to all employees include, but are not limited to,'' found at § 2635.205(d). OGE has made this change for clarity because paragraph (d) in that section is part of a longer list that is connected by a semi-colon and the word ''or'' after paragraph (e) in that same section. By eliminating the period, OGE seeks to ensure that the period is not misconstrued as invalidating paragraphs (e) and (f) in the remainder of that list.

5 CFR 2635.206 Proper Disposition of Prohibited Gifts

OGE received four comments on § 2635.206, which explains what steps an employee must take to properly dispose of a prohibited gift. OGE amended this section to provide additional guidance on what steps are required to comply with the disposition authorities. One commenter was generally supportive of the additional guidance provided by OGE. Three commenters expressed concern that OGE's amendment of § 2635.206(a)(1) to allow employees to destroy prohibited tangible gifts worth $100 or less was wasteful. These three commenters also recommended that OGE amend § 2635.206(a)(1) to permit employees to donate prohibited tangible gifts worth $100 or less to charity.

For the following reasons, OGE has not accepted the commenters' suggestions. Allowing the destruction of relatively low-value, tangible gifts provides useful flexibility, while continuing to prohibit employees from retaining impermissible gifts. Setting the value threshold at $100 establishes a reasonable range that imposes minimal administrative burden in determining whether most low value items qualify for destruction. Setting the threshold far below that level would increase transaction costs because official time would necessarily have to be expended researching the precise market value of inexpensive items in order to determine whether they could be destroyed. It bears noting that, as is explained in § 2635.206(a), an employee is not required to destroy prohibited gifts; destruction is only one of several authorized options for disposition. Other options include returning the gift to the donor, paying the donor the gift's market value, or not accepting the gift in the first instance. Whenever the value of an item approaches the higher end of the $100 range, employees and agency ethics officials may be disinclined to destroy the item; in fact, the administrative burden of researching the item's precise market value in order to avoid exceeding the permissible value threshold creates a natural incentive to choose another option for disposition of more expensive items.

Authorizing donations to charity in lieu of destruction would present other problems. OGE has considered and rejected this option in the past. *See* 57 FR 35006, 35015 (Aug. 7, 1992). Allowing an employee to direct that a gift be donated to a charity of the employee's choosing would be tantamount to permitting constructive receipt of the gift by the employee. OGE is concerned that employees may be able to claim tax deductions under the Internal Revenue Code for gifts donated to charity, in essence receiving the "gift" of a tax deduction in lieu of the original gift. OGE has also explained in the past that permitting donations "would create an incentive for donors to offer employees items they cannot accept and, in the case of highly visible employees, might result in their favorite charities profiting from their official positions." *Id.* OGE remains concerned that authorizing donations to charity as a means to dispose of impermissible gifts could incentivize some employees to intentionally accept impermissible gifts for the purpose of donating them to their favorite charities.

OGE has, however, revised § 2635.206(a)(1) for clarity. In the proposed regulation, the first sentence read: "The employee must promptly return any tangible item to the donor, or pay the donor its market value, or, in the case that the tangible item has a market value not in excess of $100, the employee may destroy the item." In the final regulation, that sentence now reads: "The employee must promptly return any tangible item to the donor or pay the donor its market value; or, in the case of a tangible item with a market value of $100 or less, the employee may destroy the item." The meaning of the sentence is unchanged, but the revised sentence is easier to understand. In addition, OGE has removed the legal citation at the end of that paragraph, which referred to the definition of "market value" at § 2635.203(c), because the cross reference was unnecessary and potentially confusing to the reader.

III. Matters of Regulatory Procedure

Regulatory Flexibility Act

As Director of the Office of Government Ethics, I certify under the Regulatory Flexibility Act (5 U.S.C. chapter 6) that this final rule would not have a significant economic impact on a substantial number of small entities because it primarily affects current Federal executive branch employees.

Paperwork Reduction Act

The Paperwork Reduction Act (44 U.S.C. chapter 35) does not apply because this regulation does not contain information collection requirements that require approval of the Office of Management and Budget.

Unfunded Mandates Reform Act

For purposes of the Unfunded Mandates Reform Act of 1995 (2 U.S.C. chapter 5, subchapter II), this final rule would not significantly or uniquely affect small governments and will not result in increased expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more (as adjusted for inflation) in any one year.

Executive Order 13563 and Executive Order 12866

Executive Orders 13563 and 12866 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select the regulatory approaches that maximize net benefits (including economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This rule has been designated as a "significant regulatory action," although not economically significant, under section 3(f) of Executive Order 12866. Accordingly, this rule has been reviewed by the Office of Management and Budget.

Executive Order 12988

As Director of the Office of Government Ethics, I have reviewed this final rule in light of section 3 of Executive Order 12988, Civil Justice Reform, and certify that it meets the applicable standards provided therein.

List of Subjects in 5 CFR Part 2635

Conflict of interests, Executive Branch standards of ethical conduct, Government employees.

Approved: November 3, 2016.

Walter M. Shaub, Jr.,

Director, Office of Government Ethics.

Accordingly, for the reasons set forth in the preamble, the Office of Government Ethics is amending 5 CFR part 2635, as set forth below:

PART 2635—STANDARDS OF ETHICAL CONDUCT FOR EMPLOYEES OF THE EXECUTIVE BRANCH

■ 1. The authority citation for part 2635 continues to read as follows:

Authority: 5 U.S.C. 7301, 7351, 7353; 5 U.S.C. App. (Ethics in Government Act of 1978); E.O. 12674, 54 FR 15159, 3 CFR, 1989 Comp., p. 215, as modified by E.O. 12731, 55 FR 42547, 3 CFR, 1990 Comp., p. 306.

■ 2. Revise subpart B of part 2635 to read as follows:

Subpart B—Gifts From Outside Sources

Subpart B—Gifts From Outside Sources

§ 2635.201 Overview and considerations for declining otherwise permissible gifts.

(a) *Overview.* This subpart contains standards that prohibit an employee from soliciting or accepting any gift from a prohibited source or any gift given because of the employee's official position, unless the item is excluded from the definition of a gift or falls within one of the exceptions set forth in this subpart.

(b) *Considerations for declining otherwise permissible gifts.* (1) Every employee has a fundamental responsibility to the United States and its citizens to place loyalty to the Constitution, laws, and ethical principles above private gain. An employee's actions should promote the public's trust that this responsibility is being met. For this reason, employees should consider declining otherwise permissible gifts if they believe that a reasonable person with knowledge of the relevant facts would question the employee's integrity or impartiality as a result of accepting the gift.

(2) An employee who is considering whether acceptance of a gift would lead a reasonable person with knowledge of the relevant facts to question his or her integrity or impartiality may consider, among other relevant factors, whether:

(i) The gift has a high market value;

(ii) The timing of the gift creates the appearance that the donor is seeking to influence an official action;

(iii) The gift was provided by a person who has interests that may be substantially affected by the performance or nonperformance of the employee's official duties; and

(iv) Acceptance of the gift would provide the donor with significantly disproportionate access.

(3) Notwithstanding paragraph (b)(1) of this section, an employee who accepts a gift that qualifies for an exception under § 2635.204 does not violate this subpart or the Principles of Ethical Conduct set forth in § 2635.101(b).

(4) Employees who have questions regarding this subpart, including whether the employee should decline a gift that would otherwise be permitted under an exception found in § 2635.204, should seek advice from an agency ethics official.

Example 1 to paragraph (b): An employee of the Peace Corps is in charge of making routine purchases of office supplies. After a promotional presentation to highlight several new products, a vendor offers to buy the employee lunch, which costs less than $20. The employee is concerned that a reasonable person may question her impartiality in accepting the free lunch, as the timing of the offer indicates that the donor may be seeking to influence an official action and the company has interests that may be substantially affected by the performance or nonperformance of the employee's duties. As such, although acceptance of the gift may be permissible under § 2635.204(a), the employee decides to decline the gift.

§ 2635.202 General prohibition on solicitation or acceptance of gifts.

(a) *Prohibition on soliciting gifts.* Except as provided in this subpart, an employee may not, directly or indirectly:

(1) Solicit a gift from a prohibited source; or

(2) Solicit a gift to be given because of the employee's official position.

(b) *Prohibition on accepting gifts.* Except as provided in this subpart, an employee may not, directly or indirectly:

(1) Accept a gift from a prohibited source; or

(2) Accept a gift given because of the employee's official position.

(c) *Relationship to illegal gratuities statute.* A gift accepted pursuant to an exception found in this subpart will not constitute an illegal gratuity otherwise prohibited by 18 U.S.C. 201(c)(1)(B), unless it is accepted in return for being influenced in the performance of an official act. As more fully described in § 2635.205(d)(1), an employee may not solicit or accept a gift if to do so would be prohibited by the Federal bribery statute, 18 U.S.C. 201(b).

Example 1 to paragraph (c): A Government contractor who specializes in information technology software has offered an employee of the Department of Energy's information technology acquisition division a $15 gift card to a local restaurant if the employee will recommend to the agency's contracting officer that she select the contractor's products during the next acquisition. Even though the gift card is less than $20, the employee may not accept the gift under § 2635.204(a) because it is conditional upon official action by the employee. Pursuant to §§ 2635.202(c) and 2635.205(a), notwithstanding any exception to the rule, an employee may not accept a gift in return for being influenced in the performance of an official act.

§ 2635.203 Definitions.

For purposes of this subpart, the following definitions apply:

(a) *Agency* has the meaning set forth in § 2635.102(a). However, for purposes of this subpart, an executive department, as defined in 5 U.S.C. 101, may, by supplemental agency regulation, designate as a separate agency any component of that department which the department determines exercises distinct and separate functions.

(b) *Gift* includes any gratuity, favor, discount, entertainment, hospitality, loan, forbearance, or other item having monetary value. It includes services as well as gifts of training, transportation, local travel, lodgings and meals, whether provided in-kind, by purchase of a ticket, payment in advance, or reimbursement after the expense has been incurred. The term excludes the following:

(1) Modest items of food and non-alcoholic refreshments, such as soft drinks, coffee and donuts, offered other than as part of a meal;

(2) Greeting cards and items with little intrinsic value, such as plaques, certificates, and trophies, which are intended primarily for presentation;

Example 1 to paragraph (b)(2): After giving a speech at the facility of a pharmaceutical company, a Government employee is presented with a glass paperweight in the shape of a pill capsule with the name of the company's latest drug and the date of the speech imprinted on the side. The employee may accept the paperweight because it is an item with little intrinsic value which is intended primarily for presentation.

Example 2 to paragraph (b)(2): After participating in a panel discussion hosted by an international media company, a Government employee is presented with an inexpensive portable music player emblazoned with the media company's logo. The portable music player has a market value of $25. The employee may not accept the portable music player as it has a significant independent use as a music player rather than being intended primarily for presentation.

Example 3 to paragraph (b)(2): After giving a speech at a conference held by a national association of miners, a Department of Commerce employee is presented with a block of granite that is engraved with the association's logo, a picture of the Appalachian Mountains, the date of the speech, and the employee's name. The employee may accept this item because it is similar to a plaque, is designed primarily for presentation, and has little intrinsic value.

(3) Loans from banks and other financial institutions on terms generally available to the public;

(4) Opportunities and benefits, including favorable rates and commercial discounts, available to the public or to a class consisting of all Government employees or all uniformed military personnel, whether or not restricted on the basis of geographic considerations;

(5) Rewards and prizes given to competitors in contests or events, including random drawings, open to the public unless the employee's entry into the contest or event is required as part of the employee's official duties;

Example 1 to paragraph (b)(5): A Government employee is attending a free trade show on official time. The trade show is held in a public shopping area adjacent to the employee's office building. The employee voluntarily enters a drawing at an individual vendor's booth which is open to the public. She fills in an entry form on the vendor's display table and drops it into the contest box. The employee may accept the resulting prize because entry into the contest was not required by or related to her official duties.

Example 2 to paragraph (b)(5): Attendees at a conference, which is not open to the public, are entered in a drawing for a weekend getaway to Bermuda as a result of being registered for the conference. A Government employee who attends the conference in his official capacity could not accept the prize under paragraph (b)(5) of this section, as the event is not open to the public.

(6) Pension and other benefits resulting from continued participation in an employee welfare and benefits plan maintained by a current or former employer;

(7) Anything which is paid for by the Government or secured by the Government under Government contract;

Example 1 to paragraph (b)(7): An employee at the Occupational Safety and Health Administration is assigned to travel away from her duty station to conduct an investigation of a collapse at a construction site. The employee's agency is paying for her travel expenses, including her airfare. The employee may accept and retain travel promotional items, such as frequent flyer miles, received as a result of her official travel, to the extent permitted by 5 U.S.C. 5702, note, and 41 CFR part 301–53.

(8) Free attendance to an event provided by the sponsor of the event to:

(i) An employee who is assigned to present information on behalf of the agency at the event on any day when the employee is presenting;

(ii) An employee whose presence on any day of the event is deemed to be essential by the agency to the presenting employee's participation in the event, provided that the employee is accompanying the presenting employee; and

(iii) The spouse or one other guest of the presenting employee on any day when the employee is presenting, provided that others in attendance will generally be accompanied by a spouse or other guest, the offer of free attendance for the spouse or other guest is unsolicited, and the agency designee, orally or in writing, has authorized the presenting employee to accept;

Example 1 to paragraph (b)(8): An employee of the Department of the Treasury who is assigned to participate in a panel discussion of economic issues as part of a one-day conference may accept the sponsor's waiver of the conference fee. Under the separate authority of § 2635.204(a), the employee may accept a token of appreciation that has a market value of $20 or less.

Example 2 to paragraph (b)(8): An employee of the Securities and Exchange Commission is assigned to present the agency's views at a roundtable discussion of an ongoing working group. The employee may accept free attendance to the meeting under paragraph (b)(8) of this section because the employee has been assigned to present information at the meeting on behalf of the agency. If it is determined by the agency that it is essential that another employee accompany the presenting employee to the roundtable discussion, the accompanying employee may also accept free attendance to the meeting under paragraph (b)(8)(ii) of this section.

Example 3 to paragraph (b)(8): An employee of the United States Trade and Development Agency is invited to attend a cocktail party hosted by a prohibited source. The employee believes that he will have an opportunity to discuss official matters with other attendees while at the event. Although the employee may voluntarily discuss official matters with other attendees, the employee has not been assigned to present information on behalf of the agency. The employee may not accept free attendance to the event under paragraph (b)(8) of this section.

(9) Any gift accepted by the Government under specific statutory authority, including:

(i) Travel, subsistence, and related expenses accepted by an agency under the authority of 31 U.S.C. 1353 in connection with an employee's attendance at a meeting or similar function relating to the employee's official duties which take place away from the employee's duty station, provided that the agency's acceptance is in accordance with the implementing regulations at 41 CFR chapter 304; and

(ii) Other gifts provided in-kind which have been accepted by an agency under its agency gift acceptance statute; and

(10) Anything for which market value is paid by the employee.

(c) *Market value* means the cost that a member of the general public would reasonably expect to incur to purchase the gift. An employee who cannot ascertain the market value of a gift may estimate its market value by reference to the retail cost of similar items of like quality. The market value of a gift of a ticket entitling the holder to food, refreshments, entertainment, or any other benefit is deemed to be the face value of the ticket.

Example 1 to paragraph (c): An employee who has been given a watch inscribed with the corporate logo of a prohibited source may determine its market value based on her observation that a comparable watch, not inscribed with a logo, generally sells for about $50.

Example 2 to paragraph (c): During an official visit to a factory operated by a well-known athletic footwear manufacturer, an employee of the Department of Labor is offered a commemorative pair of athletic shoes manufactured at the factory. Although the cost incurred by the donor to manufacture the shoes was $17, the market value of the shoes would be the $100 that the employee would have to pay for the shoes on the open market.

Example 3 to paragraph (c): A prohibited source has offered a Government employee a ticket to a charitable event consisting of a cocktail reception to be followed by an evening of chamber music. Even though the food, refreshments, and entertainment provided at the event may be worth only $20, the market value of the ticket is its $250 face value.

Example 4 to paragraph (c): A company offers an employee of the Federal Communication Commission (FCC) free attendance for two to a private skybox at a ballpark to watch a major league baseball game. The skybox is leased annually by the company, which has business pending before the FCC. The skybox tickets provided to the employee do not have a face value. To determine the market value of the tickets, the employee must add the face value of two of the most expensive publicly available tickets to the game and the market value of any food, parking or other tangible benefits provided in connection with the gift of attendance that are not already included in the cost of the most expensive publicly available tickets.

Example 5 to paragraph (c): An employee of the Department of Agriculture is invited to a reception held by a prohibited source. There is no entrance fee to the reception event or to the venue. To determine the market value of the gift, the employee must add the market value of any entertainment, food, beverages, or other tangible benefit provided to attendees in connection with the reception, but need not consider the cost incurred by the sponsor to rent or maintain the venue where the event is held. The employee may rely on a per-person cost estimate provided by the sponsor of the event, unless the employee or an agency designee has determined that a reasonable person would find that the estimate is clearly implausible.

(d) *Prohibited source* means any person who:

(1) Is seeking official action by the employee's agency;

(2) Does business or seeks to do business with the employee's agency;

(3) Conducts activities regulated by the employee's agency;

(4) Has interests that may be substantially affected by the performance or nonperformance of the employee's official duties; or

(5) Is an organization a majority of whose members are described in paragraphs (d)(1) through (4) of this section.

(e) *Given because of the employee's official position.* A gift is given because of the employee's official position if the gift is from a person other than an employee and would not have been given had the employee not held the status, authority, or duties associated with the employee's Federal position.

Note to paragraph (e): Gifts between employees are subject to the limitations set forth in subpart C of this part.

Example 1 to paragraph (e): Where free season tickets are offered by an opera guild to all members of the Cabinet, the gift is offered because of their official positions.

Example 2 to paragraph (e): Employees at a regional office of the Department of Justice (DOJ) work in Government-leased space at a private office building, along with various private business tenants. A major fire in the building during normal office hours causes a traumatic experience for all occupants of the building in making their escape, and it is the subject of widespread news coverage. A corporate hotel chain, which does not meet the definition of a prohibited source for DOJ, seizes the moment and announces that it will give a free night's lodging to all building occupants and their families, as a public goodwill gesture. Employees of DOJ may accept, as this gift is not being given because of their Government positions. The donor's motivation for offering this gift is unrelated to the DOJ employees' status, authority, or duties associated with their Federal position, but instead is based on their mere presence in the building as occupants at the time of the fire.

(f) *Indirectly solicited or accepted.* A gift which is solicited or accepted indirectly includes a gift:

(1) Given with the employee's knowledge and acquiescence to the employee's parent, sibling, spouse, child, dependent relative, or a member of the employee's household because of that person's relationship to the employee; or

(2) Given to any other person, including any charitable organization, on the basis of designation, recommendation, or other specification by the employee, except the employee has not indirectly solicited or accepted a gift by the raising of funds or other support for a charitable organization if done in accordance with § 2635.808.

Example 1 to paragraph (f)(2): An employee who must decline a gift of a personal computer pursuant to this subpart may not suggest that the gift be given instead to one of five charitable organizations whose names are provided by the employee.

(g) *Free attendance* includes waiver of all or part of the fee for an event or the provision of food, refreshments, entertainment, instruction or materials furnished to all attendees as an integral part of the event. It does not include travel expenses, lodgings, or entertainment collateral to the event. It does not include meals taken other than in a group setting with all other attendees, unless the employee is a presenter at the event and is invited to a separate meal for participating presenters that is hosted by the sponsor of the event. Where the offer of free attendance has been extended to an accompanying spouse or other guest, the market value of the gift of free attendance includes the market value of free attendance by both the employee and the spouse or other guest.

§ 2635.204 Exceptions to the prohibition for acceptance of certain gifts.

Subject to the limitations in § 2635.205, this section establishes exceptions to the prohibitions set forth in § 2635.202(a) and (b). Even though acceptance of a gift may be permitted by one of the exceptions contained in this section, it is never inappropriate and frequently prudent for an employee to decline a gift if acceptance would cause a reasonable person to question the employee's integrity or impartiality. Section 2635.201(b) identifies considerations for declining otherwise permissible gifts.

(a) *Gifts of $20 or less.* An employee may accept unsolicited gifts having an aggregate market value of $20 or less per source per occasion, provided that the aggregate market value of individual gifts received from any one person under the authority of this paragraph (a) does not exceed $50 in a calendar year. This exception does not apply to gifts of cash or of investment interests such as stock, bonds, or certificates of deposit. Where the market value of a gift or the aggregate market value of gifts offered on any single occasion exceeds $20, the employee may not pay the excess value over $20 in order to accept that portion of the gift or those gifts worth $20. Where the aggregate value of tangible items offered on a single occasion exceeds $20, the employee may decline any distinct and separate item in order to accept those items aggregating $20 or less.

Example 1 to paragraph (a): An employee of the Securities and Exchange Commission and his spouse have been invited by a representative of a regulated entity to a community theater production, tickets to which have a face value of $30 each. The aggregate market value of the gifts offered on this single occasion is $60, $40 more than the $20 amount that may be accepted for a single event or presentation. The employee may not accept the gift of the evening of entertainment. He and his spouse may attend the play only if he pays the full $60 value of the two tickets.

Example 2 to paragraph (a): An employee of the National Geospatial-Intelligence Agency has been invited by an association of cartographers to speak about her agency's role in the evolution of missile technology. At the conclusion of her speech, the association presents the employee a framed map with a market value of $18 and a ceramic mug that has a market value of $15. The employee may accept the map or the mug, but not both, because the aggregate value of these two tangible items exceeds $20.

Example 3 to paragraph (a): On four occasions during the calendar year, an employee of the Defense Logistics Agency (DLA) was given gifts worth $10 each by four employees of a corporation that is a DLA contractor. For purposes of applying the yearly $50 limitation on gifts of $20 or less from any one person, the four gifts must be aggregated because a person is defined at § 2635.102(k) to mean not only the corporate entity, but its officers and employees as well. However, for purposes of applying the $50 aggregate limitation, the employee would not have to include the value of a birthday present received from his cousin, who is employed by the same corporation, if he can accept the birthday present under the exception at paragraph (b) of this section for gifts based on a personal relationship.

Example 4 to paragraph (a): Under the authority of 31 U.S.C. 1353 for agencies to accept payments from non-Federal sources in connection with attendance at certain meetings or similar functions, the Environmental Protection Agency (EPA) has accepted an association's gift of travel expenses and conference fees for an employee to attend a conference on the long-term effect of radon exposure. While at the conference, the employee may accept a gift of $20 or less from the association or from another person attending the conference even though it was not approved in advance by the EPA. Although 31 U.S.C. 1353 is the authority under which the EPA accepted the gift to the agency of travel expenses and conference fees, a gift of $20 or less accepted under paragraph (a) of this section is a gift to the employee rather than to her employing agency.

Example 5 to paragraph (a): During off-duty time, an employee of the Department of Defense (DoD) attends a trade show involving companies that are DoD contractors. He is offered software worth $15 at X Company's booth, a calendar worth $12 at Y Company's booth, and a deli lunch worth $8 from Z Company. The employee may accept all three of these items because they do not exceed $20 per source, even though they total more than $20 at this single occasion.

Example 6 to paragraph (a): An employee of the Department of Defense (DoD) is being promoted to a higher level position in another DoD office. Six individuals, each employed by a different defense contractor, who have worked with the DoD employee over the years, decide to act in concert to pool their resources to buy her a nicer gift than each could buy her separately. Each defense contractor employee contributes $20 to buy a desk clock for the DoD employee that has a market value of $120. Although each of the contributions does not exceed the $20 limit, the employee may not accept the $120 gift because it is a single gift that has a market value in excess of $20.

Example 7 to paragraph (a): During a holiday party, an employee of the Department of State is given a $15 store gift card to a national coffee chain by an agency contractor. The employee may accept the card as the market value is less than $20. The employee could not, however, accept a gift card that is issued by a credit card company or other financial institution, because such a card is equivalent to a gift of cash.

(b) *Gifts based on a personal relationship.* An employee may accept a gift given by an individual under circumstances which make it clear that the gift is motivated by a family relationship or personal friendship rather than the position of the employee. Relevant factors in making such a determination include the history and nature of the relationship and whether the family member or friend personally pays for the gift.

Example 1 to paragraph (b): An employee of the Federal Deposit Insurance Corporation (FDIC) has been dating an accountant employed by a member bank. As part of its ''Work-Life Balance'' program, the bank has given each employee in the accountant's division two tickets to a professional basketball game and has urged each to invite a family member or friend to share the evening of entertainment. Under the circumstances, the FDIC employee may accept the invitation to attend the game. Even though the tickets were initially purchased by the member bank, they were given without reservation to the accountant to use as she wished, and her invitation to the employee was motivated by their personal friendship.

Example 2 to paragraph (b): Three partners in a law firm that handles corporate mergers have invited an employee of the Federal Trade Commission (FTC) to join them in a golf tournament at a private club at the firm's expense. The entry fee is $500 per foursome. The employee cannot accept the gift of one-quarter of the entry fee even though he and the three partners have developed an amicable relationship as a result of the firm's dealings with the FTC. As evidenced in part by the fact that the fees are to be paid by the firm, it is not a personal friendship but a business relationship that is the motivation behind the partners' gift.

Example 3 to paragraph (b): A Peace Corps employee enjoys using a social media site on the internet in his personal capacity outside of work. He has used the site to keep in touch with friends, neighbors, coworkers, professional contacts, and other individuals he has met over the years through both work and personal activities. One of these individuals works for a contractor that provides language services to the Peace Corps. The employee was acting in his official capacity when he met the individual at a meeting to discuss a matter related to the contract between their respective employers. Thereafter, the two communicated occasionally regarding contract matters. They later also granted one another access to join their social media networks through their respective social media accounts. However, they did not communicate further in their personal capacities, carry on extensive personal interactions, or meet socially outside of work. One day, the individual, whose employer continues to serve as a Peace Corps contractor, contacts the employee to offer him a pair of concert tickets worth $30 apiece. Although the employee and the individual are connected through social media, the circumstances do not demonstrate that the gift was clearly motivated by a personal relationship, rather than the position of the employee, and therefore the employee may not accept the gift pursuant to paragraph (b) of this section.

(c) *Discounts and similar benefits.* In addition to those opportunities and benefits excluded from the definition of a gift by § 2635.203(b)(4), an employee may accept:

(1) A reduction or waiver of the fees for membership or other fees for participation in organization activities offered to all Government employees or all uniformed military personnel by professional organizations if the only restrictions on membership relate to professional qualifications; and

(2) Opportunities and benefits, including favorable rates, commercial discounts, and free attendance or participation not precluded by paragraph (c)(3) of this section:

(i) Offered to members of a group or class in which membership is unrelated to Government employment;

(ii) Offered to members of an organization, such as an employees' association or agency credit union, in which membership is related to Government employment if the same offer is broadly available to large segments of the public through organizations of similar size; or

(iii) Offered by a person who is not a prohibited source to any group or class that is not defined in a manner that specifically discriminates among Government employees on the basis of type of official responsibility or on a basis that favors those of higher rank or rate of pay.

Example 1 to paragraph (c)(2): A computer company offers a discount on the purchase of computer equipment to all public and private sector computer procurement officials who work in organizations with over 300 employees. An employee who works as the computer procurement official for a Government agency could not accept the discount to purchase the personal computer under the exception in paragraph (c)(2)(i) of this section. Her membership in the group to which the discount is offered is related to Government employment because her membership is based on her status as a procurement official with the Government.

Example 2 to paragraph (c)(2): An employee of the Consumer Product Safety Commission (CPSC) may accept a discount of $50 on a microwave oven offered by the manufacturer to all members of the CPSC employees' association. Even though the CPSC is currently conducting studies on the safety of microwave ovens, the $50 discount is a standard offer that the manufacturer has made broadly available through a number of employee associations and similar organizations to large segments of the public.

Example 3 to paragraph (c)(2): An Assistant Secretary may not accept a local country club's offer of membership to all members of Department Secretariats which includes a waiver of its $5,000 membership initiation fee. Even though the country club is not a prohibited source, the offer discriminates in favor of higher ranking officials.

(3) An employee may not accept for personal use any benefit to which the Government is entitled as the result of an expenditure of Government funds, unless authorized by statute or regulation (*e.g.,* 5 U.S.C. 5702, note, regarding frequent flyer miles).

Example 1 to paragraph (c)(3): The administrative officer for a field office of U.S. Immigration and Customs Enforcement (ICE) has signed an order to purchase 50 boxes of photocopy paper from a supplier whose literature advertises that it will give a free briefcase to anyone who purchases 50 or more boxes. Because the paper was purchased with ICE funds, the administrative officer cannot keep the briefcase which, if claimed and received, is Government property.

(d) *Awards and honorary degrees*—(1) *Awards.* An employee may accept a *bona fide* award for meritorious public service or achievement and any item incident to the award, provided that:

(i) The award and any item incident to the award are not from a person who has interests that may be substantially affected by the performance or nonperformance of the employee's official duties, or from an association or other organization if a majority of its members have such interests; and

(ii) If the award or any item incident to the award is in the form of cash or an investment interest, or if the aggregate value of the award and any item incident to the award, other than free attendance to the event provided to the employee and to members of the employee's family by the sponsor of the event, exceeds $200, the agency ethics official has made a written determination that the award is made as part of an established program of recognition.

Example 1 to paragraph (d)(1): Based on a written determination by an agency ethics official that the prize meets the criteria set forth in paragraph (d)(2) of this section, an employee of the National Institutes of Health (NIH) may accept the Nobel Prize for Medicine, including the cash award which accompanies the prize, even though the prize was conferred on the basis of laboratory work performed at NIH.

Example 2 to paragraph (d)(1): A defense contractor, ABC Systems, has an annual award program for the outstanding public employee of the year. The award includes a cash payment of $1,000. The award program is wholly funded to ensure its continuation on a regular basis for the next twenty years and selection of award recipients is made pursuant to written standards. An employee of the Department of the Air Force, who has duties that include overseeing contract performance by ABC Systems, is selected to receive the award. The employee may not accept the cash award because ABC Systems has interests that may be substantially affected by the performance or nonperformance of the employee's official duties.

Example 3 to paragraph (d)(1): An ambassador selected by a nonprofit organization as a recipient of its annual award for distinguished service in the interest of world peace may, together with his spouse and children, attend the awards ceremony dinner and accept a crystal bowl worth $200 presented during the ceremony. However, where the organization has also offered airline tickets for the ambassador and his family to travel to the city where the awards ceremony is to be held, the aggregate value of the tickets and the crystal bowl exceeds $200, and he may accept only upon a written determination by the agency ethics official that the award is made as part of an established program of recognition.

(2) *Established program of recognition.* An award and an item incident to the award are made pursuant to an established program of recognition if:

(i) Awards have been made on a regular basis or, if the program is new, there is a reasonable basis for concluding that awards will be made on a regular basis based on funding or funding commitments; and

(ii) Selection of award recipients is made pursuant to written standards.

(3) *Honorary degrees.* An employee may accept an honorary degree from an institution of higher education, as defined at 20 U.S.C. 1001, or from a similar foreign institution of higher education, based on a written determination by an agency ethics official that the timing of the award of the degree would not cause a reasonable person to question the employee's impartiality in a matter affecting the institution.

Note to paragraph (d)(3): When the honorary degree is offered by a foreign institution of higher education, the agency may need to make a separate determination as to whether the institution of higher education is a foreign government for purposes of the Emoluments Clause of the U.S. Constitution (U.S. Const., art. I, sec. 9, cl. 8), which forbids employees from accepting emoluments, presents, offices, or titles from foreign governments, without the consent of Congress. The Foreign Gifts and Decorations Act, 5 U.S.C. 7342, however, may permit the acceptance of honorary degrees in some circumstances.

Example 1 to paragraph (d)(3): A well-known university located in the United States wishes to give an honorary degree to the Secretary of Labor. The Secretary may accept the honorary degree only if an agency ethics official determines in writing that the timing of the award of the degree would not cause a reasonable person to question the Secretary's impartiality in a matter affecting the university.

(4) *Presentation events.* An employee who may accept an award or honorary degree pursuant to paragraph (d)(1) or (3) of this section may also accept free attendance to the event provided to the employee and to members of the employee's family by the sponsor of an event. In addition, the employee may also accept unsolicited offers of travel to and from the event provided to the employee and to members of the employee's family by the sponsor of the event. Travel expenses accepted under this paragraph (d)(4) must be added to the value of the award for purposes of determining whether the aggregate value of the award exceeds $200.

(e) *Gifts based on outside business or employment relationships.* An employee may accept meals, lodgings, transportation and other benefits:

(1) Resulting from the business or employment activities of an employee's spouse when it is clear that such benefits have not been offered or enhanced because of the employee's official position;

Example 1 to paragraph (e)(1): A Department of Agriculture employee whose spouse is a computer programmer employed by a Department of Agriculture contractor may attend the company's annual retreat for all of its employees and their families held at a resort facility. However, under § 2635.502, the employee may be disqualified from performing official duties affecting her spouse's employer.

Example 2 to paragraph (e)(1): Where the spouses of other clerical personnel have not been invited, an employee of the Defense Contract Audit Agency whose spouse is a clerical worker at a defense contractor may not attend the contractor's annual retreat in Hawaii for corporate officers and members of the board of directors, even though his spouse received a special invitation for herself and the employee.

(2) Resulting from the employee's outside business or employment activities when it is clear that such benefits are based on the outside business or employment activities and have not been offered or enhanced because of the employee's official status;

Example 1 to paragraph (e)(2): The members of an Army Corps of Engineers environmental advisory committee that meets six times per year are special Government employees. A member who has a consulting business may accept an invitation to a $50 dinner from her corporate client, an Army construction contractor, unless, for example, the invitation was extended in order to discuss the activities of the advisory committee.

(3) Customarily provided by a prospective employer in connection with *bona fide* employment discussions. If the prospective employer has interests that could be affected by performance or nonperformance of the employee's duties, acceptance is permitted only if the employee first has complied with the disqualification requirements of subpart F of this part applicable when seeking employment; or

Example 1 to paragraph (e)(3): An employee of the Federal Communications Commission with responsibility for drafting regulations affecting all cable television companies wishes to apply for a job opening with a cable television holding company. Once she has properly disqualified herself from further work on the regulations as required by subpart F of this part, she may enter into employment discussions with the company and may accept the company's offer to pay for her airfare, hotel, and meals in connection with an interview trip.

(4) Provided by a former employer to attend a reception or similar event when other former employees have been invited to attend, the invitation and benefits are based on the former employment relationship, and it is clear that such benefits have not been offered or enhanced because of the employee's official position.

Example 1 to paragraph (e)(4): An employee of the Department of the Army is invited by her former employer, an Army contractor, to attend its annual holiday dinner party. The former employer traditionally invites both its current and former employees to the holiday dinner regardless of their current employment activities. Under these circumstances, the employee may attend the dinner because the dinner invitation is a result of the employee's former outside employment activities, other former employees have been asked to attend, and the gift is not offered because of the employee's official position.

(5) For purposes of paragraphs (e)(1) through (4) of this section, ''employment'' means any form of non-Federal employment or business relationship involving the provision of personal services.

(f) *Gifts in connection with political activities permitted by the Hatch Act Reform Amendments.* An employee who, in accordance with the Hatch Act Reform Amendments of 1993, at 5 U.S.C. 7323, may take an active part in political management or in political campaigns, may accept meals, lodgings, transportation, and other benefits, including free attendance at events, for the employee and an accompanying spouse or other guests, when provided, in connection with such active participation, by a political organization described in 26 U.S.C. 527(e). Any other employee, such as a security officer, whose official duties require him or her to accompany an employee to a political event, may accept meals, free attendance, and entertainment provided at the event by such an organization.

Example 1 to paragraph (f): The Secretary of the Department of Health and Human

Services may accept an airline ticket and hotel accommodations furnished by the campaign committee of a candidate for the United States Senate in order to give a speech in support of the candidate.

(g) *Gifts of free attendance at widely attended gatherings*—(1) *Authorization.* When authorized in writing by the agency designee pursuant to paragraph (g)(3) of this section, an employee may accept an unsolicited gift of free attendance at all or appropriate parts of a widely attended gathering. For an employee who is subject to a leave system, attendance at the event will be on the employee's own time or, if authorized by the employee's agency, on excused absence pursuant to applicable guidelines for granting such absence, or otherwise without charge to the employee's leave account.

(2) *Widely attended gatherings.* A gathering is widely attended if it is expected that a large number of persons will attend, that persons with a diversity of views or interests will be present, for example, if it is open to members from throughout the interested industry or profession or if those in attendance represent a range of persons interested in a given matter, and that there will be an opportunity to exchange ideas and views among invited persons.

(3) *Written authorization by the agency designee.* The agency designee may authorize an employee or employees to accept a gift of free attendance at all or appropriate parts of a widely attended gathering only if the agency designee issues a written determination after finding that:

(i) The event is a widely attended gathering, as set forth in paragraph (g)(2) of this section;

(ii) The employee's attendance at the event is in the agency's interest because it will further agency programs or operations;

(iii) The agency's interest in the employee's attendance outweighs the concern that the employee may be, or may appear to be, improperly influenced in the performance of official duties; and

(iv) If a person other than the sponsor of the event invites or designates the employee as the recipient of the gift of free attendance and bears the cost of that gift, the event is expected to be attended by more than 100 persons and the value of the gift of free attendance does not exceed $375.

(4) *Determination of agency interest.* In determining whether the agency's interest in the employee's attendance outweighs the concern that the employee may be, or may appear to be, improperly influenced in the performance of official duties, the agency designee may consider relevant factors including:

(i) The importance of the event to the agency;

(ii) The nature and sensitivity of any pending matter affecting the interests of the person who extended the invitation and the significance of the employee's role in any such matter;

(iii) The purpose of the event;

(iv) The identity of other expected participants;

(v) Whether acceptance would reasonably create the appearance that the donor is receiving preferential treatment;

(vi) Whether the Government is also providing persons with views or interests that differ from those of the donor with access to the Government; and

(vii) The market value of the gift of free attendance.

(5) *Cost provided by person other than the sponsor of the event.* The cost of the employee's attendance will be considered to be provided by a person other than the sponsor of the event where such person designates the employee to be invited and bears the cost of the employee's attendance through a contribution or other payment intended to facilitate the employee's attendance. Payment of dues or a similar assessment to a sponsoring organization does not constitute a payment intended to facilitate a particular employee's attendance.

(6) *Accompanying spouse or other guest.* When others in attendance will generally be accompanied by a spouse or other guest, and where the invitation is from the same person who has invited the employee, the agency designee may authorize an employee to accept an unsolicited invitation of free attendance to an accompanying spouse or one other accompanying guest to participate in all or a portion of the event at which the employee's free attendance is permitted under paragraph (g)(1) this section. The authorization required by this paragraph (g)(6) must be provided in writing.

Example 1 to paragraph (g): An aerospace industry association that is a prohibited source sponsors an industry-wide, two-day seminar for which it charges a fee of $800 and anticipates attendance of approximately 400. An Air Force contractor pays $4,000 to the association so that the association can extend free invitations to five Air Force officials designated by the contractor. The Air Force officials may not accept the gifts of free attendance because (a) the contractor, rather than the association, provided the cost of their attendance; (b) the contractor designated the specific employees to receive the gift of free attendance; and (c) the value of the gift exceeds $375 per employee.

Example 2 to paragraph (g): An aerospace industry association that is a prohibited source sponsors an industry-wide, two-day seminar for which it charges a fee of $25 and anticipates attendance of approximately 50. An Air Force contractor pays $125 to the association so that the association can extend free invitations to five Air Force officials designated by the contractor. The Air Force officials may not accept the gifts of free attendance because (a) the contractor, rather than the association, provided the cost of their attendance; (b) the contractor designated the specific employees to receive the gift of free attendance; and (c) the event was not expected to be attended by more than 100 persons.

Example 3 to paragraph (g): An aerospace industry association that is a prohibited source sponsors an industry-wide, two-day seminar for which it charges a fee of $800 and anticipates attendance of approximately 400. An Air Force contractor pays $4,000 in order that the association might invite any five Federal employees. An Air Force official to whom the sponsoring association, rather than the contractor, extended one of the five invitations could attend if the employee's participation were determined to be in the interest of the agency and he received a written authorization.

Example 4 to paragraph (g): An employee of the Department of Transportation is invited by a news organization to an annual press dinner sponsored by an association of press organizations. Tickets for the event cost $375 per person and attendance is limited to 400 representatives of press organizations and their guests. If the employee's attendance is determined to be in the interest of the agency and she receives a written authorization from the agency designee, she may accept the invitation from the news organization because more than 100 persons will attend and the cost of the ticket does not exceed $375. However, if the invitation were extended to the employee and an accompanying guest, the employee's guest could not be authorized to attend for free because the market value of the gift of free attendance would exceed $375.

Example 5 to paragraph (g): An employee of the Department of Energy (DOE) and his spouse have been invited by a major utility executive to a small dinner party. A few other officials of the utility and their spouses or other guests are also invited, as is a representative of a consumer group concerned with utility rates and her spouse. The DOE official believes the dinner party will provide him an opportunity to socialize with and get to know those in attendance. The employee may not accept the free invitation under this exception, even if his attendance could be determined to be in the interest of the agency. The small dinner party is not a widely attended gathering. Nor could the employee be authorized to accept even if the event were instead a corporate banquet to which forty company officials and their spouses or other guests were invited. In this second case, notwithstanding the larger number of persons expected (as opposed to the small dinner party just noted) and despite the presence of the consumer group representative and her spouse who are not officials of the utility, those in attendance would still not represent a diversity of views or interests. Thus, the company banquet would not qualify as a widely attended gathering under those circumstances either.

Example 6 to paragraph (g): An Assistant U.S. Attorney is invited to attend a luncheon meeting of a local bar association to hear a distinguished judge lecture on cross-examining expert witnesses. Although members of the bar association are assessed a $15 fee for the meeting, the Assistant U.S. Attorney may accept the bar association's offer to attend for free, even without a determination of agency interest. The gift can be accepted under the $20 gift exception at paragraph (a) of this section.

Example 7 to paragraph (g): An employee of the Department of the Interior authorized to speak on the first day of a four-day conference on endangered species may accept the sponsor's waiver of the conference fee for the first day of the conference under § 2635.203(b)(8). If the conference is widely attended, the employee may be authorized to accept the sponsor's offer to waive the attendance fee for the remainder of the conference if the agency designee has made a written determination that attendance is in the agency's interest.

Example 8 to paragraph (g): A military officer has been approved to attend a widely attended gathering, pursuant to paragraph (g) of this section, that will be held in the same city as the officer's duty station. The defense contractor sponsoring the event has offered to transport the officer in a limousine to the event. The officer may not accept the offer of transportation because the definition of ''free attendance'' set forth in § 2635.203(g) excludes travel, and the market value of the transportation would exceed $20.

(h) *Social invitations.* An employee may accept food, refreshments, and entertainment, not including travel or lodgings, for the employee and an accompanying spouse or other guests, at a social event attended by several persons if:

(1) The invitation is unsolicited and is from a person who is not a prohibited source;

(2) No fee is charged to any person in attendance; and

(3) If either the sponsor of the event or the person extending the invitation to the employee is not an individual, the agency designee has made a written determination after finding that the employee's attendance would not cause a reasonable person with knowledge of the relevant facts to question the employee's integrity or impartiality, consistent with § 2635.201(b).

Example 1 to paragraph (h): An employee of the White House Press Office has been invited to a social dinner for current and former White House Press Officers at the home of an individual who is not a prohibited source. The employee may attend even if she is being invited because of her official position.

(i) *Meals, refreshments, and entertainment in foreign areas.* An employee assigned to duty in, or on official travel to, a foreign area as defined in 41 CFR 300–3.1 may accept unsolicited food, refreshments, or entertainment in the course of a breakfast, luncheon, dinner, or other meeting or event provided:

(1) The market value in the foreign area of the food, refreshments or entertainment provided at the meeting or event, as converted to U.S. dollars, does not exceed the per diem rate for the foreign area specified in the U.S. Department of State's Maximum Per Diem Allowances for Foreign Areas, Per Diem Supplement Section 925 to the Standardized Regulations (GC–FA), available on the Internet at *www.state.gov;*

(2) There is participation in the meeting or event by non-U.S. citizens or by representatives of foreign governments or other foreign entities;

(3) Attendance at the meeting or event is part of the employee's official duties to obtain information, disseminate information, promote the export of U.S. goods and services, represent the United States, or otherwise further programs or operations of the agency or the U.S. mission in the foreign area; and

(4) The gift of meals, refreshments, or entertainment is from a person other than a foreign government as defined in 5 U.S.C. 7342(a)(2).

Example 1 to paragraph (i): A number of local business owners in a developing country are eager for a U.S. company to locate a manufacturing facility in their province. An official of the Overseas Private Investment Corporation may accompany the visiting vice president of the U.S. company to a dinner meeting hosted by the business owners at a province restaurant where the market value of the food and refreshments does not exceed the per diem rate for that country.

(j) *Gifts to the President or Vice President.* Because of considerations relating to the conduct of their offices, including those of protocol and etiquette, the President or the Vice President may accept any gift on his or her own behalf or on behalf of any family member, provided that such acceptance does not violate § 2635.205(a) or (b), 18 U.S.C. 201(b) or 201(c)(3), or the Constitution of the United States.

(k) *Gifts authorized by supplemental agency regulation.* An employee may accept any gift when acceptance of the gift is specifically authorized by a supplemental agency regulation issued with the concurrence of the Office of Government Ethics, pursuant to § 2635.105.

(l) *Gifts accepted under specific statutory authority.* The prohibitions on acceptance of gifts from outside sources contained in this subpart do not apply to any item which a statute specifically authorizes an employee to accept. Gifts which may be accepted by an employee under the authority of specific statutes include, but are not limited to:

(1) Free attendance, course or meeting materials, transportation, lodgings, food and refreshments or reimbursements therefor incident to training or meetings when accepted by the employee under the authority of 5 U.S.C. 4111. The employee's acceptance must be approved by the agency in accordance with part 410 of this title; or

(2) Gifts from a foreign government or international or multinational organization, or its representative, when accepted by the employee under the authority of the Foreign Gifts and Decorations Act, 5 U.S.C. 7342. As a condition of acceptance, an employee must comply with requirements imposed by the agency's regulations or procedures implementing that Act.

(m) *Gifts of informational materials.* (1) An employee may accept unsolicited gifts of informational materials, provided that:

(i) The aggregate market value of all informational materials received from any one person does not exceed $100 in a calendar year; or

(ii) If the aggregate market value of all informational materials from the same person exceeds $100 in a calendar year, an agency designee has made a written determination after finding that acceptance by the employee would not be inconsistent with the standard set forth in § 2635.201(b).

(2) *Informational materials* are writings, recordings, documents, records, or other items that:

(i) Are educational or instructive in nature;

(ii) Are not primarily created for entertainment, display, or decoration; and

(iii) Contain information that relates in whole or in part to the following categories:

(A) The employee's official duties or position, profession, or field of study;

(B) A general subject matter area, industry, or economic sector affected by or involved in the programs or operations of the agency; or

(C) Another topic of interest to the agency or its mission.

Example 1 to paragraph (m): An analyst at the Agricultural Research Service receives an edition of an agricultural research journal in the mail from a consortium of private farming operations concerned with soil toxicity. The journal edition has a market value of $75. The analyst may accept the gift.

Example 2 to paragraph (m): An inspector at the Mine Safety and Health Administration receives a popular novel with a market value of $25 from a mine operator. Because the novel is primarily for entertainment purposes, the inspector may not accept the gift.

Example 3 to paragraph (m): An employee at the Department of the Army is offered an encyclopedia on cyberwarfare from a prohibited source. The cost of the encyclopedia is far in excess of $100. The agency designee determines that acceptance of the gift would be inconsistent with the standard set out in § 2635.201(b). The employee may not accept the gift under paragraph (m) of this section.

§ 2635.205 Limitations on use of exceptions.

Notwithstanding any exception provided in this subpart, other than § 2635.204(j), an employee may not:

(a) Accept a gift in return for being influenced in the performance of an official act;

(b) Use, or permit the use of, the employee's Government position, or any authority associated with public office, to solicit or coerce the offering of a gift;

(c) Accept gifts from the same or different sources on a basis so frequent that a reasonable person would be led to believe the employee is using the employee's public office for private gain;

Example 1 to paragraph (c): A purchasing agent for a Department of Veterans Affairs medical center routinely deals with representatives of pharmaceutical manufacturers who provide information about new company products. Because of his crowded calendar, the purchasing agent has offered to meet with manufacturer representatives during his lunch hours Tuesdays through Thursdays, and the representatives routinely arrive at the employee's office bringing a sandwich and a soft drink for the employee. Even though the market value of each of the lunches is less than $6 and the aggregate value from any one manufacturer does not exceed the $50 aggregate limitation in § 2635.204(a) on gifts of $20 or less, the practice of accepting even these modest gifts on a recurring basis is improper.

(d) Accept a gift in violation of any statute; relevant statutes applicable to all employees include, but are not limited to:

(1) 18 U.S.C. 201(b), which prohibits a public official from, directly or indirectly, corruptly demanding, seeking, receiving, accepting, or agreeing to receive or accept anything of value personally or for any other person or entity in return for being influenced in the performance of an official act; being influenced to commit or aid in committing, or to collude in, or allow, any fraud, or make opportunity for the commission of any fraud, on the United States; or for being induced to do or omit to do any action in violation of his or her official duty. As used in 18 U.S.C. 201(b), the term ''public official'' is broadly construed and includes regular and special Government employees as well as all other Government officials; and

(2) 18 U.S.C. 209, which prohibits an employee, other than a special Government employee, from receiving any salary or any contribution to or supplementation of salary from any source other than the United States as compensation for services as a Government employee. The statute contains several specific exceptions to this general prohibition, including an exception for contributions made from the treasury of a State, county, or municipality;

(e) Accept a gift in violation of any Executive Order; or

(f) Accept any gift when acceptance of the gift is specifically prohibited by a supplemental agency regulation issued with the concurrence of the Office of Government Ethics, pursuant to § 2635.105.

§ 2635.206 Proper disposition of prohibited gifts.

(a) Unless a gift is accepted by an agency acting under specific statutory authority, an employee who has received a gift that cannot be accepted under this subpart must dispose of the gift in accordance with the procedures set forth in this section. The employee must promptly complete the authorized disposition of the gift. The obligation to dispose of a gift that cannot be accepted under this subpart is independent of an agency's decision regarding corrective or disciplinary action under § 2635.106.

(1) *Gifts of tangible items.* The employee must promptly return any tangible item to the donor or pay the donor its market value; or, in the case of a tangible item with a market value of $100 or less, the employee may destroy the item. An employee who cannot ascertain the actual market value of an item may estimate its market value by reference to the retail cost of similar items of like quality.

Example 1 to paragraph (a)(1): A Department of Commerce employee received a $25 T-shirt from a prohibited source after providing training at a conference. Because the gift would not be permissible under an exception to this subpart, the employee must either return or destroy the T-shirt or promptly reimburse the donor $25. Destruction may be carried out by physical destruction or by permanently discarding the T-shirt by placing it in the trash.

Example 2 to paragraph (a)(1): To avoid public embarrassment to the seminar sponsor, an employee of the National Park Service did not decline a barometer worth $200 given at the conclusion of his speech on Federal lands policy. To comply with this section, the employee must either promptly return the barometer or pay the donor the market value of the gift. Alternatively, the National Park Service may choose to accept the gift if permitted under specific statutory gift acceptance authority. The employee may not destroy this gift, as the market value is in excess of $100.

(2) *Gifts of perishable items.* When it is not practical to return a tangible item in accordance with paragraph (a)(1) of this section because the item is perishable, the employee may, at the discretion of the employee's supervisor or the agency designee, give the item to an appropriate charity, share the item within the recipient's office, or destroy the item.

Example 1 to paragraph (a)(2): With approval by the recipient's supervisor, a floral arrangement sent by a disability claimant to a helpful employee of the Social Security Administration may be placed in the office's reception area.

(3) *Gifts of intangibles.* The employee must promptly reimburse the donor the market value for any entertainment, favor, service, benefit or other intangible. Subsequent reciprocation by the employee does not constitute reimbursement.

Example 1 to paragraph (a)(3): A Department of Defense employee wishes to attend a charitable event to which he has been offered a $300 ticket by a prohibited source. Although his attendance is not in the interest of the agency under § 2635.204(g), he may attend if he reimburses the donor the $300 face value of the ticket.

(4) *Gifts from foreign governments or international organizations.* The employee must dispose of gifts from foreign governments or international organizations in accordance with 41 CFR part 102–42.

(b) An agency may authorize disposition or return of gifts at Government expense. Employees may use penalty mail to forward reimbursements required or permitted by this section.

(c) An employee who, on his or her own initiative, promptly complies with the requirements of this section will not be deemed to have improperly accepted an unsolicited gift. An employee who promptly consults his or her agency ethics official to determine whether acceptance of an unsolicited gift is proper and who, upon the advice of the ethics official, returns the gift or otherwise disposes of the gift in accordance with this section, will be considered to have complied with the requirements of this section on the employee's own initiative.

(d) Employees are encouraged to record any actions they have taken to properly dispose of gifts that cannot be accepted under this subpart, such as by sending an electronic mail message to the appropriate agency ethics official or the employee's supervisor.

[FR Doc. 2016–27036 Filed 11–17–16; 8:45 am]

BILLING CODE 6345–03–P

DEPARTMENT OF AGRICULTURE

Commodity Credit Corporation

7 CFR Part 1471

RIN 0551–AA90

Pima Agriculture Cotton Trust Fund and Agriculture Wool Apparel Manufacturers Trust Fund

AGENCY: Foreign Agricultural Service and Commodity Credit Corporation (CCC), USDA.

ACTION: Final rule.

SUMMARY: This final rule makes amendments to the final rule, with request for comments, published in the **Federal Register** on March 9, 2015, that established regulations for the Pima Agriculture Cotton Trust Fund (Agriculture Pima Trust) and the Agriculture Wool Apparel Manufacturers Trust Fund (Agriculture Wool Trust) programs. This final rule is amended based on comments received and to add details for the Refund of Duties Paid on Imports of Certain Wool Products (Wool Duty Refund) payment. The administration of the Wool Duty Refund payment was transferred to the United States Department of Agriculture (USDA) beginning in calendar year (CY) 2016 and assigned to the Foreign Agricultural Service (FAS). It was previously administered by the Customs and Border Protection Agency of the Department of Homeland Security.

DATES: This final rule is effective November 18, 2016.

FOR FURTHER INFORMATION CONTACT: Peter W. Burr, Import Policies and Export Reporting Division, Office of Trade Programs, Foreign Agricultural Service, USDA; email: *pimawool@fas.usda.gov,* 202–720–3274.

SUPPLEMENTARY INFORMATION:

Background

On March 9, 2015, FAS published a final rule, with request for comments, in the **Federal Register** (80 FR 12321) for the Agriculture Pima Trust and the Agriculture Wool Trust programs. The final rule, with request for comments, was published under RIN 0551–AA86. The final rule, with request for comments, established regulations and sought comments for the Agriculture Pima Trust program and for three of the four payments under the Agriculture Wool Trust program. The Agriculture Pima Trust and Agriculture Wool Trust programs were established in the Agricultural Act of 2014 (Farm Bill). The Farm Bill transferred to USDA the responsibility for administering the Agriculture Pima Trust and three of the four payments under the Agriculture Wool Trust beginning in 2015, but transferred the fourth payment, the Wool Duty Refund, beginning in 2016.

Discussion of Comments

The following is a summary and discussion of the comments received relative to the Agriculture Pima Trust and the Agriculture Wool Trust programs along with the reasoning for the revisions made.

General

A commenter suggested that applicants not be required as noted in § 1471.1(b)(3)(iii), § 1471.1(b)(4), § 1471.10(b)(3)(iii), and § 1471.10(b)(4), to annually file IRS forms W–9 (U.S. person or resident alien) or the 1199A (direct deposit) with an application for either the Agriculture Pima Trust or Agriculture Wool Trust programs unless a change in the applicant's W–9 or 1199A information had occurred when compared to their previous year's application. This was deemed to be reasonable. Beginning in 2017, IRS forms W–9 and 1199A will only need to be filed if changes in the information have occurred.

A commenter noted that a technical correction is necessary in paragraphs (1) and (2) of § 1471.2(c) by closing the parentheticals after the word ''insurance.'' This correction will be made.

Payments to Manufacturers of Certain Worsted Wool Fabrics

A commenter identified an error common to paragraphs (b)(1)(ii) and (b)(2)(ii) of § 1471.11, Payments to manufacturers of certain worsted wool fabrics. The payment formula for payments to eligible persons is provided for under this section. The payment formula mistakenly states in paragraph (ii) that payments will be calculated based on the eligible person's production in the preceding year. However, the payments are actually based on the eligible person's production of qualifying worsted wool fabric during calendar years 1999, 2000, and 2001. This correction will be made.

Free Trade Zones

A commenter suggested that the scope of the monetization of the wool tariff rate quota payment as noted under § 1471.13(a)(2)(i) be expanded to include eligible entities, that are manufacturers and would otherwise be eligible for monetization payments, that import qualifying worsted wool into a free trade zone (FTZ), cut the wool and use it to make worsted wool suits for men and boys within the FTZ.

The monetization payment requires that the eligible entities receiving a monetization payment (1) import into the Customs territory of the United States the qualifying worsted wool directly or indirectly; (2) manufacture in the United States the qualifying worsted wool into worsted wool suits for men and boys; and (3) own the worsted wool at the time it's cut and manufactured.

An entity that manufactures the suits in an FTZ and does not export from the FTZ into the Customs territory of the United States the qualifying worsted wool directly or indirectly, does not qualify for this benefit because by definition the entity avoided paying the import duty on the qualifying worsted wool. However, an eligible entity that manufacturers the suits in an FTZ and exports into the Customs territory of the United States the qualifying worsted wool directly or indirectly and thus pays the import duty on the qualifying worsted wool, does qualify for this benefit. For the purpose of the monetization payment, the worsted wool suits for men and boys are manufactured in the U.S. and all environmental, worker safety, and wage protection laws, etc., would apply to this manufacturer.

USDA will also broaden the scope of eligible entities as it pertains to the wool yarn, wool fiber, and wool top compensation payment found at § 1471.14(a)(2)(i) to include those operating within a FTZ.

Definition of Eligible Person

A commenter suggested that the definition of an eligible person found at § 1471.13(a)(2)(i) in the monetization of the wool tariff rate quota payment be modified to allow an eligible person to claim the annual dollar value and quantity of imported qualifying worsted wool fabric cut and sewn if the eligible person owned the wool at the time it was cut and sewn, whether the person actually cut and sewed the imported qualifying worsted wool or another person cut and sewed the wool on behalf of the eligible person. This was deemed reasonable and is already allowed under § 1471.13(d)(3)(i)(A) and (d)(3)(ii)(A).

USDA will also make this change as it pertains to the wool yarn, wool fiber, and wool top duty compensation payment found at § 1471.14(a)(2)(i).

Reporting of Direct Imports

A commenter suggested that applicants for the monetization of the wool tariff rate quota payment not be required to include direct imports on their annual application for this payment. The commenter's suggestion was based on their observance that countries of origin of imported qualifying worsted wool by direct importers is included on the Customs and Border Protection (CBP) form #7501, which is provided to the Secretary of Treasury every year, and thus it was redundant to also require this information to be included on the affirmation part of the annual application. Even though this information is provided to CBP each year, USDA will maintain the requirement as found at § 1471.13(d)(2)(iii)(A) and (B) that applicants for the monetization of the wool tariff rate quota payment include their direct and indirect imports on their annual application. Including direct and indirect imports on the application for this payment will make it easier for USDA to process the annual payments and to distribute them in a timely manner.

Importers Versus Manufacturers

Regarding the monetization of the wool tariff rate quota payment, found at § 1471.13(a)(2), a commenter suggested that the definitions of eligible person and qualifying worsted wool, a provision eliciting specific business information, and the scope of the affirmation, be expanded to include all importers of qualifying worsted wool suitable for worsted wool suits, as opposed to importers of qualifying worsted wool that actually used the wool to make suits for men or boys. To support the commenter's position, the commenter cited statutory references to types of worsted wool fabrics categorized under the harmonized tariff schedule (HTS). However the commenter conflates statutory provisions authorizing the tariffs for HTS categories of worsted wool suitable for wool suits with defining the universe of eligible manufacturers who import qualifying worsted wool and are eligible for payments under this program. The wool tariff rate quota administered by the Secretary of Commerce, until its statutory sunset in 2014, in fact required that to benefit from the tariff reduction, the worsted wool had to be actually used for worsted wool suits. This monetization program provides payments to manufacturers who formerly benefitted from the tariff reduction. The requirement in the monetization payment that the qualifying worsted wool must be used by the manufacturer receiving the payment to make suits for men and boys will remain unchanged.

A commenter made a suggestion regarding the wool yarn, wool fiber, and wool top duty compensation payment found at § 1471.14(a)(2) that is similar to the comment above. The commenter suggested that the definitions of eligible person and qualifying wool, a provision eliciting specific business information, and the scope of the affirmation, be expanded from manufacturers that directly or indirectly imported qualifying wool and manufactured the qualifying wool, to include all importers of qualifying wool (whether or not the importer was also the manufacturer of the wool). To support this position, the commenter referred to statutory authority that did not require importers of qualifying wool to also be manufacturers of the qualifying wool. The commenter further stated that the wool duty refund program, of which only manufacturers of qualifying wool have participated, did not impose the requirement that the entity actually manufacture the qualifying wool. However the commenter is incorrect about what the statutory authority actually provides, and conflates extension of the duty suspension (that was applicable to all importers, regardless of whether they also manufactured men's and boy's wool suits) in section 5102 of the Trade Act of 2002, Public Law 107–210 and the wool duty refund payment program (that applied only to manufacturers of men's and boy's wool suits) in section 5101 of the Trade Act of 2002. The duty refund program administered by the U.S. Customs Service and by Customs and Border Protection in the Department of Homeland Security from 2002–2014 required that the importer must also be the manufacturer of the qualifying wool. The requirements in the wool yarn, wool fiber, and wool top duty compensation payment that the qualifying wool must be imported and must also be used for further manufacturing by the importing manufacturer will remain unchanged.

Refund of Duties Paid on Imports of Certain Wool Products

The Wool Duty Refund payment found at § 1471.12 was administered by the Department of Homeland Security's Customs and Border Protection (CBP) through 2015. In the Farm Bill, the Wool Duty Refund payment was established for the year 2016 through 2019 and was transferred to USDA. The Wool Duty Refund payment is open to U.S. entities that manufactured certain wool articles made with certain imported wool products during calendar years 2000, 2001 and 2002; received a 2005 payment under section 505 of the Trade and Development Act of 2000; and as of January 1st of the payment year, continues to be a manufacturer in the U.S. as provided for in Section 505(a) of the Trade and Development Act of 2000. FAS will administer the Wool Duty Refund payment for 2016–2019 exactly the same as it was administered by CBP.

Executive Order 12630

This Executive Order requires careful evaluation of governmental actions that interfere with constitutionally protected property rights. This rule does not interfere with any property rights and, therefore, does not need to be evaluated on the basis of the criteria outlined in Executive Order 12630.

Executive Order 12866

This final rule is issued in conformance with Executive Order 12866 and Administrative Procedure Act (5 U.S.C. 553). It has been determined to be not significant for the purposes of Executive Order 12866 and was not reviewed by OMB for this purpose. A cost-benefit assessment of this rule was not completed.

Executive Order 12372

This final rule is not subject to Executive Order 12372, which requires intergovernmental consultation with State and local officials. See the notice related to 7 CFR part 3015, subpart V, published at 48 FR 29115 (June 24, 1983).

Executive Order 12988

This final rule has been reviewed in accordance with Executive Order 12988. This rule would not preempt State or local laws, regulations, or policies unless they present an irreconcilable conflict with this rule. This rule would not be retroactive.

Executive Order 13132

This final rule has been reviewed under Executive order 13132, ''Federalism.'' The policies contained in this final rule do not have any substantial direct effect on States, on the relationship between the Federal government and the States, or on the distribution of power and responsibilities among the various levels of government, nor does this final rule impose substantial direct compliance costs on State and local governments. Therefore, consultation with the States is not required.

Executive Order 13175

This final rule has been reviewed for compliance with E.O. 13175. The policies contained in this final rule do not have tribal implications that preempt tribal law.

Regulatory Flexibility Act

The Regulatory Flexibility Act does not apply to this final rule because FAS is not required by 5 U.S.C. 553 or any other law to publish a notice of proposed rulemaking with respect to the subject matter of this final rule.

Civil Rights Impact Statement

No major civil rights impact is likely to result from the announcement of this final rule. It will not have a negative civil rights impact on very-low income, low income, moderate income, and minority populations.

Environmental Assessment

The environmental impacts of this rule have been considered in a manner consistent with the provisions of the National Environmental Policy Act (NEPA, 42 U.S.C. 4321–4347), the regulations of the Council on Environmental Quality (40 CFR parts 1500–1508), and FAS regulations for compliance with NEPA (7 CFR part 799). FAS has determined that NEPA does not apply to this final rule and that no environmental assessment or environmental impact statement will be prepared.

Unfunded Mandates Reform Act

This final rule does not impose any enforceable duty or contain any unfunded mandate as described under Title II of the Unfunded Mandates Reform Act of 1995 (UMRA). Therefore, this rule is not subject to the requirements of sections 202 and 205 of UMRA.

E-Government Act Compliance

FAS is committed to complying with the E-Government Act to promote the use of the Internet and other information technologies to provide increased opportunities for citizen access to Government information, services, and for other purposes. The forms, regulations, and other information collection activities required to be utilized by a person subject to this final rule are available at: *http://www.fas.usda.gov.*

List of Subjects in 7 CFR Part 1471

Agricultural commodities, imports.

Accordingly, 7 CFR part 1471 is amended as follows:

PART 1471—PIMA AGRICULTURE COTTON TRUST FUND (AGRICULTURE PIMA TRUST) AND AGRICULTURE WOOL APPAREL MANUFACTURERS TRUST FUND (AGRICULTURE WOOL TRUST)

■ 1. The authority citation for part 1471 continues to read as follows:

Authority: Sections 501–506, Pub. L. 106–200, (114 Stat. 299–304); Section 4002, Pub. L. 108–429 (7 U.S.C. 7101 note); Section 1633, Pub. L. 109–280 (120 Stat. 1166); Section 325, Pub. L. 110–343 (122 Stat. 3875); Sections 12314 and 12315, Pub. L. 113–79 (7 U.S.C. 2101 note and 7101 note).

Subpart A—Agriculture Pima Trust

■ 2. Amend § 1471.1 to revise paragraphs (b)(3)(iii) and (b)(4) to read as follows:

§ 1471.1 Provisions common to this subpart.

* * * * *

(b) * * *

(3) * * *

(iii) A W–9 providing the Federal tax identification number of the person (if the information required by Form W–9 has changed since the previous application).

(4) Standard Form 1199A. Every person claiming a payment must provide Standard Form 1199A, a direct deposit sign-up form, to facilitate any transfer of funds (if the information required by Form 1199A has changed since the previous application).

* * * * *

§ 1471.2 [Amended]

■ 3. Amend § 1471.2(c)(1) and (2) by removing "(excluding duty, shipping, and insurance" and adding in its place "(excluding duty, shipping, and insurance)".

* * * * *

■ 4. Revise § 1471.5 to read as follows:

§ 1471.5 Affidavit of pima cotton trade associations.

In addition to applicable information requirements in § 1471.1, trade associations filing a claim for a payment must electronically provide a statement which states that during the calendar year immediately preceding the payment they were, as determined by the Secretary, a domestic nationally recognized association established and operating for the promotion of pima cotton for domestic use in textile and apparel goods.

Subpart B—Agriculture Wool Trust

■ 5. Amend § 1471.10 to revise paragraphs (b)(3)(iii) and (b)(4) to read as follows:

§ 1471.10 Provisions common to this subpart.

* * * * *

(b) * * *

(3) * * *

(iii) A W–9 providing the Federal tax identification number of the person (if the information required by Form W–9 has changed since the previous application).

(4) Every person claiming a payment must provide Standard Form 1199A, a direct deposit sign-up form, to facilitate any transfer of funds (if the information required by Form 1199A has changed since the previous application).

* * * * *

■ 6. Amend § 1471.11 to revise paragraphs (b)(1)(ii) and (b)(2)(ii) to read as follows:

§ 1471.11 Payments to manufacturers of certain worsted wool fabrics.

* * * * *

(b) * * *

(1) * * *

(ii) *Payment amounts.* A total of $2,666,000 will be allocated annually among eligible persons covered by this paragraph on the basis of the percentage of each eligible person's total production (actual production, not estimates) of qualifying worsted wool fabric described in paragraph (b)(1)(i) of this section for each of the calendar years 1999, 2000, and 2001 in relation to the total production of such fabric by all eligible persons who qualify for payments under this paragraph for each of the calendar years 1999, 2000, and 2001.

* * * * *

(2) * * *

(ii) *Payment amounts.* A total of $2,666,000 will be allocated annually among eligible persons covered by this paragraph on the basis of the percentage of each eligible person's total production (actual production, not estimates) of qualifying worsted wool fabric described in paragraph (b)(2)(i) of this section for each of the calendar years 1999, 2000, and 2001 in relation to the total production of such fabric by all eligible persons who qualify for payments under this paragraph for each of the calendar years 1999, 2000, and 2001.

* * * * *

■ 7. Add § 1471.12 to read as follows:

§ 1471.12 Refund of duties paid on imports of certain wool products.

(a) *Eligible wool.* Eligible wool under the Duty Refund program means imported wool yarn of the kind described in section 505 of the Trade and Development Act of 2000 Public Law 106–200 (May 18, 2000).

(b) *Payments*—(1) *Eligibility.* Persons eligible for a Duty Refund payment are manufacturers who, in the year immediately preceding the payment, were actively engaged in manufacturing wool (as determined by FAS), and in calendar years 2000, 2001, and 2002—

(i) Imported eligible wool directly or indirectly; and

(ii) Used the imported wool to make men's or boy's suits; or

(iii) Further manufactured the eligible imported wool.

(2) *Payment amount.* Persons eligible for a Duty Refund payment shall be paid the same amounts that were made to the persons by CBP through FY 2015.

■ 8. Amend § 1471.13 to revise paragraphs (a)(2)(i), (d)(3)(i)(A), and (d)(3)(ii)(A) to read as follows:

§ 1471.13 Monetization of the wool tariff rate quota.

(a) * * *

(2) * * *

(i) *In general.* The term ''eligible person'' means a manufacturer (or a successor-in-interest to the manufacturer) in the U.S. or in a Foreign-Trade Zone authorized under the Foreign-Trade Zones Act of 1934 (19 U.S.C. 81a–81u) during the calendar year immediately preceding the payment that:

(A) Imported qualifying worsted wool fabric; and

(B) Used the imported qualifying worsted wool fabric directly or had another person use the qualifying worsted wool fabric providing the eligible person owned the qualifying worsted wool fabric at the time it was used:

(*1*) In the case of wool of the kind described in subheadings 9902.51.11 or 9902.51.15 of the 2014 HTS, to produce worsted wool suits, suit-type jackets and trousers for men and boys; or

(*2*) In the case of wool fabric of the kind described in subheading 9902.51.16 of the 2014 HTS, used such wool fabric in manufacturing.

* * * * *

(d) * * *

(3) * * *

(i) * * *

(A) *In general.* When reporting the annual dollar value and quantity of imported qualifying worsted wool fabric, an eligible person may either have cut and sewn the wool on its own behalf or had another person cut and sew the wool on behalf of the eligible person, provided the eligible person owned the wool at the time it was cut and sewn.

* * * * *

(ii) * * *

(A) *In general.* When reporting the annual dollar value and quantity of imported qualifying worsted wool fabric, an eligible person may either have manufactured the wool on its own behalf or had another person manufacture the wool on behalf of the eligible person, provided the eligible person owned the wool at the time of manufacture.

* * * * *

■ 9. Amend § 1471.14 to revise paragraph (a)(2)(i) to read as follows:

§ 1471.14 Wool yarn, wool fiber, and wool top duty compensation payment.

(a) * * *

(2) * * *

(i) *In general.* The term ''eligible person'' means a manufacturer (or a successor-in-interest to the manufacturer) in the U.S. or in a Foreign-Trade Zone authorized under the Foreign-Trade Zones Act of 1934 (19 U.S.C. 81a–81u) during the calendar year immediately preceding the payment that

(A) Imported qualifying wool; and

(B) Manufactured the qualifying wool directly or had another person manufacture the qualifying wool providing the eligible person owned the qualifying wool at the time it was manufactured.

* * * * *

Dated: November 2, 2016.

Philip C. Karsting,

Administrator, Foreign Agricultural Service, and Vice President, Commodity Credit Corporation.

[FR Doc. 2016–27661 Filed 11–17–16; 8:45 am]

BILLING CODE 3410–10–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2016–9000; Directorate Identifier 2016–CE–027–AD; Amendment 39–18713; AD 2016–23–06]

RIN 2120–AA64

Airworthiness Directives; Various Aircraft Equipped With BRP-Powertrain GmbH & Co KG 912 A Series Engine

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for various aircraft equipped with a BRP-Powertrain GmbH & Co KG (formerly Rotax Aircraft Engines) 912 A series engine. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as a manufacturing defect found in certain carburetor floats where an in-flight engine shutdown and forced landing could occur when the affected cylinder had reduced or blocked fuel supply. We are issuing this AD to require actions to address the unsafe condition on these products.

DATES: This AD is effective December 23, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 23, 2016.

ADDRESSES: You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2016–9000; or in person at Document Management Facility, U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.

For service information identified in this AD, contact BRP-Powertrain GmbH & Co. KG, Welser Strasse 32, A–4623 Gunskirchen, Austria; phone: +43 7246 601 0; fax: +43 7246 601 9130; Internet: *www.rotax-aircraft-engines.com.* You may view this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329–4148. It is also available on the Internet at *http://www.regulations.gov* by searching for Docket No. FAA–2016–9000.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329–4165; fax: (816) 329–4090; email: *jim.rutherford@faa.gov.*

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to various aircraft equipped with a BRP-Powertrain GmbH & Co KG (formerly Rotax Aircraft Engines) 912 A series engine. The NPRM was published in the **Federal Register** on September 8, 2016 (81 FR 62037). The NPRM proposed to correct an unsafe condition for the specified products and was based on mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country. The MCAI states:

Due to a quality escape in the manufacturing process of certain floats, Part Number (P/N) 861185, a partial separation of the float outer skin may occur during engine operation. Separated particles could lead to a restriction of the jets in the carburetor, possibly reducing or blocking the fuel supply to the affected cylinder.

This condition, if not detected and corrected, could lead to in-flight engine shutdown and forced landing, possibly resulting in damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, BRP-Powertrain published Alert Service Bulletin (ASB) ASB–912–069/ASB–914–051 (single document, hereafter referred to as 'the ASB' in this AD), providing instructions for identification and replacement of the affected parts.

For the reasons stated above, this AD required identification and replacement of the affected floats with serviceable parts.

This AD is republished to correct one typographical error in Table 2 of Appendix 2, and to include reference to revision 1 of the ASB in the Referenced Publications.

You may examine the MCAI on the Internet at *https://www.regulations.gov/document?D=FAA-2016-9000-0002.*

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

We reviewed BRP-Powertrain GmbH & CO KG Rotax Aircraft Engines BRP Alert Service Bulletin ASB–912–069R1/ASB–914–051R1 (co-published as one document), Revision 1, dated July 22, 2016. The service information describes procedures for identifying and replacing defective carburetor floats. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section of this AD.

Costs of Compliance

We estimate that this AD will affect 65 products of U.S. registry. We also estimate that it will take about 2 work-hours per product to comply with the basic requirements of this AD. The average labor rate is $85 per work-hour. Required parts will cost about $100 per product.

Based on these figures, we estimate the cost of this AD on U.S. operators to be $17,550, or $270 per product.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. ''Subtitle VII: Aviation Programs,'' describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in ''Subtitle VII, Part A, Subpart III, section 44701: General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2016–9000; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647–5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new AD:

2016–23–06 Various Aircraft: Amendment 39–18713; Docket No. FAA–2016–9000; Directorate Identifier 2016–CE–027–AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective December 23, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all serial numbers (S/N) of the airplanes listed in table 1 of paragraph (c) of this AD, certificated in any category, that incorporate one of the following:

(1) A BRP-Powertrain GmbH & Co KG (formerly Rotax Aircraft Engines) 912 A series engine having a serial number with a carburetor part number (P/N) and S/N listed in table 2 of paragraph (c) of this AD, installed as noted, in cylinder head position 1 through 4; or

(2) an engine that, after May 8, 2016, has had an affected float, P/N 861185, installed in service as part of the airframe. Affected floats were initially delivered between May 9, 2016, and July 17, 2016, and do not have three dots stamped on the surface, as shown in paragraph 3.3) of the Accomplishment/Instructions in Rotax Aircraft Engines BRP Alert Service Bulletin ASB–912–069R1/ASB–914–051R1 (co-published as one document), Revision 1, dated July 22, 2016. A certification document (*e.g.,* Form 1), delivery document or record of previous installation of the float are acceptable to determine an initial delivery on or before May 8, 2016.

TABLE 1 OF PARAGRAPH (C)—AFFECTED AIRPLANES

Type certificate holder	Aircraft model	Engine model
Aeromot-Indústria; Mecânico-Metalúrgica Ltda	AMT–200	912 A2
Diamond Aircraft Industries	HK 36 R "SUPER DIMONA"	912 A
DIAMOND AIRCRAFT INDUSTRIES GmbH	HK 36 TS and HK 36 TC	912 A3
Diamond Aircraft Industries Inc.	DA20–A1	912 A3
HOAC-Austria	DV 20 KATANA	912 A3
Iniziative Industriali Italiane S.p.A.	Sky Arrow 650 TC	912 A2
SCHEIBE-Flugzeugbau GmbH	SF 25C	912 A2, 912 A3

TABLE 2 OF PARAGRAPH (C)—AFFECTED CARBURETORS

Engine	Cylinder position	Carburetor P/N and S/N
912A1, 912A2, 912A3, 912A4	1 or 3	P/N 892500—S/Ns 161138 through 161143, 161483 through 161490, 161493 through 161507, 161516 through 161518, and 161526.
	2 or 4	P/N 892505—S/Ns 162193, 162194, 162196 through 162199, and 162205.

(d) Subject

Air Transport Association of America (ATA) Code 73: Engine—Fuel and Control.

(e) Reason

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as a manufacturing defect found in certain carburetor floats. We are issuing this AD to require actions to prevent the fuel supply to the affected cylinder from becoming reduced or blocked, which could cause an in-flight engine shutdown and result in a forced landing and damage to the airplane or injury to the occupants.

(f) Actions and Compliance

Unless already done, do the following actions:

(1) Within the next 25 hours time-in-service after December 23, 2016 (the effective date of this AD) or within the next 30 days after December 23, 2016 (the effective date of this AD), whichever occurs first, replace all affected floats with a serviceable float following paragraph (3) Accomplishment/Instructions in Rotax Aircraft Engines BRP Alert Service Bulletin ASB–912–069R1/ASB–914–051R1 (co-published as one document), Revision 1, dated July 22, 2016.

(2) As of December 23, 2016 (the effective date of this AD), do not install a float, P/N 861185, that does not have three dots stamped on the surface, as shown in paragraph (3.3) of the Accomplishment/Instructions in Rotax Aircraft Engines BRP Alert Service Bulletin ASB–912–069R1/ASB–914–051R1 (co-published as one document), Revision 1, dated July 22, 2016.

(g) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329–4165; fax: (816) 329–4090; email: *jim.rutherford@faa.gov.* Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) *Airworthy Product:* For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(h) Related Information

Refer to MCAI European Aviation Safety Agency (EASA) AD No.: 2016–0144, correction dated July 25, 2016, and BRP-Powertrain GmbH & CO KG Rotax Aircraft Engines BRP Alert Service Bulletin ASB–912–069/ASB–914–051 (co-published as one document), dated July 14, 2016, for related information. You may examine the MCAI on the Internet at *https://www.regulations.gov/document?D=FAA-2016-9000-0002.*

(i) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Rotax Aircraft Engines BRP Alert Service Bulletin ASB–912–069R1/ASB–914–051R1 (co-published as one document), Revision 1, dated July 22, 2016.

(ii) Reserved.

(3) For Rotax Aircraft Engines BRP service information identified in this AD, contact BRP-Powertrain GmbH & Co. KG, Welser Strasse 32, A–4623 Gunskirchen, Austria; phone: +43 7246 601 0; fax: +43 7246 601 9130; Internet: *www.rotax-aircraft-engines.com.*

(4) You may view this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329–4148. In addition, you can access this service information on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2016–9000.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued in Kansas City, Missouri, on November 7, 2016.

Pat Mullen,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–27444 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

15 CFR Part 744

[Docket No. 160106014–6728–04]

RIN 0694–AG82

Temporary General License: Extension of Validity

AGENCY: Bureau of Industry and Security, Commerce.

ACTION: Final rule.

SUMMARY: On March 24, 2016, the Bureau of Industry and Security (BIS) published a final rule, Temporary General License. The March 24 final rule created a temporary general license that restored, for a specified time period, the licensing requirements and policies under the Export Administration Regulations (EAR) for exports, reexports, and transfers (in-country) as of March 7, 2016, to two entities (ZTE Corporation and ZTE Kangxun) that were added to the Entity List on March 8, 2016. At this time, the U.S. Government has decided to extend the temporary general license until February 27, 2017. In order to implement this decision, this final rule revises the temporary general license to remove the expiration date of November 28, 2016, and to substitute the date of February 27, 2017. This final rule makes no other changes to the EAR.

DATES: This rule is effective November 18, 2016 through February 27, 2017. The expiration date of the final rule published on March 24, 2016 (81 FR 15633) is extended until February 27, 2017.

FOR FURTHER INFORMATION CONTACT: Chair, End-User Review Committee, Office of the Assistant Secretary, Export Administration, Bureau of Industry and Security, Department of Commerce, Phone: (202) 482–5991, Email: *ERC@bis.doc.gov.*

SUPPLEMENTARY INFORMATION:

Background

On March 24, 2016, the Bureau of Industry and Security (BIS) published a final rule, Temporary General License (81 FR 15633). The March 24 final rule amended the EAR by adding Supplement No. 7 to part 744 to create a temporary general license that returned, until June 30, 2016, the licensing and other policies of the EAR regarding exports, reexports, and transfers (in-country) to Zhongxing Telecommunications Equipment (ZTE) Corporation and ZTE Kangxun to that which were in effect prior to their addition to the Entity List on March 8, 2016.

On June 28, 2016, BIS published a final rule, Temporary General License: Extension of Validity (81 FR 41799), which extended the validity of the temporary general license until August 30, 2016. On August 19, 2016, BIS published a final rule, Temporary General License: Extension of Validity (81 FR 55372), which extended, for a second time, the validity of the Temporary General License until November 28, 2016. Details regarding the scope of the listing are at 81 FR 12004 (Mar. 8, 2016), (''Additions to the Entity List''). Details regarding the Temporary General License can be found in the March 24 final rule and in Supplement No. 7 to Part 744—Temporary General License.

BIS issued the March 24 final rule, and the June 28 and August 19 extension of validity final rules, in connection with a request to remove or modify the listings. The March 24 final rule, and the June 28 and August 19 final rules, specified that the temporary general license was renewable if the U.S. Government determined, in its sole discretion, that ZTE Corporation and ZTE Kangxun were performing their undertakings to the U.S. Government in a timely manner and otherwise cooperating with the U.S. Government in resolving the matter which led to the two entities' listing.

At this time, the U.S. Government has decided to extend the temporary general license until February 27, 2017. In order to implement this U.S. Government decision, this final rule revises the temporary general license to remove the date of November 28, 2016, and substitute the date of February 27, 2017. This final rule makes no other changes to the EAR.

Export Administration Act

Although the Export Administration Act expired on August 20, 2001, the President, through Executive Order 13222 of August 17, 2001, 3 CFR, 2001 Comp., p. 783 (2002), as amended by Executive Order 13637 of March 8, 2013, 78 FR 16129 (March 13, 2013) and as extended by the Notice of August 4, 2016, 81 FR 52587 (August 8, 2016), has continued the Export Administration Regulations in effect under the International Emergency Economic Powers Act. BIS continues to carry out the provisions of the Export Administration Act, as appropriate and to the extent permitted by law, pursuant to Executive Order 13222, as amended by Executive Order 13637.

Rulemaking Requirements

1. Executive Orders 13563 and 12866 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This rule has been determined to be not significant for purposes of Executive Order 12866.

2. Notwithstanding any other provision of law, no person is required to respond to or be subject to a penalty for failure to comply with a collection of information, subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) (PRA), unless that collection of information displays a currently valid Office of Management and Budget (OMB) Control Number. This regulation involves collections previously approved by OMB under control number 0694–0088, Simplified Network Application Processing System, which includes, among other things, license applications and carries a burden estimate of 43.8 minutes for a manual or electronic submission. Total burden hours associated with the PRA and OMB control number 0694–0088 are not expected to increase as a result of this rule. You may send comments regarding the collection of information associated with this rule, including suggestions for reducing the burden, to Jasmeet K. Seehra, Office of Management and Budget (OMB), by email to *Jasmeet_K._Seehra@omb.eop.gov,* or by fax to (202) 395–7285.

3. This rule does not contain policies with Federalism implications as that term is defined in Executive Order 13132.

4. The provisions of the Administrative Procedure Act (5 U.S.C. 553) requiring notice of proposed rulemaking, the opportunity for public comment, and a delay in effective date are inapplicable because this regulation involves a military or foreign affairs function of the United States. (*See* 5

U.S.C. 553(a)(1)). If this rule were delayed to allow for notice and comment and a delay in effective date, then the national security and foreign policy objectives of this rule would be harmed. Because a notice of proposed rulemaking and an opportunity for public comment are not required to be given for this rule by 5 U.S.C. 553, or by any other law, the analytical requirements of the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.,* are not applicable. Accordingly, no regulatory flexibility analysis is required and none has been prepared.

List of Subject in 15 CFR Part 744

Exports, Reporting and recordkeeping requirements, Terrorism.

Accordingly, part 744 of the Export Administration Regulations (15 CFR parts 730 through 774) is amended as follows:

PART 744—[AMENDED]

■ 1. The authority citation for 15 CFR part 744 continues to read as follows:

Authority: 50 U.S.C. 4601 *et seq.;* 50 U.S.C. 1701 *et seq.;* 22 U.S.C. 3201 *et seq.;* 42 U.S.C. 2139a; 22 U.S.C. 7201 *et seq.;* 22 U.S.C. 7210; E.O. 12058, 43 FR 20947, 3 CFR, 1978 Comp., p. 179; E.O. 12851, 58 FR 33181, 3 CFR, 1993 Comp., p. 608; E.O. 12938, 59 FR 59099, 3 CFR, 1994 Comp., p. 950; E.O. 12947, 60 FR 5079, 3 CFR, 1995 Comp., p. 356; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13099, 63 FR 45167, 3 CFR, 1998 Comp., p. 208; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; E.O. 13224, 66 FR 49079, 3 CFR, 2001 Comp., p. 786; Notice of November 12, 2015, 80 FR 70667 (November 13, 2015); Notice of January 20, 2016, 81 FR 3937 (January 22, 2016); Notice of August 4, 2016, 81 FR 52587 (August 8, 2016); Notice of September 15, 2016, 81 FR 64343 (September 19, 2016).

Supplement No. 7 to Part 744—[Amended]

■ 2. In Supplement No. 7 to part 744, remove ''November 28, 2016'' and add in its place ''February 27, 2017''.

Dated: November 14, 2016.

Kevin J. Wolf,

Assistant Secretary for Export Administration.

[FR Doc. 2016–27772 Filed 11–17–16; 8:45 am]

BILLING CODE 3510–33–P

FEDERAL TRADE COMMISSION

16 CFR Part 455

RIN 3084–AB05

Used Motor Vehicle Trade Regulation Rule

AGENCY: Federal Trade Commission.

ACTION: Final rule.

SUMMARY: The Federal Trade Commission (''FTC'' or ''Commission'') amends the Used Motor Vehicle Trade Regulation Rule (''Rule'' or ''Used Car Rule''). The Final Rule adopts the following proposals: adding a Buyers Guide statement recommending that consumers obtain a vehicle history report (''VHR''), and directing them to an FTC website for more information about VHRs and safety recalls; revising the Buyers Guide statement describing the meaning of an ''As Is'' sale in which a dealer offers a vehicle for sale without a warranty; adding boxes to the front of the Buyers Guide where dealers can indicate additional warranty and service contract coverage; adding a Spanish statement to the English Buyers Guide advising consumers to ask for a copy of the Buyers Guide in Spanish if the dealer is conducting the sale in Spanish (and providing a Spanish translation of the optional consumer acknowledgment of receipt of the Buyers Guide); and adding air bags and catalytic converters to the list of major defects on the back of the Buyers Guide.

DATES: This Rule is effective on January 27, 2017.

ADDRESSES: Copies of this document are available on the Commission's website, *www.ftc.gov.*

FOR FURTHER INFORMATION CONTACT: John C. Hallerud, (312) 960–5634, Attorney, Midwest Region, Federal Trade Commission, 55 West Monroe Street, Suite 1825, Chicago, IL 60603.

SUPPLEMENTARY INFORMATION:

I. Background

The Used Car Rule requires dealers to display on used cars offered for sale a window sticker called a ''Buyers Guide'' containing warranty and other information. The Commission promulgated the Used Car Rule in 1984, and the Rule became effective in 1985.[1] One of the principal goals of the Used Car Rule is to prevent oral misrepresentations and unfair omissions of material facts by used car dealers concerning warranty coverage. To accomplish that goal, the Rule provides a uniform method for disclosing warranty information on the ''Buyers Guide.'' The Rule requires used car dealers to disclose on the Buyers Guide whether they are offering a used car for sale with a dealer's warranty and, if so, the basic terms, including the duration of coverage, the percentage of total repair costs to be paid by the dealer, and the exact systems covered by the warranty. The Rule additionally provides that the Buyers Guide disclosures are to be incorporated by reference into the sales contract, and are to govern in the event of an inconsistency between the Buyers Guide and the sales contract. The Rule requires Spanish language versions of the Buyers Guide when dealers conduct sales in Spanish. The Rule also requires other disclosures that must be printed directly on the Buyers Guide, including: a suggestion that consumers ask the dealer if a pre-purchase inspection is permitted; a warning against reliance on spoken promises that are not confirmed in writing; and a list of fourteen major systems of a used motor vehicle and the major defects that may occur in these systems (''List of Systems'').

In July 2008, the Commission commenced its periodic regulatory review of the Rule (''Regulatory Review'') to examine its efficacy, costs, and benefits, and to determine whether to retain, to modify, or to rescind the Rule.[2] The Commission also asked for public comments on the Spanish translation of the Buyers Guide, the List of Systems and defects on the back of the Buyers Guide, and whether to revise the Buyers Guide by adding boxes where dealers could disclose non-dealer warranties offered by third parties.[3] The Commission received twenty-five comments from twenty-one commenters, including an automobile auction firm, an automotive repair firm, an online seller of used cars, automobile dealers, individual consumers, a consumer protection attorney, a group of consumer advocacy organizations, national automobile dealers' associations, state automobile dealers' associations, suppliers of dealer forms, county consumer protection agencies, the National Association of Attorneys General, the International Association of Lemon Law Administrators, and the Wisconsin Department of Transportation.[4] Among other things, commenters recommended that the Commission require dealers to provide consumers with VHRs.[5]

In December 2012, the FTC issued a notice of proposed rulemaking (''NPRM'') with proposed changes to the Rule.[6] In the NPRM, the Commission proposed adding a statement to the Buyers Guide advising consumers about

[1] 49 FR 45692 (Nov. 19, 1984).

[2] 73 FR 42285 (July 21, 2008).

[3] 73 FR 42285.

[4] *https://www.ftc.gov/policy/public-comments/initiative-259; https://www.ftc.gov/policy/public-comments/initiative-294.*

[5] *https://www.ftc.gov/policy/public-comments/initiative-259; https://www.ftc.gov/policy/public-comments/initiative-294.*

[6] 77 FR 74746 (Dec. 17, 2012).

the availability of VHRs and directing consumers to an FTC website for more information about those reports; changing the statement on the Buyers Guide that describes the meaning of ''As Is'' when a dealer offers to sell a used vehicle without a warranty; and adding a statement, in Spanish, to the English Buyers Guide advising Spanish-speaking consumers to ask for a Spanish Buyers Guide if they could not read the English version. The NPRM also requested comments on revising the Buyers Guide to include non-dealer warranty boxes and a revised List of Systems that contained airbags and catalytic converters. In response to the NPRM, the Commission received nearly 150 comments from members of the public, including automobile dealers, consumer attorneys, consumer advocacy organizations, automobile dealer associations, providers of VHRs, legal aid agencies, consumer protection agencies, and state attorneys general.[7]

After reviewing the comments, the Commission published a supplemental notice of proposed rulemaking (''SNPRM'').[8] In the SNPRM, the Commission proposed additional modifications to address concerns raised by commenters and sought comments on alternative proposals and issues that commenters identified in response to the NPRM. The Commission proposed amending the Rule to require that dealers who had obtained a VHR on an individual vehicle indicate on the Buyers Guide that they had obtained such a report and would provide a copy to consumers who requested one. The proposal retained, with modifications, the statement proposed in the NPRM to encourage consumers to obtain VHRs, to search for safety recalls, and to visit a proposed FTC website for more information. The proposed amended Rule would not have required dealers to obtain VHRs and would not have mandated a specific type of VHR or designated a specific provider of the reports.

The Commission also proposed modifying the Buyers Guide statement that describes the meaning of an ''As Is'' sale in light of comments concerning a revision of the statement proposed in the NPRM. The ''As Is'' statement is meant to clarify that a dealer is offering the vehicle for sale without a warranty, *i.e.,* without any undertaking or promise by the dealer to be responsible for post-sale repairs to the vehicle. The Commission also sought comments on providing boxes on the front of the Buyers Guide where dealers could disclose manufacturer and other non-dealer warranties, a Spanish statement on the English Buyers Guide advising Spanish-speaking consumers to ask for a Spanish Buyers Guide, and a revision to the descriptive language on the ''Implied Warranties Only'' Buyers Guide.

After reviewing the entire record, the Commission declines to adopt the approach proposed in the SNPRM, which would have required dealers that had obtained a VHR to check a new Buyers Guide box indicating that they had obtained a VHR and would provide a copy upon request. Instead, similar to what was proposed in the NPRM, the Commission has decided to add a statement to the Buyers Guide encouraging consumers to seek vehicle history information and directing consumers to an FTC website for more information. The Commission is aware that the marketplace for vehicle history information is changing rapidly and will continue to monitor developments in this area.

The Commission also has decided to revise the ''As Is'' statement proposed in the SNPRM. The revised statement in the Final Rule is:

AS IS—NO DEALER WARRANTY

THE DEALER DOES NOT PROVIDE ANY WARRANTY FOR ANY REPAIRS AFTER SALE.

(See Figure 1). The Commission is also adopting the revised ''Implied Warranties Only'' disclosure proposed in the NPRM for use in jurisdictions that prohibit ''As Is'' used vehicle sales.[9] (Figure 2).

The Commission has decided to modify the Buyers Guide in other ways proposed in the NPRM and SNPRM. The modified Buyers Guide in the Final Rule includes boxes on the front of the Buyers Guide where dealers can disclose manufacturer and other non-dealer warranties. The Commission is also reformatting the Service Contract box on the front of the Buyers Guide to make it flush with the non-dealer warranty boxes.

The Commission is adding a statement in Spanish to the front of the English Buyers Guide. The statement alerts Spanish-speaking consumers who cannot read the English Buyers Guide to ask for a Spanish Buyers Guide, if the dealer conducts the sale in Spanish. The additional Spanish statement is not intended to change the Rule's existing requirement that dealers provide a Spanish Buyers Guide if the dealer conducts a sale in Spanish.

II. Basis for Final Rule and Analysis of Public Comments

The Commission received forty-one comments during the SNPRM comment period from groups and individuals. The Commission has considered those comments as well as the comments submitted in response to the NPRM and the 2008 Regulatory Review in promulgating the Final Rule. Commenters on the three notices include consumer advocacy groups, industry trade associations, state attorneys general (''State AGs''),[10] state regulatory agencies, attorneys who practice consumer law, and individual consumers.

A. Vehicle History Information

i. Commission Decision and Summary

The Commission has decided to modify the Buyers Guide by adding a statement that advises consumers to obtain VHRs and to visit an FTC website for more information. The Final Rule is similar to the approach proposed in the NPRM, in which the Commission proposed a Buyers Guide containing a statement that advised consumers to obtain VHRs and directed consumers to an FTC website for more information.[11] In the SNPRM, the Commission proposed an alternative approach that would have required dealers who had obtained VHRs to check a box so indicating and to provide a copy of the report to consumers upon request. As described in greater detail below, commenters provided a range of views about both proposals and discussed various other approaches to disclosing vehicle history information.

The informational approach to VHRs adopted here should help reduce deception and consumer injury that could result from undisclosed or deceptive disclosure of title brands or other pieces of problematic history. It

[7] Public comments on the NPRM are available at: *https://www.ftc.gov/policy/public-comments/initiative-460.*

[8] 79 FR 70804 (Nov. 28, 2014). Public comments on the SNPRM are available at: *https://www.ftc.gov/policy/public-comments/initiative-583.* Comments cited in this notice are identified by the name of the commenter (organization or individual) followed by the year of the comment. The designation (2015) identifies comments made in reference to the SNPRM and (2013) identifies comments made in reference to the NPRM (*e.g.,* Center for Auto Safety (''CAS'') (2015) is the CAS comment on the SNPRM).

[9] *See* 16 CFR 455.2(b)(ii), 77 FR at 74768, 74770 (Figure 2). The Commission did not receive comments on the proposed revision to the ''Implied Warranties Only'' disclosure.

[10] Although the state attorneys general commented collectively, the group of state attorneys general who joined the comment on the NPRM differs from the group who commented on the SNPRM. State AG Group (2015) refers to the Mar. 17, 2015, SNPRM comment, and State AG Group (2013) refers to the Mar. 13, 2013, NPRM comment.

[11] 77 FR at 74754–74756.

reduces the potential that, under the SNPRM approach, consumers will rely too much on particular VHRs and dealers as a source of mechanical condition information, and instead directs consumers to a source of information on the FTC's website which is independent of the dealer. Moreover, the informational approach does not appreciably increase the burden on dealers beyond that already imposed by the Rule. By recommending that consumers obtain their own VHRs from whatever source best suits their needs, the Buyers Guide may make consumers more educated about VHRs and prompt more consumers to make appropriate use of them.

In reaching this decision, the Commission has considered the differences in VHRs and providers, the strengths and limitations of VHRs, and the evolving development of the collection and distribution of vehicle history information. The Commission notes that consumers currently can gain access to VHRs at no cost from many dealers, automobile market websites, buying services, and other sources and can purchase VHRs at a nominal cost from commercial vendors. This approach balances the benefits to consumers of vehicle history information and the burden of requiring dealers to procure and disclose vehicle history information.

ii. Sources of Vehicle History Information

Vehicle history information is available from a variety of public and private sources. These sources include state titling agencies (*e.g.,* departments of motor vehicles (''DMVs'')), the National Motor Vehicle Title Identification System (''NMVTIS''), and commercial vehicle history providers, such as CARFAX and Experian's AutoCheck.

NMVTIS is a nationwide electronic database of vehicle history information created pursuant to the Anti-Car Theft Act of 1992.[12] NMVTIS was created to prevent the introduction or reintroduction of stolen motor vehicles into interstate commerce, to protect states and individual and commercial consumers from fraud, to reduce the use of stolen vehicles for illicit purposes including funding of criminal enterprises, and to provide consumers protection from unsafe vehicles.[13] It is designed to enable nationwide access to title information submitted by state titling agencies, and information concerning junk or salvage vehicles that insurers, recyclers, and salvage yards are required by law to submit.[14] It is intended to serve as a reliable source of title and brand history.[15] NMVTIS is limited to providing data on five key indicators associated with preventing auto fraud and theft: Current title information, brand history, odometer reading, total loss history, and salvage history.[16]

Although NMVTIS is intended to be a reliable source of vehicle brand and title history, it does not contain detailed repair history and may not include significant damage history.[17] For example, information on previous significant damage may not be included in NMVTIS if a vehicle was never determined to be a ''total loss'' by an insurer (or other appropriate entity) or branded by a DMV.[18] On the other hand, an insurer may be required to report a vehicle as a ''total loss'' even if the state's titling agency does not brand it as ''junk'' or ''salvage.'' [19]

The NMVTIS Web site, *www.vehiclehistory.gov,* contains live links to the Web sites of approved commercial vendors that sell NMVTIS reports to the public.[20] Consumers can purchase NMVTIS reports from these vendors for a few dollars. Approved vendors to both consumers and dealers are subject to quality control standards designed to ensure consistency with the intent and purpose of the Anti-Car Theft Act and its implementing regulations.

Title and other vehicle history information are also available in commercial reports from vendors such as CARFAX and Experian's AutoCheck. CARFAX and AutoCheck enable consumers to purchase VHRs, and some dealers distribute them to consumers free of charge. CARFAX and AutoCheck obtain data from state titling agencies, insurers, repair facilities, automobile auctions, salvage facilities, and fleet rental firms. These reports can include information on prior ownership, usage, damage, repair history, etc. They may even disclose whether a vehicle has had regular oil changes. Both CARFAX and AutoCheck offer mobile apps that allow real-time access to their reports. In addition, both CARFAX and AutoCheck offer consumers an option to pay a flat fee to receive multiple reports.

Commercial VHRs may include vehicle condition data from sources other than NMVTIS.[21] According to CARFAX, NMVTIS reports carry limited title, odometer, brand, and salvage/total loss information, whereas commercial reports may contain ''a wealth of information about brands, total losses, prior wrecks, airbag deployments, open recalls, odometer readings, and even maintenance history.'' [22] Experian noted that its AutoCheck VHRs can include information about fire and flood damage; accident damage, including the number and severity of any accidents; number of prior owners; auction inspection announcements; salvage, theft, or lemon; [23] fleet or rental use; frame damage; service and maintenance records; and manufacturer recalls.[24]

iii. Summary of Procedural History and Vehicle History Proposals

In the NPRM, the Commission proposed a statement on the Buyers Guide informing consumers about the availability of VHRs and advising consumers to obtain the reports. In response, many consumer advocacy groups, the State AG Group, and some NMVTIS vendors recommended that the Commission require dealers to obtain NMVTIS reports and/or adopt California Assembly Bill 1215 (''AB 1215'') (codified as Cal. Vehicle Code 11713.26), or some variation of it.[25] AB

---

[12] 49 U.S.C. 30501–30505. The United States Department of Justice published the final rule implementing NMVTIS in 2009. 28 CFR part 25, subpart B, 74 FR 5740 (Jan. 30, 2009). For a detailed discussion of NMVTIS information, and limitations of that information, *see http://www.vehiclehistory.gov/nmvtis_consumers.html.*

[13] *See* Understanding an NMVTIS Vehicle History Report, available at: *http://www.vehiclehistory.gov/nmvtis_understandingvhr.html.*

[14] *Id.*

[15] Brands are descriptive labels (applied by state motor vehicle titling agencies) regarding the status of a motor vehicle, such as ''junk,'' ''salvage,'' and ''flood.'' NMVTIS keeps a history of all brands that have been assigned to the vehicle by any state. *See id.* Individual state laws determine the application of title brands. The meaning of a brand and the brands that states assign differ by state.

[16] *http://www.vehiclehistory.gov/nmvtis_understandingvhr.html.*

[17] *See* Consumer Access Product Disclaimer available through: *http://www.vehiclehistory.gov/index.html.*

[18] *See Id.*

[19] *Id.*

[20] The American Association of Motor Vehicle Administrators (''AAMVA'') operates NMVTIS under the oversight of the Department of Justice. AAMVA is responsible for approving vendors. Approved NMVTIS vendors must comply with quality control standards and are monitored by AAMVA.

[21] Consumer Access Product Disclaimer available through: *http://www.vehiclehistory.gov/index.html.*

[22] CARFAX (2013) at 1.

[23] State ''lemon'' laws typically require a manufacturer to buy back a new vehicle if defects in the vehicle cannot be repaired after a reasonable number of attempts. *See Lemon Law Basics* available from the Int'l Ass'n of Lemon Law Administrators (''IALLA'') at *http://ialla.net/pub_1.htm.* Some states use the title brands lemon, lemon law buyback, or manufacturer buyback, or similar terms, to designate vehicles that have been reacquired by a manufacturer under a state lemon law.

[24] Experian (2013) at 3.

[25] *E.g.,* Consumers for Auto Reliability and Safety (''CARS''), *et al.* (2013) (fourteen consumer advocacy groups joined the comment); Legal Aid

1215 requires dealers to obtain NMVTIS reports and to affix a warning label to a vehicle if the NMVTIS report shows a previous salvage or other state title brand or contains some other reported event, such as a total loss report from an insurance company. Broadly speaking, dealers' groups and the leading vendors of commercial VHRs opposed requiring dealers to obtain NMVTIS or commercial reports, or a regulation that would effectively choose one type of provider of VHRs over others.[26]

Rather than issuing a final rule based on the NPRM or AB 1215, the Commission published the SNPRM to seek comments on requiring dealers to disclose on the Buyers Guide if they had a VHR and to provide a copy of whatever report they had to requesting consumers. The SNPRM also invited public comments on several other approaches to vehicle history information proposed in the comments on the NPRM. The various approaches ranged from recommending that the Rule not address vehicle history information at all to approaches that generally fell somewhere between the NPRM's informational approach and the required disclosures of AB 1215.

iv. Analysis of Comments

a. The Commission's Authority To Promulgate a Rule Addressing Vehicle History Information

The National Automobile Dealers Association (''NADA'') and the National Independent Automobile Dealers Association (''NIADA'') argue that a rule provision dealing with VHRs would exceed the Commission's authority.[27] Specifically, they contend that the Used Car Rule was promulgated under Title I of the Magnuson-Moss Warranty Act, 15 U.S.C. 2309(b), which directs the Commission to initiate ''a rulemaking proceeding dealing with warranties and warranty practices in connection with the sale of used motor vehicles,'' and that vehicle history information is unrelated to warranty and warranty practices.[28]

NADA, but not NIADA, further argues that the Commission must use more elaborate rulemaking procedures than those specified by the Administrative Procedure Act (''APA'')[29] in order to reach certain independent dealers that sell used cars but (under NADA's interpretation) do not ''service'' them.[30] Section 1029 of the Dodd-Frank Act (''DFA'')[31] authorizes the FTC to use the more informal APA rulemaking procedures to prescribe rules with respect to motor vehicle dealers that are ''predominantly engaged in the sale and servicing of motor vehicles, the leasing and servicing of motor vehicles, or both.'' 12 U.S.C. 5519(a), (d). According to NADA, certain entities that are subject to the Used Car Rule (although apparently none of NADA's members themselves) are not ''predominantly engaged in the sale and servicing'' of motor vehicles because they only sell and do not service vehicles.[32] NADA thus argues that, to reach these entities, any amendments affecting all dealers subject to the Used Car Rule must be promulgated using the heightened procedures required by section 18 of the FTC Act.[33]

(1) The Commission Has Statutory Authority To Issue These Rule Amendments

NADA and NIADA argue that the Commission lacks statutory authority to issue these Rule amendments. That argument, however, founders on the mistaken premise that the Rule rests solely on the Magnuson-Moss Warranty Act and not also on the FTC Act. As discussed in more detail below, the Rule has historically rested on *both* Title I of the Magnuson-Moss Warranty Act and the Commission's authority under the FTC Act to issue rules addressing deceptive acts or practices. In the current proceeding, the Commission is issuing the rule amendments solely under the latter authority.

Ever since the Used Car Rule was promulgated, the Commission has made clear that the authority for the Rule ''is derived from two sources'': Title I of the Magnuson-Moss Warranty Act and the FTC Act.[34] The specific authority under the FTC Act is section 18, which authorizes the FTC to issue trade regulation rules that ''define with specificity acts or practices which are unfair or deceptive'' within the meaning of section 5 of the FTC Act.

The dual bases of statutory authority are also reflected in the Rule's existing provisions and the procedures that the Commission used to promulgate the Rule. Some of the current provisions in the Used Car Rule deal with unfair or deceptive acts or practices that are not directly related to warranties or warranty practices.[35] Moreover, given that the Rule is in part a trade regulation rule, the Commission followed the more elaborate procedures in section 18 of the FTC Act when promulgating the Used Car Rule, not the simpler procedures that would have been available if the Rule had been issued solely under the Magnuson-Moss Warranty Act.

NADA and NIADA are thus incorrect in arguing that the VHR amendments exceed the FTC's rulemaking authority.

Justice Center (''LAJC'') (2013) (CARS joined the comment); Nat'l Salvage Vehicle Reporting Program (''NSVRP'') (2013); Nat'l Vehicle Service (''NVS'') (2013); CARCO (2013); ADD (2013) at 3–4; State AG Group (2015) (''we encourage the FTC to require dealers to obtain a NMVTIS report'').

[26] CARFAX (2013) at 3 (FTC should not choose ''exclusive technology and system by only providing information about a single public or private source of vehicle history''); Experian (2013) at 5–6 (NPRM ''strikes a good balance in protecting used car consumers without being overly burdensome;'' FTC should not promote one provider or source of vehicle history information over another; NMVTS statute defines what information is included in a NMVTIS report and therefore NMVTIS reports are not likely to be as ''robust'' as commercial reports); NADA (2013) at 3 (questioning whether Rule permits NPRM proposed VHR statement and commenting that proposed Web site should not endorse, link to, or otherwise imply legitimacy of any particular vehicle history company, report, or service); NIADA (2013) at 3 (commending Commission for not requiring dealers to provide vehicle history reports/damage history).

[27] *See* NADA (2015) at 3–4; NIADA (2015) at 3. NADA is the national trade association of manufacturer-franchised new vehicle dealers. NIADA is the national trade association of independent non-franchised used vehicle dealers.

[28] Public Law No. 93–637, formally known as the Magnuson-Moss Warranty—Federal Trade Commission Improvements Act, has two titles. Title I concerns consumer product warranties and includes a provision directing the FTC to ''initiate within one year after the date of enactment of this Act a rulemaking proceeding dealing with warranties and warranty practices in connection with the sale of used motor vehicles.'' 15 U.S.C. 2309(b). Title II amended various parts of the FTC Act and added what is currently section 18 of the FTC Act, which specifies the applicable procedures when the Commission issues a trade regulation rule.

Section 18 rulemakings are sometimes called Magnuson-Moss rulemakings, after the name of the bill that created section 18 of the FTC Act. But rulemakings under *Title I* of the Magnuson-Moss Warranty Act—that is, rulemakings related to warranties—are governed by the procedural requirements described in 15 U.S.C. 2309(a), not by the procedural requirements described in section 18 of the FTC Act. For warranty rulemakings under 15 U.S.C. 2309(a), the Commission is required to follow the notice-and-comment procedures in 5 U.S.C. 553 and additionally to provide ''interested persons an opportunity for oral presentations of data, views, and arguments.'' 15 U.S.C. 2309(a).

[29] 5 U.S.C. 500–596.

[30] *See* NADA (2015) at 4.

[31] Dodd-Frank Wall Street Reform and Consumer Protection Act, Public Law 111–203, sec. 1029 (codified at 12 U.S.C. 5519).

[32] *See* NADA (2015) Exh. A at 6 & n.6.

[33] NADA (2015) Exh. A at 1, 8. NADA also argues that, ''[a]t the very least, the FTC cannot go below'' the hybrid rulemaking procedures found in 15 U.S.C. 2309(a)—*i.e.,* the notice-and-comment procedures of 5 U.S.C. 553 plus an opportunity for oral presentations. NADA (2015) Exh. A at 6 n.7.

[34] *See* Trade Regulation Rule; Sale of Used Motor Vehicles, 49 FR 45692, 45703 (Nov. 19, 1984). For this same reason, the authority citation for part 455 has always cited both statutes. *See id.* at 45725; Regulatory Flexibility Act and Periodic Review of Used Motor Vehicle Trade Regulation Rule, 60 FR 62195, 62205 (Dec. 5, 1995).

[35] *See, e.g.,* 16 CFR 455.1(a)(1) (making it a deceptive act or practice for any used vehicle dealer to misrepresent the mechanical condition of a used vehicle).

The rule amendments are based solely on the Commission's authority under the FTC Act to issue rules addressing deceptive acts or practices. In particular, the VHR amendments will help prevent deception in the market for used vehicles, as previously discussed in the NPRM and as further explained herein.[36] The Commission has properly acted under sections 5 and 18 of the FTC Act in promulgating the VHR amendments.

(2) The DFA Authorizes the Commission To Issue These Rule Amendments Pursuant to APA Procedures

Section 1029 of the DFA authorizes standard APA rulemaking procedures when the Commission uses its section 5 and section 18 rulemaking authority to address unfair or deceptive acts or practices by motor vehicle dealers. The DFA defines a ''motor vehicle dealer'' to mean someone who is (1) licensed by a State or territory to sell motor vehicles, and (2) takes title, owns, or has physical custody of them.[37]

Section 1029(d) authorizes the FTC ''to prescribe rules under sections 5 and 18(a)(1)(B) of the Federal Trade Commission Act'' with respect to motor vehicle dealers that are ''predominantly engaged in the sale and servicing of motor vehicles, the leasing and servicing of motor vehicles, or both.''[38] The DFA authorizes the Commission to promulgate such rules ''in accordance with'' the APA procedures in 5 U.S.C. 553, ''[n]otwithstanding section 18 of the Federal Trade Commission Act.'' DFA 1029(d).

NADA argues that some non-franchised used car dealers are outside the scope of DFA 1029(a) because they sell but do not ''service'' vehicles.[39] This argument, however, relies on an unduly narrow interpretation of ''servicing.'' Although the DFA does not define ''servicing,'' the plain meaning of that term, along with the statutory language in DFA 1029(b)(3), suggests that the term should be read broadly to encompass activities such as ''repair, refurbishment, [or] maintenance,'' as well as other services.[40]

That definition captures activities undertaken by essentially all used car dealers. For example, whether or not they offer *post*-sale repair or maintenance services, used car dealers routinely prepare vehicles for sale by addressing any obvious mechanical problems and, as the Commission has previously noted, by undertaking the ''general industry practice of appearance reconditioning.''[41] Such activities are a type of ''servicing'' within the plain meaning of that term and fall easily within the category of ''refurbishment'' activities mentioned in DFA 1029(b)(3). Because the Commission previously determined that used car dealers ''routinely'' recondition vehicles, *id.,* and NADA has not offered any evidence that used car dealers have stopped engaging in this ''general industry practice,'' the Commission finds that dealers' practice of reconditioning vehicles is sufficient to satisfy DFA 1029(a)'s ''and servicing'' language.

The legislative history of DFA 1029 likewise confirms that Congress intended to preserve the FTC's existing rulemaking authority over auto dealers but streamline the procedures applicable to all such dealers, not only to an arbitrarily defined subset of them. When Congress enacted section 1029 of DFA, Congress sought to achieve two ends. First, Congress was aware of and intended to preserve the FTC's existing authority over auto dealers. For example, Representative Frank said, ''We are not increasing the authority that the FTC has. There is no further grant of powers other than what the FTC already has.''[42] Senator Dodd similarly stated, ''The Federal Trade Commission has jurisdiction on—on automobile dealerships so we're not breaking new ground. We're just, in fact, providing some tools for them to do this job.''[43]

Second, Congress was aware that the FTC's existing section 18 rulemaking process is time consuming and wanted to speed up the FTC's rulemaking process with respect to auto dealers. As Representative Frank explained, the reason for section 1029 was to ''expedite the ability of the FTC to act responding to'' concerns about dealers' unfair or deceptive acts or practices.[44] Representative Watt noted that requiring the FTC to use its existing section 18 procedures ''that could take up to eight years before you can do something to respond to some predatory practice'' might create ''very bad consequences.''[45]

Congress never suggested that it intended to apply the expedited rulemaking procedures to only a subset of the car dealers who are subject to the FTC's jurisdiction. Moreover, Congress had no clear basis for requiring different rulemaking procedures for different used-car dealers depending on what types of post-sale services those dealers happened to offer. In short, NADA's argument not only conflicts with the statutory text and legislative history, but would serve no rational policy objective.

Finally, as discussed, NADA's argument about the scope of the FTC's APA rule-making authority rests on an unduly narrow interpretation of ''servicing'' that includes only post-sale activities and excludes pre-sale activities such as refurbishing. But NADA's members are franchised dealers who are required to offer *post*-sale or *post*-lease servicing and warranty work as part of their franchise agreements. NADA's procedural argument could thus apply only to a subset of the non-franchised dealers separately represented in part by NIADA, which, notably, does *not* make the argument. The record contains no data to support NADA's assumption that many non-franchised dealers provide no post-sale ''servicing,'' which suggests that NADA's argument on this point may have limited applicability even if the term ''servicing'' were construed narrowly to include only post-sale activities.

b. Incorporating the Disclosure of Vehicle History Information Into the Rule

Some commenters raised arguments against including vehicle history information in the Buyers Guide. First,

[36] 77 FR at 74755–56; section II.A.iv.f., supra.

[37] DFA 1029(f)(2).

[38] DFA 1029(a), (d).

[39] *See* NADA (2015) Exh. A at 6 & n.6. It is unclear from NADA's comment whether NADA is separately arguing that certain entities subject to the Used Car Rule fall outside the DFA's definition of ''motor vehicle dealer'' which is limited to entities licensed by a State or territory to sell motor vehicles. 12 U.S.C. 5519(f)(2)(A). To the extent that NADA is making this assertion, NADA does not develop it and the Commission therefore declines to address it. In any event, many, if not all, used vehicle sellers subject to the Rule are also required to be licensed by the state or territory in which they do business.

[40] *See* DFA 1029(b)(3) (creating a category of persons who offer or provide ''a consumer financial product or service not involving or related to the sale, financing, leasing, rental, repair, refurbishment, maintenance, *or other servicing* of motor vehicles, motor vehicle parts, or any related or ancillary product or service'' (emphasis added)).

[41] 49 FR at 45701. The record contains no evidence that the industry practice of reconditioning used vehicles is less widespread today than it was in 1984 when the Commission adopted the Rule.

[42] Transcript of House-Senate Conference Committee Markup of H.R. 4173, Financial Regulatory Overhaul Bill (June 24, 2010), *http://www.cq.com/doc/congressionaltranscripts-3690270* (last visited Dec. 4, 2015).

[43] Transcript of House-Senate Conference Committee Markup of H.R. 4173, Financial Regulatory Overhaul Bill (June 22, 2010), *http://www.cq.com/doc/congressionaltranscripts-3693204* (last visited Dec. 4, 2015).

[44] Transcript of House-Senate Conference Committee Markup of H.R. 4173, Financial Regulatory Overhaul Bill (June 24, 2010), *http://www.cq.com/doc/congressionaltranscripts-3690270* (last visited Dec. 4, 2015).

[45] *Id.*

NADA and NIADA commented that the Rule and the Buyers Guide are limited to warranty disclosures and that the disclosure of vehicle history information is outside the scope of the Rule.[46] As explained above in subsection (a), this argument is based on a misunderstanding of the Rule's purpose. From its inception, the Rule has addressed unfair or deceptive acts or practices as well as warranty practices.[47] For this reason, the Buyers Guide already contains information that is primarily intended to help prevent consumer deception and that is not directly related to warranty disclosures, such as the spoken promises warning, the list of major defects and systems, and the advice to ask about a pre-purchase inspection.

The Commission concludes that incorporating vehicle history information into the Rule fits within the general framework of the existing Rule and would benefit consumers by reducing deception in the used car market. Encouraging consumers to obtain VHRs independently will serve to direct consumers to an additional source of pre-sale information that is not controlled by the dealer and thereby lessen the consumer's reliance on dealers for information. The incorporation of vehicle history information should help reduce deception by unscrupulous dealers, because any misrepresentations will be contradicted by information that consumers have obtained independently.

Second, NADA and CARFAX commented that including vehicle history information on the Buyers Guide is not necessary because dealers already obtain and share commercial VHRs with consumers.[48] Of course, not all dealers obtain and share VHR information, and the prevalence of the practice among non-franchised independent dealers is unclear.[49] In addition, unscrupulous dealers might provide out-of-date reports or pick reports that contain the least amount of negative data. A statement on the Buyers Guide about the availability of VHRs will help ensure that consumers are not deceived by such practices.

Finally, some commenters expressed doubt about the reliability of vehicle history information.[50] NADA commented that, although general information related to vehicle history might be appropriate on a Commission website, a reference to specific commercial providers would not.[51] NADA argued that consumers could gain a false sense of security from the reports, especially if they are required by the government and impliedly have the Commission's imprimatur on them.[52] For those reasons, NADA commented that the FTC should include a disclaimer about the limitations of VHRs, if the reports are mentioned at all.[53]

A disclaimer, however, is unnecessary because the reports are typically dated and contain disclaimers about the limits of the data in them.[54] In addition, the website listed on the Buyers Guide includes information about the limits of data in VHRs.

Some commenters approved of the informational approach proposed by the NPRM, *i.e.,* adding a statement to the Buyers Guide advising consumers to obtain a VHR and directing consumers to an FTC website.[55] Two vehicle history vendors commented that the FTC should avoid promoting a particular vendor or type of technology to deliver VHRs.[56] In addition, the auto dealer associations recommended that the Rule not favor a particular source of vehicle history information.[57] NIADA commented that the NPRM's proposed approach of directing consumers to a website and advising an independent inspection is ''an acceptable compromise.'' [58] Experian commented that the NPRM proposal ''strikes a good balance in protecting used car consumers without being overly burdensome.'' [59]

The Commission has decided to use an informational approach to vehicle history that reduces consumer reliance on dealers for information. The chosen approach does not endorse any type of or vendor of vehicle history information. Encouraging consumers to obtain VHRs independently will reduce deception in the marketplace by directing consumers to sources of information about the vehicles that they are considering buying that are not controlled by the selling dealer and thereby reduce the potential for consumers to rely upon misrepresentations from unscrupulous dealers.

c. Alternative Approaches to Incorporating Vehicle History Information Into the Rule

The commenters who recommended incorporating vehicle history information into the Rule proposed several different approaches. Some favored an informational approach; some recommended a Rule that, like AB 1215, would require dealers to obtain VHRs and to disclose information about them to consumers; some suggested various approaches in between. Below, the Commission discusses why it has declined to adopt three of the alternative approaches recommended by commenters.

First, in response to the NPRM and the SNPRM, the State AG Group, other regulators, and consumer advocacy groups stated that they prefer an approach like AB 1215 along with a requirement that dealers obtain and provide consumers with NMVTIS reports.[60] For example, the National Consumer Law Center commented that dealers should be required to obtain a report that includes up-to-date vehicle history information from NMVTIS.[61] Otherwise dealers might pick reports that contain the least amount of negative data, and VHR vendors might produce

[46] NADA (2015) at 5; NIADA (2015) at 3; *see also* NADA (2015) Exhibit A, note 1 (questioning whether, in 1984, the Commission exceeded its Magnuson Moss authority by adopting the pre-purchase inspection notice).

[47] For example, the Rule provides that misrepresenting the mechanical condition of a vehicle is a deceptive act or practice when a used vehicle dealer sells or offers to sell a used vehicle. 16 CFR 455.1(a)(1). *See* note 35 supra.

[48] NADA (2015) at 6–7 (NADA's comment is limited to the practices of franchised new vehicle dealers); CARFAX (2015) at 12.

[49] *See* NIADA (2015) at 8 (NIADA does not know how frequently independent dealers who access commercial VHRs provide them to consumers).

[50] *See, e.g.,* NADA (2015) at 5 (''it is important to understand that VHRs are unreliable and limited . . . only as good as the information available to the VHR providers.'').

[51] NADA (2013) at 3 (FTC website, if created at all, ''should be limited to educational materials and should not endorse, link to, or otherwise imply the legitimacy of any particular vehicle history company, report, or service.'').

[52] NADA (2013) at 4.

[53] NADA (2015) at 9; NADA (2013) at 4.

[54] *See, e.g.,* NMVTIS Consumer Access Product Disclaimer available at *www.vehiclehistory.gov.*

[55] *E.g.,* CARFAX (2013) at 1.

[56] CARFAX (2013) at 2–3; Experian (2013) at 1.

[57] NADA (2013) at 4; NIADA (2013) at 3.

[58] NIADA (2013) at 3.

[59] Experian (2013) at 5.

[60] State AG Group (2015) at 7; CAS (2015) at 1 (required disclosure of NMVTIS information); Nat'l Consumer Law Center (''NCLC''), *et al.* (comment joined by five consumer advocacy group including CARS) (2015) at 1–4 (FTC should require dealers to obtain VHRs that meet a minimum standard of containing NMVTIS information); CARS (2013) at 2 (FTC should require dealers to check NMVTIS and post AB 1215 warning label); Consumers Union (2015) at 1 (FTC should require dealers to check NMVTIS and other auto history databases as appropriate); Steinbach (consumer attorney) (2015) at 2 (FTC should incorporate NMVTIS data into Buyers Guide or require dealers to provide NMVTIS reports); Maier (consumer attorney) (2015) (FTC should require NMVTIS and safety recall information); Holcomb (VA DMV) (2015); NSVRP (2015) (FTC should adopt AB 1215); Stiger (Los Angeles County Department of Consumer Affairs) (2015) (noting that AB 1215 has been beneficial, office approves of SNPRM proposal to require dealers to indicate if they have a VHR and to provide a copy upon request).

[61] NCLC (2015) at 4.

reports to cater to dealer demand for more favorable reports.[62]

The Commission, however, has decided that it will not adopt an amended Rule modeled on AB 1215 for the reasons already stated in the SNPRM.[63] In addition, the Commission cannot give dealers the protection from liability for inaccuracies in NMVTIS reports provided by AB 1215.[64] The Commission recognizes the limitations of VHR information as an indicator of a vehicle's current mechanical condition and does not wish to over-emphasize the value of VHR information over other potentially more probative sources of information, such as a pre-purchase mechanical inspection. In addition, requiring dealers to provide NMVTIS reports might discourage consumers from investigating other types of VHRs from other vendors.

Second, as an alternative to the AB 1215 approach, the State AG Group proposed a vehicle history disclosure model similar to the SNPRM with the addition of a ''branded title checkbox'' that the dealer would be required to check to indicate that the vehicle's title had a brand.[65] Like the SNPRM, the State AG Group's proposal would not require dealers to obtain VHRs or designate a type of or vendor of VHRs.[66]

The ''branded title check box'' proposal from the State AG Group suffers from a number of practical problems if dealers are not also required to obtain either NMVTIS reports or other VHRs. Without a requirement that dealers obtain a VHR, the branded title check box could encourage dealers to forego VHRs entirely or to acquire only favorable ones. In addition, if an unchecked box, indicating that the dealer is unaware that the vehicle has a branded title, is incorporated into the contract as the dealer's affirmative representation that the vehicle in fact does not have a branded title, the dealer could face liability if a subsequent VHR shows a branded title. The lack of a checkmark could also suggest to consumers that the vehicle is in good condition when the lack of a checkmark is actually the far more limited representation that the dealer does not know whether the vehicle has a branded title.

Third, CAS commented that its preferred approach is ''something of a hybrid'' between AB 1215 and the State AG Group's approach.[67] CAS would require dealers to obtain and to disclose NMVTIS reports, as required by AB 1215, and to check a box, similar to the branded title box suggested by the State AG Group, disclosing if the vehicle has a title brand.[68] CAS envisions an improved disclosure box along with information about vehicle histories on the Buyers Guide and the FTC websites.[69] Dealers who check the box would be required to provide a copy of any reports that they have obtained to requesting consumers.[70] CAS would require dealers to keep any report that they view for as long as the dealer possesses the vehicle to which the report applies.[71]

As noted, the Commission has decided against following AB 1215 and requiring dealers to obtain NMVTIS reports.[72] The Commission is also not adopting the branded title check box proposed by the State AG Group, and favored by CAS, for the reasons previously discussed.

The Commission is also not adopting the CAS approach because of the recordkeeping that it seems to necessarily entail. The CAS approach would impose new recordkeeping obligations by requiring dealers to keep copies of any reports that they view. The purpose of the CAS recordkeeping requirement is to prevent dealers from selecting favorable reports or from, for example, viewing reports online, but not printing or storing them, or obtaining information orally without ever viewing, or possessing, an actual report. But it is not clear how the Commission could construct detailed rules about when a dealer will be deemed to have viewed a report that would encompass all situations or how the Commission would enforce those rules if they could be devised.

d. Comments on the SNPRM Approach to Vehicle History Reports

As noted above, in the SNPRM, the Commission proposed requiring dealers who had obtained VHRs to check a box so indicating and to provide a copy of the report to consumers upon request. The SNPRM proposal also contained additional text recommending that consumers obtain a VHR, regardless of whether the box was checked, and advising that consumers visit an FTC website for information on how to obtain a VHR, how to search for safety recalls, and other topics. Many commenters criticized the SNPRM approach.

Consumer advocacy groups identified several problems with the SNPRM vehicle history approach. CAS, other consumer advocacy groups, and the State AG Group note that dealers could avoid revealing negative information in VHRs by, for example, picking and choosing among reports to select the most favorable report, discarding older (or newer) reports, selecting a report that showed the fewest problems, or selecting a vendor that generates reports showing minimal problems.[73] As noted, CAS commented that it prefers the State AG Group's approach (requiring a title brand disclosure on the Buyers Guide and providing a copy of the most recent report from each vendor) if the Commission does not require dealers to provide NMVTIS reports.[74] CAS notes that either approach could be supplemented with a requirement that dealers provide copies of the VHRs that the dealer possesses, but also tacitly acknowledges the difficulty in devising and implementing such a requirement.[75]

NADA further questioned the value of VHRs to consumers. NADA reiterated its earlier comments that VHRs are unreliable and of limited utility, which NADA states VHR vendors acknowledge in their own disclaimers about the accuracy, reliability, or completeness of the data in the reports.[76] Given these

[62] NCLC (2015) at 3. *See also* NIADA (2015) at 3 (unscrupulous dealers may engage in VHR shopping); NSVRP (2015) at 3 (allowing any commercial report, instead of NMVTIS, would enable VHR shopping); Boyer (Nov. 20, 2014) (will companies evolve ''to provide less objective and more 'positively spun' reports for dealers?'').

[63] 79 FR at 70808.

[64] AB 1215 grants dealers immunity from liability for inaccuracies, errors, and omissions in NMVTIS reports. Cal. Veh. Code 11713.26(f).

[65] State AG Group (2015) at 6; State AG Group (2013) at 5–6 (the ''branded'' title checkbox would indicate that the vehicle's title ''will carry one or more of the following brands: Salvage, Prior Salvage, Rebuilt, Remanufactured, Flood, Lemon Law, or similar brand.'').

[66] State AG Group (2015) at 6.

[67] CAS (2015) at 1.

[68] CAS (2015) at 1.

[69] CAS suggests an improved disclosure box. CAS (2015) at 1, note 2. Staff understands an improved disclosure box to mean one that provides more information on the Buyers Guide about what the NMVTIS report reveals, presumably similar to the AB 1215 warning label, rather than simply an indication that the NMVTIS report (or other VHR) indicates that the vehicle has a branded title.

[70] *Id.* at 2. CAS would consider permitting dealers to provide only the most recent report if the dealer has obtained multiple reports from the same provider.

[71] *Id.* at 2.

[72] *See* 79 FR at 70808.

[73] *Id.* at 2; State AG Group (2015) at 7 (dealers should not be able to skirt requirement by discarding an observed VHR prior to sale); NCLC (2015) at 2 (dealer could have third-party auctioneer or broker pull report so that dealer does not possess it).

[74] *Id.* at 2.

[75] *Id.* at 3 (Requiring dealers to provide VHRs upon request ''will require very well-drafted controls on dealer practices regarding vehicle history reports.'').

[76] NADA (2015) at 5–6, note 9. *See also, e.g.,* Kelly (NJ AG Div. Consumer Affairs) (2015) (unreliable information in CARFAX reports); Kramer (Oregon DMV) (2015) at 1 (NMVTIS is

limitations, NADA, and others, commented that the SNPRM's checkbox proposal could raise the prominence of VHR information in consumers' minds to an inappropriately high level.[77]

Dealers' groups identified several additional problems with the vehicle history approach proposed in the SNPRM. NADA questioned the need for a rule about VHRs in the first instance because most franchised dealers, and potentially other dealers, already provide VHRs to consumers and because of a lack of evidence that dealers fail to disclose known title brands.[78] NADA commented that requiring dealers to indicate on the Buyers Guide whether they have a report and requiring dealers to provide it would make it less likely that dealers will continue to obtain and to distribute the reports because of the risk that the VHR information will be incorporated into the contract and that the dealer will be construed to have made a warranty about it.[79] NIADA also raised concerns about dealer exposure to liability for third-party VHR information that the dealer does not control,[80] which is potentially compounded by unreported repairs, poor reporting procedures, and different brands/classifications in each state.[81]

Both NADA and NIADA commented that the SNPRM does not define a VHR.[82] NIADA stated that, without a definition, dealers would have to guess when to check a box indicating that they have a report.[83] NIADA also noted that, in addition to the well-known providers of VHRs such as NMVTIS and commercial vendors, other sources, such as banks, insurers, and service facilities potentially have information on used cars that could be construed to constitute VHRs.[84] NADA proposed defining VHRs as third-party reports from state titling agencies, NMVTIS, or commercial vendors.[85]

The commenters disagreed about whether dealers or consumers should be required to pay for copies of the VHRs contemplated by the SNPRM. Dealers' groups commented that dealers should be permitted to pass along their costs to consumers.[86] That cost could increase depending upon how often dealers must provide the reports because, dealers' groups and others commented, the SNPRM does not identify the point in a transaction when a dealer would become obligated to provide the reports.[87] Although NADA indicates that franchised dealers now routinely share VHR information with consumers,[88] NADA questioned whether licensing agreements would permit dealers to share those reports with all potential customers if doing so were to be required by the Rule.[89]

Consumer advocacy groups, the State AG Group, and other commenters would place the costs of VHRs on dealers.[90] NCLC commented that the dealer would need to purchase only one report per vehicle, and provide the reports to successive consumers, whereas those same consumers would each need to purchase a separate report for the same vehicle.[91] Moreover, consumers who looked at several vehicles when shopping would need to purchase multiple reports.[92] NCLC commented that asking consumers to obtain reports on their own is impractical because of the cost of the reports, especially multiple reports.[93] NCLC and Consumers Union commented that some consumers might have Internet access only away from the dealership, at home or work, and would have to review the reports off-site and then return to the dealership to use the information.[94]

The American Association of Motor Vehicle Administrators supported disclosure of vehicle history data at the point of sale. Both it and the Virginia DMV commented that the FTC should recommend or reference only VHRs that integrate NMVTIS data because NMVTIS is a congressionally mandated database.[95]

e. Incorporating Safety Recall Information

A number of commenters urged the Commission to address safety recalls in an amended Rule. Several recommended that the Commission prohibit the sale of vehicles with open recalls.[96] Other commenters urged the Commission to require dealers to disclose if a vehicle is subject to an unrepaired (*i.e.,* ''open'') recall[97] or at least to check if a vehicle is subject to an open recall.[98] Consumers Union

---

limited because not all states participate and NMVTIS information is not independent information such as service records).

[77] NADA (2015) at 4; Carlson (2015) (adding VHR to Buyers Guide would give increased credibility to the reports); Copart (vehicle auctioneer) (2015) at 1 (FTC should not endorse VHRs but should continue to emphasize pre-purchase mechanical inspections, which will ''provide more consumer protection than an often incomplete vehicle history report.'').

[78] NADA (2015) at 6–7 and 12.

[79] NADA (2015) at 10. NADA estimated that 95% of franchised dealers are customers of one or both of the two major VHR retailers and ''routinely'' share the reports with their customers.

[80] NIADA (2015) at 4–6.

[81] NIADA (2015) at 5.

[82] NADA (2015) at 16; NIADA (2015) at 4.

[83] NIADA (2015) at 4.

[84] NIADA (2015) at 4.

[85] NADA (2015) at 16.

[86] NADA (2015) at 13; NIADA (2015) at 7; Texas Automobile Dealers Ass'n (2015) (''TADA'') at 2; Crowl, All Star Autos, Inc. (automobile dealer) (00021) (dealers should not be required to provide an expensive $16.99 VHR to every customer).

[87] NIADA (2015) at 7; TADA (2015) at 2 (although unlikely, a consumer could request a VHR on every vehicle on a dealer's lot).

[88] NADA (2015) at 7.

[89] NADA (2015) at 14.

[90] State AG Group (2015) at 8; NCLC (2015) at 4–5.

[91] NCLC (2015) at 3–4. NCLC notes that [at the time of its comment] CARFAX offered unlimited reports for a period of 60 days at a cost of $54.99, and AutoCheck offered unlimited reports for 30 days for $44.99, sums that NCLC notes are beyond the reach of many consumers.

[92] NCLC (2015) at 3.

[93] NCLC (2015) at 4. However, consumers may be able to reduce their costs for multiple commercial reports in several ways. NADA notes that commercial VHR providers offer lower prices on a per report basis for multiple reports. NADA (2015) at 10, fn. 22. The AutoCheck and CARFAX websites corroborate NADA's statement, for example, consumers can purchase twenty-five AutoCheck reports for $49.99, *http://www.autocheck.com/vehiclehistory/autocheck/en/AutoCheck-vehicle-history-reports/25-Reports-for-21-Days/p/10025,* or five CARFAX reports for $49.99, ten dollars more than the price of a single report ($39.99), *https://secure.carfax.com/creditCard.cfx?partner=CAR&partnerSiteLocation=4.* In addition, commercial VHRs such as those offered by CARFAX are in many cases available for free through dealers' websites or websites listing used cars, such as AutoTrader.com and Cars.com. CARFAX (2015) at 2.

[94] NCLC (2015) at 4; Consumers Union (2015) at 2. However, the Commission notes that the increased use of smart phones may enable consumers to obtain mobile access to VHRs when consumers are on a dealer's lot shopping for a used vehicle.

[95] AAMVA (2015) at 1; Holcomb (VA DMV) (2015). AAMVA is the association of state DMV administrators. AAMVA operates NMVTIS under the oversight of the United States Department of Justice. *http://www.vehiclehistory.gov/nmvtis_faq.html#operates.*

[96] NCLC (2015) at 5–7; CAS (2015) at 4 (contending that ''[i]t is an unlawful trade practice under the FTC Act for a dealer to sell a vehicle with an open safety recall and the Commission should be using all its rulemaking and enforcement power to end that practice.''); Steinbach (consumer attorney) (2015) at 7; NSVRP (2015) at 6–9 (recommending that the Commission require dealers to check for open recalls; would prefer that Commission require dealers to repair open recalls before offering vehicles for sale, but believes Commission lacks the authority to enact such a requirement); Karwoski, SEA, Inc. (2015) (Commission should require dealers to disclose open recalls and require franchised dealers to repair open recalls on franchise brand vehicles that they sell).

[97] State AG Group (2015) at 8 (proposing revised statement that places greater emphasis on recalls than the SNPRM statement); U.S. D.O.T. (2015) at 2–3 (recommending a Buyers Guide box for dealers to check if they have found safety recalls that have not been completed and directing consumers to check for open recalls at *www.safercar.gov*); Strassburger (Alliance of Automobile Manufacturers) (2015) (recommending that the Buyers Guide direct consumers to *safercar.gov* to check for open safety recalls).

[98] Spiller (NVS) (2015) at 2; Frias (North American Export Committee) (2015) at 2.

recommended two boxes where dealers would indicate whether they had (or had not) repaired a vehicle in compliance with any applicable recall notices.[99]

Rather than adopt these proposals, the Commission has decided to address safety recalls by including a Buyers Guide statement directing consumers to check for open safety recalls by visiting *safercar.gov.* The Commission recognizes the significant public safety concerns associated with vehicle recalls, including in the used car marketplace, and is aware that potential legislation to address this public safety issue is under consideration and has NHTSA's support.[100] We believe that legislative bodies and NHTSA, as the federal agency primarily tasked with ensuring motor vehicle safety, are best situated to consider and resolve the many issues implicated by such proposals—including, for example, the competitive effects they would have on independent dealerships that are not authorized to make repairs, the effect they could have on used vehicle trade-ins, the fact that remedies for some recalls may remain unavailable for significant periods of time, and other factors affecting the costs and benefits to consumers.

The Commission does note, however, that under the FTC Act's existing prohibition on deceptive acts and practices, an advertiser's claims may trigger the need for the advertiser to disclose information about open safety recalls. For example, the Commission approved for public comment proposed consent orders concerning advertising that, according to the Commission's complaints, touted the benefits of rigorous inspections of used vehicles, but failed to disclose adequately that some of the vehicles were subject to open safety recalls.[101] Those proposed settlements would curb deceptive conduct by requiring the respondents to qualify their inspection claims, wherever they make them, with clear and conspicuous disclosures informing consumers that their used vehicles may be subject to unrepaired recalls for safety issues and explaining how to determine whether an individual vehicle is subject to an open recall. Further, the proposed orders would prohibit the respondents from making misrepresentations regarding recall status or safety, and require them to notify recent past consumers regarding recalls.

f. Final Rule on Vehicle History Reports and Safety Recall Information

The Commission has considered the comments and entire record and has decided to adopt a final rule similar to what it initially proposed in the NPRM. Accordingly, the Commission is revising the Buyers Guide to include a statement advising consumers to obtain a VHR and directing consumers to an FTC website for more information. The Buyers Guide VHR statement appears in Figures 1 and 2. The Spanish translation appears in Figures 4 and 5.

As described above, the views expressed by the commenters include those advocating that the Rule and the Buyers Guide should not address vehicle history information at all, those favoring an informational approach, and those favoring an approach that, like AB 1215, would require dealers to obtain VHRs (specifically a NMVTIS report in the case of AB1215) and to disclose information about them to consumers, and various approaches in between.

The Final Rule incorporates an informational approach to VHRs. Revising the Buyers Guide by directing consumers to obtain a vehicle history report should help reduce consumer injury and deception that could result from undisclosed or deceptive disclosure of title brands or other pieces of problematic history. The SNPRM approach could encourage consumers to rely too much on particular VHRs and dealers for mechanical condition information to the neglect of information available from sources independent of dealers. On the other hand, specifying the source of or type of VHR that consumers consult, such as AB 1215 does, could discourage consumers from choosing VHRs that best suit their needs. Finally, an informational approach to VHR disclosures should not increase the burden on dealers much beyond what the Rule already imposes.

The Commission agrees that the SNPRM approach to VHR disclosures suffers from practical problems raised by the commenters. Among these is whether the Commission must define a VHR, or adopt a standard, such as NMVTIS, for the minimum amount of information that a VHR must contain to comply with a VHR disclosure requirement. Another question is whether the Commission would have to define what it means to obtain a report and whether the Commission can prevent dealers from viewing a report online or discarding reports. Other problematic issues also would arise, such as whether consumers or dealers should bear the cost of the reports. If dealers bear the cost, should they be required to produce reports to all requesting consumers, or should they be required to provide reports only to *bona fide* potential customers rather than, for example, to all casual shoppers? The Commission notes that the SNPRM approach could create an incentive for dealers to shop for reports that minimize or do not include negative information and for vendors to produce such reports.

In addition, requiring dealers to produce any VHRs that the dealer possesses, as proposed by the SNPRM, could reduce the availability of VHRs that dealers currently provide because of dealer liability concerns. Such a requirement would likely necessitate an extensive, and potentially unwieldy, rule defining what constitutes a VHR and when a dealer will be deemed to have obtained a VHR that would likely be difficult to apply in all situations.

Moreover, the marketplace for VHRs is evolving rapidly. Consumers currently can purchase the reports from commercial vendors for between $2 and $40 per report and can also gain access to them at no cost from many dealers, automobile market websites, buying services, etc.[102] The Commission is concerned that a mandatory approach to vehicle history information disclosure could have the unintended effect of impeding these developments and reducing consumer access to current and reliable vehicle history information.

The Commission is also adding language to the Buyers Guide statement directing consumers to check for open safety recalls by visiting *safercar.gov.* In its comment on the SNPRM, NHTSA recommended treating safety recalls in a manner similar to the SNPRM's treatment of VHRs. NHTSA proposed a box that dealers would check if they had searched for information about open recalls, which dealers would then be obligated to provide to consumers upon request.[103] Given that the Commission is adopting an informational approach to VHRs by directing consumers to obtain them independently, the Commission is also adopting a similar approach to safety recall information.[104]

---

[99] Consumers Union (2015) at 4–5.

[100] *See, e.g.,* NHTSA (2015) at 3 (describing the Department of Transportation's proposed reauthorization bill, the GROW AMERICA Act, which would give the Department the authority to require used car dealers to remedy safety recalls before resale.).

[101] The Commission's press release announcing the proposed settlements is available at *https://www.ftc.gov/news-events/press-releases/2016/01/gm-jim-koons-management-lithia-motors-inc-settle-ftc-actions.*

[102] *See* note 93 *infra.* (consumers can purchase twenty-five AutoCheck reports for $49.99).

[103] NHTSA (2015) at 2.

[104] As suggested by CAS, the Buyers Guide in the Final Rule uses the term ''check for'' safety recalls instead of ''search'' for recalls. CAS (2015), note 8.

B. ''As Is'' Statement

i. Summary

The existing Buyers Guide contains a box that dealers who offer to sell a used car without a warranty are required to mark to indicate that the vehicle is offered ''As Is,'' *i.e.,* without a warranty from the dealer. Adjacent to that box is a statement describing the meaning of the term ''As Is.'' In the NPRM, the Commission proposed modifying that statement to make it easier to read and to understand, but not to change the statement's meaning. In the SNPRM, the Commission proposed a revised formulation of the ''As Is'' statement and sought comments on other ''As Is'' statements.

After reviewing the comments that addressed the ''As Is'' statement, the Commission has decided to adopt the following ''As Is'' statement on the Buyers Guide which will appear next to a box that dealers would check in appropriate circumstances:

AS IS—NO DEALER WARRANTY

THE DEALER DOES NOT PROVIDE A WARRANTY FOR ANY REPAIRS AFTER SALE.

The statement is intended to convey nothing more than that the dealer does not intend to provide post-sale repairs under a warranty. Dealer groups strenuously objected to the Commission's SNPRM proposal to include the statement, ''But you may have other legal rights and remedies for dealer misconduct.'' [105] Consumer advocacy groups raised concerns that the SNPRM revision misstated dealers' potential obligations in some circumstances. The Commission has attempted to balance these concerns with a simple statement that concerns the warranty responsibilities that the dealer intends to disclaim. The fact that the dealer does not provide a warranty does not foreclose the possibility that a dealer could have post-sale repair obligations in some circumstances.

ii. Existing ''As Is'' Statement

The existing ''As Is'' statement on the Buyers Guide has been part of the Buyers Guide since the Rule's promulgation in 1984. The ''As Is'' statement was formulated to correct consumer misunderstanding of the term ''As Is.'' [106] The existing Buyers Guide states:

AS IS—NO WARRANTY

YOU WILL PAY ALL COSTS FOR ANY REPAIRS. The dealer assumes no responsibility for any repairs regardless of any oral statements about the vehicle. The Commission identified dealer oral misrepresentations regarding both mechanical condition and dealer after-sale repair responsibility in adopting the existing ''As Is'' disclosure.[107] The Commission concluded that a clear ''As Is'' disclosure would reduce consumer reliance on oral promises to repair problems that arise after sale, which may be difficult to enforce.[108]

iii. NPRM ''As Is'' Statement

In the NPRM, the Commission proposed revising the Buyers Guide ''As Is'' statement to improve readability and to clarify the meaning of the term ''As Is.'' The Buyers Guide in the NPRM stated:

AS IS—NO DEALER WARRANTY

THE DEALER WON'T PAY FOR ANY REPAIRS. The dealer is not responsible for any repairs, regardless of what anybody tells you. (''NPRM 'As Is' Statement'').[109]

iv. SNPRM ''As Is'' Statement

After reviewing the comments filed in response to the NPRM, the Commission, in the SNPRM, proposed retaining the ''regardless of any oral statements about the vehicle'' from the existing Rule and added ''but you may have other legal rights and remedies for dealer misconduct.'' Thus, the Buyers Guide in the SNPRM contains the following ''As Is'' statement:

AS IS—NO DEALER WARRANTY

THE DEALER WILL NOT PAY FOR ANY REPAIRS. The dealer does not accept responsibility to make or to pay for any repairs to this vehicle after you buy it regardless of any oral statements about the vehicle. But you may have other legal rights and remedies for dealer misconduct. (''SNRPRM 'As Is' Statement'').

v. Comments and Analysis

NCLC commented that the phrase ''regardless of any oral statements'' is ''troubling'' because ''[i]t is likely to convey to consumers that the dealer has the right not to stand behind its oral statements.'' [110] According to NCLC, however, ''under most states' laws, when the dealer has made statements about a vehicle's condition, it no longer has the ability to decline to accept responsibility for repairs necessary to bring the vehicle up to that condition.'' [111] Attorneys representing consumers agreed that the language could understate a dealer's potential liability for oral misrepresentations.[112]

The State AG Group proposed eliminating the use of ''As Is'' entirely.[113] The group observed that the focus of the statement should be on the ''fact that the dealer is not providing a warranty, rather than the potentially confusing or misleading statements that the dealer is selling a vehicle 'as is' or that it 'will not pay for any repairs.' '' [114] Dealers' groups likewise emphasized that the disclosure should be about whether the dealer is providing a warranty.[115]

The Commission agrees that the description of an ''As Is'' sale should focus on whether the dealer is offering a warranty rather than on an affirmative statement that the dealer will not pay for repairs. Likewise, the disclosure should not focus on an affirmative statement about a consumer's likely obligation in an ''As Is'' sale (''you will pay all costs for any repairs.''). Accordingly, the Commission has decided to delete the affirmative statements concerning the dealer's and consumer's respective obligations. Instead, the Commission has revised the Buyers Guide to add the explanatory statement, ''the dealer does not provide a warranty for any repairs after sale.''

The Commission, however, has decided to retain the term ''As Is.'' As noted in the 1984 rulemaking, the Uniform Commercial Code specifically identifies using ''As Is'' as a method to disclaim implied warranties.[116]

To balance the potential of the ''regardless of oral statements'' language to insulate dealers from liability and to dissuade consumers from pursuing remedies for oral misrepresentations that may be available in some circumstances, the Commission, in the SNPRM, proposed adding ''but you may

[105] NADA (2015) at 18; NIADA (2015) at 7.

[106] 49 FR at 45722–45723.

[107] 49 FR at 45705–45706.

[108] 49 FR at 45722. *See also* 49 FR 45697 (discussing parol evidence rule exclusion of evidence of oral statements that contradict written contract terms).

[109] 77 FR at 74769 (Figure 1).

[110] NCLC (2015) at 7.

[111] *Id.*

[112] Flinn (2015) (Georgia attorney) (seller could be responsible for oral misrepresentations when vehicle is sold ''As Is''; contracts induced by fraudulent misrepresentation are voidable); Gayle (2015) (Virginia consumer attorney). *Cf.* Moskos (2015) (South Carolina attorney) (suggests adding language to Buyers Guide that dealer is responsible for fraud regardless of what is on the Buyers Guide; judges sometimes accept dealer claim that it is not responsible for frame damage because possible frame damage is listed on back of Buyers Guide).

[113] State AG Group (2015) at 4–5.

[114] State AG Group (2015) at 5.

[115] NADA (2015) at 18 (''should be one and only one goal in including this language [an explanatory phrase], and that is to explain that the dealer is not offering a warranty on the used vehicle.'').

[116] 49 FR 45697 note 59; Uniform Commercial Code 2–316(3)(a).

have other legal rights and remedies for dealer misconduct.'' [117] The proposed language was a variation of language suggested by the State AG Group [118] and, with several formulations, favored by various consumer advocacy organizations.[119]

Dealers' organizations strongly objected to the proposed language. NIADA commented that ''one is hard pressed not to read the third sentence as anything more than a provocation of consumers to search for dealer misconduct whether it exists or not.'' [120] NADA commented that the proposed language is ''gratuitous'' and implies that dealers ''are engaged in 'misconduct' because they are offering a vehicle 'as is' and without a warranty.'' [121]

The Commission has decided against including the phrase ''but you may have other legal rights and remedies for dealer misconduct,'' as it had proposed in the SNPRM. The Commission agrees that the phrase may suggest that dealer misconduct exists or that consumers should look for it when none exists. Simplifying the description of an ''As Is'' sale to one in which the ''dealer does not provide a warranty'' should lessen the likelihood of consumer confusion and provide clearer guidance on whether a dealer affirmatively offers a warranty.

The Commission has decided to adopt a simplified ''As Is'' statement to address comments about whether the existing statement on the Buyers Guide clearly conveys that the dealer is not offering a warranty. The Commission has also considered the comments critical of various formulations of the phrase ''regardless of any oral statements about the vehicle'' and has decided to delete the phrase. The Commission notes that the Buyers Guide will continue to warn consumers that oral promises are difficult to enforce and to advise that consumers ask the dealer to put all promises in writing.

C. Non-Dealer Warranty Boxes

The proposed Buyers Guide in the SNPRM included boxes (''non-dealer warranty boxes'') that dealers could check to indicate whether an unexpired manufacturer warranty, a manufacturer used car warranty, or some other warranty applies, and whether a service contract is available. The version of the Buyers Guide proposed in the NPRM included similar boxes on the back of the Buyers Guide.[122] NPRM commenters who addressed the non-dealer warranty boxes uniformly recommended moving the disclosures to the front of the Buyers Guide where they will be more accessible to consumers.[123] SNPRM commenters also favored the boxes and placing them on the front, although some of these commenters proposed modifications to the boxes and making disclosure of unexpired manufacturers' warranties mandatory.

As suggested by the comments, the Commission has decided to make the non-dealer warranty boxes more prominent and accessible by moving them to the front of the Buyers Guide, as proposed in the SNPRM and shown in Figures 1 and 2. The Commission is also modifying the existing Rule's description of a service contract as proposed in the SNPRM and making the service contract box flush with the non-dealer warranty boxes.[124]

The Commission has also decided to modify the statement that dealers may use on the Buyers Guide to disclose the applicability of an unexpired manufacturer's warranty.[125] In its NPRM comment, CAS suggested that the unexpired manufacturer's warranty box should state that ''[t]he manufacturer's original warranty has not expired on some components of the vehicle'' because, according to CAS, that language is ''more consistent with the different coverages that are in current warranties.'' [126] The AG Group also supported CAS's proposed language.[127] In its comments on the SNPRM, CAS proposed an alternative, the ''manufacturer's warranty coverage period has not expired.'' [128] As noted by CAS, the current language suggests that a manufacturer's unexpired warranty is bumper-to-bumper coverage whereas only some components may be covered.[129]

The Commission has decided to adopt the language initially proposed by CAS to disclose unexpired manufacturer's warranties because the language more accurately describes that an unexpired manufacturer's warranty typically refers to warranty coverage over some components of a used vehicle rather than the bumper-to-bumper coverage associated with a new vehicle. Accordingly, the amended Final Rule will provide dealers the ability to disclose that a ''manufacturer's original warranty has not expired on some components of the vehicle.''

For the reasons discussed in the NPRM, the Commission declines to make the disclosure of non-dealer warranties mandatory on the Buyers Guide.[130] The Commission believes that a statement on the Buyers Guide encouraging consumers to request more information about non-dealer warranties will help ensure that consumers are not deceived if the dealer chooses to use the existence of a non-dealer warranty as a selling point. To ensure that consumers understand the scope of any non-dealer warranty, the disclosure advises consumers to ''ask the dealer for a copy of the warranty document and an

[117] 79 FR at 70809.

[118] The State AG Group proposed ''But, you may have legal rights if the dealer concealed problems with the vehicle or its history.'' State AG Group (2013) at 5.

[119] Various commenters proposed additional revisions but also approved of the phrase ''but you may have other legal rights and remedies for dealer misconduct.'' *E.g.,* NCLC (2015) at 6–7; Steinbach (consumer attorney) (2015) at 7; State AG Group 015 at 4–5 (listing three acceptable alternatives: ''however, you may have legal rights if the dealer concealed problems with the vehicle or its history''; ''but you may have other legal rights if the dealer misrepresents the vehicle's condition or engages in other misconduct''; ''but you may have other legal rights and remedies for dealer misconduct'').

[120] NIADA (2015) at 7.

[121] NADA (2015) at 18.

[122] 77 FR at 74771 (Figure 3).

[123] *E.g.,* American Ass'n for Justice (2013) at 2; Bolliger (2013) (Florida attorney); CAS (2013) at 2; CARS (2013) at 8; Crabtree (2013); Domonoske (2013); Elias (2013) (Florida Dep't of Regulatory and Economic Resources—Consumer Protection); Kaufman (2013): Klarquist (2013); Kraft, Karen, Credit Counseling (2013); Richards, Casper & Casper (2013); Speer, James, Virginia Poverty Law Center (2013); Thomson (2013); Wells (2013); NACA (2013) at 2; Ohio Ass'n for Justice (2013) at 2; Wholesale Forms (2013) at 1, 2.

[124] The State AG Group suggested making the service contract box flush and clearly separated from the non-dealer warranty boxes. State AG (2015) at 5.

[125] 16 CFR 455.2(b)(v) permits dealers that wish to disclose the applicability of an unexpired manufacturer's warranty to state ''The manufacturer's original warranty has not expired on the vehicle.''

The Final Rule permits dealers to use their existing stock of Buyers Guides for up to one year after the effective date of the Rule amendments. It includes a revised disclosure that dealers must use if they choose to disclose unexpired manufacturers' warranties, or other non-dealer warranties, using those Buyers Guides.

[126] CAS (2013) at 3.

[127] State AG Group (2015) at 3–6.

[128] CAS (2015) at 3. CAS also commented that the disclosure of an unexpired manufacturer's warranty should be mandatory, and, if not made mandatory, the space on the front of the Buyers Guide should not be wasted on the disclosure.

[129] CAS (2015) at 4.

[130] 77 FR at 74753. As the Commission noted when it adopted the Rule in 1984, dealers subject to the Used Car Rule should be aware that the provisions of the Magnuson-Moss Warranty Act (''MMWA'') and the Commission's rules interpreting the MMWA are fully applicable to any written warranty offered in connection with the sale of a used car. Used vehicle dealers should therefore consult the terms of the MMWA and the Commission's rules interpreting the MMWA for a clear explanation of the duties arising under the MMWA. See 49 FR at 45,709 (citing 15 U.S.C. 2302–2308; 16 CFR parts 700 (interpretations of the MMWA); 701 (disclosure of written consumer product warranty terms and conditions); 702 (presale availability of written warranty terms); and 703 (informal dispute settlement procedures)).

explanation of warranty coverage, exclusions, and repair obligations.'' [131]

D. Spanish Sales

The Commission has decided to add a revised statement, in Spanish, to the front of the English Buyers Guide advising Spanish-speaking consumers who cannot read the English Buyers Guide to ask for a copy of the Spanish Buyers Guide if the dealer conducts the sale in Spanish. A proposed Spanish statement was included in the Buyers Guide published with the NPRM and incorporated into the SNPRM Buyers Guide.[132] The Rule prescribes a Spanish Buyers Guide and requires its use if a dealer conducts a sale in Spanish.[133] Dealers' groups commented that the proposed statement (''if you are unable to read this document in English, ask your salesperson for a copy in Spanish'') potentially could have expanded dealers' obligation to use Spanish Guides.[134] Recognizing this concern and not intending any change in the Rule's requirement regarding Spanish Buyers Guides, the Commission has changed the statement to advise consumers to ask for the Buyers Guide in Spanish if the dealer is conducting the sale in Spanish.

The Rule permits dealers to add an optional signature line to the back of the Buyers Guide where consumers can acknowledge receipt of the Buyers Guide.[135] As recommended by the Texas Automobile Dealers Association, the Commission has adopted a translation of the acknowledgment statement into the Final Rule.[136]

E. Miscellaneous NPRM Buyers Guide Modifications Incorporated in the Final Rule

The Final Rule and Buyers Guide incorporate text and other modifications to the Buyers Guide that the Commission proposed in the NPRM. The Buyers Guide's statement advising consumers to ask the dealer about a mechanical inspection has been relocated above the proposed vehicle history information box to enhance its prominence.[137] The Final Rule retains the use of the terms ''dealer warranty'' and ''non-dealer warranty'' proposed in the NPRM. Finally, the Buyers Guide incorporates the NPRM's proposed modifications to the description of ''Implied Warranties Only'' on the version of the Buyers Guide for use in jurisdictions that prohibit dealers from waiving implied warranties [138] and the description of a service contract on the front of the Buyers Guide.[139]

In the NPRM, the Commission proposed adding air bags and catalytic converters, as part of the exhaust system, to the list of some major defects that may occur in used vehicles.[140] The Commission did not receive comments on the proposal. The revised Buyers Guide includes air bags and catalytic converters in the list of major defects.[141]

F. Modification of Service-Contract Provisions

When the Commission promulgated the Rule in 1984, the Commission noted that it did not intend to regulate those service contracts that are ''excluded from the Commission's jurisdiction by the McCarran-Ferguson Act.'' [142] Consistent with that intent, the Commission has decided to adopt the revisions proposed in the SNPRM.[143] Therefore, § 455.1(d)(7) and § 455.2(b)(3) will be amended so that they correspond more closely with the statutory language of the McCarran-Ferguson Act.[144]

III. Regulatory Flexibility Act

The Regulatory Flexibility Act (''RFA'') [145] requires that the Commission conduct an initial and a final analysis of the anticipated economic impact of the amendments on small entities. The purpose of a regulatory flexibility analysis is to ensure the agency considers the impacts on small entities and examines regulatory alternatives that could achieve the regulatory purpose while minimizing burdens on small entities. The RFA [146] provides that such an analysis is not required if the agency head certifies that the regulatory action will not have a significant economic impact on a substantial number of small entities.

The Commission believes that the amendments will not have a significant economic impact on small entities, although they will likely affect a substantial number of small entities. The Rule, and the amendments, apply primarily to independent used vehicle dealers and franchised new vehicle dealers, which typically also sell used vehicles, such as vehicles traded for new car purchases. Most dealers would be classified as small businesses, as explained *infra.*

The amendments revise the Buyers Guide that the Rule requires dealers to display on used vehicles by changing pre-printed disclosures that appear on the Buyers Guide and adding boxes that dealers can check if they choose to disclose additional information concerning non-dealer warranties. Although the amendments will require that dealers eventually substitute the revised Buyers Guides, the amendments permit dealers to use their existing stock of Buyers Guides for up to one year after the effective date of these Rule amendments before doing so. The Rule already permits dealers to make the disclosures in the check boxes, but the check boxes will make the disclosures easier for those dealers who choose to make them. Therefore, the Commission certifies that amending the Rule will not have a significant economic impact on a substantial number of small businesses.

The Final Rule is similar to the rule proposed in the NPRM. In its Initial Regulatory Flexibility Analysis (''IRFA''), the Commission determined that the NPRM Proposed Rule was not likely to have a significant economic impact on a substantial number of small entities.[147] The only additional burden that the Final Rule, like the Proposed Rule, places on dealers is the substitution of new Buyers Guides for the ones that dealers currently use, but dealers will be permitted to use their existing stock of Buyers Guides for up to one year after the effective date of these Rule amendments. The new Buyers Guide makes disclosing non-dealer warranties easier for those dealers who choose to disclose them, but does not require additional disclosures regarding non-dealer warranties.

Although the Commission certifies under the RFA that the amendments will not have a significant impact on a substantial number of small entities, the Commission nonetheless has determined that publishing a final regulatory flexibility analysis (FRFA) is appropriate to ensure that the impact of the amendments is fully addressed.

[131] *See* Figure 1.

[132] *See* SNPRM Figures 1 and 2, 79 FR 70818–70819; NPRM Figures 1 and 2, 77 FR at 74769 and 74770.

[133] 16 CFR 455.5.

[134] NADA (2015) at 19, 20.

[135] 16 CFR 455.2(f).

[136] Texas Automobile Dealers Association (00032) at 4. *See* revised 16 CFR 455.5.

[137] The following statement has been on the Buyers Guide since the Rule's promulgation in 1984: ASK THE DEALER IF YOUR MECHANIC CAN INSPECT THE VEHICLE ON OR OFF THE LOT. *See* Figures 1 and 2.

[138] *See* 16 CFR 455.2(b)(1)(ii); Figure 2.

[139] *Id.*

[140] 77 FR at 74760.

[141] *See* Figures 3 and 6 (Spanish).

[142] Trade Regulation Rule Concerning Sale of Used Motor Vehicles, 49 FR 45692, 45709 (Nov. 19, 1984).

[143] 79 FR at 70810.

[144] 15 U.S.C. 1012(b).

[145] 5 U.S.C. 601–612.

[146] 5 U.S.C. 605.

[147] 77 FR 74765.

Therefore, the Commission has prepared the following analysis:

A. Need for and Objectives of the Amendments

The purpose of the amendments is to provide material information about vehicle histories and used car warranties to help protect consumers from dealer misrepresentations and to aid consumers in making informed choices when purchasing a used vehicle. In particular, the amendments seek to promote consumer awareness of vehicle history information, to clarify the meaning of ''as is'' in the sale of used vehicles without warranties, to make disclosures concerning non-dealer warranties more prominent, to improve Spanish-speaking consumers' access to the Spanish Buyers Guide during sales conducted in Spanish, and to provide additional information about defects that may be found in used vehicles.

B. Significant Issues Raised in Public Comments

None of the comments disputed the Initial Regulatory Flexibility Analysis in the NPRM or in the SNPRM. In the SNPRM, the Commission proposed that dealers indicate on the Buyers Guide that they had obtained a VHR and, if so, provide a copy of the VHR to consumers upon request. Commenters questioned whether the cost of providing copies of VHRs to consumers should be borne by consumers or dealers. The Final Rule does not require dealers to provide copies of VHRs to consumers, but instead a pre-printed statement on the Buyers Guide recommends that consumers visit an FTC website to learn more about obtaining VHRs. Accordingly, the amendments will not require dealers to bear the cost of providing VHRs to consumers.

The Commission did not receive any comments from the Small Business Administration Chief Counsel for Advocacy.

C. Small Entities to Which the Amendments Will Apply

The Used Car Rule primarily applies to ''dealers'' defined as ''any individual or business which sells or offers for sale a used vehicle after selling or offering for sale five (5) or more used vehicles in the previous twelve months.'' [148] The Commission believes that many of these dealers are small businesses according to the applicable Small Business Administration (''SBA'') size standards. Under those standards, the SBA would classify as small businesses independent used car dealers having annual receipts of less than $25 million and franchised new car dealers, which also typically sell used cars, having fewer than 200 employees each.[149]

Most independent used vehicle dealers would be classified as small businesses. In 2012, the United States' 37,892 independent used vehicle dealers [150] had average total sales of $4,228,137.[151] These used vehicle dealers' average annual revenue is well below the maximum $25 million in annual sales established by the SBA for classification as a small business. Therefore, these used vehicle dealers would be classified as small businesses.

The SBA would also classify many franchised new car dealers as small businesses. In 2015, the nation's 16,545 franchised new car dealers [152] had an average of sixty-seven employees,[153] well below the 200-employee maximum established by the SBA for classification as a small business.[154]

D. Projected Reporting, Recordkeeping, and Other Compliance Requirements, Including Classes of Covered Small Entities and Professional Skills Needed To Comply

The Used Car Rule imposes disclosure obligations on used vehicle dealers, but does not impose any reporting or recordkeeping requirements. Specifically, the Rule requires dealers to complete and to display a Buyers Guide on each used car offered for sale. Neither the existing Rule nor the Final Rule requires dealers to disclose non-dealer warranties. Under the existing Rule, dealers who choose to disclose non-dealer warranties, in particular, unexpired manufacturer's warranties, may do so by adding a statement to the Buyers Guide that is prescribed by the Rule. The Final Rule permits dealers to disclose unexpired manufacturer's warranties and other third-party warranties, but does not require that dealers make those disclosures. For those dealers who choose to disclose non-dealer warranties, the Final Rule should make the disclosure easier because dealers can make the disclosures by checking a box on the Buyers Guide rather than adding a statement prescribed by the Rule.

In other **Federal Register** submissions, the Commission has concluded that professional skills needed to comply with the rule are possessed by clerical or administrative staff.[155] The professional skills necessary to comply with the Rule as modified by the amendments are the same as those necessary to comply with the existing Rule.

E. Significant Alternatives to the Amendments

The Commission has not proposed any specific small entity exemption or other significant alternatives because the amendments simply modify the pre-printed disclosures that dealers are already required to make in connection with offering used cars for sale.

The Commission believes that the Final Rule will help reduce potential deception by promoting consumer awareness of vehicle history information, consumer understanding of the meaning of ''As Is'' in used vehicle sales transactions in which a dealer disclaims warranties, and consumer awareness of warranties that may apply to a used vehicle. The revised Buyers Guide contains pre-printed statements that direct consumers to consumer-oriented websites for additional information, including live links to outside sources of information. The Rule also requires dealers to complete parts of the Buyers Guide by, among other things, listing the VIN and indicating the warranty coverage, if any, that applies to the vehicle. A downloadable, fillable version of the revised Buyers Guide is available on the Commission's Web site.

The Rule also provides that the Buyers Guide is incorporated into the sales contract. The Rule requires that dealers complete a Buyers Guide for each used vehicle offered for sale, display a physical Buyers Guide on the vehicle, and provide a copy of that Buyers Guide to consumers. Therefore, consumers are able to see the Buyers Guide disclosures upon even a casual inspection of a used vehicle that they are considering buying. Consumers likely expect to see a physical label on used cars because disclosure labels (''Monroney'' stickers) are required to be affixed to new cars.[156] In staff's enforcement experience, used vehicle dealers routinely place point of sale

[148] 16 CFR 455.1(d)(3).

[149] *Table of Small Bus. Size Standards Matched to North American Indus. Classification System Codes,* 13 CFR 121.201 (available at: *https://www.sba.gov/contracting/getting-started-contractor/make-sure-you-meet-sba-size-standards/table-small-business-size-stand*), updated Feb. 26, 2016. Used car dealers are classified as NAICS 441120 and franchised new car dealers as NAICS 441110.

[150] *NIADA Used Car Industry Report 2013,* at 16. The most recent figures published by NIADA are for 2012.

[151] *Id.* at 20. Used vehicle sales accounted for 38.29% ($1,618,954) of those sales.

[152] *NADA Data 2015* at 3. (available at: *https://www.nada.org/nadadata/.*).

[153] *Id.* at 17.

[154] *Table of Small Bus. Size Standards* at 23.

[155] *See, e.g.,* 79 FR 70814, note 101; Request for Extension of Clearance, 78 FR 59032, 59033 (Sept. 25, 2013).

[156] *See* 15 U.S.C. 1232.

advertising statements (e.g., ''low miles,'' ''one owner'') directly on vehicles to capture consumers' attention. Similarly, the Commission continues to believe that a Buyers Guide displayed on a used vehicle will most effectively capture a consumer's attention.

The Commission considered several different approaches to vehicle history information discussed in the comments. In the SNPRM, the Commission proposed requiring dealers who have VHRs to disclose that fact on the Buyers Guide and to provide copies of the reports to requesting consumers. In the NPRM, the Commission proposed placing a statement on the Buyers Guide that would advise consumers about the availability of vehicle history information and direct consumers to an FTC website for more information. The Commission also considered requiring dealers to obtain VHRs. such as NMVTIS reports, and requiring dealers to make disclosures similar to those required by California's AB 1215. Currently consumers can gain access to VHRs at no cost from many dealers, automobile marketplace websites, buying services, etc., and from commercial vendors at a nominal cost. Given the availability of various sources for and types of VHRs, the Commission has chosen not to require that dealers obtain reports or to designate specific types of reports or specific vendors. In doing so, the Commission sought to balance the burden placed on dealers with the goals of promoting consumer choice and access to vehicle history information.

The Commission considered comments on the Buyers Guide ''As Is'' statement and the various formulations of the statement proposed by the comments. The Commission chose the ''As Is'' statement in this Final Rule because the Commission believes that the statement clearly and accurately describes the meaning of ''As Is.''

The Commission considered comments on the non-dealer warranty boxes proposed in the NPRM. In response to those comments, the Commission has moved those boxes to the front of the Buyers Guide.

Under these circumstances, the Commission does not believe a special exemption for small entities or significant compliance alternatives are necessary or appropriate to minimize the compliance burden, if any, on small entities while achieving the intended purposes of the amendments.

IV. Regulatory Analysis

Under section 22 of the FTC Act, the Commission must issue a regulatory analysis for a proceeding to amend a rule only when it: (1) Estimates that the amendment will have an annual effect on the national economy of $100,000,000 or more; (2) estimates that the amendment will cause a substantial change in the cost or price of certain categories of goods or services; or (3) otherwise determines that the amendment will have a significant effect upon covered entities or upon consumers.

After careful consideration of the comments, and the record as a whole, the Commission has determined that there are no facts in the record, or other reasons to believe, that these amendments will have significant effects on the national economy, on the cost of goods or services, or on covered parties or consumers. No commenter provided a cost estimate of the amendments. Moreover, none indicated that the amendments would have an annual impact of more than $100,000,000, cause substantial change in the cost of goods or services, or otherwise have a significant effect upon covered entities or consumers.

In any event, to the extent, if any, these final rule amendments will have such effects, the Commission has explained above the need for, and the objectives of, the final amendments; the regulatory alternatives that the Commission considered; the projected benefits and adverse economic or other effects, if any, of the amendments; the reasons that the final amendments will attain their intended objectives in a manner consistent with applicable law; the reasons for the particular amendments that the agency has adopted; and the significant issues raised by public comments, including the Commission's assessment of and response to those comments on those issues.

V. Paperwork Reduction Act

The existing Rule contains no recordkeeping or reporting requirements, but it does contain disclosure requirements that constitute ''information collection requirements'' as defined by 5 CFR 1320.3(c) under the Office of Management and Budget (''OMB'') regulations that implement the Paperwork Reduction Act (''PRA''). OMB has approved the Rule's existing information collection requirements through Jan. 31, 2017 (OMB Control No. 3084–0108).

As discussed above, the Commission is retaining the requirement that dealers must display a Buyers Guide on used cars offered for sale and is updating the text of the disclosures that dealers must provide in the Buyers Guide. The Commission is also amending the Buyers Guide to provide dealers with a method to disclose optional additional information about non-dealer warranties. The amendments about non-dealer warranties do not require dealers to disclose this additional information nor do they alter the Rule's existing disclosure requirements or impose recordkeeping requirements.

The Commission has made amended Buyers Guides available on its Web site for downloading by dealers free of charge. The Commission expects that current suppliers of Buyers Guides, such as commercial vendors and dealer trade associations, will supply dealers with amended Buyers Guides. Accordingly, individual dealer cost to obtain amended Buyers Guides should increase only marginally, if at all.

As explained in the NPRM, FTC staff has estimated that dealers will make the optional disclosures on 25% of used cars offered for sale. Dealers who choose to make the optional disclosures should obtain amended Buyers Guides and complete them by checking additional boxes not appearing on the current Buyers Guide. Staff has in the past estimated that completing Buyers Guides requires approximately 2 minutes per vehicle for vehicles sold without a warranty and 3 minutes per vehicle for vehicles sold with a warranty.[157] Staff believes that checking the additional boxes should require dealers no more than an additional 30 seconds per vehicle.[158] Thus, based on 27,966,551 used cars sold,[159] making the optional disclosures presented by the amendments would increase estimated burden by 58,264 hours (25% $\times$ 27,966,551 vehicles sold $\times$ 1/120 hour per vehicle).

Staff also anticipates that dealers can use lower level clerical staff at a mean hourly wage of $15.33 per hour[160] to

[157] *See, e.g.,* 78 FR 59032, 59032 (Sept. 25, 2013) (Notice: ''Agency Information Collection Activities; Proposed Collection; Comment Request; Extension.'').

[158] Previously, dealers who opted to disclose the applicability of manufacturers' warranties could do so by adding a statement to the Buyers Guide, 16 CFR 455.2(2)(b)(v), which likely would take longer than simply checking a box to make the same disclosure. The projected increment of 30 seconds is a combined reflection of time saved through the latter means and the incremental time accorded to checking off additional boxes tied to new disclosures under the Final Rule.

[159] *NIADA's Used Car Industry Report 2016,* at 31 (*citing* NADA data for the total number of used vehicles sold by franchised and independent dealers in 2015).

[160] The hourly rate is based on the Bureau of Labor Statistics estimate of the mean hourly wage for office clerks, general. *Occupational Employment and Wages, May 2015, 43–9061 Office Clerks,* Continued

complete the Buyers Guides, so incremental labor costs associated with making the optional disclosures will total $893,187 per year [58,264 hours × $15.33 per hour].

Estimating, as stated above, that dealers will make the optional disclosures on 25% of the 27,966,551 used cars offered for sale, and assuming further a cost of thirty cents per preprinted Buyers Guide, incremental purchase costs per year will total $2,097,491. Any other capital costs associated with the amendments are likely to be minimal. This analysis is consistent with the analysis provided in the NPRM, but has been updated with more recent data regarding the number of used vehicles sold and labor costs tied to making the optional disclosures for those sales. None of the comments disputed the PRA analysis in the NPRM.

List of Subjects in 16 CFR Part 455

Motor vehicles, Trade practices.

For the reasons set forth in the preamble, the Federal Trade Commission amends part 455 of title 16, Code of Federal Regulations, as follows:

PART 455—USED MOTOR VEHICLE TRADE REGULATION RULE

■ 1. The authority citation for part 455 continues to read as follows:

Authority: 15 U.S.C. 2309; 15 U.S.C. 41–58.

■ 2. Amend § 455.1 by revising paragraph (d)(7) to read as follows:

§ 455.1 General duties of a used vehicle dealer; definitions.

* * * * *

(d) * * *

(7) *Service contract* means a contract in writing for any period of time or any specific mileage to refund, repair, replace, or maintain a used vehicle and provided at an extra charge beyond the price of the used vehicle, unless offering such contract is ''the business of insurance'' and such business is regulated by State law.

* * * * *

■ 3. Amend § 455.2 by revising paragraph (a) introductory text, paragraph (a)(2), and paragraph (b) to read as follows:

§ 455.2 Consumer sales—window form.

(a) *General duty.* Before you offer a used vehicle for sale to a consumer, you must prepare, fill in as applicable and display on that vehicle the applicable ''Buyers Guide'' illustrated by Figures 1–2 at the end of this part. Dealers may use remaining stocks of the version of the Buyers Guide in effect prior to the effective date of this Rule for up to one year after that effective date (*i.e.,* until January 27, 2018). Dealers who opt to use their existing stock and choose to disclose the applicability of a non-dealer warranty, must add the following as applicable below the ''Full/Limited Warranty'' disclosure: ''Manufacturer's Warranty still applies. The manufacturer's original warranty has not expired on the vehicle;'' ''Manufacturer's Used Vehicle Warranty Applies;'' or ''Other Used Vehicle Warranty Applies,'' followed by the statement, ''Ask the dealer for a copy of the warranty document and an explanation of warranty coverage, exclusions, and repair obligations.''

* * * * *

(2) The capitalization, punctuation and wording of all items, headings, and text on the form must be exactly as required by this Rule. The entire form must be printed in 100% black ink on a white stock no smaller than 11 inches high by 7¼ inches wide in the type styles, sizes and format indicated. When filling out the form, follow the directions in paragraphs (b) through (f) of this section and § 455.4.

(b) *Warranties*—(1) *No Implied Warranty*—''*As Is*''/*No Dealer Warranty.* (i) If you offer the vehicle without any implied warranty, *i.e.,* ''as is,'' mark the box appearing in Figure 1. If you offer the vehicle with implied warranties only, substitute the IMPLIED WARRANTIES ONLY disclosure specified in paragraph (b)(1)(ii) of this section, and mark the IMPLIED WARRANTIES ONLY box illustrated by Figure 2. If you first offer the vehicle ''as is'' or with implied warranties only but then sell it with a warranty, cross out the ''As Is—No Dealer Warranty'' or ''Implied Warranties Only'' disclosure, and fill in the warranty terms in accordance with paragraph (b)(2) of this section.

(ii) If your State law limits or prohibits ''as is'' sales of vehicles, that State law overrides this part and this rule does not give you the right to sell ''as is.'' In such States, the heading ''As Is—No Dealer Warranty'' and the paragraph immediately accompanying that phrase must be deleted from the form, and the following heading and paragraph must be substituted as illustrated in the Buyers Guide in Figure 2. If you sell vehicles in States that permit ''as is'' sales, but you choose to offer implied warranties only, you must also use the following disclosure instead of ''As Is—No Dealer Warranty'' as illustrated by the Buyers Guide in Figure 2. *See* § 455.5 for the Spanish version of this disclosure.

IMPLIED WARRANTIES ONLY

The dealer doesn't make any promises to fix things that need repair when you buy the vehicle or afterward. But *implied warranties* under your state's laws may give you some rights to have the dealer take care of serious problems that were not apparent when you bought the vehicle.

(2) *Full/Limited Warranty.* If you offer the vehicle with a warranty, briefly describe the warranty terms in the space provided. This description must include the following warranty information:

(i) Whether the warranty offered is ''Full'' or ''Limited.'' Mark the box next to the appropriate designation. A ''Full'' warranty is defined by the Federal Minimum Standards for Warranty set forth in section 104 of the Magnuson-Moss Act, 15 U.S.C. 2304 (1975). The Magnuson-Moss Act does not apply to vehicles manufactured before July 4, 1975. Therefore, if you choose not to designate ''Full'' or ''Limited'' for such vehicles, cross out both designations, leaving only ''Warranty.''

(ii) Which of the specific systems are covered (for example, ''engine, transmission, differential''). You cannot use shorthand, such as ''drive train'' or ''power train'' for covered systems.

(iii) The duration (for example, ''30 days or 1,000 miles, whichever occurs first'').

(iv) The percentage of the repair cost paid by you (for example, ''The dealer will pay 100% of the labor and 100% of the parts.'')

(v) You may, but are not required to, disclose that a warranty from a source other than the dealer applies to the vehicle. If you choose to disclose the applicability of a non-dealer warranty, mark the applicable box or boxes beneath ''NON-DEALER WARRANTIES FOR THIS VEHICLE'' to indicate: ''MANUFACTURER'S WARRANTY STILL APPLIES. The manufacturer's original warranty has not expired on some components of the vehicle,'' ''MANUFACTURER'S USED VEHICLE WARRANTY APPLIES,'' and/or ''OTHER USED VEHICLE WARRANTY APPLIES.''

If, following negotiations, you and the buyer agree to changes in the warranty coverage, mark the changes on the form, as appropriate. If you first offer the vehicle with a warranty, but then sell it without one, cross out the offered warranty and mark either the ''As Is—No Dealer Warranty'' box or the ''Implied Warranties Only'' box, as appropriate.

(3) *Service contracts.* If you make a service contract available on the vehicle,

General, available at: *http://www.bls.gov/oes/current/oes439061.htm.*

you must add the following heading and paragraph below the Non-Dealer Warranties Section and mark the box labeled ''Service Contract,'' unless offering such service contract is ''the business of insurance'' and such business is regulated by State law. *See* § 455.5 for the Spanish version of this disclosure.

☐ SERVICE CONTRACT. A service contract on this vehicle is available for an extra charge. Ask for details about coverage, deductible, price, and exclusions. If you buy a service contract within 90 days of your purchase of this vehicle, *implied warranties* under your state's laws may give you additional rights.

* * * * *

■ 3. Revise § 455.5 to read as follows:

§ 455.5 Spanish language sales.

(a) If you conduct a sale in Spanish, the window form required by § 455.2 and the contract disclosures required by § 455.3 must be in that language. You may display on a vehicle both an English language window form and a Spanish language translation of that form. Use the translation and layout for Spanish language sales in Figures 4, 5, and 6.

(b) Use the following language for the ''Implied Warranties Only'' disclosure when required by § 455.2(b)(1) as illustrated by Figure 5:

SOLO GARANTÍAS IMPLÍCITAS

El concesionario no hace ninguna promesa de reparar lo que sea necesario cuando compre el vehículo o posteriormente. Sin embargo, las *garantías implícitas* según las leyes estatales podrían darle algunos derechos para hacer que el concesionario se encargue de ciertos problemas que no fueran evidentes cuando compró el vehículo.

(c) Use the following language for the ''Service Contract'' disclosure required by § 455.2(b)(3) as illustrated by Figures 4 and 5:

CONTRATO DE MANTENIMIENTO. Con un cargo adicional, puede obtener un contrato de mantenimiento para este vehículo. Pregunte acerca de los detalles de la cobertura, los deducibles, el precio y las exclusiones. Si compra un contrato de mantenimiento dentro de los 90 días desde el momento en que compró el vehículo, las *garantías implícitas* según las leyes de su estado podrían darle derechos adicionales.

(d) Use the following language if you choose to use the Optional Signature Line provided by § 455.2(f):

Por este medio confirmo que he recibido copia de la Guía del Comprador al momento de la compraventa.

■ 4. Add Figures 1 through 6 to part 455 to read as follows:

BILLING CODE 6750–01–P

FIGURE 1 TO PART 455 – "AS IS" - NO DEALER WARRANTY Buyers Guide

(English)

504 x 684 pt box, 1 pt stroke

BUYERS GUIDE

26 pt bold caps centered

1 pt rule

IMPORTANT: Spoken promises are difficult to enforce. Ask the dealer to put all promises in writing. Keep this form.

8.5 pt bold & regular, caps & lc

0.5 pt rule

VEHICLE MAKE MODEL YEAR VEHICLE IDENTIFICATION NUMBER (VIN)

6 pt regular caps

WARRANTIES FOR THIS VEHICLE:

12 pt bold caps

2 pt rule

☐ **AS IS - NO DEALER WARRANTY**

THE DEALER DOES NOT PROVIDE A WARRANTY FOR ANY REPAIRS AFTER SALE.

22 pt box, 1 pt stroke
24 pt bold caps
8.5 pt regular, caps & lc
1 pt dashed rule

☐ **DEALER WARRANTY**

☐ FULL WARRANTY.

☐ LIMITED WARRANTY. The dealer will pay ____% of the labor and ____% of the parts for the covered systems that fail during the warranty period. Ask the dealer for a copy of the warranty, and for any documents that explain warranty coverage, exclusions, and the dealer's repair obligations. *Implied warranties* under your state's laws may give you additional rights.

22 pt box, 1 pt stroke
24 pt bold caps
8 pt boxes, 1 pt stroke
8.5 pt regular, italic, caps & lc
10.2 pt leading

SYSTEMS COVERED: **DURATION:**

9 pt bold caps, 2 columns

NON-DEALER WARRANTIES FOR THIS VEHICLE:

12 pt bold caps
2 pt rule

☐ MANUFACTURER'S WARRANTY STILL APPLIES. The manufacturer's original warranty has not expired on some components of the vehicle.

☐ MANUFACTURER'S USED VEHICLE WARRANTY APPLIES.

☐ OTHER USED VEHICLE WARRANTY APPLIES.

8 pt boxes, 1 pt stroke
8.5 pt regular, caps & lc
10.2 pt leading

Ask the dealer for a copy of the warranty document and an explanation of warranty coverage, exclusions, and repair obligations.

1 pt rule

☐ SERVICE CONTRACT. A service contract on this vehicle is available for an extra charge. Ask for details about coverage, deductible, price, and exclusions. If you buy a service contract within 90 days of your purchase of this vehicle, *implied warranties* under your state's laws may give you additional rights.

8 pt box, 1 pt stroke
8.5 pt regular, italic, caps & lc
10.2 pt leading
2 pt rule

ASK THE DEALER IF YOUR MECHANIC CAN INSPECT THE VEHICLE ON OR OFF THE LOT.

OBTAIN A VEHICLE HISTORY REPORT AND CHECK FOR OPEN SAFETY RECALLS. For information on how to obtain a vehicle history report, visit ftc.gov/usedcars. To check for open safety recalls, visit safercar.gov. You will need the vehicle identification number (VIN) shown above to make the best use of the resources on these sites.

SEE OTHER SIDE for important additional information, including a list of major defects that may occur in used motor vehicles.

Si el concesionario gestiona la venta en español, pídale una copia de la Guía del Comprador en español.

9 pt regular, bold, caps & lc
10.8 pt leading

* Typeface is Arial, text is flush left unless otherwise noted.

FIGURE 2 TO PART 455 – IMPLIED WARRANTIES ONLY Buyers Guide (English)

504 x 684 pt box, 1 pt stroke

BUYERS GUIDE

26 pt bold caps centered

1 pt rule

IMPORTANT: Spoken promises are difficult to enforce. Ask the dealer to put all promises in writing. Keep this form.

8.5 pt bold & regular, caps & lc

0.5 pt rule

VEHICLE MAKE MODEL YEAR VEHICLE IDENTIFICATION NUMBER (VIN)

6 pt regular caps

WARRANTIES FOR THIS VEHICLE:

12 pt bold caps
2 pt rule

☐ **IMPLIED WARRANTIES ONLY**

The dealer doesn't make any promises to fix things that need repair when you buy the vehicle or afterward. But *implied warranties* under your state's laws may give you some rights to have the dealer take care of serious problems that were not apparent when you bought the vehicle.

22 pt box, 1 pt stroke
24 pt bold caps
8.5 pt regular, italic, caps & lc
10.2 pt leading
1 pt dashed rule

☐ **DEALER WARRANTY**

☐ FULL WARRANTY.

☐ LIMITED WARRANTY. The dealer will pay ____% of the labor and ____% of the parts for the covered systems that fail during the warranty period. Ask the dealer for a copy of the warranty, and for any documents that explain warranty coverage, exclusions, and the dealer's repair obligations. *Implied warranties* under your state's laws may give you additional rights.

22 pt box, 1 pt stroke
24 pt bold caps
8 pt boxes, 1 pt stroke
8.5 pt regular, italic, caps & lc
10.2 pt leading

SYSTEMS COVERED: **DURATION:**

9 pt bold caps, 2 columns

NON-DEALER WARRANTIES FOR THIS VEHICLE:

12 pt bold caps
2 pt rule

☐ MANUFACTURER'S WARRANTY STILL APPLIES. The manufacturer's original warranty has not expired on some components of the vehicle.

☐ MANUFACTURER'S USED VEHICLE WARRANTY APPLIES.

☐ OTHER USED VEHICLE WARRANTY APPLIES.

Ask the dealer for a copy of the warranty document and an explanation of warranty coverage, exclusions, and repair obligations.

8 pt boxes, 1 pt stroke
8.5 pt regular, caps & lc
10.2 pt leading

1 pt rule

☐ SERVICE CONTRACT. A service contract on this vehicle is available for an extra charge. Ask for details about coverage, deductible, price, and exclusions. If you buy a service contract within 90 days of your purchase of this vehicle, *implied warranties* under your state's laws may give you additional rights.

8 pt box, 1 pt stroke
8.5 pt regular, italic, caps & lc
10.2 pt leading
2 pt rule

ASK THE DEALER IF YOUR MECHANIC CAN INSPECT THE VEHICLE ON OR OFF THE LOT.

OBTAIN A VEHICLE HISTORY REPORT AND CHECK FOR OPEN SAFETY RECALLS. For information on how to obtain a vehicle history report, visit ftc.gov/usedcars. To check for open safety recalls, visit safercar.gov. You will need the vehicle identification number (VIN) shown above to make the best use of the resources on these sites.

SEE OTHER SIDE for important additional information, including a list of major defects that may occur in used motor vehicles.

Si el concesionario gestiona la venta en español, pídale una copia de la Guía del Comprador en español.

9 pt regular, bold, caps & lc
10.8 pt leading

* Typeface is Arial, text is flush left unless otherwise noted.

FIGURE 3 TO PART 455 – Back of Buyers Guide (English)

504 x 684 pt box, 1 pt stroke

2 pt rule

Here is a list of some major defects that may occur in used vehicles.

7 pt regular, cap & lc

144 pt columns, left, center, right
7 pt bold, 2 pt before para,
7 pt regular, 15 pt left ind,
-10 pt first line ind
8.4 pt leading

Frame & Body
Frame-cracks, corrective welds, or rusted through
Dog tracks---bent or twisted frame

Engine
Oil leakage, excluding normal seepage
Cracked block or head
Belts missing or inoperable
Knocks or misses related to camshaft
lifters and push rods
Abnormal exhaust discharge

Transmission & Drive Shaft
Improper fluid level or leakage, excluding normal seepage
Cracked or damaged case which is visible
Abnormal noise or vibration caused by faulty transmission or drive shaft
Improper shifting or functioning in any gear
Manual clutch slips or chatters

Differential
Improper fluid level or leakeage, excluding normal seepage
Cracked of damaged housing which is visible
Abnormal noise or vibration caused by faulty differential

Cooling System
Leakage including radiator
Improperly functioning water pump

Electrical System
Battery leakage
Improperly functioning alternator, generator, battery, or starter

Fuel System
Visible leakage

Inoperable Accessories
Gauges or warning devices
Air conditioner
Heater & Defroster

Brake System
Failure warning light broken
Pedal not firm under pressure (DOT spec.)
Not enough pedal reserve (DOT spec.)
Does not stop vehicle in straight line (DOT spec.)
Hoses damaged
Drum or rotor too thin (Mfgr. Specs)
Lining or pad thickness less than 1/32 inch
Power unit not operating or leaking
Structural or mechanical parts damaged

Air Bags

Steering System
Too much free play at steering wheel (DOT specs.)
Free play in linkage more than 1/4 inch
Steering gear binds or jams
Front wheels aligned improperly (DOT specs.)
Power unit belts cracked or slipping
Power unit fluid level improper

Suspension System
Ball joint seals damaged
Structural parts bent or damaged
Stabilizer bar disconnected
Spring broken
Shock absorber mounting loose
Rubber bushings damaged or missing
Radius rod damaged or missing
Shock absorber leaking or functioning improperly

Tires
Tread depth less than 2/32 inch
Sizes mismatched
Visible damage

Wheels
Visible cracks, damage or repairs
Mounting bolts loose or missing

Exhaust System
Leakage
Catalytic Converter

2 pt rule

DEALER NAME

ADDRESS

TELEPHONE EMAIL

FOR COMPLAINTS AFTER SALE, CONTACT:

0.5 pt rules
8 pt regular, caps
25 pts between rules

2 pt rule

IMPORTANT: The information on this form is part of any contract to buy this vehicle. Removing this label before consumer purchase (except for purpose of test-driving) violates federal law (16 C.F.R. 455).

9 pt bold & regular, caps & lc
10.8 pt leading

* Typeface is Arial, text is flush left unless otherwise noted.

FIGURE 4 TO PART 455 – "AS IS"- NO DEALER WARRANTY Buyers Guide

(Spanish)

GUÍA DEL COMPRADOR

IMPORTANTE: Las promesas verbales son difíciles de hacer cumplir. Solicite al concesionario que ponga todas las promesas por escrito. Conserve este formulario.

MARCA DEL VEHÍCULO MODELO AÑO NÚMERO DE IDENTIFICACIÓN DEL VEHICULO (VIN)

GARANTÍAS PARA ESTE VEHÍCULO:

☐ **COMO ESTÁ - SIN GARANTÍA DEL CONCESIONARIO**

EL CONCESIONARIO NO PAGARÁ NINGUNA REPARACIÓN. El concesionario no provee una garantía para reparaciones hechas después del momento de la venta.

☐ **GARANTÍA DEL CONCESIONARIO**

☐ GARANTÍA COMPLETA.

☐ GARANTÍA LIMITADA. El concesionario pagará el _______% de la mano de obra y el ______% de las partes de los sistemas cubiertos que fallen durante el período de garantía. Pídale al concesionario una copia de la garantía y de cualquier documento que le explique la cobertura, las exclusiones y las obligaciones de reparación del concesionario. Las *garantías implícitas*, según las leyes de su estado, podrían darle derechos adicionales.

SISTEMAS CUBIERTOS: **DURACIÓN:**

GARANTÍAS QUE NO PERTENECEN AL CONCESIONARIO:

☐ LA GARANTÍA DEL FABRICANTE TODAVÍA APLICA. La garantía original del fabricante no ha expirado para algunos de los componentes del vehículo.

☐ SE APLICA LA GARANTÍA DEL FABRICANTE PARA VEHÍCULOS USADOS.

☐ SE APLICA OTRA GARANTÍA PARA VEHÍCULOS USADOS.

Pídale al concesionario una copia del documento de garantía y una explicación de la cobertura, las exclusiones y las obligaciones de reparación.

☐ CONTRATO DE MANTENIMIENTO. Con un cargo adicional, puede obtener un contrato de mantenimiento para este vehículo. Pregunte acerca de los detalles de la cobertura, los deducibles, el precio y las exclusiones. Si compra un contrato de mantenimiento dentro de los 90 días desde el momento en que compró el vehículo, las *garantías implícitas* según las leyes de su estado podrían darle derechos adicionales.

PREGÚNTELE AL CONCESIONARIO SI SU MECÁNICO PUEDE INSPECCIONAR EL VEHÍCULO DENTRO O FUERA DEL CONCESIONARIO.

OBTENGA UN INFORME DEL HISTORIAL DEL VEHÍCULO Y VERIFIQUE SI EXISTEN RETIROS POR DEFECTOS DE SEGURIDAD PENDIENTES. Para información sobre cómo obtener un Informe del Historial del Vehículo, visite el sitio ftc.gov/carrosusados. Para verificar si existen retiros por defectos de seguridad pendientes, visite safercar.gov. Para aprovechar al máximo los recursos de estos sitios necesitará el número de identificación de vehículo (VIN) mostrado anteriormente.

CONSULTE EL DORSO para obtener más información, incluyendo una lista de defectos importantes que pueden ocurrir en vehículos de motor usados.

504 x 684 pt box, 1 pt stroke
26 pt bold caps centered
1 pt rule
8.5 pt bold & regular, caps & lc
10.2 pt leading
0.5 pt rule
6 pt regular caps
12 pt bold caps
2 pt rule
22 pt box, 1 pt stroke
24 pt bold caps
24 pt leading
8.5 pt regular, caps & lc
10.2 pt leading
1 pt dashed rule
22 pt box, 1 pt stroke
24 pt bold caps
8 pt boxes, 1 pt stroke
8.5 pt regular, italic, caps & lc
10.2 pt leading
9 pt bold caps, 2 columns
12 pt bold caps
2 pt rule
8 pt boxes, 1 pt stroke
8.5 pt regular, caps & lc
10.2 pt leading
1 pt rule
8 pt box, 1 pt stroke
8.5 pt regular, italic, caps & lc
10.2 pt leading
2 pt rule
9 pt regular, bold, caps & lc
10.8 pt leading

* Typeface is Arial, text is flush left unless otherwise noted.

FIGURE 5 TO PART 455 – IMPLIED WARRANTIES ONLY Buyers Guide (Spanish)

504 x 684 pt box, 1 pt stroke

GUÍA DEL COMPRADOR

26 pt bold caps centered

1 pt rule

IMPORTANTE: Las promesas verbales son difíciles de hacer cumplir. Solicite al concesionario que ponga todas las promesas por escrito. Conserve este formulario.

8.5 pt bold & regular, caps & lc
10.2 pt leading

MARCA DEL VEHÍCULO | MODELO | AÑO | NÚMERO DE IDENTIFICACIÓN DEL VEHÍCULO (VIN)

0.5 pt rule
6 pt regular caps

GARANTÍAS PARA ESTE VEHÍCULO:

12 pt bold caps
2 pt rule

☐ **SOLO GARANTÍAS IMPLÍCITAS**

22 pt box, 1 pt stroke
24 pt bold caps

El concesionario no hace ninguna promesa de reparar lo que sea necesario cuando compre el vehículo o posteriormente. Sin embargo, las *garantías implícitas* según las leyes estatales podrían darle algunos derechos para hacer que el concesionario se encargue de ciertos problemas que no fueran evidentes cuando compró el vehículo.

8.5 pt regular, italic, caps & lc
10.2 pt leading

1 pt dashed rule

☐ **GARANTÍA DEL CONCESIONARIO**

22 pt box, 1 pt stroke
24 pt bold caps

☐ GARANTÍA COMPLETA.

☐ GARANTÍA LIMITADA. El concesionario pagará el _______% de la mano de obra y el ______% de las partes de los sistemas cubiertos que fallen durante el período de garantía. Pídale al concesionario una copia de la garantía y de cualquier documento que le explique la cobertura, las exclusiones y las obligaciones de reparación del concesionario. Las *garantías implícitas*, según las leyes de su estado, podrían darle derechos adicionales.

8 pt boxes, 1 pt stroke
8.5 pt regular, italic, caps & lc
10.2 pt leading

SISTEMAS CUBIERTOS: | **DURACIÓN:**

9 pt bold caps, 2 columns

GARANTÍAS QUE NO PERTENECEN AL CONCESIONARIO:

12 pt bold caps
2 pt rule

☐ LA GARANTÍA DEL FABRICANTE TODAVÍA APLICA. La garantía original del fabricante no ha expirado para algunos de los componentes del vehículo.

☐ SE APLICA LA GARANTÍA DEL FABRICANTE PARA VEHÍCULOS USADOS.

☐ SE APLICA OTRA GARANTÍA PARA VEHÍCULOS USADOS.

Pídale al concesionario una copia del documento de garantía y una explicación de la cobertura, las exclusiones y las obligaciones de reparación.

8 pt boxes, 1 pt stroke
8.5 pt regular, caps & lc
10.2 pt leading

1 pt rule

☐ CONTRATO DE MANTENIMIENTO. Con un cargo adicional, puede obtener un contrato de mantenimiento para este vehículo. Pregunte acerca de los detalles de la cobertura, los deducibles, el precio y las exclusiones. Si compra un contrato de mantenimiento dentro de los 90 días desde el momento en que compró el vehículo, las *garantías implícitas* según las leyes de su estado podrían darle derechos adicionales.

8 pt box, 1 pt stroke
8.5 pt regular, italic, caps & lc
10.2 pt leading

2 pt rule

PREGÚNTELE AL CONCESIONARIO SI SU MECÁNICO PUEDE INSPECCIONAR EL VEHÍCULO DENTRO O FUERA DEL CONCESIONARIO.

OBTENGA UN INFORME DEL HISTORIAL DEL VEHÍCULO Y VERIFIQUE SI EXISTEN RETIROS POR DEFECTOS DE SEGURIDAD PENDIENTES. Para información sobre cómo obtener un Informe del Historial del Vehículo, visite el sitio ftc.gov/carrosusados. Para verificar si existen retiros por defectos de seguridad pendientes, visite safercar.gov. Para aprovechar al máximo los recursos de estos sitios necesitará el número de identificación de vehículo (VIN) mostrado anteriormente.

CONSULTE EL DORSO para obtener más información, incluyendo una lista de defectos importantes que pueden ocurrir en vehículos de motor usados.

9 pt regular, bold, caps & lc
10.8 pt leading

* Typeface is Arial, text is flush left unless otherwise noted.

FIGURE 6 TO PART 455 – Back of Buyers Guide (Spanish)

A continuación podrá encontrar una lista de los defectos principales que podrían ocurrir en vehículos usados.

Chasis y carrocería
Grietas en el chasis, soldaduras correctivas u oxidadas
Descuadrado: chasis doblado o torcido

Motor
Pérdidas de aceite, excepto las filtraciones normales
Bloque o cárter con grietas
Correas ausentes o fuera de servicio
Golpes o fallas relacionados con levantadores de levas o bielas
Descarga del escape fuera de lo normal

Transmisión y eje motor
Nivel inadecuado de fluido o pérdidas excepto filtraciones normales
Grietas o daños visibles en la caja.
Ruidos o vibraciones fuera de lo normal ocasionadas por la transmisión o el eje motor
Cambios o funcionamiento inadecuados en cualquier velocidad
Patinados o vibraciones del embrague manual

Diferencial
Nivel inadecuado de fluido o pérdidas excepto filtraciones normales
Grietas o daños visibles en el cárter del diferencial
Ruidos o vibraciones fuera de lo normal ocasionadas por fallas en el diferencial.

Sistema de enfriamiento
Pérdidas, incluidas las del radiador
Funcionamiento inadecuado de la bomba de agua

Sistema eléctrico
Pérdidas en la batería
Funcionamiento inadecuado del alternador, generador, batería o arrancador

Sistema de combustible
Pérdidas visibles

Accesorios fuera de servicio
Indicadores o dispositivos de advertencia
Aire acondicionado
Calefacción y Desempañador

Sistema de frenos
Luz de advertencia de fallas rota
Falta de firmeza cuando se presiona el pedal (según especificaciones del Departamento de Transporte [DOT])
Distancia insuficiente del pedal (según especificaciones del DOT)
El vehículo no se detiene en línea recta (según especificaciones del DOT)
Mangueras dañadas
Tambor o rotor muy delgados (según especificaciones del fabricante)
Grosor de la placa o del revestimiento inferior que 1/32 pulgadas
Unidad de potencia fuera de servicio o con pérdidas
Partes estructurales o mecánicas dañadas

Bolsas de aire

Sistema de dirección
Demasiado juego en el volante (según especificaciones del DOT)
Juego mayor a 1/4 de pulgada en el varillaje.
El mecanismo de dirección se traba
Alineación inadecuada de las ruedas frontales (según especificaciones del DOT)
Grietas o deslizamientos en las correas de la unidad de potencia
Nivel inadecuado de fluidos de la unidad de potencia

Sistema de suspensión
Juntas de rótula dañadas
Partes estructurales dobladas o dañadas
Barra estabilizadora desconectada
Resorte roto
Cojinete del amortiguador suelto
Cojinetes de caucho dañados o ausentes
Biela dañada o ausente
Amortiguador con pérdidas o con funcionamiento inadecuado

Neumáticos
Profundidad de las ranuras menor que 2/32 de pulgada
Tamaños que no corresponden
Daños visibles

Ruedas
Grietas, daños o reparaciones visibles
Tornillos de sujeción sueltos o ausentes

Sistema de escape
Pérdidas
Convertidor catalítico

NOMBRE DEL CONCESIONARIO

DIRECCIÓN DEL CONCESIONARIO

TELÉFONO CORREO ELECTRÓNICO

PARA QUEJAS DESPUÉS DE LA VENTA COMUNÍQUESE CON:

IMPORTANTE: La información de este formulario es parte de cualquier contrato para comprar este vehículo. Quitar esta etiqueta antes de la compra del consumidor (excepto a los fines de realizar una prueba de conducción) es una infracción a la ley federal (16 C. F. R. 455).

504 x 684 pt box, 1 pt stroke
2 pt rule
8 pt regular, cap & lc
144 pt columns, left, center, right
7 pt bold, 2 pt before para,
7 pt regular, 15 pt left ind,
-10 pt first line ind
8.4 pt leading
2 pt rule
0.5 pt rules
8 pt regular, caps
25 pts between rules
2 pt rule
9 pt bold & regular, caps & lc
10.8 pt leading

* Typeface is Arial, text is flush left unless otherwise noted.

By direction of the Commission.

Donald S. Clark,

Secretary.

[FR Doc. 2016–27694 Filed 11–17–16; 8:45 am]

BILLING CODE 6750–01–C

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Parts 201 and 211

[Docket No. FDA–2005–N–0343]

RIN 0910–AC53

Medical Gas Containers and Closures; Current Good Manufacturing Practice Requirements

AGENCY: Food and Drug Administration, HHS.

ACTION: Final rule.

SUMMARY: The Food and Drug Administration (FDA or the Agency) is amending its current good manufacturing practice (CGMP) and labeling regulations regarding medical gases. FDA is requiring that portable cryogenic medical gas containers not manufactured with permanent gas use outlet connections have gas-specific use outlet connections that cannot be readily removed or replaced except by the manufacturer. FDA is also requiring that portable cryogenic medical gas containers and high-pressure medical gas cylinders meet certain labeling, naming, and color requirements. These requirements are intended to increase the likelihood that the contents of medical gas containers are accurately identified and reduce the likelihood of the wrong gas being connected to a gas

supply system or container. FDA is also revising an existing regulation that conditionally exempts certain medical gases from certain otherwise-applicable labeling requirements in order to add oxygen and nitrogen to the list of gases subject to the exemption, and to remove cyclopropane and ethylene from the list.

DATES: This rule is effective January 17, 2017. See section V of this document for the compliance date of this final rule.

FOR FURTHER INFORMATION CONTACT: J. Patrick Raulerson, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 51, Rm. 6260, Silver Spring, MD 20993–0002, 301–796–3522.

SUPPLEMENTARY INFORMATION:

Table of Contents

I. Executive Summary

A. Purpose of the Final Rule

On April 10, 2006, FDA issued a proposed rule to amend our regulations on CGMP to include new or revised requirements for the labeling, color, dedication, and design of medical gas containers and closures (71 FR 18039). The chief impetus for the proposed rule was a number of incidents in which a medical gas container holding a gas other than oxygen was erroneously connected to a health care facility's oxygen supply system, leading to serious injuries and deaths. In addition, FDA recognized that the regulation that conditionally exempts certain medical gases from certain otherwise-applicable prescription drug labeling regulations did not reflect either industry best practices or FDA's current regulatory expectations.

Following consideration of comments received and further internal deliberation, we are finalizing this rule as described in this document. The final rule is intended to increase the likelihood that the contents of medical gas containers are accurately identified and reduce the likelihood of the wrong gas being connected to a gas supply system or container. The final rule also modifies the medical gas conditional labeling exemption regulation such that it now largely reflects existing industry best practices and FDA's current regulatory expectations regarding the labeling of medical gases.

B. Summary of the Major Provisions of the Final Rule

We received approximately 50 comments on the proposed rule. The most detailed comments were from industry trade associations. The other comments were largely from individual medical gas firms, consultants, or other industry stakeholders, and they generally expressed agreement with the trade associations' comments. We discuss all significant comments in section IV.

The final rule requires that portable cryogenic medical gas containers not manufactured with permanent gas use outlet connections have gas-specific use outlet connections that cannot be readily removed or replaced except by the manufacturer. The rule further requires that portable cryogenic medical gas containers and high-pressure medical gas cylinders meet certain labeling, naming, and color requirements. Principally, portable cryogenic medical gas containers are required to bear a 360° wraparound label identifying the contents of the container, and high-pressure medical gas cylinders are required to be colored on the shoulder of the container in the FDA-designated color or colors associated with the gas or gases held in the container. These requirements are intended to increase the likelihood that the contents of medical gas containers are accurately identified and reduce the likelihood of the wrong gas being connected to a gas supply system or container.

The final rule also revises the medical gas conditional labeling exemption regulation to add oxygen and nitrogen to the list of medical gases subject to the exemption, and to remove cyclopropane and ethylene from the list. The final rule further revises this regulation by adding new warning statement content to be included in oxygen labeling and by expanding the scope of the regulation to include medically appropriate mixtures of medical gases.

C. Legal Authority

Medical gases are generally regulated as prescription drugs under sections 201(g)(1) and 503(b)(1) of the Federal Food, Drug, and Cosmetic Act (the FD&C Act) (21 U.S.C. 321(g)(1) and 353(b)(1)) (though oxygen may be dispensed without a prescription for certain uses specified at section 576(b)(2) of the FD&C Act (21 U.S.C. 360ddd–1(b)(2)), and are subject to regulation under section 501(a)(2)(B) of the FD&C Act (21 U.S.C. 351(a)(2)(B)). Sections 575 and 576 of the FD&C Act (21 U.S.C. 360ddd and 360ddd–1) address the regulation of medical gases and designated medical gases. FDA is invoking its authority under sections 501(a)(2)(B), 502(f) (21 U.S.C. 352(f)), 576(a), and 701(a) (21 U.S.C. 371(a)) of the FD&C Act to create or modify CGMP and labeling regulations applicable to medical gases to ensure that they meet the requirements of the FD&C Act as to safety and have the identity and strength, and meet the quality and purity characteristics, that they purport or are represented to possess, and are labeled with adequate warnings and instructions for use.

D. Costs and Benefits

The rule is expected to provide a modest net social benefit (estimated benefits minus estimated costs) to society. Costs are attributed to coloring medical gas containers, complying with the 360° wraparound label requirement for portable cryogenic containers, and requiring gas-specific use outlet connections on portable cryogenic containers to be permanently attached to the valve body (*e.g.,* by silver brazing) or attached to the valve body using a locking mechanism or other appropriate device so that only the manufacturer can readily remove or replace them. Using a standard 10 year time period, we estimate annualized costs to range between $180,000 and $1.5 million using a 3 percent discount rate and between $210,000 and $1.8 million using a 7 percent discount rate. Benefits are attributed to reducing the probability that medical personnel accidentally administer the wrong gas to patients, resulting in serious injury or death. We estimate annualized benefits to range between $800,000 and $2.8 million using a 3 percent discount rate, and between $2.5 million and $8.3 million using a 7 percent discount rate. Together we estimate annualized net benefits to range between $620,000 and $1.3 million using a 3 percent discount rate, and between $2.3 million and $6.5 million using a 7 percent discount rate.

II. Background

A. History of the Rulemaking

In the **Federal Register** of April 10, 2006, FDA issued a proposed rule to amend our regulations on CGMP to include new requirements for the labeling, color, dedication, and design of medical gas containers and closures. The chief impetus for issuance of the proposed rule was a number of incidents in which a medical gas container holding a gas other than oxygen was erroneously connected to a health care facility's oxygen supply system, leading to serious injuries and deaths. FDA was also concerned with reports of serious injuries attributable to contamination of high-pressure medical gas cylinders with residue of industrial cleaning solvents, likely as a result of inadequate cleaning during conversion of the cylinder from industrial to medical use. For a detailed account of these incidents, please refer to the proposed rule (71 FR 18039 at 18040–18041).

Accordingly, FDA proposed certain regulatory requirements intended to (1) reduce the likelihood of the wrong gas being attached to a gas supply system or container (and in particular to reduce the likelihood of a gas other than oxygen being connected to an oxygen supply system), (2) make the contents of medical gas containers more easily and accurately identifiable, and (3) reduce the risk of contamination of medical gases. Additionally, FDA proposed including medical air, oxygen, and nitrogen among, and excluding cyclopropane and ethylene from, the list of gases that are conditionally exempt from certain labeling requirements as described in § 201.161 (21 CFR 201.161). FDA solicited written comments on the proposed rule.

Following publication of the proposed rule, the Food and Drug Administration Safety and Innovation Act (FDASIA) was enacted (Pub. L. 112–144 (July 9, 2012)). Title XI, Subtitle B of FDASIA, ''Medical Gas Product Regulation,'' added new sections 575, 576, and 577 to the FD&C Act (21 U.S.C. 360ddd, 360ddd–1, and 360ddd–2), creating a new certification process for certain ''designated'' medical gases, including all of the gases listed at § 201.161 as amended by this rule. Section 575 of the FD&C Act defines the term ''designated medical gas'' to include oxygen, nitrogen, nitrous oxide, carbon dioxide, helium, carbon monoxide, and medical air that meet the standards set forth in an official compendium. Section 576 of the FD&C Act permits any person to file a request for certification of a medical gas as a designated medical gas for certain specified indications. A designated medical gas for which a certification is granted is deemed to have in effect an approved application under section 505 (New Drug Application) or 512 (New Animal Drug Application) of the FD&C Act (21 U.S.C. 355 or 360b) (*see* FD&C Act section 576(a)(3)(A)(i)). This approval applies to the designated medical gas alone or in combination, as medically appropriate, with one or more other designated medical gases for which certifications have been granted (Id.).

Section 576 of the FD&C Act also addresses the labeling and prescription drug status of designated medical gases. Section 576(a)(3)(A)(ii) of the FD&C Act, similar to the conditional labeling exemption at § 201.161(a), specifies how the labeling of designated medical gases may meet certain generally applicable statutory labeling requirements. Specifically, section 576(a)(3)(A)(ii) of the FD&C Act provides that the requirements of sections 503(b)(4) of the FD&C Act (regarding labeling of a drug as a prescription drug) and 502(f) of the FD&C Act (regarding inclusion of adequate directions for use and adequate warnings in drug labeling) are deemed to have been met for a designated medical gas if the labeling on the final use container for the medical gas bears: (1) The information required by section 503(b)(4); (2) a warning statement concerning the use of the medical gas as determined by the Secretary by regulation; and (3) appropriate directions and warnings concerning storage and handling. Section 576(b)(2)(B) of the FD&C Act further provides that, in the case of oxygen provided for certain uses specified at section 576(b)(2)(A), the requirements of section 503(b)(4) of the FD&C Act are deemed to have been met if the labeling bears a warning that the oxygen can be used for emergency use only and for all other medical applications a prescription is required. Finally, section 576(b) of the FD&C Act provides that designated medical gases shall generally be subject to the requirements of section 503(b)(1) of the FD&C Act (requiring that drugs meeting certain specified conditions be dispensed only upon prescription), while also providing that oxygen may be dispensed without a prescription for certain specified uses.

B. Summary of Comments to the Proposed Rule

FDA received approximately 50 written comments on the proposed rule. Comments were submitted by trade associations representing the medical gas and home health care industries, medical gas firms, medical gas industry consultants and other industry stakeholders, and one State regulatory body.

The comments addressed the following topics, among others:

- The appropriate warning statements to be included in oxygen and medical air labeling.
- Safety issues associated with converting a gas container from industrial to medical use and how best to address them.
- The utility and appropriateness of coloring medical gas containers in whole or in part.
- The appropriate content and configuration of wraparound labeling on portable cryogenic medical gas containers.
- Estimated costs to comply with the proposed rule and whether such costs are justified under a cost-benefit analysis.

C. General Overview of the Final Rule

This final rule includes many of the provisions of the April 2006 proposed rule, with certain modifications described in section IV.C of this document. In particular, the final rule adds oxygen and nitrogen to, and removes cyclopropane and ethylene from, the list of medical gases in § 201.161(a) that are conditionally exempt from the labeling requirements of § 201.100(b)(2) and (3), and (c)(1). The final rule also requires that portable cryogenic medical gas containers and high-pressure medical gas cylinders meet certain labeling, naming, and coloring requirements as provided in new § 201.328. The final rule further requires that portable cryogenic medical gas containers not manufactured with permanent gas use outlet connections have gas-specific use outlet connections that cannot be readily removed or replaced except by the manufacturer by amending § 211.94 (21 CFR 211.94) through the addition of new paragraph (e).

This final rule also reflects revisions FDA is making to the April 2006 proposed rule in light of comments received. In addition to other changes discussed in section IV.C of this document, FDA is making the following significant changes to the proposed rule:

- Revisions to Conditional Labeling Exemptions for Medical Gases

FDA is making additional revisions to § 201.161 in response to concerns raised by comments. First, in response to a comment questioning § 201.161(b)'s exclusion of gas mixtures from the scope of the § 201.161(a) conditional labeling exemptions applicable to certain medical gases, FDA is removing this exclusion. Second, in response to comments that oxygen labeling should bear a different warning statement from other medical gases listed at § 201.161, paragraph (a) of § 201.161 now includes new warning statement requirements specific to oxygen. Third, in response to comments that medical air labeling should bear a different warning statement from other medical gases listed at § 201.161, FDA has determined that medical air should be removed from the scope of the final rule, for the reasons discussed in section IV.C of this document. Fourth, FDA is also revising the regulation such that the warning statement that must be included on labeling to qualify for the labeling exemption must contain certain specified information, but need not consist of the exact words used in the regulation.

If the labeling on a final use container of a designated medical gas (or medically appropriate mixture of designated medical gases) includes the information required by section 503(b)(4) of the FD&C Act as well as the information required to obtain the conditional labeling exemptions provided at § 201.161(a) as revised by this rule, FDA will consider such labeling to meet the conditions set forth at section 576(a)(3)(A)(ii) of the FD&C Act, and, therefore, to have met the requirements of sections 503(b)(4) and 502(f) of the FD& C Act.

- Proposed Prohibition on Conversion of Cryogenic Containers and High-Pressure Cylinders From Industrial to Medical Use

In § 211.94(e)(1) of the proposed rule, FDA proposed generally prohibiting cryogenic containers and high-pressure cylinders used to hold industrial gases from being converted to medical use to minimize the risk of contamination of medical gases by industrial contaminants or cleaning solvents. As discussed further in section IV.C of this document, FDA agrees with comments stating that such a prohibition would be unnecessarily costly, as these types of contamination incidents appear to be rare and existing regulations regarding cleaning and inspection of drug containers and closures are sufficient to address this issue. Accordingly, FDA is not finalizing this proposed requirement.

III. Legal Authority

Medical gases are generally regulated as prescription drugs under sections 201(g)(1) and 503(b)(1) of the FD&C Act (though oxygen may be dispensed without a prescription for certain uses specified at section 576(b)(2) of the FD&C Act, and are subject to regulation under section 501(a)(2)(B) of the FD&C Act. Sections 575 and 576 of the FD&C Act address the regulation of medical gases and designated medical gases. Under sections 501(a)(2)(B), 502(f), and 701(a) of the FD&C Act, FDA has the authority to create and modify CGMP and labeling regulations to ensure that drugs meet the requirements of the FD&C Act as to safety and have the identity and strength, and meet the quality and purity characteristics, that they purport or are represented to possess, and are labeled with adequate warnings and instructions for use. Medical gas containers, closures, and labeling are integral parts of medical gas drug products and play a critical role in ensuring that these products are safe and have the appropriate identity, strength, quality, and purity. Medical gas mix-ups have caused deaths and serious injuries. These incidents have occurred despite current regulations and guidance addressing the safe handling of medical gases. FDA is therefore invoking the authority granted by sections 701(a), 501(a)(2)(B), 502(f), and 576(a) of the FD&C Act to issue CGMP and labeling regulations designed to facilitate the safe use of medical gases and to ensure that medical gases are labeled with adequate warnings and instructions for use. The specific requirements in these regulations will help to ensure the safety of these products.

IV. Comments on the Proposed Rule and FDA Response

A. Introduction

We describe and respond to comments on the proposed rule in this section. We respond to certain comments on the Preliminary Regulatory Impact Analysis (PRIA) in the Final Regulatory Impact Analysis (see Section VI). For ease of identification, the word ''Comment,'' in parentheses, will appear before the comment's description, and the word ''Response,'' in parentheses, will appear before our response. The number assigned to each comment is purely for organizational purposes and does not signify the comment's value or importance or the order in which it was received. Many of the comments voiced the same or highly similar concerns and made the same or highly similar recommendations; these comments have been consolidated where possible.

B. Description of General Comments and FDA Response

(Comment 1) Many comments contend that FDA's proposal does not reflect the risk-based principles that have historically been enunciated in connection with recent CGMP policy. These comments state that risk-based principles focus regulation on critical areas that are likely to achieve the greatest public health impact. Thus, these comments state that because the impact of FDA's proposed rule is disproportionate to and beyond the scope of any public health risk associated with medical gases, it is inconsistent with the Agency's risk-based approach for CGMP. The comments further contend that the incidents cited in the preamble of the proposed rule do not support the number of requirements proposed, and that a single requirement in the proposed rule—requirement for secure connections on portable containers—would have prevented all but one of the fatalities cited in the preamble.

(Response 1) FDA agrees in part with these comments and has, following reanalysis of expected costs and benefits, declined to adopt certain provisions in the proposed rule and has revised other proposed provisions to more efficiently achieve public health objectives. Many of the requirements in the final rule are consistent with what we understand to be industry practices (Refs. 1–3). We continue to believe that medical gas containers and closures, such as portable cryogenic containers and high-pressure cylinders, are integral parts of the drug product and play a critical role in ensuring that the drug provided to the patient has the appropriate identity, strength, quality, and purity. Accordingly, we believe that this rule, as finalized, is fully consistent with FDA's risk-based approach to CGMP regulation.

(Comment 2) Many comments contend that FDA significantly underestimated the costs to industry imposed by the rule as proposed. These comments estimate these potential costs to be in the range of $855 million to $1.3 billion, as opposed to FDA's estimate of $950,000 to $1.2 million. These comments request that the cost assumptions and conclusions contained in the preamble to the proposed rule be critically reexamined by the Department of Health and Human Services and the Office of Management and Budget (OMB).

(Response 2) We considered these concerns, as appropriate, in preparing the Final Regulatory Impact Analysis (see Section VI).

C. Specific Comments and FDA Response

• Revisions To Labeling Exemptions for Certain Medical Gases (§ 201.161)

FDA proposed adding medical air, oxygen, and nitrogen to the list of gases conditionally exempted by § 201.161(a) from the labeling requirements of § 201.100(b)(2) and (3), and (c)(1). FDA proposed these changes because, based on its years of regulatory experience with these gases, FDA believed that compliance with § 201.100(b)(2) and (3), and (c)(1) would be unnecessary if the warning statement and storage and handling directions required to obtain the conditional § 201.161(a) labeling exemptions were included in the labeling of such gases and the labeling and coloring requirements found in proposed § 211.94(e)(4) were met. FDA also proposed removing cyclopropane and ethylene from § 201.161(a), as these gases are no longer used in medical procedures because they are flammable and pose a risk of explosion or fire.

Comments support these proposed changes to the list of exempted gases. Many comments expressed concern, however, over how these proposed changes would affect the labeling of oxygen and medical air. These concerns are set forth in comments 3 and 4, followed by FDA's response.

(Comment 3) Many comments express significant concerns with FDA's proposal to add oxygen to the list of gases at § 201.161(a) without providing a warning statement specific to oxygen. The warning statement at § 201.161(a)(1) previously provided that the gas may only be used by or under the supervision of a licensed practitioner. These comments argue that requiring this statement for oxygen could eliminate the ability of first responders to administer oxygen without a prescription. These comments also note that the labeling on oxygen containers that has long been in use by the industry, which provides for use without a prescription in certain situations when administered by properly trained personnel, would no longer be acceptable and would need to be changed. These comments state that further changes are needed to address these issues.

(Comment 4) Many comments further note that the warning statement at § 201.161(a) does not include certain warnings currently included on oxygen labels. For instance, widely used oxygen labeling warns that uninterrupted use of high concentrations of oxygen over a long duration without monitoring its effect on oxygen content of arterial blood may be harmful and that oxygen should not be used on patients who have stopped breathing unless used in conjunction with resuscitative equipment.

(Response to Comments 3 and 4) FDA is further revising § 201.161(a)(1) in response to these comments.

Prior to the revisions finalized in this rule, § 201.161(a) provided that if the labeling of the medical gases listed in the rule—carbon dioxide, cyclopropane, ethylene, helium, and nitrous oxide intended for drug use—bore a specified warning statement and any needed directions concerning the conditions for storage and warnings against the inherent dangers in the handling of the specific compressed gas, those gases would be exempt from certain otherwise-applicable labeling requirements concerning the recommended or usual dosage, the drug's route of administration, and adequate directions for use. Section 201.161(b) provided that the exemption in § 201.161(a) did not apply to any mixture of the gases covered by the regulation with oxygen or with each other. In the 2006 proposed rulemaking FDA proposed adding oxygen, medical air, and nitrogen, and removing cyclopropane and ethylene, from the scope of § 201.161, but proposed no other changes to the rule.

As many comments point out, the warning statement previously specified at § 201.161(a)(1) differs significantly from the warning statement that has long been in use on oxygen labeling. FDA agrees with these comments that this oxygen-specific warning statement is more useful and appropriate for oxygen than the general warning statement previously specified at § 201.161(a)(1).

FDA further agrees with these comments that conditioning the § 201.161(a) labeling exemptions on inclusion of a warning statement limiting oxygen to prescription use would be inconsistent with the longstanding use of oxygen without a prescription in certain situations. It would also be inconsistent with new section 576(b)(2)(B) of the FD&C Act which, as discussed in section II.A of this document, provides that, in the case of oxygen provided without a prescription for certain uses specified at section 576(b)(2)(A), the requirements of section 503(b)(4) of the FD&C Act shall be deemed to have been met if the labeling bears a warning that the oxygen can be used for emergency use only and for all of other medical applications a prescription is required.

Therefore, § 201.161(a)(1)(i) of this final rule provides warning statement requirements specific to oxygen, as well as an additional warning statement requirement for oxygen that may be provided for certain uses without a prescription. FDA believes most oxygen containers currently marketed in the United States bear labeling that satisfies these new requirements (Ref. 1).

(Comment 5) Some comments express concerns with FDA's proposal to add medical air to the list of gases at § 201.161(a) without providing a warning statement specific to medical air. These comments point out that widely used medical air labeling indicates that medical air may be used without a prescription by properly trained personnel for breathing support, while for all other uses a prescription is required. These comments note that such labeling would be inconsistent with the warning statement previously specified at § 201.161(a)(1), which provided that the gas may only be used by or under the supervision of a licensed practitioner.

(Response 5) FDA acknowledges the comments that certain non-prescription uses of medical air are medically appropriate, and, accordingly, that the 'prescription only' warning statement at § 201.161(a)(1)(i) as finalized by this rule is not appropriate for medical air. FDA is not finalizing the proposal to add medical air to the list of gases at § 201.161, and the question of what constitutes an appropriate warning statement for medical air remains under consideration by FDA.

(Comment 6) Many comments note that the proposed rule does not address labeling for medical gas mixtures, but rather leaves in place § 201.161(b)'s exclusion of gas mixtures from the scope of the § 201.161(a) conditional labeling exemptions. These comments recommend for the short term that § 201.161(b) remain as currently published but that FDA nonetheless permit these medical gas mixtures to be labeled consistent with industry practice, which utilizes the warning statement previously specified at § 201.161(a)(1).

(Response 6) FDA notes that, as discussed in section II.A of this document, following publication of the proposed rule new section 576(a)(3)(A)(i) was added to the FD&C Act by FDASIA. This new section provides that designated medical gases for which a certification is granted are deemed alone or in combination, as medically appropriate, with one or more other designated medical gases for which certifications have been granted to have in effect an approved application.

Accordingly, FDA is further revising § 201.161(a)(1) in response to these comments. Specifically, FDA has determined that medically appropriate mixtures of the gases listed at § 201.161(a) should be eligible for the conditional labeling exemptions provided by § 201.161(a). Accordingly, in this final rule FDA is removing the § 201.161(b) exclusion and is specifying that the general warning statement requirements applicable to the gases listed at § 201.161(a) (other than oxygen) are also applicable to medically appropriate mixtures of the listed gases (see § 201.161(a)(1)(ii) of this final rule).

(Comment 7) A comment requests that medical xenon be added to the list of exempted gases in § 201.161(a) as it is used clinically as a general anesthetic and as a diagnostic and test agent.

(Response 7) FDA disagrees that medical xenon should be added to the list of gases for which the § 201.161(a) conditional labeling exemptions are available. Xenon is not a designated medical gas and is not otherwise approved for use as a general anesthetic. Certain xenon gas radioisotopes have been approved as diagnostic agents, but these products have approved prescription drug labeling. Accordingly, it would be inappropriate to add xenon gas to the list of gases at § 201.161(a).

(Comment 8) Many comments contend that the content in proposed § 211.94(e)(4) is misplaced by being located in part 211 (21 CFR part 211, CGMP requirements) rather than part 201 (21 CFR part 201, labeling requirements). These comments recommend that any proposed labeling requirements be included in part 201.

(Response 8) FDA largely agrees with these comments and is reorganizing this content in the final rule. Specifically, the labeling content requirements in proposed § 211.94(e)(4) are being finalized under new § 201.328, while requirements that medical gas labels and coloring materials be resistant to wear and, in the case of labels, not susceptible to inadvertent removal, have been retained in § 211.94(e).

• Requirement for 360° Wraparound Label for Portable Cryogenic Medical Gas Containers (§ 201.328(a)(1))

In § 211.94(e)(4) of the proposed rule (renumbered as § 201.328(a)(1) in this final rule), FDA proposed to require portable cryogenic containers to bear 360° wraparound labeling that meets naming, lettering, and placement specifications.

(Comment 9) Many comments expressed concern about the proposed requirement that the word ''Medical'' precede the name of the gas on the wraparound label. These comments state that there is a risk that users would focus on the ''Medical'' designation and ignore the more significant information, *i.e.,* the identity of the gas itself (*e.g.,* oxygen versus nitrogen). Therefore, these comments recommend removing this requirement from the final rule. Some of these comments also state that this naming requirement would be inconsistent with the ''established name'' of the gas, *e.g.,* Oxygen USP or Nitrogen NF (see definition of ''established name'' at section 502(e)(3) of the FD&C Act). As an alternative, one comment proposes that the rule refer to the product name and provide that either the word ''Medical'' may precede, or ''USP'' or ''NF'' may follow, the product name.

(Response 9) FDA proposed adding the word ''Medical'' to the wraparound label to distinguish containers labeled with medical gases from containers holding industrial gases. This proposed requirement was intended to make the contents of the containers more readily and accurately identified by persons responsible for handling and connecting them to medical gas supply systems in hospitals or other health care facilities and thereby reduce the likelihood of medical gas mix-ups. However, FDA agrees with the comments that inclusion of the word ''Medical'' in the name of the gas would be inconsistent with the established names of medical gases.

Accordingly, as set forth in § 201.328(a)(2), FDA will instead require that the portable cryogenic containers bear a label (either the wraparound label or a separate label) near the top of the container but below the top seam weld that includes the phrase ''For Medical Use,'' ''Medical Gas,'' or some similar phrase that indicates the gas is for medical use in conspicuous lettering.

FDA has also reconsidered the proposed requirement that gases be identified on the wraparound label by their ''standard names.'' Section 502(e) of the FD&C Act provides that a drug product is misbranded unless its label bears the established name of the drug, if there is such a name. All of the gases listed at § 201.328(c) have established names. Thus, the proposed requirement regarding ''standard names'' is not necessary, and we are removing this concept from the final rule.

(Comment 10) A few of the parties providing comments state that while they agree with the proposed requirement at § 211.94(e)(4)(i)(E) that the label be placed ''as close to the top of the container as possible but below the top weld seam'', they object to the following phrase: ''. . . so that it cannot be easily detached or worn'' (§ 211.94(e)(4)(i)(F)). These comments express concern that if the label is worn or detached by the user, for whatever reason, the manufacturer may be considered to be not in compliance with the proposed rule requirements, when in fact the firm may have properly placed the label.

(Response 10) FDA agrees that this proposed requirement should be revised. The key issue is that the wraparound label be affixed such that it is not susceptible to wear or to being inadvertently removed during normal use, and FDA is revising this requirement accordingly (see § 211.94(e)(2) of this final rule).

(Comment 11) Many comments note that the minimum lettering height requirement for the name of the gas on the wraparound label in the proposed rule (2¾ inches) is inconsistent with the industry practice (minimum letter height of 2 inches). According to these comments, requiring 2¾ inch letters will reduce the number of times the name can be fully printed on the label, and will come at a considerable expense to those suppliers that currently comply with the 2-inch industry practice.

(Response 11) FDA is revising the minimum letter height requirement in consideration of these comments. The final rule states that the lettering height for the name of the gas on the label must be at least 2 inches high (see § 201.328(a)(1)(ii) of this final rule).

• Color Requirements for Medical Gas Cylinders (§ 201.328(a)(1)(v) and (b))

(Comment 12) Many comments support color-coding high-pressure cylinders, but are concerned that FDA may be placing undue emphasis on this means of identification. These comments contend that health care personnel should primarily rely on the label to identify the gas or gases in a container, and argue that reliance on color is problematic because of the variability of lighting conditions, color fading, and potential personnel colorblindness. Other comments state that reliance on color coding would appear to contradict training programs that industry and FDA have implemented to prevent mix-ups, as the consistent and fundamental themes of these training programs has been to emphasize that the label should be the primary indicator of a container's contents.

(Response 12) FDA agrees that the wording on the label should be used as the primary means of identifying a drug product. Requiring color coding of high-pressure cylinders, which we understand is already industry practice (Ref. 2), simply provides an additional safeguard to facilitate accurate identification of the drug product and detection of potential errors. Additionally, § 211.25 addresses the need to train qualified personnel in the manufacture, processing, packing, or holding of a drug product. Proper training should help mitigate against the possibility that users might improperly rely solely on the cylinder's color to identify its contents.

(Comment 13) Many comments recommend removing the requirement of ''colored in whole'' for non-aluminum high-pressure cylinders. These comments state that the current industry practice is to paint the shoulder to match the designated color for that medical gas. This is based on manufacturer recommendations that some non-aluminum high-pressure cylinders should not be painted in whole due to concerns about concealing defects.

(Response 13) FDA agrees with these comments. Thus, the final rule requires only that high-pressure medical gas cylinders be colored on the shoulder portion of the cylinder (see § 201.328(b)), which is consistent with what FDA understands to be industry practice (Ref. 2).

(Comment 14) Many comments dispute FDA's assumption that a large majority of high-pressure medical gas cylinders are already in compliance with the proposed coloring requirements. These comments note that portions of the shoulders of many cylinders are painted white to make retest information more visible, and that the upper neck portion of many cylinders are not painted a color based on the contents of the cylinder.

(Response 14) The cylinder coloring requirement in the final rule (see § 201.328(b)) would not require recoloring of cylinders colored in the manner described in the comments. As long as the cylinder shoulder is colored in the FDA-designated color or colors, the upper neck portion of the cylinder need not be that same color and use of white to make retesting information on a portion of the shoulder of the cylinder more visible is acceptable.

(Comment 15) Many comments recommend removal of the requirement that high-pressure medical gas cylinders containing mixtures of gases be painted in rough proportion to the fractions of gases contained in the mixture. These comments express concern that this method may cause the end user to ignore the label and rely on color proportions to identify the contents of a mixture. Additionally, these comments recommend that the following language be incorporated in the regulation: ''when color marking consists of 2 or more colors, the pattern shall permit a portion of the colors to be seen together when viewed from the top,'' which is consistent with industry practice.

(Response 15) FDA agrees with these comments. Therefore, FDA is revising the rule to require that the color for every constituent gas be visible when the cylinder is viewed from the top, and to remove the proportionality requirement.

(Comment 16) Many comments recommend removing the proposed requirement (at § 211.94(e)(4)(i)(G) in the proposed rule) that if the shoulder portion of a portable cryogenic medical gas container is colored, the color used must be the FDA-designated color of the gas held in the container. These comments point out that painting cryogenic containers with dark colors causes increased heat absorption, accelerating the rate of product venting, which could lead to unsafe conditions. These comments also note that large cryogenic containers made from carbon steel are painted in whole (including on the shoulder) in a light-reflective color, which would not necessarily correspond to the FDA-designated color or colors of the gas or gases held in the container.

(Response 16) FDA agrees with these concerns and is revising the proposed coloring requirement for portable cryogenic medical gas containers. As set forth in § 201.328(a)(1)(v) of the final rule, a portable cryogenic medical gas container may only be colored, in whole or in part, in the color or colors designated at § 201.328(c) if the gas or gases held in the container correspond to that color or those colors. The container may still be colored in a light-reflective color such as white (or some other color that is not an FDA-designated gas color), or simply not colored at all.

Finally, FDA is revising color requirements for the wraparound label such that they only apply to portable cryogenic medical gas containers that hold a single gas (see § 201.328(a)(1)(i) of this final rule). FDA believes that multiple colors on a single wraparound label—either in the lettering or in the background—may be impractical. Firms may still choose to follow the color scheme at § 201.328(a)(1)(i) for portable cryogenic medical gas containers that hold gas mixtures or blends, but will not be required to do so.

• Proposed Prohibition on Conversion of Cryogenic Containers and High-Pressure Cylinders From Industrial to Medical Use (Proposed § 211.94(e)(1))

In § 211.94(e)(1) of the proposed rule, FDA proposed prohibiting cryogenic containers and high-pressure cylinders used to hold industrial gases from being converted to medical use, subject to limited exceptions.

(Comment 17) Many comments oppose any requirements to dedicate high-pressure cylinders and cryogenic containers to solely one use—industrial or medical. These comments contend that the root cause of the contamination incidents involving high-pressure cylinders discussed in the preamble to the proposed rule was the improper cleaning of cylinders, regardless of whether the cylinders previously held gases intended for medical or industrial use. These comments argue that the costs that would be associated with implementing this rule are not justified considering that the preamble to the proposed rule identified only two contamination incidents leading to injuries. According to these comments, these costs would include procuring additional containers (and associated assets), tracking individual containers over their useful life, marking containers for industrial or medical use, and increased distribution expenses. These comments further argue that FDA significantly underestimated the costs associated with this requirement in the economic analysis provided in the preamble to the proposed rule.

Many comments state that the proposed prohibition on conversion of medical gas containers from industrial to medical use is unwarranted because existing CGMP requirements, particularly § 211.94(c) (requiring cleaning of containers and closures to assure they are suitable for their intended use) and § 211.100(a) (requiring written procedures for process and production control designed to assure drug products have the identity, strength, quality, and purity they purport or are represented to possess), are adequate to prevent contamination associated with such conversion. These comments further argue that the proposed rule is inconsistent with FDA's past advice that medical gas assets can be converted from industrial to medical use and need not be dedicated to industrial use provided the items in question undergo validated cleaning procedures when converted to medical use.

(Response 17) FDA has reevaluated this proposed requirement in light of these concerns. FDA has determined that the risk of contamination associated with converting gas containers from industrial to medical use is relatively low, and can be fully addressed if the manufacturer, in compliance with §§ 211.84(a), 211.94(c), 211.100, and other applicable CGMP regulations, employs adequate, validated cleaning and production control strategies when performing such conversion. FDA also agrees with the comments that the proposed requirement to dedicate containers to either industrial or medical use would be quite expensive to implement, and, in light of our assessment that existing regulations are adequate to address this concern, not cost-justified. Accordingly, we are removing this requirement from the final rule.

(Comment 18) One comment states that the incidents dated March 20, 1998, and March 27, 1996, attributed in the proposed rule to contamination likely associated with conversion of high-pressure cylinders from industrial to medical use, could have been ignition events involving polytetraethylene seals or sealing tape. The comment suggests that a more detailed description of these events should be provided in order to make clear that the odors and compounds detected were from improper cleaning and not from ignition events.

(Response 18) As stated, FDA has reevaluated the necessity of the proposed non-conversion requirement and is removing it from the final rule.

• Requirement for Secure Gas-Specific Use Outlet Connections on Portable Cryogenic Medical Gas Containers (§ 211.94(e)(1))

In § 211.94(e)(3) of the proposed rule, FDA proposed to require that portable cryogenic medical gas containers not manufactured with permanent gas use outlet connections have gas-specific use outlet connections that cannot be readily removed or replaced except by the manufacturer. FDA is finalizing this provision (renumbered as § 211.94(e)(1)) with certain minor modifications explained in this document.

(Comment 19) Many comments support this requirement, as it would have a positive impact on patient safety by making medical gas mix-ups less likely. In fact, these comments recommend that the rule be extended to other outlets typically found on portable cryogenic medical gas containers, namely, the vent outlet and liquid fill/withdrawal outlet.

(Response 19) FDA is not aware of mix-up incidents involving the vent outlet valves or with liquid fill/withdrawal outlets, and such hypothetical mix-ups do not seem likely, given that the gas use outlet connection should be the only connection used to connect a portable cryogenic container to a health care facility's gas supply system. Accordingly, FDA believes that it is not necessary to extend the secure gas-specific use outlet connection requirement to vent outlets or liquid fill/withdrawal outlets.

(Comment 20) Some comments propose that the Agency slightly modify the exemption for ''small cryogenic gas containers for use by individual patients'' from the proposed definition of ''portable cryogenic medical gas containers.'' These comments note that some liquid oxygen home units designed for use by individual patients are, in fact, also used in certain situations to fill other containers for use by patients. These comments are concerned that if the exemption is not clarified, these liquid oxygen home units may be subject to the secure gas use outlet connection rule if they are used to fill other containers. Accordingly, these comments propose that the exemption be revised to include ''small cryogenic gas containers *designed* for use by individual patients *at their residence, including health care facilities*'' (emphasis added).

(Comment 21) Many comments propose that FDA clarify in the rule that the requirement for secure gas-specific use outlet connections is inapplicable to cryogenic containers that are too large (*e.g.,* tank trucks, trailers, rail cars) to be connected to a medical gas supply system.

(Response to Comments 20 and 21) FDA agrees that the definition of ''portable cryogenic medical gas container'' as used in the rule should be clarified. As such, we are clarifying in the final rule that cryogenic gas containers not designed to be connected to a medical gas supply system, including tank trucks, trailers, rail cars, and liquid oxygen home units, are exempt from the secure gas-specific use outlet connection requirement.

(Comment 22) A comment recommends that base units used to fill portable containers for use by patients in hospitals and other health care facilities, and large cryogenic containers that may be placed on trailers along with vaporizers and that are used as emergency backup when repairs are performed on the health care facility's permanent storage system, also be excluded from the rule. The comment states that because these base units and containers remain within the control of the medical gas manufacturer, and not the consumer, the risk of an improper connection is substantially reduced.

(Response 22) FDA does not agree that base units used to fill portable containers for use by patients in hospitals and other health care facilities and large cryogenic containers that may be placed on trailers along with vaporizers and that are used as emergency backup when repairs are performed on the health care facility's permanent storage system should be excluded from the rule. We believe that requiring such containers (which are designed to be connected to a medical gas supply system) to have secure gas-specific use outlet connections will help minimize the likelihood that an incorrect gas is connected to a gas distribution system or container.

(Comment 23) Many comments express concern with the discussion of records maintenance in the proposed rule. The PRIA indicated that there could be a slight increase in the medical gas industry's container closure records maintenance activities under § 211.184 if the industry chooses to use locking valves or devices to bring portable cryogenic containers into compliance with the secure gas-specific use outlet connection requirement. The proposed rule stated that under existing § 211.184(b), records of the results of any test or examination of a container closure under § 211.82(a) must be maintained, and that under existing § 211.184(c), an individual inventory record must be maintained for each container closure. FDA estimated that about 10 percent of the existing inventory of portable cryogenic containers would need to be modified to comply with the secure gas-specific use outlet connection requirement, that the industry would choose to comply through use of locking valves or devices (rather than silver brazing, which is more expensive), and that the records maintenance activities associated with this work would amount to about 2 minutes per locking device per year, resulting in an annualized records maintenance cost of about $54,000 dollars per year. The estimate of 2 minutes per locking device per year includes time associated with the initial inspection of the locking valve or device by the manufacturer (71 FR 18039 at 18048–18049).

The comments express concern that the proposed rule's reference to § 211.184(c) in particular entails a change of policy from FDA's historic application of records maintenance regulations to the medical gas industry and amounts to a new records maintenance expectation for medical gas containers and closures that would cost the industry between $376 and $665 million dollars to meet. The comments appear to reach this much higher number by assuming that it would be necessary to serialize valves and/or permanently mark all valves and connections on portable cryogenic containers to meet what they contend are FDA's new records maintenance expectations.

(Response 23) FDA does not believe that serializing or permanently marking all valves and connections on portable cryogenic containers is necessary to satisfy the requirements of § 211.184. FDA did not intend to announce new or heightened records maintenance expectations for medical gas container closures in the proposed rule. While FDA believes that the records maintenance activities used to arrive at the estimate in the PRIA section for the records maintenance costs associated with the secure gas-specific use outlet connection requirement are appropriate, medical gas manufacturers may employ alternative records maintenance procedures to document any work performed to bring container closures into compliance with the secure gas-specific use outlet connection requirement.

As discussed in the Final Regulatory Impact Analysis (see Section VI), the estimated records maintenance costs associated with the secure gas use outlet connections requirements have been revised to range between $70 and $3,500. This reduction in estimated costs is largely driven by updated information showing that the number of portable cryogenic containers in the market is much lower than was thought at the time the proposed rule was issued.

• Miscellaneous Comment

(Comment 24) A comment requests that the final rule include a requirement that all personnel handling medical gases have documented competency training. This comment states that medical gases are USP listed and should be delivered by qualified personnel, such as respiratory therapists (who, according to this comment, are the only health care professionals specifically educated and competency-tested in all aspects of oxygen therapy).

(Response 24) In § 211.25 individuals engaged in the manufacture, processing, packing, or holding of a drug product (which would include a medical gas manufacturer's delivery personnel) are required to have the education, training, and experience necessary to perform assigned functions. Further, we are not aware that actual administration of medical gases to patients is part of the function of medical gas delivery personnel, so it is not clear why such personnel would need to be trained to administer gases to patients. We believe the existing regulation (§ 211.25) is sufficient to address any issues that may arise regarding the qualifications of a medical gas manufacturer's delivery personnel.

V. Compliance Date

This rule is effective January 17, 2017. Affected firms and persons are encouraged to comply as soon as possible after the effective date. We recognize, however, that while most of the requirements of this final rule are already industry practices (Refs. 1–3), such practices are not ubiquitous. Accordingly, the compliance date is May 17, 2017. We believe it would be reasonable for affected firms and persons to fully implement this final rule in that amount of time.

(Comment 25) FDA received several comments that the 60-day time period proposed for implementation of the proposed rule is insufficient. These comments state that the proposal will impact every portable cryogenic container and request that FDA provide a reasonable transition period consistent with FDA precedents.

(Response 25) FDA agrees, and is establishing a compliance date that is 180 days after publication of the final rule in the **Federal Register**, as noted previously. The Agency believes that it would be reasonable for affected firms and persons to fully implement the final rule in this amount of time. Furthermore, to avoid any contradiction with this compliance date, and for purposes of clarity, FDA is removing paragraph (c) of § 201.161, which states that regulatory action may be initiated with respect to any article shipped within the jurisdiction of the FD&C Act contrary to the provisions of this section after 60 days following publication of this section in the **Federal Register**.

VI. Economic Analysis of Impacts

A. Introduction

We have examined the impacts of the final rule under Executive Order 12866, Executive Order 13563, the Regulatory Flexibility Act (5 U.S.C. 601–612), and the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4). Executive Orders 12866 and 13563 direct us to assess all costs and benefits of available regulatory alternatives and, when regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity). We believe that this final rule is not a significant regulatory action as defined by Executive Order 12866.

The Regulatory Flexibility Act requires us to analyze regulatory options that would minimize any significant impact of a rule on small entities. Because the final rule imposes new burdens on small entities, we cannot certify that the final rule will not have a significant economic impact on a substantial number of small entities.

The Unfunded Mandates Reform Act of 1995 (section 202(a)) requires us to prepare a written statement, which includes an assessment of anticipated costs and benefits, before issuing "any rule that includes any Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more (adjusted annually for inflation) in any 1 year." The current threshold after adjustment for inflation is $146 million, using the most current (2015) Implicit Price Deflator for the Gross Domestic Product. FDA does not expect this final rule to result in an expenditure in any year that meets or exceeds this amount.

B. Summary of Costs and Benefits

This final rule amends the CGMP and labeling regulations for medical gases. These amendments include the following: (1) Portable cryogenic medical gas containers not manufactured with permanent gas use outlet connections must have gas-specific use outlet connections that cannot be readily removed or replaced except by the manufacturer; (2) portable cryogenic medical gas containers must have a 360° wraparound label that clearly identifies the container's contents and conforms to certain placement, lettering, and other requirements; (3) high-pressure medical gas cylinders (and portable cryogenic medical gas containers, if colored) must be colored using an FDA-designated standard color (or colors in the case of gas mixtures); (4) the list of medical gases that are conditionally exempt from certain otherwise-applicable labeling requirements has been revised; and (5) the warning statements required to be on final use containers to qualify for the conditional exemption from certain otherwise-applicable labeling requirements have been modified for oxygen and medical air.

The rule is expected to provide a modest net social benefit (estimated benefits minus estimated costs) to society. Costs are attributed to coloring medical gas containers, complying with the 360° wraparound label requirement for portable cryogenic containers, and requiring gas-specific use outlet connections on portable cryogenic containers to be permanently attached to the valve body (*e.g.,* by silver brazing) or attached to the valve body using a locking mechanism or other appropriate device so that only the manufacturer can readily remove or replace them. Using a standard 10 year time period, we estimate annualized costs to range between $0.18 million to $1.5 million using a 3 percent discount rate and $0.21 million to $1.8 million using a 7 percent discount rate. Benefits are attributed to reducing the probability that medical personnel accidentally administer the wrong gas to patients, resulting in serious injury or death. We estimate annualized benefits to approximately range between $0.8 million to $2.8 million using a 3 percent discount rate, and $2.5 million to $8.3 million using a 7 percent discount rate. Together we estimate annualized net benefits to range between $0.62 million to $1.3 million using a 3 percent discount rate, and $2.3 million to $6.5 million using a 7 percent discount rate.

FDA also examined the economic implications of the rule as required by the Regulatory Flexibility Act. If a rule will have a significant economic impact on a substantial number of small entities, the Regulatory Flexibility Act requires us to analyze regulatory options that would lessen the economic effect of the rule on small entities. The rule imposes new costs to small entities. We estimate the rule's one-time costs to roughly range between 0.0001 percent and 0.13 percent of average annual revenues.

The full analysis of economic impacts is available in the docket for this final rule (Ref. 4) and at *http://www.fda.gov/AboutFDA/ReportsManualsForms/Reports/EconomicAnalyses/default.htm.*

VII. Analysis of Environmental Impact

We have determined under 21 CFR 25.30(j) and (k) that this action is of a type that does not individually or cumulatively have a significant effect on the human environment. Therefore, neither an environmental assessment nor an environmental impact statement is required.

VIII. Paperwork Reduction Act of 1995

This final rule contains information collection requirements that are subject to review by the OMB under the Paperwork Reduction Act of 1995 (the PRA) (44 U.S.C. 3501–3520). The title, description, and respondent description of the information collection provisions are shown in this section with an estimate of the third-party disclosure and recordkeeping burdens. Included in the estimate is the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing each collection of information.

Title: Medical Gas Containers and Closures; Current Good Manufacturing Practice Requirements.

Description: The final rule revises FDA's labeling and CGMP regulations to include new requirements for the label, color, and design of medical gas containers and closures. These requirements are intended to make the contents of medical gas containers more readily identifiable and to reduce the likelihood that the wrong gas will be connected to a medical gas supply system.

Description of Respondents: Persons and businesses, including small businesses and manufacturers, involved in the processing, manufacturing, transportation, handling, and administration of designated medical gases. FDA's database of establishments that manufacture medical gases includes about 2,500 such establishments.

We estimate the burden for the collection of information as follows:

Third-party disclosure: Table 1 shows the estimated one-time third-party disclosure burden. Upon implementation of the requirements under the final rule, we expect respondents will have realized the associated burden. In our subsequent PRA evaluation conducted in connection with requesting a renewal of OMB's approval of the information collection associated with this rule (assuming that initial approval occurs), we will adjust our estimate accordingly.

TABLE 1—ESTIMATED ONE-TIME THIRD-PARTY DISCLOSURE BURDEN [1]

21 CFR sections	Number of respondents	Number of disclosures per respondent	Total disclosures	Average burden per disclosure	Total hours
201.328(a)(1) and (2) and 211.94(e)(2) Portable Cryogenic Medical Gas Container Labels and Colors.	2,500	14	35,000	0.10 (6 minutes)	3,500
201.328(b) and 211.94(e)(2) High-Pressure Medical Gas Cylinder Colors.	2,500	984	2,460,000	0.10 (6 minutes)	246,000
Total	2,500	998	2,495,000	0.10 (6 minutes)	249,500

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

A gas listed at § 201.161(a) is exempt from certain labeling requirements if its labeling bears, among other things, a warning statement that conforms to § 201.161(a)(1). Section 201.161(a)(1)(i) specifies the content to be included in a warning statement for oxygen and § 201.161(a)(1)(ii) specifies the content to be included in a warning statement for nitrogen, carbon dioxide, helium, nitrous oxide, and any medically appropriate combinations of any of the gases listed in § 201.161(a). FDA believes most medical gases are already labeled in a manner that complies with § 201.161(a) as finalized. Furthermore, because § 201.161(a) provides the warning statement content to be included in medical gas labeling, the inclusion of these warning statements on medical gas labeling is not considered a ''collection of information'' subject to review under the PRA. See 5 CFR 1320.3(c)(2) (providing that ''the public disclosure of information originally supplied by the Federal government to the recipient for the purpose of disclosure to the public is not included'' within the definition of ''collection of information'').

Under § 201.328(a)(1), each portable cryogenic medical gas container must be conspicuously marked with a 360° wraparound label identifying its contents. The identity of the medical gas held in the container must be printed on the label in one of the following ways: Using lettering that appears in the standard color designated for the gas in § 201.328(c) and that is printed against a white background, or using lettering that appears in white against a background that is painted in the standard color for the gas as designated in § 201.328(c). The lettering for the name of the gas on the label must be at least 2 inches high; the name of the gas must be printed continuously around the label and be capable of being read around the entire container; the label must be on the sidewall of the container, as close to the top of the container as possible but below the top weld seam; and, if the shoulder portion of a portable cryogenic gas container is colored, the color used must be the standard color or colors designated in § 201.328(c) for the gas or gases held within the container.

Under § 201.328(a)(2), the 360° wraparound label required in § 201.328(a)(1), or a separate label, must include in conspicuous lettering the phrase ''For Medical Use,'' ''Medical Gas,'' or some similar phrase that indicates the gas is for medical use. Finally, under § 211.94(e)(2), the wraparound label must be affixed to the container in a manner that does not interfere with other labeling and such that it is not susceptible to becoming worn or inadvertently detached during normal use, and the wraparound label must be reasonably resistant to fading, durable when exposed to atmospheric conditions, and not readily soluble in water.

We estimate that there are approximately 35,000 portable cryogenic containers in medical gas service that are subject to the labeling requirements at § 201.328(a). As discussed in the Economic Analysis of Impacts, FDA conservatively estimates that all manufacturers will choose to comply with § 201.328(a) by removing any existing wraparound labels from all portable cryogenic containers and replacing them with wraparound labels that meet all of the requirements at § 201.328(a). Thus, on average, each manufacturer would need to add labels to (or re-label) approximately 14 containers (35,000 ÷ 2,500). FDA estimates that approximately 6 minutes would be required to remove any existing wraparound label and attach a new wraparound label to each container. Thus, the total burden third-party disclosure burden hours associated with § 201.328(a)(1) and (2) is approximately 3,500 hours (2,500 × 14 × 0.10 hours).

Section 201.328(a)(1)(v) also provides that a portable cryogenic cylinder may only be colored in the color or colors designated in § 201.328(c) if the gas or gases held within the container correspond to that color or those colors. Alternatively, the container may be colored in a light-reflective color such as white (or some other color which is not an FDA-designated gas color), or simply not colored at all. Based on discussions with subject matter experts, we believe that few to no cryogenic containers will require recoloring as a result of this requirement, and therefore we estimate no third-party disclosure burden associated with this requirement.

Under § 201.328(b), high-pressure medical gas cylinders must be colored on the shoulder with the colors designated in § 201.328(c) for the gas contained in the cylinder, and such colors must be visible when viewed from the top of the cylinder. Under § 211.94(e)(2), the materials used for coloring medical gas containers must be reasonably resistant to fading, durable when exposed to atmospheric conditions, and not readily soluble in water. Based on information contained in the Economic Analysis of Impacts (see Section VI), we estimate that as many as 10 percent of the estimated 24.6 million high-pressure cylinders in medical service will require coloring or recoloring to comply with § 201.328(b). Thus, on average, each manufacturer would need to color 984 containers (2.46 million ÷ 2,500). We conservatively estimate that it will take an average of 6 minutes to color a cylinder. Thus, the total third-party disclosure burden hours associated with § 201.328(b) is approximately 246,000 hours (2,500 × 984 × 0.10 hours).

Recordkeeping: Table 2 shows the estimated annual recordkeeping burden associated with the information collection.

TABLE 2—ESTIMATED ANNUAL RECORDKEEPING BURDEN [1]

21 CFR Section	Number of recordkeepers	Number of records per recordkeeper	Total annual records	Average burden per recordkeeping	Total hours
211.184 and 211.94(e)(1) Records Maintenance of Secure Gas Use Outlet Connection Requirement	2,500	0.7	1,750	0.033 (2 minutes)	58

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

Section 211.94(e)(1) requires that portable cryogenic medical gas containers that are not manufactured with permanent gas use outlet connections must have gas-specific use outlet connections that are attached to the valve body so that they cannot be readily removed or replaced except by the manufacturer. A small portion of the existing inventory of portable cryogenic containers would need to be modified to comply with this requirement, and manufacturers must maintain records in accordance with § 211.184 for drug product containers. As discussed in the Economic Analysis of Impacts (see Section VI), FDA conservatively estimates that manufacturers will need to secure the gas use outlets of as many as 1,750 portable cryogenic containers to bring them into compliance with the final rule. As a result each manufacturer would incur annual recordkeeping under § 211.184 incident to bringing, on average, 0.7 containers into compliance with the secure gas use outlet connection requirement (1,750 ÷ 2,500). Consistent with our estimate in the proposed rule, this should require an average of 2 minutes (0.033 hours) per container. This results in an annual burden of 58 hours (2,500 × 0.7 × 0.033 hours) for 1,750 records.

The information collection provisions of this final rule have been submitted to OMB for review, as required by section 3507(d) of the PRA. Before the effective date of this final rule, FDA will publish a notice in the **Federal Register** announcing OMB's decision to approve, modify, or disapprove the information collection provisions in this final rule. An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

IX. Federalism

We have analyzed this final rule in accordance with the principles set forth in Executive Order 13132. FDA has determined that the rule does not contain policies that have substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government. Accordingly, we conclude that the rule does not contain policies that have federalism implications as defined in the Executive order and, consequently, a federalism summary impact statement is not required.

X. References

The following reference is on display in the Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852, and is available for viewing by interested persons between 9 a.m. and 4 p.m., Monday through Friday; it is also available electronically at *http://www.regulations.gov.* FDA has verified the Web site address, as of the date this document publishes in the **Federal Register**, but Web sites are subject to change over time.

1. CGA M–15, *Standard for Appropriate and Effective Regulations for Medical Gases within 21 CFR parts 201, 2015, and 210/211* (Compressed Gas Association 2014, 1st ed), at pages 1, 14–15, 35.
2. CGA C–9, *Standard Color Marking of Compressed Gas Containers for Medical Use* (Compressed Gas Association 2013, 5th ed).
3. CGA Safety Bulletin SB–26, *Cylinder Connections on Portable Liquid Cryogenic Cylinders* (Compressed Gas Association 2014, 4th ed).
4. Medical Gas Containers and Closures; Current Good Manufacturing Practice Requirements, Final Regulatory Impact Analysis, Final Regulatory Flexibility Analysis, and Unfunded Mandates Reform Act Analysis, Docket No. FDA–2005–N–0343, available at *http://www.fda.gov/AboutFDA/ReportsManualsForms/Reports/EconomicAnalyses/default.htm.*

List of Subjects

21 CFR Part 201

Drugs, Labeling, Reporting and recordkeeping requirements.

21 CFR Part 211

Drugs, Labeling, Laboratories, Packaging and containers, Prescription drugs, Reporting and recordkeeping requirements, Warehouses.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs, 21 CFR parts 201 and 211 are amended as follows:

PART 201—LABELING

■ 1. The authority citation for part 201 continues to read as follows:

Authority: 21 U.S.C. 321, 331, 351, 352, 353, 355, 358, 360, 360b, 360gg–360ss, 371, 374, 379e; 42 U.S.C. 216, 241, 262, 264.

■ 2. Revise § 201.161 to read as follows:

§ 201.161 Medical gases.

(a) Oxygen, nitrogen, carbon dioxide, helium, and nitrous oxide gases intended for drug use, and medically appropriate combinations of any of these gases intended for drug use, are exempted from the requirements of § 201.100(b)(2) and (3), and (c)(1), provided that, where applicable, the requirements of §§ 201.328 and 211.94(e)(2) of this chapter are met and the labeling bears, in addition to any other information required by the Federal Food, Drug, and Cosmetic Act, the following:

(1)(i) In the case of oxygen, a warning statement providing that uninterrupted use of high concentrations of oxygen over a long duration, without monitoring its effect on oxygen content of arterial blood, may be harmful; that oxygen should not be used on patients who have stopped breathing unless used in conjunction with resuscitative equipment; and, in the case of oxygen that may be provided without a prescription for use in the event of depressurization or other environmental oxygen deficiency, or for oxygen deficiency or for use in emergency resuscitation when administered by properly trained personnel, a warning statement providing that oxygen may be used for emergency use only when administered by properly trained personnel for oxygen deficiency and resuscitation, and that for all other medical applications a prescription is required.

(ii) In the case of nitrogen, carbon dioxide, helium, nitrous oxide, and medically appropriate combinations of any of the gases listed in paragraph (a) of this section, a warning statement providing that the administration of the gas or gas combination (as applicable) may be hazardous or contraindicated; and that the gas or gas combination (as applicable) should be used only by or under the supervision of a licensed practitioner who is experienced in the use and administration of the gas or gas combination (as applicable) and is familiar with the indications, effects, dosages, methods, and frequency and duration of administration, and with the hazards, contraindications, and side effects and the precautions to be taken.

(2) Any needed directions concerning the conditions for storage and warnings against the inherent dangers in the handling of the specific compressed gas.

(b) [Reserved]

■ 3. Add new § 201.328 to read as follows:

§ 201.328 Labeling of medical gas containers.

(a) *Portable cryogenic medical gas containers.* For the purposes of this section a ''portable cryogenic medical gas container'' is one that is capable of being transported and is intended to be attached to a medical gas supply system within a hospital, health care entity, nursing home, other facility, or home health care setting, or is a base unit used to fill small cryogenic gas containers for use by individual patients. The term does not include cryogenic containers that are not designed to be connected to a medical gas supply system, *e.g.,* tank trucks, trailers, rail cars, or small cryogenic gas containers for use by individual patients (including portable liquid oxygen units as defined at § 868.5655 of this chapter).

(1) Each portable cryogenic medical gas container must be conspicuously marked with a 360° wraparound label identifying its contents. Such label must meet the requirements of § 211.94(e)(2) of this chapter and the following additional requirements.

(i) If the container holds a single gas, the name of the gas held in the container must be printed on the label in one of the following ways:

(A) Using lettering that appears in the color designated for the gas in paragraph (c) of this section and that is printed against a white background, or

(B) Using lettering that appears in white against a background that is painted in the color for the gas designated in paragraph (c) of this section.

(ii) The lettering for the name of the gas on the label must be at least 2 inches high.

(iii) The name of the gas must be printed continuously around the label and be capable of being read around the entire container.

(iv) The label must be on the sidewall of the container, as close to the top of the container as possible but below the top weld seam.

(v) A portable cryogenic medical gas container may only be colored in the color or colors designated in paragraph (c) of this section if the gas or gases held within the container correspond to that color or those colors.

(2) A label on the container (either the 360° wraparound label required in paragraph (a)(1) of this section or a separate label) must include, in conspicuous lettering, the phrase ''For Medical Use'', ''Medical Gas,'' or some similar phrase that indicates the gas is for medical use.

(b) *High-pressure medical gas cylinders.* Each high-pressure medical gas cylinder must be colored on the shoulder portion of the cylinder in the color or colors designated in paragraph (c) of this section. The color or colors must be visible when viewed from the top of cylinder.

(c) *Medical gas colors.* The colors required to identify medical gases under paragraph (a) and (b) of this section are:

Medical gas	Color
Medical Air	Yellow.
Carbon Dioxide	Gray.
Helium	Brown.
Nitrogen	Black.
Nitrous Oxide	Blue.
Oxygen	Green.
Mixture or Blend	Colors corresponding to each component gas.

PART 211—CURRENT GOOD MANUFACTURING PRACTICE FOR FINISHED PHARMACEUTICALS

■ 4. The authority citation for part 211 continues to read as follows:

Authority: 21 U.S.C. 321, 351, 352, 355, 360b, 371, 374; 42 U.S.C. 216, 262, 263a, 264.

■ 5. Amend § 211.94 by adding new paragraph (e) to read as follows:

§ 211.94 Drug product containers and closures.

* * * * *

(e) *Medical gas containers and closures must meet the following requirements*—(1) *Gas-specific use outlet connections.* Portable cryogenic medical gas containers that are not manufactured with permanent gas use outlet connections (*e.g.,* those that have been silver-brazed) must have gas-specific use outlet connections that are attached to the valve body so that they cannot be readily removed or replaced (without making the valve inoperable and preventing the containers' use) except by the manufacturer. For the purposes of this paragraph, the term ''manufacturer'' includes any individual or firm that fills high-pressure medical gas cylinders or cryogenic medical gas containers. For the purposes of this section, a ''portable cryogenic medical gas container'' is one that is capable of being transported and is intended to be attached to a medical gas supply system within a hospital, health care entity, nursing home, other facility, or home health care setting, or is a base unit used to fill small cryogenic gas containers for use by individual patients. The term does not include cryogenic containers that are not designed to be connected to a medical gas supply system, *e.g.,* tank trucks, trailers, rail cars, or small cryogenic gas containers for use by individual patients (including portable liquid oxygen units as defined at § 868.5655 of this chapter).

(2) *Label and coloring requirements.* The labeling specified at § 201.328(a) of this chapter must be affixed to the container in a manner that does not interfere with other labeling and such that it is not susceptible to becoming worn or inadvertently detached during normal use. Each such label as well as materials used for coloring medical gas containers must be reasonably resistant to fading, durable when exposed to atmospheric conditions, and not readily soluble in water.

■ 6. Amend § 211.125 by adding a sentence to the end of paragraph (c) to read as follows:

§ 211.125 Labeling issuance.

* * * * *

(c) * * * Labeling reconciliation is also waived for 360° wraparound labels on portable cryogenic medical gas containers.

* * * * *

Dated: November 15, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27838 Filed 11–17–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Medicare & Medicaid Services

42 CFR Parts 405, 410, 411, 414, 417, 422, 423, 424, 425, and 460

[CMS–1654–CN2]

RIN 0938–AS81

Medicare Program; Revisions to Payment Policies Under the Physician Fee Schedule and Other Revisions to Part B for CY 2017; Medicare Advantage Bid Pricing Data Release; Medicare Advantage and Part D Medical Loss Ratio Data Release; Medicare Advantage Provider Network Requirements; Expansion of Medicare Diabetes Prevention Program Model; Medicare Shared Savings Program Requirements

AGENCY: Centers for Medicare & Medicaid Services (CMS), HHS.

ACTION: Final rule; correction.

SUMMARY: This document corrects technical errors in the final rule that was placed on public inspection at the Office of the Federal Register on November 2, 2016 and scheduled for publication in the **Federal Register** on November 15, 2016. That rule is entitled, ''Medicare Program; Revisions to Payment Policies under the Physician Fee Schedule and Other Revisions to Part B for CY 2017; Medicare Advantage Bid Pricing Data Release; Medicare Advantage and Part D Medical Loss Ratio Data Release; Medicare Advantage Provider Network Requirements; Expansion of Medicare Diabetes Prevention Program Model; Medicare Shared Savings Program Requirements.''

DATES: This correcting document is effective January 1, 2017.

FOR FURTHER INFORMATION CONTACT: Terri Plumb, (410) 786–4481, Gaysha Brooks, (410) 786–9649, or Annette Brewer (410) 786–6580.

SUPPLEMENTARY INFORMATION:

I. Background

In FR Doc 2016–26668, that was placed on public inspection at the Office of the Federal Register on November 2, 2016 and scheduled for publication in the **Federal Register** on November 15, 2016, there were technical errors that are identified and corrected in this correcting document.

II. Summary of Errors in the Regulations Text

In the CY 2017 PFS final rule, we inadvertently omitted or included language in § 410.79(b), (c)(1)(ii) and (iv), (c)(2)(i) and § 424.59(a)(1) and (5), (b)(4)(i), and (e)(2)(i).

III. Waiver of Proposed Rulemaking and Delay in Effective Date

Under 5 U.S.C. 553(b) of the Administrative Procedure Act (APA), the agency is required to publish a notice of the proposed rule in the **Federal Register** and provide a period for public comment before the provisions of a rule take effect. In addition, section 553(d) of the APA mandates a 30-day delay in effective date after issuance or publication of a rule. Sections 553(b)(B) and 553(d)(3) of the APA provide for exceptions from the APA notice and comment, and delay in effective date requirements. Section 553(b)(B) of the APA authorizes an agency to dispense with normal notice and comment rulemaking procedures for good cause if the agency makes a finding that the notice and comment process is impracticable, unnecessary, or contrary to the public interest; and includes a statement of the finding and the reasons for it in the rule. In addition, section 553(d)(3) of the APA allows the agency to avoid the 30-day delay in effective date where such delay is contrary to the public interest and the agency includes in the rule a statement of the finding and the reasons for it.

In our view, this correcting document does not constitute a rulemaking that would be subject to these requirements. This document merely corrects technical errors in the CY 2017 PFS final rule. The corrections contained in this document are consistent with, and do not make substantive changes to, the policies and payment methodologies that were proposed subject to notice and comment procedures in the CY 2017 PFS final rule. As a result, the correction made through this correcting document is intended to resolve inadvertent errors so that the rule accurately reflects the policies in the final rule.

Even if this were a rulemaking to which the notice and comment and delayed effective date requirements applied, we find that there is good cause to waive such requirements. Undertaking further notice and comment procedures to incorporate the corrections in this document into the CY 2017 PFS final rule or delaying the effective date of the corrections would be contrary to the public interest because it is in the public interest to ensure that the rule accurately reflects the public comment period. Further, such procedures would be unnecessary, because we are not making any substantive revisions to the final rule, but rather, we are simply correcting the **Federal Register** document to reflect the policies in the final rule. For these reasons, we believe there is good cause to waive the requirements for notice and comment and delay in effective date.

IV. Correction of Errors in the Regulations Text

In FR Doc. 16–26668 appearing on page 80170 in the **Federal Register** of Tuesday, November 16, 2016, the following corrections are made:

■ 1. On pages 80552 and 80553, correct § 410.79 by—

■ a. In paragraph (b):

■ i. Removing the definition of ''Evaluation weight'';

■ ii. Revising the definitions of ''MDPP supplier'', ''Medicare Diabetes Prevention Program (MDPP)'', and ''Required minimum weight loss'';

■ iii. In the definition of ''National Diabetes Prevention Program, removing ''(DPP)'' and adding in its place the term ''(National DPP) ''; and

■ b. Revising paragraphs (c)(1)(ii), (c)(1)(iv) and (c)(2)(i).

The revisions read as follows:

§ 410.79 Medicare diabetes prevention program expanded model: Conditions of coverage.

* * * * *

(b) * * *

MDPP supplier refers to an entity that has enrolled in Medicare to furnish MDPP services.

Medicare Diabetes Prevention Program (MDPP) refers to a model test expanded under section 1115A(c) of the Act that makes MDPP services available to MDPP eligible beneficiaries.

* * * * *

Required minimum weight loss refers to the percentage by which the beneficiary's updated weight is less than the baseline weight. The required minimum weight loss percentage is 5 percent.

(c) * * *

(1) * * *

(ii) Have as of the date of attendance at the first core session a body mass index (BMI) of at least 25 if not self-identified as Asian or a BMI of at least 23 if self-identified as Asian.

* * * * *

(iv) Have no previous diagnosis of type 1 or type 2 diabetes (other than gestational diabetes).

* * * * *

(2) * * *

(i) *Core sessions and core maintenance sessions.* MDPP suppliers must furnish to MDPP eligible beneficiaries the MDPP core benefit. Sixteen core sessions must be furnished at least a week apart over the first 6 months. At least one core maintenance session must be furnished in each of the second 6 months. All core sessions and core maintenance sessions must have a duration of approximately one hour. MDPP suppliers must address at least 16 different curriculum topics in the core sessions and at least 6 different curriculum topics in the core maintenance sessions.

* * * * *

■ 2. On page 80558, correct § 424.59 by revising paragraphs (a)(1) and (5), (b)(4)(i), and (e)(2)(i) to read as follows:

§ 424.59 Requirements for Medicare diabetes prevention program suppliers.

(a) * * *

(1) At the time of enrollment has full CDC DPRP recognition.

* * * * *

(5) Submits a roster of all coaches who will be furnishing MDPP services on the entity's behalf that includes the coaches' first and last names, SSN, and NPI.

(b) * * *

(4) * * *

(i) Has attended one, four or nine core sessions, or

* * * * *

(e) * * *

(2) * * *

(i) Become eligible to bill for MDPP services again if it meets the requirements of paragraph (a)(1) of this section, and enrolls again in Medicare as an MDPP supplier subject to paragraph (a) of this section.

* * * * *

Dated: November 14, 2016.

Madhura Valverde,

Executive Secretary to the Department, Department of Health and Human Services.

[FR Doc. 2016–27733 Filed 11–15–16; 11:15 am]

BILLING CODE 4120–01–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 648

[Docket No. 151211999–6343–02]

RIN 0648–XF002

Fisheries of the Northeastern United States; Northeast Multispecies Fishery; Georges Bank Cod Trimester Total Allowable Catch Area Closure and Possession and Trip Limit Reductions for the Common Pool Fishery

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rule; area closure and inseason adjustment.

SUMMARY: This action closes the Georges Bank Cod Trimester Total Allowable Catch Area to Northeast multispecies common pool vessels and adjusts the Georges Bank cod possession and trip limit for common pool vessels for the remainder of Trimester 2, through December 31, 2016. The common pool fishery is projected to catch 90 percent of its Trimester 2 quota for Georges Bank cod. The closure and possession and trip limit reductions are intended to prevent an overage of the common pool's quota for this stock.

DATES: This action is effective November 15, 2016, through December 31, 2016.

FOR FURTHER INFORMATION CONTACT: Liz Sullivan, Fishery Management Specialist, (978) 282–8493.

SUPPLEMENTARY INFORMATION: Federal regulations at 50 CFR 648.82(n)(2)(ii) require the Regional Administrator to close a common pool Trimester Total Allowable Catch (TAC) Area for a stock when 90 percent of the Trimester TAC is projected to be caught. The closure applies to all common pool vessels fishing with gear capable of catching that stock for the remainder of the trimester.

As of November 5, 2016, the common pool fishery has caught approximately 87 percent of the Trimester 2 TAC (4.2 mt) for Georges Bank (GB) cod. We project that 90 percent of the Trimester 2 TAC was caught by November 7.

Effective November 15, 2016, the GB Cod Trimester TAC Area is closed for the remainder of Trimester 2, through December 31, 2016, to all common pool vessels fishing with trawl gear, sink gillnet gear, and longline/hook gear. The GB Cod Trimester TAC Area consists of statistical areas 521, 522, 525, and 561. The area reopens at the beginning of Trimester 3 on January 1, 2017.

The intent of the trimester TAC area closure is to close the area where 90 percent of the catch of the stock has occurred. However, data indicate that common pool vessels have caught approximately 35 percent of the total catch in Trimester 2 from outside the statistical areas that will be affected by the closure described above. Federal regulations at § 648.86(o) authorize the Regional Administrator to adjust the possession and trip limits for common pool vessels to prevent the overharvest or underharvest of the common pool quotas. Therefore, the possession and trip limits for GB cod, are reduced as shown in Table 1, effective November 15, 2016, through December 31, 2016. This is intended to prevent the common pool from exceeding its sub-annual catch limit, but still allow for landing incidental catch of GB cod in areas not affected by the closure.

On January 1, 2017, common pool possession and trip limits for GB cod will return to the initial limits set by Framework Adjustment 55 to the Northeast Multispecies Fishery Management Plan (FMP).

TABLE 1—REDUCED COMMON POOL POSSESSION AND TRIP LIMITS FOR GB COD

Permit	Initial 2016 limits	Reduced limits
A DAS * (outside of the Eastern U.S./Canada Area)	500 lb per DAS up to 2,500 lb per trip	25 lb per DAS up to 50 lb per trip.
A DAS (Eastern U.S./Canada Area)	100 lb per DAS up to 500 lb per trip	25 lb per DAS up to 50 lb per trip.
A DAS (Special Access Programs)	1,000 lb per trip	50 lb per trip.
Handgear A	300 lb per trip	25 lb per trip.
Handgear B	25 lb per trip	25 lb per trip (unchanged).
Regular B DAS Program	100 lb per DAS up to 1,000 lb per trip	25 lb per DAS up to 50 lb per trip.

* Day-at-sea (DAS).

If a vessel declared its trip through the Vessel Monitoring System (VMS) or the interactive voice response system, and crossed the VMS demarcation line prior to November 15, 2016, it may complete its trip within the Trimester TAC Area. Additionally, such vessels are not subject to the new possession and trip limits for that trip. A vessel that has set gillnet gear prior to November 15, 2016, may complete its trip by hauling such gear.

Any overage of the Trimester 1 or 2 TACs must be deducted from the Trimester 3 TAC. Any uncaught portion of the Trimester 1 and Trimester 2 TACs is carried over into the next trimester. If the common pool fishery exceeds its sub-ACL for the 2016 fishing year, the overage must be deducted from the common pool's sub-ACL for fishing year 2017. However, any uncaught portion of the common pool's sub-ACL may not be carried over into the following fishing year.

Weekly quota monitoring reports for the common pool fishery are on our Web site at: *http://www.greateratlantic.fisheries.noaa.gov/ro/fso/MultiMonReports.htm.* We will continue to monitor common pool catch through vessel trip reports, dealer-reported landings, VMS catch reports, and other available information, and, if necessary, we will make additional adjustments to common pool management measures.

Classification

This action is required by 50 CFR part 648 and is exempt from review under Executive Order 12866.

The Assistant Administrator for Fisheries, NOAA, finds good cause pursuant to 5 U.S.C. 553(b)(B) and 5 U.S.C. 553(d)(3) to waive prior notice and the opportunity for public comment and the 30-day delayed effectiveness period because it would be impracticable and contrary to the public interest.

Regulations require the Regional Administrator to close a trimester TAC area to the common pool fishery when 90 percent of the Trimester TAC for a stock has been caught. Updated catch information only recently became available indicating that the common pool fishery caught 90 percent of its Trimester 2 TAC for GB cod by November 7, 2016. The time necessary to provide for prior notice and comment, and a 30-day delay in effectiveness, prevents the immediate closure of the GB Cod Trimester 2 TAC Area and reduction of the common pool's GB cod possession and trip limits. Delaying the effective date of a closure and possession and trip limit reduction increases the likelihood that the common pool fishery will exceed its quota of GB cod to the detriment of this stock, which could undermine management objectives of the Northeast Multispecies FMP.

Additionally, an overage of the common pool quota could cause negative economic impacts to the common pool fishery as a result of overage paybacks in a future trimester or fishing year.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: November 15, 2016.

Emily H. Menashes,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2016–27826 Filed 11–15–16; 4:15 pm]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 648

[Docket No. 130919816–4205–02]

RIN 0648–XF044

Fisheries of the Northeastern United States; Atlantic Herring Fishery; 2016 Management Area 1B Directed Fishery Closure

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Temporary rule; directed fishery closure.

SUMMARY: NMFS is closing the directed herring fishery in management Area 1B, limiting catch from that area to 2,000 lb (907.2 kg) per trip and prohibiting landing more than once per calendar day, because it projects that 92 percent of the 2016 annual seasonal catch limit for that area will have been caught by the effective date. This action is

necessary to comply with the regulations implementing the Atlantic Herring Fishery Management Plan and is intended to prevent over harvest of herring in Area 1B.

DATES: Effective 0001 hr local time, November 18, 2016, through December 31, 2016.

FOR FURTHER INFORMATION CONTACT: Daniel Luers, Fishery Management Specialist, (978) 282–8457.

SUPPLEMENTARY INFORMATION: The reader can find regulations governing the herring fishery at 50 CFR part 648. The regulations require annual specification of the overfishing limit, acceptable biological catch, annual catch limit (ACL), optimum yield, domestic harvest and processing, U.S. at-sea processing, border transfer, and sub-ACLs for each management area. The 2016 Domestic Annual Harvest is 103,045 metric tons (mt); the 2016 sub-ACL allocated to Area 1B is 4,600 mt, and 138 mt of the Area 1B sub-ACL is set aside for research (78 FR 61828, October 4, 2013). The 2016 Area 1B sub-ACL was decreased to 2,941 mt to account for the 1,521 mt overage in 2014 catch. For management Area 1B, the catch of sub-ACL is currently allocated to the seasonal period from May 1 through December 31. There is no catch currently allocated to the seasonal period from January 1 through April 30. Therefore, under current regulations, vessels are prohibited from fishing for herring in or from Area 1B during the January 1 through April 30 period.

The regulations at § 648.201 require that when the NMFS Administrator of the Greater Atlantic Region (Regional Administrator) projects herring catch will reach 92 percent of the sub-ACL allocated in any of the four management areas designated in the Atlantic Herring Fishery Management Plan (FMP), NMFS will prohibit herring vessel permit holders from fishing for, catching, possessing, transferring, or landing more than 2,000 lb (907.2 kg) of herring per trip and landing more than once per calendar day in or from the specified management area for the remainder of the directed fishery closure period. The Regional Administrator monitors the herring fishery catch in each of the management areas based on dealer reports, state data, and other available information. NMFS publishes notification in the **Federal Register** of the date that the catch is projected to reach 92 percent of the management area sub-ACL, and of the closure of the directed fishery and a 2,000-lb (907.2-kg) trip possession limit in the management area for the remainder of the seasonal closure period. Vessels that have entered port before the closure date may offload and sell more than 2,000 lb (907.2 kg) of herring from Area 1B, from that trip. During the directed fishery closure, vessels may transit Area 1B with more than 2,000 lb (907.2 kg) of herring on board only under the conditions specified below.

The Regional Administrator has determined, based on dealer reports and other available information, that the herring fleet will catch 92 percent of the total herring sub-ACL allocated to Area 1B for the 2016 seasonal period from May 1 through December 31, 2016, by November 18, 2016. Therefore, effective 0001 hr local time, November 18, 2016, federally permitted vessels may not fish for, catch, possess, transfer, or land more than 2,000 lb (907.2 kg) of herring per trip and land more than once per calendar day, in or from Area 1B through December 31, 2016, except that vessels that have entered port before 0001 hr on November 18, 2016, may offload and sell more than 2,000 lb (907.2 kg) of herring from Area 1B from that trip after the closure. During the directed fishery closure, November 18, 2016, through December 31, 2016, a vessel may transit through Area 1B with more than 2,000 lb (907.2 kg) of herring on board, provided the vessel did not catch more than 2,000 lb (907.2 kg) of herring in Area 1B and its fishing gear is not available for immediate use as defined by § 648.2. Effective 0001 hr, November 18, 2016, federally permitted dealers may not receive herring from federally permitted herring vessels that harvest more than 2,000 lb (907.2 kg) of herring from Area 1B through 2400 hr local time, December 31, 2016, unless it is from a trip landed by a vessel that entered port before 0001 hr on November 18, 2016. Under current regulations during the seasonal period from January 1, 2017, through April 30, 2017, vessels are prohibited from fishing for, catching, possessing, transferring, or landing herring from Area 1B during this seasonal period. Vessels may transit area 1B with herring on board provided such herring were caught in an area or areas with sub-ACL available and that all fishing gear is stowed and not available for immediate use as defined in § 648.2, and the vessel is issued a permit that authorizes the amount of herring on board for the area where the herring was harvested. Beginning on May 1, 2017, the 2017 allocation for Area 1B is expected to become available.

Classification

This action is required by 50 CFR part 648 and is exempt from review under Executive Order 12866.

NMFS finds good cause pursuant to 5 U.S.C. 553(b)(B) to waive prior notice and the opportunity for public comment because it would be contrary to the public interest and impracticable. The herring fishery opened for the 2016 fishing year on January 1, 2016, and Management Area 1B opened on May 1, 2016. Data indicating the herring fleet will have landed at least 92 percent of the 2016 sub-ACL allocated to Area 1B have only recently become available. Landings data is updated on a weekly basis, and NMFS monitors catch data on a daily basis as catch increases toward the limit for the area. Further, high-volume catch and landings in this fishery increase total catch relative to the sub-ACL quickly. This action is a required response to that recently available data and closes the directed herring fishery and imposes a 2,000-lb (907.2-kg) possession limit for Management Area 1B through December 31, 2016, under current regulations. The regulations at § 648.201(a) require such action to ensure that herring vessels do not exceed the 2016 sub-ACL allocated to Area 1B. If implementation of this closure is delayed to solicit prior public comment, the sub-ACL for Area 1B for this fishing year may be exceeded, thereby undermining the conservation objectives of the FMP. If sub-ACLs are exceeded, the excess must also be deducted from a future sub-ACL and would reduce future fishing opportunities. Also, the public had prior notice and full opportunity to comment on this process when these provisions were put in place. Based on these considerations, NMFS further finds, pursuant to 5 U.S.C. 553(d)(3), good cause to waive the 30-day delayed effectiveness period for the reasons stated above.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: November 15, 2016.

Emily H. Menashes,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2016–27833 Filed 11–15–16; 4:15 pm]

BILLING CODE 3510–22–P

Proposed Rules

Federal Register

Vol. 81, No. 223

Friday, November 18, 2016

DEPARTMENT OF ENERGY

10 CFR Part 835

[Docket No. AU–RM–16–ORP]

RIN 1992–AA51

Occupational Radiation Protection

AGENCY: Office of Environment, Health, Safety and Security, U.S. Department of Energy.

ACTION: Notice of proposed rulemaking.

SUMMARY: The U.S. Department of Energy (DOE) proposes to amend the values listed in two appendices to its current occupational radiation protection regulations. The proposed amendment to appendix C would correct the derived air concentration value for any single radionuclide not listed in the appendix C table with a decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than two hours, adjusted for an 8-hr work day. The proposed amendments to appendix E would correct the activity information of two radionuclides, Rh–102 and Rh–102m.

DATES: The comment period for this proposed rule will end on December 19, 2016.

ADDRESSES: You may submit comments, identified by docket number AU–RM–16–ORP, and/or Regulation Identification Number (RIN) 1992–AA51 in one of four ways (please select only one of the ways listed):

1. *Federal e-Rulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.

2. *Email: James.dillard@hq.doe.gov.* Include docket number AU–RM–16–ORP and/or RIN 1992–AA51 in the subject line of the email. Please include the full body of your comments in the text of the message or as an attachment. If you have additional information such as studies or journal articles and cannot attach them to your electronic submission, please send them on a CD or USB flash drive to the address listed in paragraph 4. The additional material must clearly identify your electronic comments by name, date, subject, and docket number AU–RM–16–ORP.

3. *Mail:* Address written comments to James Dillard, U.S. Department of Energy, Office of Environment, Health, Safety and Security, Mailstop AU–11, Docket Number AU–RM–16–ORP, 1000 Independence Ave. SW., Washington, DC 20585 (due to potential delays in DOE's receipt and processing of mail sent through the U.S. Postal Service, we encourage respondents to submit comments electronically to ensure timely receipt). If possible, please submit all items on a CD or USB flash drive, in which case it is not necessary to include printed copies.

4. *Hand Delivery/Courier:* James Dillard, U.S. Department of Energy, Office of Environment, Health, Safety and Security, 19901 Germantown Road, Germantown, MD 20874. Telephone 301–903–1165. If possible, please submit all items on a CD or USB flash drive, in which case it is not necessary to include printed copies.

For detailed instructions on submitting comments and additional information on the rulemaking process, see Section IV of this document (Public Participation).

Docket: The docket, which includes **Federal Register** notices, public meeting attendee lists and transcripts, comments, and other supporting documents/materials, is available for review at *http://www.regulations.gov.* All documents in the docket are listed in the *www.regulations.gov* index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available. A link to the docket Web page can be found at: *http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title10/10cfr835_main_02.tpl.* The *www.regulations.gov* Web page contains instructions on how to access all documents, including public comments, in the docket. See Section IV of this document (Public Participation) for further information on how to submit comments through *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: James Dillard, U.S. Department of Energy, Office of Environment, Health, Safety and Security, Mailstop AU–11, 1000 Independence Ave. SW., Washington, DC 20585. Telephone: 301–903–1165. Email: *james.dillard@hq.doe.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

The requirements in title 10, Code of Federal Regulations, part 835 (10 CFR part 835), *Occupational Radiation Protection,* are designed to protect the health and safety of individuals from ionizing radiation resulting from the conduct of U.S. Department of Energy (DOE) activities. One situation that DOE's regulations address is the exposure of workers to radioactive material dispersed in the air. Based on calculations involving doses to the organs of the body, levels of contamination in the air that will not cause the dose limits for workers to be exceeded are established for specified radionuclides. These values are provided in appendix C of part 835. On April 13, 2011, the Department published updated Derived Air Concentration (DAC) values in appendix C for determining radiation dose from inhaled radioactive material (76 FR 20489). The updated dose conversion factors were based on an 8 hour work day exposure time instead of the previously assumed 24 hour calendar day exposure, which is consistent with other occupational scenarios, such as those used in developing appendix A DACs. In that update, the DAC values for radionuclides not listed in the appendix C table with a decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than two hours were inadvertently not revised for the 8 hour work day exposure time. The proposed amendment to appendix C would provide the correct DAC values for this group of radioactive materials.

Title 10 CFR part 835 appendix E values were developed to ensure the proper accountability of sealed radioactive sources, as well as radioactive material posting and labeling requirements (63 FR 59662, November 4, 1998). DOE most recently amended the values of appendix E to part 835 on June 8, 2007 (72 FR 31904), using the International Commission on Radiological Protection (ICRP) Publication 60 methodology (ref. 1) and the same exposure scenarios discussed in a 1998 amendment to 10 CFR part 835 (63 FR 59662, November 4, 1998). The values were based on the more limiting of the quantity of radioactive material which results in either an external or internal whole body dose, from either inhalation or ingestion, of 100 millirems. However, the final rule incorrectly listed values for two radionuclides. This proposed amendment to appendix E would provide the correct activity values for these two radionuclides (Rh-102 and Rh-102m), calculated from internal exposure scenario derived from ICRP Publication 119 (ref. 2).

II. Discussion of Proposed Amendments

A. Appendix C—Derived Air Concentration (DAC) for Workers from External Exposure During Immersion in a Cloud of Airborne Radioactive Material. The proposed amendment would provide a correction to the derived air concentration value for any single radionuclide not listed in the Appendix C table with a decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than two hours to 1E–06 μCi/mL (7E+04 Bq/m^3).

B. Appendix E—Values for Establishing Sealed Radioactive Source Accountability and Radioactive Material Posting and Labeling Requirements. The proposed amendment would correct the activity for Rh-102 to 6.4E+05 μCi and the activity from Rh-102m to 3.0E+05 μCi.

III. Procedural Requirements

A. Review Under Executive Order 12866

This regulatory action has been determined not to be ''not significant'' under Executive Order 12866, ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993). Accordingly, this action was not subject to review under that Executive Order by the Office of Information and Regulatory Affairs (OIRA) of the Office of Management and Budget (OMB).

B. Review Under the Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*) requires that a Federal agency prepare an initial regulatory flexibility analysis for any regulation for which a general notice of proposed rulemaking is required, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities (5 U.S.C. 605(b)).

This proposed rule would amend DOE requirements for nuclear safety and occupational radiation protection at DOE sites. The requirements of part 835 are primarily implemented by contractors who conduct work at DOE facilities. DOE considered whether these contractors are ''small businesses'' as the term is defined in the Regulatory Flexibility Act (5 U.S.C. 601(3)). The Regulatory Flexibility Act's definition incorporates the definition of small business concerns in the Small Business Act, which the Small Business Administration (SBA) has developed through size standards in 13 CFR part 121. The DOE contractors subject to this rule exceed the SBA's size standards for small businesses. In addition, DOE expects that any potential economic impact of this rule would be negligible because DOE activities are conducted by contractors who are reimbursed through their contracts with DOE for the costs of complying with DOE nuclear safety and radiation protection requirements, including the costs of complying with the proposed rule. For these reasons, DOE certifies that this proposed rule, if promulgated, would not have a significant economic impact on a substantial number of small entities, and therefore, no regulatory flexibility analysis has been prepared. DOE's certification and supporting statement of factual basis will be provided to the Chief Counsel of Advocacy of the SBA pursuant to 5 U.S.C. 605(b).

C. Review Under the Paperwork Reduction Act

This proposed rule does not impose a collection of information requirement subject to the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*).

D. Review Under the National Environmental Policy Act

DOE has concluded that promulgation of this rule falls into a class of actions that would not individually or cumulatively have a significant impact on the human environment, as determined by DOE's regulations implementing the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*). Specifically, this rule amends existing regulations without changing the potential environmental effect of the regulations being amended, and, therefore, is covered under the Categorical Exclusion in paragraph A5 of appendix A to subpart D, 10 CFR part 1021. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

E. Review Under Executive Order 12988

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, ''Civil Justice Reform'' (61 FR 4729, February 7, 1996), imposes on Federal agencies the general duty to adhere to the following requirements: (1) Eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; and (3) provide a clear legal standard for affected conduct rather than a general standard and promote simplification and burden reduction. Section 3(b)(2) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) Clearly specifies the preemptive effect, if any, to be given to the regulation; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any, to be given to the regulation; (5) defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in section 3(a) and section 3(b) to determine whether they are met or it is unreasonable to meet one or more of the standards. DOE has completed the required review and determined that, to the extent permitted by law, this proposed rule meets the relevant standards of Executive Order 12988.

F. Review Under Executive Order 13132

Executive Order 13132, ''Federalism'' (64 FR 43255, August 4, 1999), imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have federalism implications. Agencies are required to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and carefully assess the necessity for such actions. DOE has examined this proposed rule and has determined that it would not preempt State law and would not have a substantial direct effect on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. No further action is required by Executive Order 13132.

G. Review Under Executive Order 13175

Under Executive Order 13175 (65 FR 67249, November 6, 2000) on ''Consultation and Coordination with Indian Tribal Governments,'' DOE may not issue a discretionary rule that has ''tribal'' implications and imposes substantial direct compliance costs on Indian tribal governments. DOE has determined that the proposed rule would not have such effects and concluded that Executive Order 13175 does not apply to this proposed rule.

H. Review Under the Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4), 2 U.S.C. 1531 *et seq.,* requires each Federal agency to prepare a written assessment of the effects of any Federal mandate in a proposed or final agency regulation that may result in the expenditure by states, tribal, or local governments, on the aggregate, or by the private sector, of $100 million in any one year. The Act also requires a Federal agency to develop an effective process to permit timely input by elected officials of state, tribal, or local governments on a proposed ''significant intergovernmental mandate,'' and requires an agency plan for giving notice and opportunity to provide timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. DOE has determined that the proposed rule published does not contain any Federal mandates affecting small governments, so these requirements do not apply.

I. Review Under Executive Order 13211

Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use,'' 66 FR 28355 (May 22, 2001) requires Federal agencies to prepare and submit to the OMB a Statement of Energy Effects for any proposed significant energy action. A ''significant energy action'' is defined as any action by an agency that promulgated or is expected to lead to promulgation of a final rule, and that: (1) Is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy, or (3) is designated by the Administrator of OIRA as a significant energy action. For any proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use. This regulatory action would not have a significant adverse effect on the supply, distribution, or use of energy and is therefore not a significant energy action. Accordingly, DOE has not prepared a Statement of Energy Effects.

J. Review Under the Treasury and General Government Appropriations Act, 1999

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Pub. L. 105–277) requires Federal agencies to issue a Family Policymaking Assessment for any proposed rule that may affect family well-being. The proposed rule would not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

K. Review Under the Treasury and General Government Appropriations Act, 2001

The Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB.

OMB's guidelines were published at 67 FR 8452 (February 22, 2002), and DOE's guidelines were published at 67 FR 62446 (October 7, 2002). DOE has reviewed this proposed rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

IV. Public Participation

Submission of Comments

DOE will accept comments, data and information regarding this proposed rule before or after the public hearings, but no later than the date provided in the **DATES** section at the beginning of this proposed rule. Interested individuals are invited to participate in this proceeding by submitting data, views, or arguments with respect to this proposed rule using any of the methods described in the **ADDRESSES** section at the beginning of this proposed rule. To help the Department review the submitted comments, commenters are requested to reference the paragraph(s), *e.g.,* § 835.3(a), to which they refer where possible.

1. *Submitting comments via www.regulations.gov.* The *www.regulations.gov* Web page will require you to provide your name and contact information. Your contact information will be viewable to DOE's Office of Environment, Health, Safety and Security staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment. However, your contact information will be publicly viewable if you include it in the comment itself or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Otherwise, persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to *www.regulations.gov* information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (CBI)). Comments submitted through *www.regulations.gov* cannot be claimed as CBI. Comments received through the

Web site will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section below.

DOE processes submissions made through *www.regulations.gov* before posting them. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that *www.regulations.gov* provides after you have successfully uploaded your comment.

2. *Submitting comments via email, mail or hand delivery/courier.* Comments and documents submitted via email, mail, or hand delivery/courier, also will be posted to *www.regulations.gov.* If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information in a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information each time you submit comments, data, documents, and other information to DOE. If you submit via mail or hand delivery/courier, please provide all items on a CD or USB flash drive, if feasible. It is not necessary to submit printed copies. No facsimiles (faxes) will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, that are written in English, and that are free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

3. *Confidential Business Information.* Pursuant to the provisions of 10 CFR 1004.11, anyone submitting information or data he or she believes to be confidential and exempt by law from public disclosure should submit via email, or postal mail two well-marked copies: One copy of the document marked ''CONFIDENTIAL BUSINESS INFORMATION'' including all the information believed to be confidential, and one copy of the document marked ''NO CONFIDENTIAL BUSINESS INFORMATION'' with the information believed to be confidential deleted. Submit these documents via email or CD, if feasible. DOE will make its own determination as to the confidentiality of the information and treat it accordingly. Factors of interest to DOE when evaluating requests to treat submitted information as confidential include: (1) A description of the items; (2) whether and why such items are customarily treated as confidential within the industry; (3) whether the information is generally known by or available from other sources; (4) whether the information has previously been made available to others without obligation concerning its confidentiality; (5) an explanation of the competitive injury to the submitting person which would result from public disclosure; (6) when such information might lose its confidential character due to the passage of time; and (7) why disclosure of the information would be contrary to the public interest.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

4. *Campaign form letters.* Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Appendix A—References

1. International Commission on Radiological Protection (ICRP), 1994. *Dose Coefficients for Intakes of Radionuclides by Workers.* ICRP Publication 68. Ann. ICRP 24 (4).

2. ICRP, 2012. Corrigenda to ICRP *Publication* 119: Compendium of Dose Coefficients based on ICRP *Publication 60.* Ann. ICRP 41 (suppl.).

V. Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this proposed rule.

List of Subjects in 10 CFR Part 835

Federal buildings and facilities, Nuclear energy, Nuclear materials, Nuclear power plants and reactors, Nuclear safety, Occupational safety and health, Radiation protection, and Reporting and recordkeeping requirements.

Issued in Washington, DC, on October 31, 2016.

Matthew B. Moury,

Associate Under Secretary for Environment, Health, Safety and Security.

For the reasons set forth in the preamble, the Department of Energy proposes to amend part 835 of chapter III of title 10 of the Code of Federal Regulations as set forth below:

PART 835—OCCUPATIONAL RADIATION PROTECTION

■ 1. The authority citation for part 835 continues to read as follows:

Authority: 42 U.S.C. 2201, 7191, 50 U.S.C. 2410.

Appendix C to Part 835—[Amended]

■ 2. At the end of the table, in appendix C, the last sentence is amended by removing ''6 E–06 μCi/mL (2 E+04 Bq/m^3)'' and adding in its place ''1 E–06 μCi/mL (7 E+04 Bq/m^3)''.

Appendix E to Part 835—[Amended]

■ 3. Appendix E is amended by removing the activity value in the second column for:

■ a. Rh–102, value of ''3.0E+05'' and adding in its place ''6.4E+05''; and

■ b. Rh–102m, value of ''6.4E+05'' and adding in its place ''3.0E+05''.

[FR Doc. 2016–27510 Filed 11–17–16; 8:45 am]

BILLING CODE 6450–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2016–9388; Directorate Identifier 2016–NM–145–AD]

RIN 2120–AA64

Airworthiness Directives; Learjet Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain Learjet Inc. Model 36A airplanes. This proposed AD was prompted by a report indicating that an aileron cable failed on an airplane during a tension check and a determination that Model 36A airplanes were not included in AD 2005–13–36, which addresses this issue for other Learjet Inc. airplanes. This proposed AD would require a one-time inspection of the center ball of the aileron control cables for a defective

swage, and corrective actions if necessary. We are proposing this AD to prevent the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by January 3, 2017.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* 202–493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Learjet, Inc., One Learjet Way, Wichita, KS 67209–2942; telephone 316–946–2000; fax 316–946–2220; email *ac.ict@aero.bombardier.com;* Internet *http://www.bombardier.com.* You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2016–9388; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800–647–5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Donald Ristow, Aerospace Engineer, Systems and Propulsion Branch, ACE–116W, FAA, Wichita Aircraft Certification Office (ACO), 1801 Airport Road, Room 100, Dwight D. Eisenhower National Airport, Wichita, Kansas 67209; phone: 316–946–4120; fax: 316–946–4107; email: *donald.ristow@faa.gov.*

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the **ADDRESSES** section. Include ''Docket No. FAA–2016–9388; Directorate Identifier 2016–NM–145–AD'' at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to *http://www.regulations.gov,* including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We received a report indicating that an aileron cable failed on a Learjet Inc. Model 35A (C–21A) airplane when the cable underwent a tension check while being installed. Further investigation showed that an over-sized ball was swaged onto the cable during manufacture. Swaging an over-sized ball onto a cable allows excess material into the swaging die, which causes the ball to over-swage and then sever the cable strands. This condition, if not corrected, could result in severe weakening of the aileron cable, and consequent reduced controllability of the airplane.

The subject area on Learjet Inc. Model 36A airplanes is identical to that on the affected Model 35A (C–21A) airplane. Therefore, Model 36A airplanes may be subject to the same unsafe condition.

We previously issued AD 2005–13–36, Amendment 39–14173 (70 FR 38578, July 5, 2005) (''AD 2005–13–36''), for Learjet Inc. Model 23, 24, 24A, 24B, 24B–A, 24C, 24D, 24D–A, 24E, 24F, 24F–A, 25, 25A, 25B, 25C, 25D, 25F, 28, 29, 31, 31A, 35, 35A (C–21A), and 36 airplanes. Model 36A airplanes were inadvertently omitted from the applicability of that AD. The applicability of AD 2005–13–36 referred to Bombardier Alert Service Bulletin A35/36–27–42, dated December 23, 2002, for Model 35, 35A (C–21A), and 36 airplanes. However, Model 36A airplanes are also identified in that service information.

Related Service Information Under 1 CFR Part 51

We reviewed Bombardier Alert Service Bulletin A35/36–27–42, dated December 23, 2002. The service information describes procedures for a one-time inspection of the center ball of the aileron control cables for a defective swage, and replacement of defective cables. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously, except as described in ''Differences between this Proposed AD and the Service Information.''

Differences Between This Proposed AD and the Service Information

Bombardier Alert Service Bulletin A35/36–27–42, dated December 23, 2002, recommends that operators accomplish the actions within 10 flight hours after receipt. This proposed AD would require that operators accomplish the actions within 100 flight hours, or 90 days after the effective date of the AD, whichever occurs first. We find that the proposed compliance time addresses the unsafe condition soon enough to maintain an adequate level of safety for the affected fleet. In developing an appropriate compliance time for this proposed AD we considered the degree of urgency associated with addressing the unsafe condition, and the maximum interval of time allowable for all affected airplanes to continue to operate without compromising safety.

Costs of Compliance

We estimate that this proposed AD affects 21 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	1 work-hour × $85 per hour = $85	$0	$85	$1,785

We estimate the following costs to do any necessary replacement that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need this replacement:

ON-CONDITION COSTS

Action	Labor cost	Parts cost	Cost per product
Cable Replacement	[1] Up to 48 work-hours × $85 per hour = up to $4,080	[1] Up to $2,020	[1] Up to $6,100.

[1] These costs assume replacement of all 5 cables.

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Learjet Inc.: Docket No. FAA–2016–9388; Directorate Identifier 2016–NM–145–AD.

(a) Comments Due Date

We must receive comments by January 3, 2017.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Learjet Inc. Model 36A airplanes, certificated in any category, as identified in Bombardier Alert Service Bulletin A35/36–27–42, dated December 23, 2002.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight controls.

(e) Unsafe Condition

This AD was prompted by a report indicating that an aileron cable failed on an airplane during a tension check. We are issuing this AD to prevent severe weakening of the aileron cable, and consequent reduced controllability of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection

Within 100 flight hours or 90 days after the effective date of this AD, whichever occurs first, do a detailed inspection of the center ball of the aileron control cables for a defective swage, and before further flight, replace any damaged or defective cable with a new cable, in accordance with the Accomplishment Instructions of Bombardier Alert Service Bulletin A35/36–27–42, dated December 23, 2002. For the purposes of this AD, a detailed inspection is: An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required.

(h) Parts Installation Limitation

As of the effective date of this AD, no person may install on any airplane an aileron control cable unless it has been inspected in accordance with paragraph (g) of this AD.

(i) No Reporting or Parts Return Requirement

Although Bombardier Alert Service Bulletin A35/36–27–42, dated December 23, 2002, has procedures for submitting a report showing compliance and for returning any discrepant parts to the manufacturer, this AD does not include those requirements.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Wichita Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (k)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

(1) For more information about this AD, contact Donald Ristow, Aerospace Engineer, Systems and Propulsion Branch, ACE–116W, FAA, Wichita ACO, 1801 Airport Road, Room 100, Dwight D. Eisenhower National Airport, Wichita, Kansas 67209; phone: 316–946–4120; fax: 316–946–4107; email: *donald.ristow@faa.gov.*

(2) For service information identified in this AD, contact Learjet, Inc., One Learjet Way, Wichita, KS 67209–2942; telephone 316–946–2000; fax 316–946–2220; email *ac.ict@aero.bombardier.com;* Internet *http://www.bombardier.com.* You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

Issued in Renton, Washington, on November 7, 2016.

Michael Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–27532 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2016–9391; Directorate Identifier 2016–NM–129–AD]

RIN 2120–AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all The Boeing Company Model 737–300, –400, and –500 series airplanes. This proposed AD was prompted by a report of a crack in a certain body station (BS) frame inboard chord during supplemental structural inspection document (SSID) inspections. This proposed AD would require repetitive detailed and high frequency eddy current (HFEC) inspections for any crack at the frame inboard chords, and repair if necessary. We are proposing this AD to prevent the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by January 3, 2017.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* 202–493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740; telephone: 562–797–1717; Internet: *https://www.myboeingfleet.com.* You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221. It is also available on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2016–9391.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2016–9391; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800–647–5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Galib Abumeri, Aerospace Engineer, Airframe Branch, ANM 120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Boulevard, Lakewood, CA 90712–4137; phone: 562–627–5324; fax: 562–627–5210; email: *galib.abumeri@faa.gov.*

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the **ADDRESSES** section. Include ''Docket No. FAA–2016–9391; Directorate Identifier 2016–NM–129–AD'' at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to *http://www.regulations.gov,* including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We have received a report indicating a crack of approximately 1.00 inch was found in the BS 616 frame inboard chord during SSID inspections. The crack was located at the lowest fastener hole of the inboard chord inboard strap below stringer S–11R. The airplane had accumulated 75,584 total flight hours and 63,570 total flight cycles. Cracking in the inboard chord is the result of fatigue caused by cyclic pressurization of the fuselage. This condition, if not corrected, could result in structural failure of the frame and possible rapid decompression.

Related Service Information Under 1 CFR Part 51

We reviewed Boeing Alert Service Bulletin 737–53A1366, dated May 17, 2016. The service information describes procedures for repetitive detailed and HFEC inspections for cracking at the frame inboard chords, and repair. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under ''Differences Between this Proposed AD and the Service Information.'' For information on the procedures and compliance times, see this service information at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2016–9391.

Differences Between This Proposed AD and the Service Information

Boeing Alert Service Bulletin 737–53A1366, dated May 17, 2016, specifies to contact the manufacturer for certain instructions, but this proposed AD would require using repair methods, modification deviations, and alteration deviations in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

Costs of Compliance

We estimate that this proposed AD affects 400 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Detailed and HFEC Inspections.	8 work-hours × $85 per hour = $680 per inspection cycle.	$0	$680 per inspection cycle.	$272,000 per inspection cycle.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed AD.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: ''General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

The Boeing Company: Docket No. FAA–2016–9391; Directorate Identifier 2016–NM–129–AD.

(a) Comments Due Date

We must receive comments by January 3, 2017.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 737–300, –400, and –500 series airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by a report of a crack in the body station (BS) 616 frame inboard chord during supplemental structural inspection document (SSID) inspections; the crack was located at the lowest fastener hole of the inboard chord inboard strap below stringer S–11R. We are issuing this AD to detect and correct any crack in the inboard chord of the BS 616 frame below stringers S–11L or S–11R, which could result in structural failure of the frame and possible rapid decompression.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Repetitive Detailed and High Frequency Eddy Current (HFEC) Inspections

Except as required by paragraph (i) of this AD, at the applicable times specified in table 1 of paragraph 1.E., ''Compliance,'' of Boeing Alert Service Bulletin 737–53A1366, dated May 17, 2016: Do detailed and HFEC inspections for any crack at the frame inboard chords, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737–53A1366, dated May 17, 2016. Repeat the inspections thereafter at the time specified in table 1 of paragraph 1.E., ''Compliance,'' of Boeing Alert Service Bulletin 737–53A1366, dated May 17, 2016.

(h) Repair

If any crack is found during any inspection required by paragraph (g) of this AD, repair before further flight using a method approved in accordance with the procedures specified in paragraph (j) of this AD. Although Boeing Alert Service Bulletin 737–53A1366, dated May 17, 2016, specifies to contact Boeing for repair instructions, and specifies that action as ''RC'' (Required for Compliance), this AD requires repair as specified in this paragraph.

(i) Service Information Exceptions

Where Boeing Alert Service Bulletin 737–53A1366, dated May 17, 2016, specifies a compliance time ''after the original issue date of this service bulletin,'' this AD requires compliance within the specified compliance time after the effective date of this AD.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to *9-ANM-LAACO-AMOC-Requests@faa.gov.*

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) Except as required by paragraph (h) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (j)(4)(i) and (j)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or sub-step is labeled ''RC Exempt,'' then the RC requirement is removed from that step or sub-step. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(k) Related Information

(1) For more information about this AD, contact Galib Abumeri, Aerospace Engineer, Airframe Branch, ANM 120L, FAA, Los Angeles ACO, 3960 Paramount Boulevard, Lakewood, CA 90712–4137; phone: 562–627–5324; fax: 562–627–5210; email: *galib.abumeri@faa.gov.*

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740; telephone: 562–797–1717; Internet: *https://www.myboeingfleet.com.* You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

Issued in Renton, Washington, on November 7, 2016.

Michael Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–27531 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2016–9392; Directorate Identifier 2016–NM–003–AD]

RIN 2120–AA64

Airworthiness Directives; Zodiac Aero Evacuation Systems

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for Zodiac Aero Evacuation Systems fusible plugs installed on emergency evacuation equipment for various transport category airplanes. This proposed AD was prompted by reports indicating that affected fusible plugs activated (vented gas) below the rated temperature. This proposed AD would require an inspection of the fusible plugs to determine the part number, and lot number and replacement of all affected fusible plugs. We are proposing this AD to prevent the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by January 3, 2017.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* 202–493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2016–9392; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800–647–5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE–171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516–228–7318; fax: 516–794–5531.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the **ADDRESSES** section. Include ''Docket No. FAA–2016–9392; Directorate Identifier 2016–NM–003–AD'' at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to *http://www.regulations.gov,* including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We have received reports indicating that certain fusible plugs installed on emergency evacuation equipment activated below the rated temperature. Fusible plugs are safety devices that vent air from charged inflation systems if the inflation systems encounter excessive temperatures. Tests conducted on affected fusible plugs revealed that the plugs activated (vented gas) between 130 and 150 degrees Fahrenheit (°F) instead of the rated temperature of 174 °F. The affected fusible plugs shipped from Air Cruisers, which is a component of Zodiac Aero Evacuation Systems, from October 1, 2008, through

October 1, 2009, and have part number (P/N) B13984–3, stamped with Lot PA–21 or PA–22. Currently there are 158 affected fusible plugs that have not been accounted for. Affected fusible plugs could be installed on emergency evacuation equipment, which includes all inflation valves, reservoir and valve assemblies, and evacuation slides, slides/rafts and liferafts. Activation of the fusible plugs vents all of the gas from the inflation system reservoir (inflation bottle), rendering the evacuation system unusable.

Related Service Information

We reviewed Air Cruisers Service Information Letter 25–246, Rev. No. 1, dated February 21, 2014. The service information provides information regarding affected fusible plugs and provides guidance on fusible plug replacement.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require an inspection of the fusible plugs to determine the part number and lot number, and replacement of all affected fusible plugs. This proposed AD also would require, for affected part and lot numbers only, sending the part number identification results to Air Cruisers.

Costs of Compliance

We estimate that this proposed AD affects 3,384 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Determining part number	1 work-hour × $85 per hour = $85	$0	$85	$287,640

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need these replacements:

ON-CONDITION COSTS

Action	Labor cost	Parts cost	Cost per product
Replacing	1 work-hour × $85 per hour = $85	Not available	$85
Reporting	1 work-hour × $85 per hour = $85	$0	85

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all available costs in our cost estimate.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120–0056. The paperwork cost associated with this AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at 800 Independence Ave. SW., Washington, DC 20591, ATTN: Information Collection Clearance Officer, AES–200.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: ''General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Zodiac Aero Evacuation Systems: Docket No. FAA–2016–9392; Directorate Identifier 2016–NM–003–AD.

(a) Comments Due Date

We must receive comments by January 3, 2017.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Zodiac Aero Evacuation Systems fusible plugs installed on emergency evacuation equipment. These affected fusible plugs might be installed on the emergency evacuation equipment of various transport airplanes, certificated in any category, including, but not limited to, the airplanes of manufacturers specified in paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) of this AD.

(1) Airbus.

(2) The Boeing Company.

(3) BAE Systems (Operations) Limited.

(4) Fokker Services B.V.

(d) Subject

Air Transport Association (ATA) of America Code 25, Equipment/furnishings.

(e) Unsafe Condition

This AD was prompted by reports indicating that affected fusible plugs activated (vented gas) below the rated temperature. We are issuing this AD to detect and correct fusible plugs that might activate below the rated temperature, which renders the evacuation system unusable.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Fusible Plug Identification, and Replacement

Within 30 days after the effective date of this AD: Do an inspection to determine the part number and lot number of the fusible plugs installed in the emergency evacuation equipment (including all inflation valves, reservoir and valve assemblies, and evacuation slides, slides/rafts and liferafts). A review of airplane maintenance records is acceptable to make this determination if the part number and lot number of the fusible plugs can be conclusively determined from that review. If any fusible plug has part number (P/N) B13984–3, stamped with Lot PA–21 or PA–22: Before further flight, replace the fusible plug with a new part.

Note 1 to paragraph (g) of this AD: Guidance can be found in the applicable component maintenance manual for the replacement. In addition, Air Cruisers Service Information Letter 25–246, Rev. No. 1, dated February 21, 2014, provides information regarding affected fusible plugs and guidance on the replacement.

(h) Reporting

If any fusible plug having P/N B13984–3, stamped with Lot PA–21 or PA–22, is identified during the inspection required by paragraph (g) of this AD: At the time specified in paragraph (h)(1) or (h)(2) of this AD, report the finding to Air Cruisers, Attention Kelly Schmidt, 1747 State Route 34, Wall Township, NJ 07727–3935; fax: 732–681–9163; email: *aircruisers@zodiacaerospace.com.* Include the quantity of fusible plugs scrapped and the name of the company or service center.

(1) If any affected fusible plug was identified on or after the effective date of this AD: Submit the report within 30 days after the part number identification.

(2) If any affected fusible plug was identified before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(i) Parts Installation Prohibition

As of the effective date of this AD, no person may install on any airplane any fusible plug having P/N B13984–3, stamped with Lot PA–21 or PA–22.

(j) Paperwork Reduction Act Burden Statement

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120–0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES–200.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, New York Aircraft Certification Office (ACO), ANE–170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516–228–7300; fax: 516–794–5531.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(l) Related Information

For more information about this AD, contact Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE–171, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516–228–7318; fax: 516–794–5531.

Issued in Renton, Washington, on November 8, 2016.

Michael Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–27626 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 51, 52, 60, 70, and 71

[EPA–HQ–OAR–2015–0355; FRL–9955–14–OAR]

RIN 2060–AS62

Revisions to the Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas (GHG) Permitting Regulations and Establishment of a Significant Emissions Rate (SER) for GHG Emissions Under the PSD Program

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule; extension of comment period.

SUMMARY: On August 26, 2016, the Environmental Protection Agency (EPA) issued a proposed rule to revise provisions in the Prevention of Significant Deterioration (PSD) and title V permitting regulations applicable to greenhouse gases (GHGs) to fully conform with recent court decisions. The EPA is extending the comment period on this proposed rule that was scheduled to close on December 2, 2016. The EPA received a letter requesting the extension of the proposed rule public comment period to allow the public additional time to review the rule and supporting documentation.

DATES: The public comment period on the proposed rule published in the **Federal Register** on October 3, 2016 (81 FR 68110), is being extended. Written comments must be received on or before December 16, 2016.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2015–0355, at *http://www.regulations.gov.* Follow the online instructions for submitting comments.

Once submitted, comments cannot be edited or removed from *Regulations.gov*. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the Web, Cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *http://www2.epa.gov/dockets/commenting-epa-dockets.*

FOR FURTHER INFORMATION CONTACT: For additional information on this action, contact Jessica Montañez, Office of Air Quality Planning and Standards, Environmental Protection Agency (C504–03), Research Triangle Park, North Carolina 27711; telephone number (919) 541–3407; fax number (919) 541–5509; email address: *montanez.jessica@epa.gov.*

SUPPLEMENTARY INFORMATION: After considering the request to extend the public comment period, the EPA has decided to extend the public comment period by 2 weeks, until December 16, 2016. This extension will ensure that the public has additional time to review the proposed rule and its supporting documents.

Dated: November 9, 2016.

Mary Henigin,

Acting Director, Office of Air Quality Planning and Standards.

[FR Doc. 2016–27670 Filed 11–17–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R08–OAR–2016–0521; FRL–9955–31–Region 8]

Approval and Disapproval and Promulgation of Air Quality Implementation Plans; Interstate Transport for Wyoming

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing action on the portions of six submissions from the State of Wyoming that are intended to demonstrate that the State Implementation Plan (SIP) meets certain interstate transport requirements of the Clean Air Act (Act or CAA). These submissions address the 2006 and 2012 fine particulate matter ($PM_{2.5}$) National Ambient Air Quality Standards (NAAQS), 2008 ozone NAAQS, 2008 lead (Pb) NAAQS, 2010 sulfur dioxide (SO_2) NAAQS and 2010 nitrogen dioxide (NO_2) NAAQS. The interstate transport requirements under the CAA consist of four elements: Significant contribution to nonattainment (prong 1) and interference with maintenance (prong 2) of the NAAQS in other states; and interference with measures required to be included in the plan for other states to prevent significant deterioration of air quality (prong 3) or to protect visibility (prong 4). Specifically, the EPA is proposing to approve interstate transport prongs 1 and 2 for the 2008 Pb and 2010 NO_2 NAAQS, and proposing to approve prong 1 and disapprove prong 2 for the 2008 ozone NAAQS. The EPA is also proposing to approve interstate transport prong 4 for the 2008 Pb and 2010 SO_2 NAAQS, and proposing to disapprove prong 4 for the 2006 $PM_{2.5}$, 2008 ozone, 2010 NO_2 and 2012 $PM_{2.5}$ NAAQS.

DATES: Comments must be received on or before December 19, 2016.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R08–OAR–2016–0521 at *http://www.regulations.gov.* Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *www.regulations.gov.* The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *http://www2.epa.gov/dockets/commenting-epa-dockets.*

FOR FURTHER INFORMATION CONTACT: Adam Clark, Air Program, U.S. Environmental Protection Agency, Region 8, Mail Code 8P–AR, 1595 Wynkoop Street, Denver, Colorado 80202–1129. (303) 312–7104, *clark.adam@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

What should I consider as I prepare my comments for EPA?

1. *Submitting Confidential Business Information (CBI).* Do not submit CBI to EPA through *http://www.regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on a disk or CD–ROM that you mail to the EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for preparing your comments.* When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** volume, date, and page number);
- Follow directions and organize your comments;
- Explain why you agree or disagree;
- Suggest alternatives and substitute language for your requested changes;
- Describe any assumptions and provide any technical information and/or data that you used;
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced;
- Provide specific examples to illustrate your concerns, and suggest alternatives;
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats; and
- Make sure to submit your comments by the comment period deadline identified.

II. Background

On September 21, 2006, the EPA revised the primary 24-hour NAAQS for $PM_{2.5}$ to 35 micrograms per cubic meter (μg/m³). 71 FR 61144 (Oct. 17, 2006). On March 12, 2008, the EPA revised the levels of the primary and secondary 8-hour ozone standards to 0.075 parts per million (ppm). 73 FR 16436 (Mar. 27, 2008). On October 15, 2008, the EPA revised the level of the primary and secondary Pb NAAQS to 0.15 μg/m³. 73 FR 66964 (Nov. 12, 2008). On January 22, 2010, the EPA promulgated a new 1-hour primary NAAQS for NO_2 at a level of 100 parts per billion (ppb) while retaining the annual standard of 53 ppb. 75 FR 6474 (Feb. 9, 2010). The secondary NO_2 NAAQS remains unchanged at 53 ppb. On June 2, 2010, the EPA promulgated a revised primary 1-hour SO_2 standard at 75 ppb. 75 FR 35520 (June 22, 2010). Finally, on December 14, 2012, the EPA promulgated a revised annual $PM_{2.5}$ standard by lowering the level to 12.0 μg/m³ and retaining the 24-hour $PM_{2.5}$ standard at a level of 35 μg/m³. 78 FR 3086 (Jan. 15, 2013).

Pursuant to section 110(a)(1) of the CAA, states are required to submit SIPs meeting the applicable requirements of section 110(a)(2) within three years after promulgation of a new or revised NAAQS or within such shorter period as the EPA may prescribe. Section 110(a)(2) requires states to address structural SIP elements such as requirements for monitoring, basic program requirements, and legal authority that are designed to provide for implementation, maintenance and enforcement of the NAAQS. The SIP submission required by these provisions is referred to as the ''infrastructure'' SIP. Section 110(a) imposes the obligation upon states to make a SIP submission to the EPA for a new or revised NAAQS, but the contents of individual state submissions may vary depending upon the facts and circumstances.

CAA Section 110(a)(2)(D)(i)(I) requires SIPs to include provisions prohibiting any source or other type of emissions activity in one state from emitting any air pollutant in amounts that will contribute significantly to nonattainment, or interfere with maintenance, of the NAAQS in another state. The two provisions of this section are referred to as prong 1 (significant contribution to nonattainment) and prong 2 (interfere with maintenance). Section 110(a)(2)(D)(i)(II) requires SIPs to contain adequate provisions to prohibit emissions that will interfere with measures required to be included in the applicable implementation plan for any other state under part C to prevent significant deterioration of air quality (prong 3) or to protect visibility (prong 4).

The Wyoming Department of Environmental Quality (Department or WDEQ) submitted the following: A certification of Wyoming's infrastructure SIP for the 2006 $PM_{2.5}$ NAAQS on August 19, 2011; a certification of Wyoming's infrastructure SIP for the 2008 Pb SIP on October 12, 2011; a certification of Wyoming's infrastructure SIP for the 2008 ozone NAAQS on February 6, 2014; a certification of Wyoming's infrastructure SIP for the 2010 NO_2 NAAQS on January 24, 2014; a certification of Wyoming's infrastructure SIP for the 2010 SO_2 NAAQS on March 6, 2015; and a certification of Wyoming's infrastructure SIP for the 2012 $PM_{2.5}$ on June 24, 2016.

Each of these infrastructure certifications addressed all of the infrastructure elements including section 110(a)(2)(D)(i)(I), referred to as infrastructure element (D).[1] In this action, we are only addressing element (D) prongs 1, 2 and 4 for the 2008 Pb certification, 2008 ozone certification and 2010 NO_2 certification, and prong 4 from the 2010 SO_2 and 2006 and 2012 $PM_{2.5}$ certifications. All other infrastructure elements from these certifications, including element (D) prong 3 (prevent significant deterioration of air quality), have been or will be addressed in separate actions.

III. Evaluation of Significant Contribution to Nonattainment and Interference With Maintenance of the NAAQS

2008 Ozone NAAQS

In its February 6, 2014 infrastructure submittal for the 2008 ozone NAAQS, WDEQ addressed 110(a)(2)(D)(i)(I) prongs 1 and 2 by presenting ambient monitoring and wind rose data, among other information,[2] to determine that emissions from Wyoming do not significantly contribute to nonattainment or interfere with maintenance of the 2008 ozone NAAQS in any other state. WDEQ focused its analysis on nearby designated nonattainment areas, and in particular, on a nonattainment area in and around Denver, Colorado.[3] Specifically, WDEQ pointed to the attaining ozone data at a Cheyenne, Wyoming monitor, which is the monitor in Wyoming that is geographically located closest to the Denver, Colorado 2008 ozone nonattainment area. WDEQ also provided wind rose data in Cheyenne, Wyoming, which showed that prevailing winds in Cheyenne came from the west and northwest, which WDEQ asserts indicates the transport of air pollutants is away from the Denver nonattainment area, which is located 30 miles south of the southeastern Wyoming border. WDEQ concludes that the combination of low ozone monitor values in Cheyenne, Wyoming, and prevailing winds provided evidence that emissions from Wyoming do not significantly influence air quality in the Denver ozone nonattainment area. WDEQ also noted that downwind states Kansas, Nebraska, North Dakota and South Dakota did not contain nonattainment areas to which Wyoming could significantly contribute. Accordingly, WDEQ concludes that emissions from Wyoming do not contribute to nonattainment or interfere with maintenance for the 2008 ozone NAAQS in any other state.

WDEQ's approach to evaluating its compliance with the CAA section 110(a)(2)(D)(i)(I) as to the 2008 ozone NAAQS is incomplete for two reasons. First, transported emissions may cause an area to measure exceedances of the standard even if that area is not formally designated nonattainment by the EPA. While WDEQ considered its potential impact to the Denver nonattainment area based on general wind patterns, the State did not provide analysis showing that it did not contribute to ozone levels in the Denver nonattainment area on the particular days with measured exceedances. Moreover, while the State considered whether there were designated nonattainment areas in four of several nearby states, WDEQ did not evaluate whether it contributed to ozone levels elsewhere in Colorado or in other nearby states (*e.g.,* in Utah) on the days with measured exceedances, whether or not those exceedances occurred in designated nonattainment areas. The EPA has routinely interpreted the obligation to prohibit emissions that ''significantly contribute to nonattainment'' of the NAAQS in downwind states to be independent of formal designations because exceedances can happen in any area.[4]

[1] For discussion of other infrastructure elements, see EPA's ''Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Sections 110(a)(1) and (2),'' September 13, 2013.

[2] The State also provided census data and geographic information to support their assertion regarding prongs 1 and 2 in the February 6, 2014 submittal.

[3] The Denver area, including 7 full counties and 2 partial counties, was designated as a marginal nonattainment area in a final action dated May 21, 2012. See 77 FR 30110.

[4] *See, e.g.,* Clean Air Interstate Rule, 70 FR 25162, 25265 (May 12, 2005) (''As to impacts, CAA section 110(a)(2)(D) refers only to prevention of 'nonattainment' in other States, not to prevention of nonattainment in designated nonattainment areas or

Continued

Thus, WDEQ did not fully evaluate whether emissions from the State significantly contribute to nonattainment in other states as required by prong 1 of element (D).

Second, WDEQ's submission does not provide any technical analysis demonstrating that the SIP contains adequate provisions prohibiting emissions that will interfere with maintenance of the 2008 ozone NAAQS in any other state (prong 2). In remanding the Clean Air Interstate Rule (CAIR) to the EPA in *North Carolina* v. *EPA,* the D.C. Circuit explained that the regulating authority must give the ''interfere with maintenance'' clause of section 110(a)(2)(D)(i)(I) ''independent significance'' by evaluating the impact of upwind state emissions on downwind areas that, while currently in attainment, are at risk of future nonattainment, considering historic variability.[5] Wyoming does not give the ''interfere with maintenance'' clause of section 110(a)(2)(D)(i)(I) independent significance because its analysis did not evaluate the potential impact of Wyoming emissions on areas that are currently measuring clean data, but that may have issues maintaining that air quality.

The EPA developed technical information and a related analysis to assist states with meeting section 110(a)(2)(D)(i)(I) requirements for the 2008 ozone NAAQS, and used this technical analysis to support the recently finalized Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS (''CSAPR Update'').[6] As explained below, this analysis supports the conclusions of WDEQ's analysis for prong 1 and contradicts the conclusions of WDEQ's analysis regarding prong 2.

In the technical analysis supporting the CSAPR Update, the EPA used detailed air quality analyses to determine where projected nonattainment or maintenance areas would be and whether emissions from an eastern state contribute to downwind air quality problems at those projected nonattainment or maintenance receptors.[7] Specifically, the EPA determined whether a state's contributing emissions were at or above a specific threshold (*i.e.,* one percent of the ozone NAAQS). If a state's contribution did not exceed the one percent threshold, the state was not considered ''linked'' to identified downwind nonattainment and maintenance receptors and was therefore not considered to significantly contribute to nonattainment or interfere with maintenance of the standard in those downwind areas. If a state's contribution was equal to or exceeded the one percent threshold, that state was considered ''linked'' to the downwind nonattainment or maintenance receptor(s) and the state's emissions were further evaluated, taking into account both air quality and cost considerations, to determine what, if any, emissions reductions might be necessary to address the state's obligation pursuant to CAA section 110(a)(2)(D)(i)(I).

As discussed in the CSAPR Update, the air quality modeling contained in the EPA's technical analysis (1) identified locations in the U.S. where the EPA anticipates nonattainment or maintenance issues in 2017 for the 2008 ozone NAAQS (these are identified as nonattainment and maintenance receptors), and (2) quantified the projected contributions from emissions from upwind states to downwind ozone concentrations at the receptors in 2017. *See* CSAPR Update at 81 FR 74526. This modeling used the Comprehensive Air Quality Model with Extensions (CAMx version 6.11) to model the 2011 base year, and the 2017 future base case emissions scenarios to identify projected nonattainment and maintenance sites with respect to the 2008 8-hour ozone NAAQS in 2017. The EPA used nationwide state-level ozone source apportionment modeling (the CAMx Ozone Source Apportionment Technology/Anthropogenic Precursor Culpability Analysis technique) to quantify the contribution of 2017 base case nitrogen oxides (NO_X) and volatile organic compounds (VOC) emissions from all sources in each state to the 2017 projected receptors. The air quality model runs were performed for a modeling domain that covers the 48 contiguous states in the U.S. and adjacent portions of Canada and Mexico. *Id.* at 81 FR 74526 through 74527. The updated modeling data released to support the final CSAPR Update are the most up-to-date information the EPA has developed to inform our analysis of upwind state linkages to downwind air quality problems for the 2008 ozone NAAQS. *See* ''Air Quality Modeling Final Rule Technical Support Document for the Final CSAPR Update'' in the docket for this action for more details regarding the EPA's modeling analysis.

Consistent with the framework established in the original CSAPR rulemaking, the EPA's technical analysis in support of the CSAPR Update applied a threshold of one percent of the 2008 ozone NAAQS of 75 ppb (0.75 ppb) to identify linkages between upwind states and the downwind nonattainment and maintenance receptors. *See* CSAPR Update at 81 FR 74518 through 74519. The EPA considered eastern states whose contributions to a specific receptor meet or exceed the threshold ''linked'' to that receptor and we analyzed these states further to determine if emissions reductions might be required from each state to address the downwind air quality problem. The EPA determined that one percent was an appropriate threshold to use in that analysis because there were important, even if relatively small, contributions to identified nonattainment and maintenance receptors from multiple upwind states. In response to commenters who advocated a higher or lower threshold than one percent, the EPA compiled the contribution modeling results for the CSAPR Update to analyze the impact of different possible thresholds for the eastern United States. The EPA's analysis showed that the one percent threshold captures a high percentage of the total pollution transport affecting downwind states. The EPA's analysis further showed that the application of a lower threshold would result in relatively modest increases in the overall percentage of ozone transport pollution captured, while the use of higher thresholds would result in a relatively large reduction in the overall percentage of ozone pollution transport captured relative to the levels captured at one percent at the majority of the receptors. *Id.; See also* Air Quality Modeling Final Rule Technical Support Document for the Final CSAPR Update, Appendix F, Analysis of Contribution Thresholds. This approach is consistent with the use of a one percent threshold to identify those states ''linked'' to air quality

any similar formulation requiring that designations for downwind nonattainment areas must first have occurred.''); Cross-State Air Pollution Rule, 76 FR 48208, 48211 (Aug. 8, 2011) (evaluating nonattainment and maintenance concerns based on modeled projections); Brief for Respondents U.S. Environmental Protection Agency at 23–24, *EME Homer City Generation, L.P.* v. *EPA,* Case No. 11–1302 (D.C. Cir. Jan. 16, 2015), ECF No. 1532516 (defending the EPA's identification of air quality problems in CSAPR independent of area designations). *Cf.* Final Response to Petition from New Jersey Regarding SO_2 Emissions From the Portland Generating Station, 76 FR 69052 (Nov. 7, 2011) (finding facility in violation of the prohibitions of CAA section 110(a)(2)(D)(i)(I) with respect to the 2010 SO_2 NAAQS prior to issuance of designations for that standard).

[5] 531 F.3d 896, 910–11 (D.C. Cir. 2008) (holding that the EPA must give ''independent significance'' to each prong of CAA section 110(a)(2)(D)(i)(I)).

[6] 81 FR 74504 (Oct. 26, 2016).

[7] For purposes of the CSAPR Update, ''eastern'' states refer to all contiguous states east of the Rocky Mountains, specifically not including: Montana, Wyoming, Colorado and New Mexico.

problems with respect to the 1997 ozone NAAQS in the original CSAPR rulemaking, wherein the EPA noted that there are adverse health impacts associated with ambient ozone even at low levels. 76 FR 48208, 48236 through 48237 (August 8, 2011).

As to western states, the EPA noted in the CSAPR Update that there may be geographically specific factors to consider in evaluating interstate transport, and given the near-term 2017 implementation timeframe, the EPA focused the final CSAPR Update on eastern states. *See* CSAPR Update at 81 FR 74523. Consistent with our statements in the CSAPR Update, the EPA intends to address western states, like Wyoming, on a case-by-case basis.

The EPA's air quality modeling as updated for the final CSAPR Update projects that for the Western U.S. (outside of California), there are no nonattainment receptors and only three maintenance receptors located in the Denver, Colorado area. Wyoming emissions are projected to contribute above one percent of the NAAQS at one of these receptors (the ''Douglas County maintenance receptor''; see Table 1, below). The modeling also shows that multiple upwind states would collectively contribute to the projected Douglas County maintenance receptor in Colorado. The EPA found that the contribution to ozone concentrations from all states upwind of the Douglas County maintenance receptor in Colorado is about 9.7 percent.[8] Thus, the collective contribution of emissions from upwind states represents a large portion of the ozone concentrations at the projected Douglas County maintenance receptor in Colorado.

As noted, the Agency has historically found that the one percent threshold is appropriate for identifying interstate transport linkages for states collectively contributing to downwind ozone nonattainment or maintenance problems because that threshold captures a high percentage of the total pollution transport affecting downwind receptors. The EPA believes contribution from an individual state equal to or above one percent of the NAAQS could be considered significant where the collective contribution of emissions from one or more upwind states is responsible for a considerable portion of the downwind air quality problem regardless of where the receptor is geographically located. In this case, three states contributing to the Douglas County maintenance receptor, including Wyoming, contribute emissions greater than or equal to one percent of the 2008 ozone NAAQS. Given these data, the EPA is proposing to find that the one percent threshold is also appropriate to determine the linkage from Wyoming to the Douglas County maintenance receptor in Colorado with respect to the 2008 ozone NAAQS.

The EPA is not necessarily determining that one percent of the NAAQS is always an appropriate threshold for identifying interstate transport linkages for all states in the West. For example, the EPA recently evaluated the impact of emissions from Arizona on two projected nonattainment receptors identified in California and concluded that even though Arizona's modeled contribution was greater than one percent of the 2008 ozone NAAQS, Arizona did not significantly contribute to nonattainment or interfere with maintenance at those receptors. *See* Proposed Rule, 81 FR 15202 (March 22, 2016); Final Rule, 81 FR 31513 (May 19, 2016). The EPA evaluated the nature of the ozone nonattainment problem at the California receptors and determined that, unlike the receptors identified in the East and unlike the Douglas County maintenance receptor to which Wyoming contributes, only one state—Arizona—contributed above the one percent threshold to the California receptors and that the total contribution from all states linked to the receptors was negligible. *See* 81 FR at 15203. Considering this information, along with emissions inventories and emissions projections showing Arizona emissions decreasing over time, the EPA determined that Arizona had satisfied the requirements of section 110(a)(2)(D)(i)(I) with respect to the 2008 ozone NAAQS. *Id.* Accordingly, where the facts and circumstances support a different conclusion, the EPA has not directly applied the one percent threshold to identify states which may significantly contribute to nonattainment or interfere with maintenance of the 2008 ozone NAAQS in other states.

Likewise, the EPA is not determining that because Wyoming contributes above the one percent threshold, it is necessarily making a significant contribution that warrants further reductions in emissions. As noted above, the one percent threshold identifies a state as ''linked,'' prompting further inquiry into whether the contributions are significant and whether there are cost-effective controls that can be employed. That inquiry with regard to Wyoming's SIP submittal is provided below.

In summary, Table 1 shows the air quality modeling results from the final modeling in support of the CSAPR Update. The modeling indicates that Wyoming contributes emissions above the one percent threshold of 0.75 ppb with respect to the Douglas County maintenance receptor in the Denver, Colorado area.

TABLE 1—MAINTENANCE RECEPTOR WITH WYOMING CONTRIBUTION MODELED ABOVE

Monitor I.D.	State	County	Wyoming modeled contribution (ppb)
80350004	Colorado	Douglas ..	1.18

Wyoming's largest contribution to any projected downwind maintenance-only site is 1.18 ppb, which is approximately 1.57% of the 2008 ozone NAAQS of 75 ppb. Thus, the final modeling in support of the CSAPR Update indicates that the contributions from Wyoming are above the one percent threshold of 0.75 ppb with respect to the Douglas County maintenance receptor in the Denver, Colorado area, and the State's emissions require further evaluation, taking into account both air quality and cost considerations, to determine what, if any, emissions reductions might be necessary to address the State's emission reduction obligation pursuant to 110(a)(2)(D)(i)(I). However, WDEQ in its SIP submittal neither identified nor included any ozone or ozone precursor emission reduction measures that the EPA could evaluate to determine whether the state has fully addressed these transport impacts. Accordingly, the EPA cannot conclude that Wyoming's SIP contains sufficient provisions to prohibit emissions that will interfere with maintenance of the 2008 ozone NAAQS in the Denver, Colorado area.

WDEQ's analysis regarding prong 1 is also incomplete as previously described, but the EPA's modeling indicates that Wyoming does not contribute above the one percent threshold to any nonattainment receptors. As discussed above, while the EPA is not necessarily determining that one percent of the NAAQS is always an appropriate threshold for identifying interstate transport linkages for all states in the West, this low level of contribution suggests that Wyoming does not contribute significantly to nonattainment of the 2008 ozone NAAQS in any other state. Thus, the EPA is proposing that the Wyoming SIP meets the 110(a)(2)(D)(i) prong 1 requirement for the 2008 ozone NAAQS.

[8] Please see the spreadsheet titled ''Final CSAPR Update—Ozone Design Values & Contributions,'' in the docket for this action.

Based on WDEQ's SIP submittal and the EPA's most recent modeling, the EPA proposes to approve prong 1 and disapprove the prong 2 portion of the February 6, 2014, 2008 ozone NAAQS infrastructure submittal. The EPA is soliciting public comments on this proposed action and will consider public comments received during the comment period.

2008 Pb NAAQS

WDEQ's analysis of potential interstate transport for the 2008 Pb NAAQS discussed the lack of sources with significant Pb emissions near the State's borders. As noted in our October 14, 2011 Infrastructure Guidance Memo, there is a sharp decrease in Pb concentrations, at least in the coarse fraction, as the distance from a Pb source increases. *See* ''Guidance on Infrastructure SIP Elements Required Under Sections 110(a)(1) and (2) for the 2008 Lead (Pb) National Ambient Air Quality Standards (NAAQS).'' October 14, 2011 at 8. For this reason, the EPA found that the requirements of subsection 110(a)(2)(D)(i)(I) (prongs 1 and 2) could be satisfied through a state's assessment as to whether or not emissions from Pb sources located in close proximity to their state borders have emissions that impact the neighboring state such that they contribute significantly to nonattainment or interfere with maintenance in that state. *Id.* at 8. In that guidance document, the EPA further specified that any source appeared unlikely to contribute significantly to nonattainment unless it was located less than two miles from a state border and emitted at least 0.5 tons per year of Pb. WDEQ's 110(a)(2)(D)(i)(I) analysis noted that there are no Pb sources within two miles of the State's borders. The EPA concurs with the Department's analysis and conclusion that no Wyoming sources have the combination of Pb emission levels and proximity to nearby nonattainment or maintenance areas to contribute significantly to nonattainment in or interfere with maintenance by other states for this NAAQS. Since Wyoming's SIP is therefore adequate to ensure that such impacts do not occur, the EPA is proposing to approve WDEQ's submittal with regard to the requirements of section 110(a)(2)(D)(i) prongs 1 and 2 for the 2008 Pb NAAQS.

2010 NO_2 NAAQS

Wyoming's 2010 NO_2 transport analysis for elements 1 and 2 of section 110(a)(2)(D)(i) describes how all NO_2 monitors within the State and elsewhere in the U.S. showed no violations of the NO_2 NAAQS. WDEQ asserted that because the entire country had been designated unclassifiable/attainment for the 2010 NO_2 NAAQS, Wyoming sources do not contribute significantly to nonattainment or interfere with maintenance of the NAAQS in other states. The Department's analysis is available in the docket for this action.

The EPA does not agree with the Wyoming's reliance on area designations for purposes of determining whether the State has met the requirements of section 110(a)(2)(D)(i)(I) with respect to the 2010 NO_2 NAAQS. As noted above, the EPA has routinely interpreted the obligation to prohibit emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS in downwind states to be independent of formal designations because exceedances can happen in any area. However, for the reasons explained below, the EPA concurs with the conclusion that emissions from the state do not significantly contribute to nonattainment or interfere with maintenance of the 2010 NO_2 NAAQS in any other state.

Due to the State's limited technical analysis, the EPA evaluated NO_2 monitoring data from Wyoming and surrounding states in reaching its conclusion. The EPA notes that the highest monitored NO_2 design values in each state bordering or near Wyoming are significantly below the NAAQS (see Table 2).[9] The EPA has determined that this information supports the State's contention that it does not significantly contribute to nonattainment or interfere with maintenance of the NO_2 NAAQS. As shown in Table 2, the maximum design values in states bordering Wyoming are well below the 2010 NO_2 NAAQS. As the states near Wyoming are not only attaining, but also maintaining the NAAQS, there are no areas to which Wyoming could significantly contribute to nonattainment or interfere with maintenance of the 2010 NO_2 NAAQS.

TABLE 2—HIGHEST MONITORED 2010 NO_2 NAAQS DESIGN VALUES

State	2013–2015 design value (ppb)	% of NAAQS (100 ppb)
Colorado	72	72
Idaho	43	43
Montana	[10] 29	29
South Dakota	37	37
Utah	65	65

***Source:** *https://www.epa.gov/air-trends/air-quality-design-values*.

In addition to the monitored levels of NO_2 in states near Wyoming being well below the NAAQS, Wyoming's highest official design value from 2013–2015 was also significantly below this NAAQS – 49 ppb, compared to the NAAQS level of 100 ppb.[11]

Based on all of these factors, EPA concurs with the State's conclusion that Wyoming does not contribute significantly to nonattainment or interfere with maintenance of the 2010 NO_2 NAAQS in other states. The EPA is therefore proposing to determine that Wyoming's SIP includes adequate provisions to prohibit sources or other emission activities within the State from emitting NO_2 in amounts that will contribute significantly to nonattainment in or interfere with maintenance by any other state with respect to the NO_2 NAAQS.

IV. Evaluation of Interference With Measures To Protect Visibility

State Submissions

In Wyoming's 2008 ozone, 2010 SO_2, 2010 NO_2 and 2012 $PM_{2.5}$ NAAQS infrastructure certifications, the Department pointed to both its Regional Haze SIP and Wyoming Air Quality Standards and Regulations (WAQSR) Chapter 9, Section 2, ''Visibility,'' to certify that the State meets the visibility requirements of section 110(a)(2)(D)(i)(II) (prong 4). As explained below, this information is relevant in determining whether Wyoming's SIP will achieve the emission reductions that the Western Regional Air Partnership (WRAP) states mutually agreed are necessary to avoid interstate visibility impacts in Class I areas. *See* ''Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Sections 110(a)(1) and (2),'' September 13, 2013, (''2013 Guidance'') at 34.

WDEQ addressed visibility for the 2008 Pb NAAQS by pointing to the lack of significant sources of Pb in Wyoming near the State's border. *Id.* at 33. The

[9] There is not an NO_2 design value presented for Nebraska, as none is available in EPA's Air Trends or AirData Web sites.

[10] The design values for Montana and Utah were derived using EPA's AirData Web site at *https://www3.epa.gov/airdata/ad_rep_mon.html.* These are not official design values.

[11] *https://www.epa.gov/air-trends/air-quality-design-values.*

State did not point to any visibility-related state regulations in its 2006 $PM_{2.5,}$ certification, but generally indicated that they met this requirement.

Wyoming's Regional Haze SIP

As stated in the EPA's 2013 Guidance, ''[o]ne way in which prong 4 may be satisfied for any relevant NAAQS is through an air agency's confirmation in its infrastructure SIP submission that it has an approved regional haze SIP that fully meets the requirements of 40 CFR 51.308 or 51.309. 40 CFR 51.308 and 51.309 specifically require that a state participating in a regional planning process include all measures needed to achieve its apportionment of emission reduction obligations agreed upon through that process.'' *Id.* at 33.

On January 12, 2011 and April 19, 2012, Wyoming submitted to the EPA SIP revisions to address the requirements of the regional haze program. The EPA approved Wyoming's April 19, 2012 submittal and partially approved Wyoming's January 12, 2011 submittal in a final action published December 12, 2012. 77 FR 73926. This included EPA approval of Wyoming's BART alternative for SO_2, which relied on the State's participation in the backstop SO_2 trading program under 40 CFR 51.309.[12] In a separate action, the EPA partially approved and partially disapproved the remainder of Wyoming's January 12, 2011 SIP revision. 79 FR 5032 (Jan. 30, 2014). In that action, the EPA disapproved the following portions of the submittal: Wyoming's NO_X Best Available Retrofit Technology (BART) determinations for five units at three facilities; the State's reasonable progress goals; monitoring, recordkeeping and reporting requirements; portions of the long term strategy, and; the provisions necessary to review reasonably attributable visibility improvement. *Id.* at 5038. The EPA also promulgated a final federal implementation plan (FIP) to address these deficiencies. *Id.*

EPA's Assessment

The 2013 Guidance states that section 110(a)(2)(D)(i)(II)'s prong 4 requirements can be satisfied by approved SIP provisions that the EPA has found to adequately address a state's contribution to visibility impairment in other states. The EPA interprets prong 4 to be pollutant-specific, such that the infrastructure SIP submission need only address the potential for interference with protection of visibility caused by the pollutant (including precursors) to which the new or revised NAAQS applies. *See* 2013 Guidance at 33.

The 2013 Guidance lays out two ways in which a state's infrastructure SIP submittal may satisfy prong 4. As explained above, one way is through a state's confirmation in its infrastructure SIP submittal that it has an EPA approved regional haze SIP in place. Alternatively, in the absence of a fully approved regional haze SIP, a state can make a demonstration in its infrastructure SIP submittal that emissions within its jurisdiction do not interfere with other states' plans to protect visibility. Such a submittal should point to measures in the state's SIP that limit visibility-impairing pollutants and ensure that the resulting reductions conform to any mutually agreed emission reductions under the relevant regional haze regional planning organization (RPO) process.[13]

WDEQ worked through its RPO, the WRAP, to develop strategies to address regional haze. To help states in establishing reasonable progress goals for improving visibility in Class I areas, the WRAP modeled future visibility conditions based on the mutually agreed emissions reductions from each state. The WRAP states then relied on this modeling in setting their respective reasonable progress goals. As a result, we consider emissions reductions from measures in Wyoming's SIP that conform with the level of emission reductions the State agreed to include in the WRAP modeling to meet the visibility requirement of CAA section 110(a)(2)(D)(i)(II).

With regard to the 2010 SO_2 NAAQS, the EPA proposes to find that the State's implementation of the Western Backstop Sulfur Dioxide Trading Program and the agreed upon SO_2 reductions achieved through that program sufficient to meet the requirements of prong 4.[14] Under 40 CFR 51.309, certain states, including Wyoming, can satisfy their SO_2 BART requirements by adopting an alternative program consisting of SO_2 emission milestones and a backstop trading program. *See* 40 CFR 51.309. Wyoming Air Quality Standards and Regulations (WAQSR) Chapter 14, section 2 implements the backstop trading program provisions and the EPA has approved the State's rules, including the SO_2 reduction milestones, as satisfying its regional haze SO_2 obligations. 77 FR 73926 (Dec. 12, 2012). Wyoming's SIP thus contains measures requiring reductions of SO_2 consistent with what the State agreed to achieve under the WRAP process in order to protect visibility. As a result, the EPA is proposing to approve 110(a)(2)(D)(i)(II) prong 4 for the 2010 SO_2 NAAQS.

The EPA is also proposing to approve Wyoming's prong 4 SIP submittal for the 2008 Pb NAAQS. The EPA has found that significant impacts from Pb emissions from stationary sources are expected to be limited to short distances from the source. The State noted that it does not have any major sources of Pb located near any bordering state. Further, when evaluating the extent to which Pb could impact visibility, the EPA has found Pb-related visibility impacts insignificant (*e.g.,* less than 0.10 percent). *See* 2013 Guidance, at 33. The EPA proposes to approve prong 4 for the 2008 Pb NAAQS based on Wyoming's conclusion that it does not have any significant sources of lead emissions near another state's border and that it, therefore, does not have emissions of Pb that would interfere with the requirements of section 110(a)(2)(D)(i)(II) with respect to visibility.

The EPA is proposing to disapprove Wyoming's prong 4 infrastructure SIP submittals for the 2006 $PM_{2.5}$, 2008 ozone, 2010 NO_2, and 2012 $PM_{2.5}$ NAAQS. The EPA's disapproval of Wyoming's NO_X BART determination in our January 30, 2014 final rulemaking included the specific disapproval of the NOx control measures the State submitted for PacifiCorp Dave Johnston Unit 3, PacifiCorp Wyodak Unit 1, and Basin Electric Laramie River Units 1, 2 and 3. *See* 79 FR 5038.

As noted, Wyoming referenced both its Regional Haze SIP and WAQSR Chapter 9, Section 2 as justification for the approvability of prong 4 for the 2008 ozone, 2010 NO_2 and 2012 $PM_{2.5}$ NAAQS. Because the Department did not provide an alternative demonstration that its SIP contains measures to limit NO_X emissions in accordance with the emission reductions it agreed to under the WRAP,[15] the EPA's disapproval of portions of Wyoming's NOx BART determination means that Wyoming's SIP does not include measures needed to ensure that its emissions will not

[12] Wyoming's ''Western Backstop Sulfur Dioxide Trading Program'' can be found in Wyoming Air Quality Standards and Regulations (WAQSR) Chapter 14, Section 2.

[13] *See id.* at 34, and also 76 *FR* 22036 (April 20, 2011) containing EPA's approval of the visibility requirement of 110(a)(2)(D)(i)(II) based on a demonstration by Colorado that did not rely on the Colorado Regional Haze SIP.

[14] Specifically, the State is required to reach its ''emissions milestone'' for this program by keeping its SO_2 emissions below 141,849 tons/SO_2 in 2018 and each year thereafter.

[15] The Visibility section of WAQSR Chapter 9, Section 2 does not address NOx emissions reductions.

interfere with other states' plans to protect visibility from the effects of NAAQS pollutants impacted by NOx. Specifically, NOx is a precursor of $PM_{2.5}$ and ozone, and is also a term which refers to both NO (nitrogen oxide) and NO_2. The EPA is therefore proposing to disapprove prong 4 of Wyoming's infrastructure certifications with regard to the 2006 $PM_{2.5}$, 2008 ozone, 2010 NO_2 and 2012 $PM_{2.5}$ NAAQS.

If the EPA disapproves an infrastructure SIP submission for prong 4, as we are proposing for the 2006 $PM_{2.5}$, 2008 ozone, 2010 NO_2 and 2012 $PM_{2.5}$ NAAQS, a FIP obligation will be created. However, as noted previously, the EPA has promulgated a FIP for Wyoming that corrects all regional haze SIP deficiencies. 79 FR 5032. Therefore, there will be no additional practical consequences from the disapproval for WDEQ, the sources within its jurisdiction, or the EPA, and the EPA will not be required to take further action with respect to these prong 4 disapprovals, if finalized, because the FIP already in place would satisfy the requirements with respect to prong 4. *See* 2013 Guidance at 34–35. Additionally, since the infrastructure SIP submission is not required in response to a SIP call under CAA section 110(k)(5), mandatory sanctions under CAA section 179 would not apply because the deficiencies are not with respect to a submission that is required under CAA title I part D. *Id.*

V. Proposed Action

The EPA is proposing to approve CAA section 110(a)(2)(D)(i)(I) prongs 1, 2 and 4 for the 2008 Pb NAAQS, prong 1 for the 2008 ozone NAAQS, and prong 4 for the 2010 SO_2 NAAQS, as shown in Table 3, below. The EPA is also proposing to disapprove prong 4 for the 2006 $PM_{2.5}$, 2008 ozone, 2010 NO_2 and 2012 $PM_{2.5}$ NAAQS, and prong 2 for the 2008 ozone NAAQS, as shown in Table 4. The EPA is soliciting public comments on this proposed action and will consider public comments received during the comment period.

TABLE 3—LIST OF WYOMING INTERSTATE TRANSPORT PRONGS THAT THE EPA IS PROPOSING TO APPROVE

Proposed approval
February 6, 2014 submittal—2008 Ozone NAAQS: (D)(i)(I) prong 1.
October 12, 2011 submittal—2008 Pb NAAQS: (D)(i)(I) prongs 1 and 2, (D)(i)(II) prong 4.
January 24, 2014 submittal—2010 NO_2 NAAQS: (D)(i)(I) prongs 1 and 2.
March 6, 2015 submittal—2010 SO_2 NAAQS: (D)(i)(II) prong 4.

TABLE 4—LIST OF WYOMING INTERSTATE TRANSPORT PRONGS THAT THE EPA IS PROPOSING TO DISAPPROVE

Proposed disapproval
August 19, 2011 submittal—2006 $PM_{2.5}$ NAAQS: (D)(i)(II) prong 4.
February 6, 2014 submittal—2008 Ozone NAAQS: (D)(i)(I) prong 2, (D)(i)(II) prong 4.
January 24, 2014 submittal—2010 NO_2 NAAQS: (D)(i)(II) prong 4.
June 24, 2016 submittal—2012 $PM_{2.5}$ NAAQS: (D)(i)(II) prong 4.

VI. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state actions, provided that they meet the criteria of the Clean Air Act. Accordingly, this proposed action merely proposes approval of some state law as meeting federal requirements and proposes disapproval of other state law because it does not meet federal requirements; this proposed action does not propose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- Does not provide the EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP does not apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by Reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: November 9, 2016.

Shaun L. McGrath,

Regional Administrator, Region 8.

[FR Doc. 2016–27672 Filed 11–17–16; 8:45 am]

BILLING CODE 6560–50–P

Notices

Federal Register

Vol. 81, No. 223

Friday, November 18, 2016

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Submission for OMB Review; Comment Request

November 15, 2016.

The Department of Agriculture has submitted the following information collection requirement(s) to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104–13. Comments are requested regarding (1) whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (2) the accuracy of the agency's estimate of burden including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Comments regarding this information collection received by December 19, 2016 will be considered. Written comments should be addressed to: Desk Officer for Agriculture, Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), New Executive Office Building, 725 17th Street NW., Washington, DC 20502. Commenters are encouraged to submit their comments to OMB via email to: *OIRA_Submission@OMB.EOP.GOV* or fax (202) 395–5806 and to Departmental Clearance Office, USDA, OCIO, Mail Stop 7602, Washington, DC 20250–7602. Copies of the submission(s) may be obtained by calling (202) 720–8958.

An agency may not conduct or sponsor a collection of information unless the collection of information displays a currently valid OMB control number and the agency informs potential persons who are to respond to the collection of information that such persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

Food Safety and Inspection Service

Title: Interstate Shipment of Meat and Poultry.

OMB Control Number: 0583–0143.

Summary of Collection: The Food Safety and Inspection Service (FSIS) has been delegated the authority to exercise the functions of the Secretary as provided in the Federal Meat Inspection Act (FMIA) (21 U.S.C. 601 *et seq.*) and the Poultry Products Inspection Act (PPIA) (21 U.S.C. 451 *et seq.*). These statutes mandate that FSIS protect the public by ensuring that meat and poultry products are safe, wholesome, not adulterated, and properly labeled and packaged. Section 11015 of the Food, Conservation, and Energy Act, enacted on June 18, 2008, and amended the FMIA and PPIA to provide for cooperative programs whereby meat and poultry state-inspected establishments will be eligible to ship meat and poultry products in interstate commerce.

Need and Use of the Information: FSIS coordinates a voluntary cooperative program under which participating state-inspected establishments with 25 or fewer employees are eligible to ship meat and poultry products in interstate commerce. States that are interested in participating in the cooperative interstate shipment program must submit a request for an agreement to establish such a program through the appropriate FSIS District Office. In their requests, States must agree to comply with certain conditions in order to qualify for the interstate shipment program. In their request, States must also: (1) Identify establishments in the State that the State recommends for initial selection into the program and (2) include documentation to demonstrate that the State is able to provide necessary inspections services to selected establishments in the State and conduct any related activities that would be required under a cooperative interstate shipment program.

Description of Respondents: Business or other for-profit.

Number of Respondents: 80.

Frequency of Responses: Reporting: On occasion.

Total Burden Hours: 2,005.

Ruth Brown,

Departmental Information Collection Clearance Officer.

[FR Doc. 2016–27774 Filed 11–17–16; 8:45 am]

BILLING CODE 3410–DM–P

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

[Docket No. APHIS–2016–0060]

International Sanitary and Phytosanitary Standard-Setting Activities

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Notice and request for comments.

SUMMARY: In accordance with legislation implementing the results of the Uruguay Round of negotiations under the General Agreement on Tariffs and Trade, we are informing the public of the international standard-setting activities of the World Organization for Animal Health, the Secretariat of the International Plant Protection Convention, and the North American Plant Protection Organization, and we are soliciting public comment on the standards to be considered.

ADDRESSES: You may submit comments by either of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov/#!docketDetail;D=APHIS-2016-0060.*
- *Postal Mail/Commercial Delivery:* Send your comment to Docket No. APHIS–2016–0060, Regulatory Analysis and Development, PPD, APHIS, Station 3A–03.8, 4700 River Road Unit 118, Riverdale, MD 20737–1238.

Supporting documents and any comments we receive on this docket may be viewed at *http://www.regulations.gov/#!docketDetail;D=APHIS-2016-0060* or in our reading room, which is located in room 1141 of the USDA South Building, 14th Street and Independence Avenue SW., Washington, DC. Normal reading room hours are 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 7997039 before coming.

FOR FURTHER INFORMATION CONTACT: For general information on the topics covered in this notice, contact Ms. Jessica Mahalingappa, Assistant Deputy Administrator for Trade and Capacity Building, International Services, APHIS, room 1132, USDA South Building, 14th Street and Independence Avenue SW., Washington, DC 20250; (202) 799–7121.

For specific information regarding standard-setting activities of the World Organization for Animal Health, contact Dr. Michael David, Director, International Animal Health Standards Team, National Import Export Services, VS, APHIS, 4700 River Road Unit 33, Riverdale, MD 20737–1231; (301) 851–3302.

For specific information regarding the standard-setting activities of the International Plant Protection Convention, contact Dr. Marina Zlotina, PPQ's IPPC Technical Director, International Phytosanitary Standards, PPQ, APHIS, 4700 River Road Unit 130, Riverdale, MD 20737; (301) 851–2200.

For specific information on the North American Plant Protection Organization, contact Ms. Patricia Abad, PPQ's NAPPO Technical Director, International Phytosanitary Standards, PPQ, APHIS, 4700 River Road Unit 130, Riverdale, MD, 20737; (301) 851–2264.

SUPPLEMENTARY INFORMATION:

Background

The World Trade Organization (WTO) was established as the common international institutional framework for governing trade relations among its members in matters related to the Uruguay Round Agreements. The WTO is the successor organization to the General Agreement on Tariffs and Trade. U.S. membership in the WTO was approved by Congress when it enacted the Uruguay Round Agreements Act (Pub. L. 103–465), which was signed into law on December 8, 1994. The WTO Agreements, which established the WTO, entered into force with respect to the United States on January 1, 1995. The Uruguay Round Agreements Act amended Title IV of the Trade Agreements Act of 1979 (19 U.S.C. 2531 *et seq.*). Section 491 of the Trade Agreements Act of 1979, as amended (19 U.S.C. 2578), requires the President to designate an agency to be responsible for informing the public of the sanitary and phytosanitary (SPS) standard-setting activities of each international standard-setting organization. The designated agency must inform the public by publishing an annual notice in the **Federal Register** that provides the following information: (1) The SPS standards under consideration or planned for consideration by the international standard-setting organization; and (2) for each SPS standard specified, a description of the consideration or planned consideration of that standard, a statement of whether the United States is participating or plans to participate in the consideration of that standard, the agenda for U.S. participation, if any, and the agency responsible for representing the United States with respect to that standard.

''International standard'' is defined in 19 U.S.C. 2578b as any standard, guideline, or recommendation: (1) Adopted by the Codex Alimentarius Commission (Codex) regarding food safety; (2) developed under the auspices of the World Organization for Animal Health (OIE, formerly known as the Office International des Epizooties) regarding animal health and welfare, and zoonoses; (3) developed under the auspices of the Secretariat of the International Plant Protection Convention (IPPC) in cooperation with the North American Plant Protection Organization (NAPPO) regarding plant health; or (4) established by or developed under any other international organization agreed to by the member countries of the North American Free Trade Agreement (NAFTA) or the member countries of the WTO.

The President, pursuant to Proclamation No. 6780 of March 23, 1995 (60 FR 15845), designated the Secretary of Agriculture as the official responsible for informing the public of the SPS standard-setting activities of Codex, OIE, IPPC, and NAPPO. The United States Department of Agriculture's (USDA's) Food Safety and Inspection Service (FSIS) informs the public of Codex standard-setting activities, and USDA's Animal and Plant Health Inspection Service (APHIS) informs the public of OIE, IPPC, and NAPPO standard-setting activities.

FSIS publishes an annual notice in the **Federal Register** to inform the public of SPS standard-setting activities for Codex. Codex was created in 1962 by two United Nations organizations, the Food and Agriculture Organization (FAO) and the World Health Organization. It is the major international organization for encouraging international trade in food and protecting the health and economic interests of consumers.

APHIS is responsible for publishing an annual notice of OIE, IPPC, and NAPPO activities related to international standards for plant and animal health and representing the United States with respect to these standards. Following are descriptions of the OIE, IPPC, and NAPPO organizations and the standard-setting agenda for each of these organizations. We have described the agenda that each of these organizations will address at their annual general sessions, including standards that may be presented for adoption or consideration, as well as other initiatives that may be underway at the OIE, IPPC, and NAPPO.

The agendas for these meetings are subject to change, and the draft standards identified in this notice may not be sufficiently developed and ready for adoption as indicated. Also, while it is the intent of the United States to support adoption of international standards and to participate actively and fully in their development, it should be recognized that the U.S. position on a specific draft standard will depend on the acceptability of the final draft. Given the dynamic and interactive nature of the standard-setting process, we encourage any persons who are interested in the most current details about a specific draft standard or the U.S. position on a particular standard-setting issue, or in providing comments on a specific standard that may be under development, to contact APHIS. Contact information is provided at the beginning of this notice under **FOR FURTHER INFORMATION CONTACT**.

OIE Standard-Setting Activities

The OIE was established in Paris, France, in 1924 with the signing of an international agreement by 28 countries. It is currently composed of 180 Members, each of which is represented by a delegate who, in most cases, is the chief veterinary officer of that country or territory. The WTO has recognized the OIE as the international forum for setting animal health standards, reporting global animal disease events, and presenting guidelines and recommendations on sanitary measures relating to animal health.

The OIE facilitates intergovernmental cooperation to prevent the spread of contagious diseases in animals by sharing scientific research among its Members. The major functions of the OIE are to collect and disseminate information on the distribution and occurrence of animal diseases and to ensure that science-based standards govern international trade in animals and animal products. The OIE aims to achieve these through the development and revision of international standards for diagnostic tests, vaccines, and the safe international trade of animals and animal products.

The OIE provides annual reports on the global distribution of animal diseases, recognizes the free status of Members for certain diseases, categorizes animal diseases with respect to their international significance, publishes bulletins on global disease status, and provides animal disease control guidelines to Members. Various OIE commissions and working groups undertake the development and preparation of draft standards, which are then circulated to Members for consultation (review and comment). Draft standards are revised accordingly and are then presented to the OIE World Assembly of Delegates (all the Members) during the General Session, which meets annually every May, for review and adoption. Adoption, as a general rule, is based on consensus of the OIE membership.

The next OIE General Session is scheduled for May 21 to May 26, 2017, in Paris, France. Currently, the Chief Trade Advisor for APHIS' Veterinary Services program is the official U.S. Delegate to the OIE. The Chief Trade Advisor for APHIS' Veterinary Services program intends to participate in the proceedings and will discuss or comment on APHIS' position on any standard up for adoption. Information about OIE draft Terrestrial and Aquatic Animal Health Code chapters may be found on the Internet at *http://www.aphis.usda.gov/animal-health/export-animals-oie* or by contacting Dr. Michael David (see **FOR FURTHER INFORMATION CONTACT** above).

OIE Terrestrial and Aquatic Animal Health Code Chapters Adopted during the May 2016 General Session.

More than 26 Code chapters were amended, rewritten, or newly proposed and presented for adoption at the General Session. The following Code chapters are of particular interest to the United States:

1. Glossary

Text was not changed in this Code chapter for the definition of ''casings.'' The proposal to include esophagi and stomachs in the definition of ''casings'' was rejected because these contain striated muscle, which is not used in the production of casings.

2. User's Guide

Text in this Code chapter was modified for clarity.

3. Chapter 1.1., Notification of diseases, Infections, Infestations and Provision of Epidemiological information

Text in this Code chapter was modified for clarity and consistency.

4. Chapter 1.2., Criteria for the Inclusion of Diseases, Infections, and Infestations Listed by the OIE

Text in this Code chapter was modified for clarity and consistency.

5. Chapter 1.2., Criteria for the Inclusion of Diseases, Infections and Infestations in the OIE List

Text in this Code chapter was modified for clarity and consistency.

6. *Chapter 1.3., Prescribed and alternative Diagnostic tests*

This Code chapter was deleted from the Terrestrial Code because the noted tests are included in the Terrestrial Manual.

7. *Chapter 3.2, Evaluation of Veterinary Services*

A minor change was adopted and approved by Member Countries.

8. *Chapter 6.8., Monitoring of the Quantities and Usage Patterns of Antimicrobial Agents in Food Producing Animals*

The text in this chapter was modified to clarify the therapeutic use of antimicrobial agents means the administration of antimicrobial agents to animals for treating and controlling infectious diseases.

9. *Chapter 7.5., Slaughter of Animals*

The diagrams of the heads of animals detailing the specific locations for the use of captive bolts for the purpose of slaughtering were proposed for removal from the chapter. The diagrams are to be relocated to the OIE Web site.

10. *Chapter 7.6., Killing of Animals for Disease Control Purposes*

References to the use of penetrating and non-penetrating captive bolts as procedures for killing adult poultry were added.

11. *Chapter 7.10., Animal Welfare and Broiler Chicken Production Systems*

Some outcome-based measurables were added, as well as minor editorial changes.

12. *Chapter 7.11, Animal Welfare and Dairy Cattle Production Systems*

This Code chapter includes prescriptive language regarding the housing of dairy cattle to which the United States continues to object and challenge.

13. *Chapter 7.X., Welfare of Working Equids*

This is a new Code chapter that was adopted this year. The United States noted an area of concern that will be considered by the Code Commission for future review.

14. *Chapter 8.3., Infection with Bluetongue Virus*

The current chapter received minor updates that were adopted.

15. *Chapter 8.7., Infection with Epizootic Hemorrhagic Disease Virus*

This chapter was adopted in 2015 and received minor updates to make it consistent with other vector borne diseases.

16. *Chapter 8.13., Infection with Rift Valley Fever virus*

Minor changes were made to create harmonization among the vector-borne disease chapters.

17. *Chapter 8.16., Infection with Trichinella spp.*

A minor addition referencing the pertinent Codex Guideline was made and the chapter was adopted.

18. *Chapter 14.7., Infection with Peste des Petits Ruminants Virus*

An editorial change was made to correct an error in Article 14.7.21. and the chapter was adopted.

19. *Chapter 15.X., Infection with Taenia solium*

An addition referencing the prevention of *T. solium* in humans was made and the chapter was adopted.

The following Aquatic Manual chapters were revised and adopted, and are of particular interest to the United States:

Chapter 2.2.2. Infectious hypodermal and haematopoietic necrosis
Chapter 2.2.4. Necrotising hepatopancreatitis
Chapter 2.2.5. Taura syndrome
Chapter 2.2.8. Infection with yellow head virus
Chapter 2.4.7. Infection with *Perkinsus olseni*

OIE Terrestrial Animal Health Code Chapters for Upcoming and Future Review

- Glossary.
- Chapter 1.4., Animal health surveillance.
- Chapter 2.X., Criteria for assessing the safety of commodities.
- Chapter 4.3., Zoning and compartmentalization.
- Chapter 4.16., High Health Status Horse Subpopulation.
- Chapter 5.3., OIE procedures relevant to the WTO/SPS Agreement.
- Chapter 6.1., The role of veterinary services in food safety.
- Chapter 6.X., Prevention and control of *Salmonella* in commercial cattle production systems.
- Chapter 6.Y., Prevention and control of *Salmonella* in commercial cattle production systems.
- Chapter 7.5., Slaughter of animals.
- Chapter 8.8., Foot and mouth disease virus.
- Chapter 8.X., Infection with Mycobacterium tuberculosis complex.
- Chapter 10.4., Infection with avian influenza virus.
- Chapter 10.5., Avian mycoplasmosis (*Mycoplasma gallisepticum*).

- Chapter 11.11., Infection with lumpy skin disease.
- Chapter 12.10., Glanders.
- Chapter 15.1., Infection with African swine fever virus.
- Chapter 15.X., Infection with porcine reproductive and respiratory syndrome virus.

IPPC Standard-Setting Activities

The IPPC is a multilateral convention adopted in 1952 for the purpose of securing common and effective action to prevent the spread and introduction of pests of plants and plant products and to promote appropriate measures for their control. The WTO has recognized the IPPC as the standard setting body for plant health. Under the IPPC, the understanding of plant protection has been, and continues to be, broad, encompassing the protection of both cultivated and non-cultivated plants from direct or indirect injury by plant pests. Activities addressed by the IPPC include the development, adoption and implementation of international phytosanitary (or plant health) standards (ISPMs), the harmonization of phytosanitary activities through emerging standards, the facilitation of the exchange of official and scientific information among countries, and the furnishing of technical assistance to developing countries that are contracting parties to the IPPC.

The IPPC is deposited with the Food and Agriculture Organization (FAO), and is an international agreement of 182 contracting parties (CPs). The Convention is implemented by national plant protection organizations (NPPOs) in cooperation with regional plant protection organizations (RPPOs), the Commission on Phytosanitary Measures (CPM), and the Secretariat of the IPPC. The IPPC has been, and continues to be, administered at the national level by plant quarantine officials whose primary objective is to safeguard plant resources from injurious pests. In the United States, the NPPO is APHIS' Plant Protection and Quarantine (PPQ) program.

The Eleventh Session of the CPM took place from April 4 to 8, 2016, at FAO Headquarters in Rome, Italy. The Deputy Administrator for APHIS' PPQ program was the U.S. delegate to the CPM. The Deputy Administrator participated in the proceedings and discussed or commented on APHIS' position on any standards up for adoption.

The following standards were adopted by the CPM at its 2016 meeting. The United States, represented by the Deputy Administrator for APHIS' PPQ program, participated in consideration of these standards. The U.S. position on each of these issues were developed prior to the CPM session and were based on APHIS' analysis, information from other U.S. Government agencies, and relevant scientific information from interested stakeholders:

- Revisions to ISPM 5: Glossary of Phytosanitary Terms
- ISPM 37: Determination of host status of fruit to fruit flies (Tephritidae)
- Annexes to ISPM 28: Phytosanitary treatments:
  - 20: Irradiation treatment for *Ostrinia nubilalis*
  - 21: Vapor heat treatment for *Bactrocera melanotus* and *B. xanthodes* on *Carica papaya*
- Annexes to ISPM 27: Diagnostic Protocols
  - 08: *Ditylenchus dipsaci* and *D. destructor*
  - 09: Genus *Anastrepha Schiner*
  - 10: *Bursaphelenchus xylophilus*
  - 11: *Xiphinema americanum sensu lato*
  - 12: *Phytoplasmas*

Other APHIS key achievements from the 2016 CPM meeting were:

- Continued development of a global electronic phytosanitary system, including to proceed with a pilot study immediately with 14 selected countries, including the United States;
- Worked towards an International Year of Plant Health (IYPH) in 2020, including the establishment of a steering committee to plan and guide the process for securing a United Nations proclamation for an IYPH and to identify and plan plant health activities and events that will occur in the lead up to and during the international year. The United States will be an active supporter of this initiative;
- Established a focus group to analyze, develop, and recommend a coherent IPPC program aimed at improving the implementation of adopted standards and to recommend an appropriate committee to oversee this new area of work at the IPPC;
- Held a special CPM session on phytosanitary risks of sea containers where the CPs agreed to temporarily suspend work on an international standard on sea containers, but consider other actions that IPPC contracting parties can take to continue addressing the sea container pathway for the introduction of plant pests; and
- Agreed on a path forward on commodity specific standards, which allows countries interested in such standards to resubmit proposals for such work.

New Standard-Setting Initiatives, Including Those in Development

A number of expert working group (EWG) meetings or other technical consultations took place during 2016 on the topics listed below. These standard-setting initiatives are under development and may be considered for future adoption. APHIS intends to participate actively and fully in each of these working groups. The U.S. position on each of the topics to be addressed by these various working groups will be developed prior to these working group meetings and will be based on APHIS' technical analysis, information from other U.S. Government agencies, and relevant scientific information from interested stakeholders:

- EWG on the international movement of grain
- Technical Panel on Fruit Flies
- Technical Panel for the Glossary of Phytosanitary Terms
- Technical Panel on Diagnostic Protocols
- Technical Panel on Phytosanitary Treatments
- Technical Panel on Forest Quarantine

For more detailed information on the above, contact Dr. Marina Zlotina (see **FOR FURTHER INFORMATION CONTACT** above).

APHIS posts links to draft standards on the Internet as they become available and provides information on the due dates for comments.[1] Additional information on IPPC standards (including the standard setting process and adopted standards) is available on the IPPC Web site.[2] For the most current information on official U.S. participation in IPPC activities, including U.S. positions on standards being considered, contact Dr. Marina Zlotina (see **FOR FURTHER INFORMATION CONTACT** above). Those wishing to provide comments on any of the areas of work being undertaken by the IPPC may do so at any time by responding to this notice (see **ADDRESSES** above) or by providing comments through Dr. Zlotina.

NAPPO Standard-Setting Activities

NAPPO, a regional plant protection organization created in 1976 under the IPPC, coordinates the efforts among the United States, Canada, and Mexico to protect their plant resources from the entry, establishment, and spread of harmful plant pests, while facilitating

[1] For more information on the IPPC draft ISPM member consultation: *https://www.aphis.usda.gov/aphis/ourfocus/planthealth/sa_international/sa_phytostandards/ct_draft_standards.*

[2] IPPC Web site: *https://www.ippc.int/.*

intra- and inter-regional trade. NAPPO conducts its work through priority-driven, annual projects conducted by expert groups. Project results and updates are provided during the NAPPO annual meeting. The NAPPO Executive Committee issues a call for project proposals, in general, each year. Projects can include the development of positions, policies, or technical documents, or the development or revision of regional standards for phytosanitary measures (RSPMs). Projects can also include implementation of standards or other capacity development activities such as workshops. After the NAPPO region selects the projects for the year, per approval of NAPPO's Executive Committee, expert groups are formed with subject matter experts from each member country, as well as representatives from key industries or commodity groups (*e.g.* nursery, seed, forestry, grains, potato, citrus, etc.). In the United States, draft standards are circulated to industry, States, and various government agencies for consideration and comment. The draft documents are posted on the NAPPO Web site.[3] Once revisions are made, the updated draft is sent to the NAPPO Advisory and Management Committee for technical review, and then to the Executive Committee for final approval, which is granted by consensus.

The 40th NAPPO annual meeting was held October 31 to November 3, 2016, in Montreal, Canada. The NAPPO Executive Committee meetings took place on October 31, 2016. The Deputy Administrator for PPQ is the U.S. member of the NAPPO Executive Committee.

Below is a summary of the current NAPPO work program as it relates to the ongoing development of NAPPO standards and projects. The United States (*i.e.,* USDA/APHIS) intends to participate actively and fully in the NAPPO work program. The U.S. position on each topic will be guided and informed by the best scientific information available. For each of the following, the United States will consider its position on any draft standard after it reviews a prepared draft. Information regarding the following NAPPO projects, assignments, activities, and updates on meeting times and locations may be obtained from the NAPPO Web site or by contacting Ms. Patricia Abad (see **FOR FURTHER INFORMATION CONTACT** above).

The 2016 work program includes the following topics being worked on by NAPPO expert groups:

1. *Asian Gypsy Moth: Validate specified risk periods for regulated Asian gypsy moth (AGM) in countries of origin.* Review available data in AGM-regulated countries to determine whether any changes in specified risk period for oviposition, flight, and establishment of AGM should be considered and whether such changes would potentially have an impact on the requirements of the vessel certification program.

2. *Biological Control: Develop an online English course to provide training on preparing a petition for first release of an entomophagous biological control agent.* Adapt into an online module the material used for the 2015 NAPPO workshop on the topic, which was based on the requirements outlined in NAPPO RSPM 12, *Guidelines for petition for first release of non-indigenous entomophagous biological control agents.* This online course was completed in October 2016.

3. *Electronic Phytosanitary Certification: Provide assistance and technical support to the IPPC ePhyto Steering Group.* Provide input to the IPPC ePhyto Steering Group, especially to help address mechanisms of exchange, security and secure transmission, and standardization of data.

4. *Forestry: Organize a multi-region conference on ISPM 15 implementation, following the recommendation that came out of the NAPPO-Asia and Pacific Plant Protection Commission (APPPC) workshop.* In 2016, NAPPO partnered with the Inter-American Institute for Cooperation on Agriculture (IICA) and other regional plant protection organizations (RPPOs) in the Americas to hold a regional workshop aimed at enhancing global compliance with the international standard for wood packaging materials (known as ISPM 15) and thereby further reduce the threat of wood and forest pests in trade. The workshop was held at IICA Headquarters in San Jose, Costa Rica, from August 29 to September 2, 2016. Approximately 40 plant health government and industry experts representing 18 countries in the Americas attended the event in addition to 14 officials who organized, presented, and/or supported logistics. The workshop provided an opportunity for participants to interact and share experiences and approaches to improve the global implementation ISPM 15, as well as to develop follow-up steps aimed to enhance implementation. The event also included a site visit near San Jose to observe a demonstration of the process for inspecting wood based on the standard.

Develop a NAPPO standard on the potential use of systems approaches to manage pest risks associated with the movement of wood. Develop an integrated measures approach which may include: inspections (at harvest, during production, prior to and or following export), prescribed production activities; laboratory diagnostics; the application of treatments; the relationship between infested areas and pest free areas and general aspects of surveillance. The specification for this standard was approved by NAPPO in 2015.

5. *Grain: Finalize the review of RSPM 13, Guidelines to establish, maintain and verify Karnal bunt pest free areas in North America.* Reach consensus on how to manage the issue of pest free areas in this case in order to finalize the revision of the standard. On July 6, 2016, NAPPO's Executive Committee approved and signed a revised version of the standard developed by the expert group, thereby completing this project.

Develop a NAPPO discussion document in preparation for the IPPC Expert Working Group tasked with the development of an ISPM on International Movement of Grain. On August 12, 2016, NAPPO submitted a discussion document to the IPPC on the shared perspectives of NAPPO member countries on this topic.

Develop a NAPPO discussion document on a North American approach to preventing introduction, establishment, and spread of Khapra beetle (Trogoderma granarium) in various pathways. Evaluate each NAPPO country's current regulatory approach to khapra beetle (prevention, detection, and response) to identify similarities, differences and gaps and determine the feasibility of closing gaps and streamlining the approach.

6. *Lymantriids: Develop a NAPPO Science and Technology paper on the risks associated with Lymantriids of potential concern to the NAPPO region, identifying potential species and pathways of concern.* Continue the development of a comprehensive examination of *Lymantriids* to identify species of potential concern to North America which may travel on the same pathway as AGM in order to help inform regulatory decisionmaking by all NAPPO member countries.

7. *Phytosanitary Alert System: Manage the NAPPO pest reporting system (Phytosanitary Alert System-PAS).* Meet reporting obligations under the IPPC and facilitate awareness, detection, prevention, and management of exotic plant pest species within North America.

[3] NAPPO Web site: *http://www.nappo.org/.*

8. *Advancing key phytosanitary concepts: Prepare a discussion document on diversion from intended use.* Clearly organize the concepts of diversion from intended use into a discussion document to serve as future reference. The reference document was presented to the NAPPO Executive Committee on October 31, 2016.

Provide guidance on assessing the likelihood of establishment component of a pest risk analysis (PRA) for quarantine pests. Assess feasibility of developing harmonized regional guidance to assess the likelihood of pest establishment when developing a PRA. The results are aimed to refocus the application of risk management measures on only those pests that are likely to cause harm. During the first half of 2016, upon thorough assessment of relevant standards and existing guidance, the expert group determined that existing guidance was adequate. Therefore, the expert group proposed a change in project scope, approved by the NAPPO Executive Committee in July 6, 2016, to instead develop a NAPPO discussion paper on interpretation of existing guidance in standards for the evaluation of the likelihood of establishment in PRAs.

Organize an international symposium on inspection sampling to support proper and harmonized implementation of ISPMs 23 (Guidelines for Inspection) and 31 (Methodologies for sampling of consignments) in the NAPPO region and internationally. The international symposium on risk-based sampling, targeted to take place in the summer of 2017, will examine the relevant scientific and statistical concepts associated with inspection sampling, the operational and regulatory challenges of implementation, the outreach/in-reach efforts needed for acceptance and capacity building, and opportunities for harmonization. The purpose of the symposium is to bring together government agencies, researchers and analysts, industries and international organizations to collaborate in the development and implementation of risk based sampling methods for phytosanitary inspection. Symposium proceedings will be created as an enduring reference.

9. *Potato: Revise the pest list for RSPM 3, Movement of potatoes into a NAPPO member country.* Undertake the annual revision of the pest list.

Work to finalize the *review of the existing RSPM 3, Movement of potatoes into a NAPPO member country, to align it with ISPM 33, Pest free potato (Solanum sp.) micropropagative material and minitubers for international trade,* and discuss any adjustments required by NAPPO member countries. Review comments received from the country consultation of the draft revision and make adjustments as required.

Revise Annex 6, *Pre-shipment testing for PVY^N,* while undertaking a full 5-year review of RSPM 3, *Movement of potatoes into a NAPPO member country.* Update the current Annex 6 of RSPM 3, based on the PVY TAG Science and Technology document finalized in 2013, while undertaking the 5-year review of RSPM 3.

10. *Seeds: Develop harmonized criteria for evaluating phytosanitary seed treatments.* Develop a discussion document providing a list of criteria for evaluating phytosanitary seed treatments, as well as the identification of data gaps and research needs where they may exist.

11. *Foundational/Procedural documents: Revision/update of various foundational or procedural documents.* In 2016, NAPPO's Advisory and Management Committee has been working to update various NAPPO foundational and procedural documents. On July 6, 2016, NAPPO's Executive Committee approved an updated version of NAPPO's Constitution and By-Laws as well as the 2016–2020 NAPPO Strategic Plan. Edits in the Constitution and By-Laws were minor in nature to update terms and practices and to streamline the document. The new Strategic Plan outlines how NAPPO will be guided by regional priorities, core goals, and focus over the next 5 years. The documents were signed during the 2016 NAPPO Annual Meeting.

The PPQ Deputy Administrator, as the official U.S. delegate to NAPPO, intends to participate in the adoption of these regional plant health standards and projects, including the work described above, once they are completed and ready for such consideration.

The information in this notice contains all the information available to us on NAPPO standards under development or consideration. For updates on meeting times and for information on the expert groups that may become available following publication of this notice, visit the NAPPO Web site or contact Ms. Patricia Abad (see **FOR FURTHER INFORMATION CONTACT** above). Information on official U.S. participation in NAPPO activities, including U.S. positions on standards being considered, may also be obtained from Ms. Abad. Those wishing to provide comments on any of the topics being addressed in the NAPPO work program may do so at any time by responding to this notice (see **ADDRESSES** above) or by transmitting comments through Ms. Abad.

Done in Washington, DC, this 14th day of November 2016.

Kevin Shea,

Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 2016–27791 Filed 11–17–16; 8:45 am]

BILLING CODE 3410–34–P

DEPARTMENT OF AGRICULTURE

Rural Business-Cooperative Service

Applications for Licensing as a Non-Leveraged Rural Business Investment Company Under the Rural Business Investment Program

AGENCY: Rural Business-Cooperative Service, USDA.

ACTION: Notice.

SUMMARY: This Notice announces the acceptance of applications from newly-formed Rural Business Investment Companies (RBICs) or new funds from existing RBICs who are interested in obtaining a licensed fund as non-leveraged RBICs under the Agency's Rural Business Investment Program (RBIP).

DATES: The Agency began accepting applications for non-leveraged status on August 6, 2012, and will continue to accept applications for non-leveraged status on a continuous basis until such time the Agency determines otherwise.

ADDRESSES:

Address for Application Submission: Completed applications must be sent to Specialty Programs Division, U.S. Department of Agriculture, Room Number 4204–S, 1400 Independence Avenue SW., Washington, DC 20250–3226.

Address for Requesting Information: Application materials and other information may be requested by writing to Kristi Kubista-Hovis, Acting Director, Specialty Programs Division, U.S. Department of Agriculture, Room 4204–S, 1400 Independence Avenue SW., Washington, DC 20250–3226.

FOR FURTHER INFORMATION CONTACT: Detailed information on the RBIP, including application materials and instructions, can be found on the Agency's Web site at *http://www.rd.usda.gov/programs-services/rural-business-investment-program.* You also may request information from the Agency by contacting David Chesnick, Program Manager, Rural Business Investment Program, Specialty Programs Division, U.S. Department of Agriculture, Room 4221–S, 1400

Independence Avenue SW., Washington, DC 20250–3226, at (202) 690–0433.

SUPPLEMENTARY INFORMATION:

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 defines ''collection of information'' as a requirement for ''answers to * * * identical reporting or recordkeeping requirements imposed on ten or more persons'' (44 U.S.C. 3502(3)(A)). The collection requirement associated with this Notice is expected to receive less than 10 respondents and therefore the Act does not apply.

Overview Information

Federal Agency Name. Rural Business-Cooperative Service.

Opportunity Title. RBIP for Non-leveraged RBICs.

Announcement Type. Subsequent announcement.

Catalog of Federal Domestic Assistance (CFDA) Number. The CFDA number for the program impacted by this action is 10.860, Rural Business Investment Program.

Dates. The Agency began accepting applications for non-leveraged status on August 6, 2012, and will continue to accept applications for non-leveraged status until such time the Agency determines otherwise. *Availability of Notice.* This Notice is available on the USDA Rural Development Web site at: *http://www.rd.usda.gov/programs-services/rural-business-investment-program.*

I. Opportunity Description

A. *Background.* The purpose of Subtitle H of the Consolidated Farm and Rural Development Act, as amended (7 U.S.C. 2009*cc et seq.*) is to promote economic development and the creation of wealth and job opportunities in rural areas and among individuals living in those areas through venture capital investments by for-profit RBICs.

Prior to August 6, 2012, the Agency issued licenses to qualified RBICs as leveraged RBICs only. A notice published in the **Federal Register** on July 5, 2012, (77 FR 39675), informed the public that the Agency would begin accepting non-leveraged RBIC license applications on August 6, 2012.

The purpose of this current Notice is to notify interested RBICs that the Agency is still accepting applications from qualified RBICs for licensing as non-leveraged RBICs under the RBIP. The Agency will continue to accept such applications until such other time the Agency determines otherwise.

B. *Program Authority.* Subtitle H of the Consolidated Farm and Rural Development Act, as amended (7 U.S.C. 2009cc *et seq.*) establishes the RBIP.

C. *Definition of Terms.* The terms defined in 7 CFR part 4290 are applicable to this Notice.

II. Licensing Information

A. *Number of Licenses.* The Agency intends to issue approximately two non-leveraged RBIC licenses a year, subject to sufficient resources. However, additional applications for licenses may be considered if sufficient resources are made available.

B. *Type of License.* Non-leveraged.

III. Eligibility Information

Applicants and their applications are subject to the provisions of this Notice and to the provisions of 7 CFR part 4290. In order to be eligible for non-leveraged status under this Notice, the applicant must demonstrate that one or more Farm Credit System (FCS) institution(s) will invest in the RBIC and, individually or collectively, hold 10 percent or more the applicant's total capital.

IV. Application and Submission Information

A. *Where to Obtain Applications.* Applicants may obtain applications and other applicable application material from the Agency's Specialty Programs Division, as provided in the **ADDRESSES** section of this Notice. Because applications will be selected on a first-come, first-served basis, the Agency recommends that potential applicants who plan to request application materials via mail request such materials as soon as possible.

Application materials may also be obtained via *http://www.rd.usda.gov/programs-services/rural-business-investment-program* or by contacting the Agency at the address and phone number provided in the **ADDRESSES** section of this Notice.

B. *Prior to Preparing Application.* The Agency recommends that those interested in applying for non-leveraged licensing contact the Agency at the address and phone number provided in the **ADDRESSES** section of this Notice to determine the status of the non-leveraged program in order to avoid unnecessary expenditure of resources by the applicant. As noted earlier in this Notice, the Agency intends to issue approximately two non-leveraged licenses a year, due to limited resources, the Agency may not be able to review more than the two applications in any 1 fiscal year.

C. *Content and Form of Submission.* Applications must be submitted in accordance with the application instructions contained in this Notice and in 7 CFR 4290. Applicants must submit complete initial applications in order to be considered. Applications must be submitted in hard copy form and on a USB flash drive; applications sent by facsimile will not be accepted.

Contents of the initial application include RD Form 4290–1, ''Rural Business Investment Program (RBIP) Application,'' Part I, Management Assessment Questionnaire (MAQ), and RD Form 4290–2, ''Rural Business Investment Program (RBIP) Application,'' Part II, Exhibits (exhibits A, B, C, D, E, F, G, H, K, L, P, V, and Z).

Submit two complete, original hard copy sets of the RD Form 4290–1 and RD Form 4290–2 (excluding Exhibit P, which is required in electronic form only). Place each of the two original sets in a large 3-ring binder. Label the binders with the RBIC's name. Submit one complete and unbound one-sided hard copy of the MAQ and Exhibits suitable for photocopying (*i.e.,* no hole punches, staples, paper clips, tabs, or binders).

Applicants must enclose in their submission a nonrefundable licensing fee of $500 in the form of a check payable to USDA.

D. *When to Submit.* The Agency is accepting applications for non-leveraged status until such time the Agency determines otherwise.

E. *Where to Submit.* The applicant must submit the application material to the Agency's Specialty Programs Division as specified in the **ADDRESSES** section of this Notice.

F. *How to Submit.* Applicants are encouraged to submit their applications via package/parcel service.

V. Program Provisions

This section of the Notice identifies the procedures the Agency will use to process and select applicants for licensing as a non-leveraged RBIC. More information about the RBIP is available in the regulation at 7 CFR part 4290.

The Agency will review each application it receives in response to this Notice with regard to eligibility and completeness. If the application is incomplete, the Agency will notify the applicant of the information that is missing. The applicant must then provide the missing information in order for the Agency to further review the application.

The Agency will select applicants for licensing as a non-leveraged RBIC on a first-come, first-served basis. The Agency will determine the order of applications based on the date the Agency receives a complete application.

For example, if an application is received on July 1, but is incomplete, and the applicant supplies the Agency with the missing information on August 1, then that application will be considered for selection on the basis of the August 1 date—the date on which the application was complete. Therefore, the Agency encourages applicants to ensure their applications are complete prior to submitting them.

Only those applications that are eligible will be processed further for determining whether the applicant will be licensed as a non-leveraged RBIC. However, not all applications received in response to this Notice will receive this further processing. For each application that receives further processing, the Agency or its designee will focus its assessment of the application on the consistency of the newly formed RBIC's business plan with the goals of the RBIP program and on the applicant's management team's qualifications. Following this assessment, if the initial recommendation is favorable, the Agency or its designee will interview the applicant's management team.

Based on the assessment and interview, a preliminary determination will be made as to whether or not to select the applicant for non-leveraged status. If the preliminary determination is favorable, the Agency will send to the applicant a Letter of Conditions (also known as a ''Green Light'' letter) and the applicant will be invited to submit an updated RD Form 4290–1, Part I, Management Assessment Questionnaire, and RD Form 4290–2, Part II, Exhibits. Upon receipt of the Letter of Conditions, the applicant has 24 months to raise their private equity capital. Once a selected applicant has achieved full compliance with the regulations governing licensing as an RBIC, the Agency will issue the non-leveraged license to the RBIC.

VI. Administrative Information Applicable to This Notice

A. Notifications

1. *Eligibility.* The Agency will notify the applicant in writing whether or not the application is determined to be eligible for participation in the RBIP. If an applicant is determined by the Agency to be ineligible, the Agency will provide the reason(s) the applicant was rejected. Such applicant will have review and appeal rights as specified in this Notice.

2. *License.* Each applicant receiving a ''Green Light'' letter will be notified whether or not the RBIC will be licensed after the Agency's review of the updated RD Form 4290–1, Part I, Management Assessment Questionnaire, and RD Form 4290–2, Part II, Exhibits.

B. Administrative and National Policy Requirements

1. *Review or Appeal Rights.* A person may seek a review of an adverse Agency decision under this Notice or appeal to the National Appeals Division in accordance with 7 CFR part 11.

2. *Notification of Unfavorable Decisions.* If at any time prior to license approval it is decided that favorable action will not be taken, the Agency will notify the applicant in writing of the decision and of the reasons why issuing a non-leveraged license was not favorably considered. The notification will inform the applicant of its rights to an informal review, mediation, and appeal of the decision in accordance with 7 CFR part 11.

VII. Agency Contacts

For further information about this Notice or for assistance with the program requirements, please contact the Specialty Programs Division, U.S. Department of Agriculture, Room 4204–S, 1400 Independence Avenue SW., Washington, DC 20250–3226. Telephone: (202) 720–1400.

VIII. Nondiscrimination

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (*e.g.,* Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720–2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877–8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD–3027, found online at *http://www.ascr.usda.gov/complaint_filing_cust.html* and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632–9992. Submit your completed form or letter to USDA by:

(1) *Mail:* U.S. Department of Agriculture Office of the Assistant Secretary for Civil Rights: 1400 Independence Avenue SW., Washington, DC 20250–9410;

(2) *Fax:* (202) 690–7442; or

(3) *Email: program.intake@usda.gov.*

USDA is an equal opportunity provider, employer, and lender.

Dated: November 9, 2016.

Samuel H. Rikkers,

Administrator, Rural Business-Cooperative Service.

[FR Doc. 2016–27731 Filed 11–17–16; 8:45 am]

BILLING CODE 3410–XY–P

DEPARTMENT OF AGRICULTURE

Rural Business-Cooperative Service

Notice of Solicitation of Applications (NOSA) Inviting Applications for the Rural Business Development Grant Program To Provide Technical Assistance for Rural Transportation Systems

AGENCY: Rural Business-Cooperative Service, USDA.

ACTION: Notice.

SUMMARY: This Notice is to invite applications for grants to provide Technical Assistance for Rural Transportation (RT) systems under the Rural Business Development Grant (RBDG) program pursuant to 7 CFR part 4280, subpart E, 2 CFR chapter IV and 2 CFR part 200 for fiscal year (FY) 2017, subject to the availability of funding to provide Technical Assistance for RT systems and for RT systems to Federally Recognized Native American Tribes' (FRNAT) (collectively ''Programs'') and the terms provided in such funding. This Notice is being issued before the FY 2017 appropriation has been enacted in order to allow applicants sufficient time to leverage financing, prepare and submit their applications, and give the Agency time to process applications in FY 2017. This Notice is based on the assumption that the FY 2017 appropriation will be identical to its successors. Should that not be the case, this Notice will be amended to reflect those changes. Successful applications will be selected by the Agency for

funding and subsequently awarded to the extent that funding may ultimately be made available to the Agency through appropriations. Awards under both grant Programs will be competitively awarded to eligible applicant(s) which historically has been a qualified national Nonprofit organization. It is expected that one grant will be for the provision of Technical Assistance to RT Projects and that the other grant will be for the provision of Technical Assistance to RT Projects operated by FRNATs only.

All applicants are responsible for any expenses incurred in developing their applications.

All initially capitalized terms in this Notice, other than proper names, are defined in 7 CFR 4280.403.

DATES: Completed applications must be received in the USDA Rural Development State Office no later than 4:30 p.m. (local time) on March 31, 2017. Applications received at a USDA Rural Development State Office after this date will not be considered for FY 2017 funding.

ADDRESSES: Submit applications in paper format to the USDA Rural Development State Office for the State where the Project is located. A list of the USDA Rural Development State Office contacts can be found at: *http://www.rd.usda.gov/contact-us/state-offices*.

FOR FURTHER INFORMATION CONTACT: Specialty Programs Division, Business Programs, Rural Business-Cooperative Service, U.S. Department of Agriculture, 1400 Independence Avenue SW., MS 3226, Room 4204-South, Washington, DC 20250–3226, or call 202–720–1400. For further information on this Notice, please contact the USDA Rural Development State Office in the State in which the applicant's headquarters is located.

SUPPLEMENTARY INFORMATION:

Overview

Solicitation Opportunity Title: Rural Business Development Grants.

Announcement Type: Initial Solicitation Announcement.

Catalog of Federal Domestic Assistance Number: 10.351.

Dates: Completed applications must be received in the USDA Rural Development State Office no later than 4:30 p.m. (local time) on March 31, 2017, to be eligible for FY 2017 grant funding. Applications received after this date will not be eligible for FY 2017 grant funding.

A. Program Description

1. *Purpose of the Program.* The purpose of this program is to improve the economic conditions of Rural Areas.

2. *Statutory Authority.* This program is authorized under section 310B(c) of the Consolidated Farm and Rural Development Act (7 U.S.C. 1932(c)). Regulations are contained in 7 CFR part 4280, subpart E. The program is administered on behalf of Rural Business-Cooperative Service (RBS) at the State level by the USDA Rural Development State Offices. Assistance provided to Rural Areas under the program has historically included the provision of on-site Technical Assistance to local and regional governments, public transit agencies, and related Nonprofit and for-profit organizations in Rural Areas; the development of training materials; and the provision of necessary training assistance to local officials and agencies in Rural Areas.

Awards under the RBDG passenger transportation program will be made on a competitive basis using specific selection criteria contained in 7 CFR part 4280, subpart E, and in accordance with section 310B(c) of the Consolidated Farm and Rural Development Act (7 U.S.C. 1932(c)). Information required to be in the application package includes Standard Form (SF) 424, ''Application for Federal Assistance;'' environmental documentation in accordance with 7 CFR part 1970, ''Environmental Policies and Procedures;'' Scope of Work Narrative; Income Statement; Balance Sheet or Audit for previous 3 years; AD–1047, ''Debarment/Suspension Certification;'' AD–1048, ''Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion;'' AD–1049, ''Certification Regarding Drug-Free Workplace Requirements;'' SF LLL, ''Disclosure of Lobbying Activities;'' RD 400–1, ''Equal Opportunity Agreement;'' RD 400–4, ''Assurance Agreement;'' and a letter providing Board authorization to obtain assistance. For the FRNAT grant, which must benefit FRNATs, at least 75 percent of the benefits of the Project must be received by members of FRNATs. The Project that scores the greatest number of points based on the RBDG selection criteria and the discretionary points will be selected for each grant.

Applicants must be qualified national Nonprofit organizations with experience in providing Technical Assistance and training to Rural communities nationwide for the purpose of improving passenger transportation service or facilities. To be considered ''national,'' RBS requires a qualified organization to provide evidence that it operates RT assistance programming nation-wide. There is not a requirement to use the grant funds in a multi-State area. Grants will be made to qualified national non-profit organizations for the provision of Technical Assistance and training to Rural communities for the purpose of improving passenger transportation services or facilities.

3. *Definition of Terms.* The definitions applicable to this Notice are published at 7 CFR 4280.403.

4. *Application Awards.* The Agency will review, evaluate, and score applications received in response to this Notice based on the provisions in 7 CFR 4280, subpart E and as indicated in this Notice. However, the Agency advises all interested parties that the applicant bears the burden in preparing and submitting an application in response to this Notice.

B. Federal Award Information

Type of Award: Grants.

Fiscal Year Funds: FY 2017.

Available Funds: Anyone interested in submitting an application for funding under this program is encouraged to consult the Rural Development Web Newsroom Web site at *http://www.rd.usda.gov/newsroom/notices-solicitation-applications-nosas* for funding information.

Approximate Number of Awards: To be determined based on the number of qualified applications received. Historically two awards have been made.

Maximum Awards: Will be determined by the specific funding provided for the Programs in the FY 2017 Appropriations Act.

Award Date: Prior to September 30, 2017.

Performance Period: October 1, 2017, through September 30, 2018.

Renewal or Supplemental Awards: None.

C. Eligibility Information

1. *Eligible Applicants.*

To be considered eligible, an entity must be a qualified national Nonprofit organization serving Rural Areas as evidenced in its organizational documents and demonstrated experience, per 7 CFR part 4280, subpart E. Grants will be competitively awarded to qualified national Nonprofit organizations.

The Agency requires the following information to make an eligibility determination that an applicant is a national Nonprofit organization. These applications must include, but are not limited to, the following:

(a) An original and one copy of SF 424, ''Application for Federal Assistance (For Non-construction);''

(b) Copies of applicant's organizational documents showing the applicant's legal existence and authority to perform the activities under the grant;

(c) A proposed scope of work, including a description of the proposed Project, details of the proposed activities to be accomplished and timeframes for completion of each task, the number of months duration of the Project, and the estimated time it will take from grant approval to beginning of Project implementation;

(d) A written narrative that includes, at a minimum, the following items:

(i) An explanation of why the Project is needed, the benefits of the proposed Project, and how the Project meets the grant eligible purposes;

(ii) Area to be served, identifying each governmental unit, *i.e.,* town, county, etc., to be affected by the Project;

(iii) Description of how the Project will coordinate Economic Development activities with other Economic Development activities within the Project area;

(iv) Businesses to be assisted, if appropriate, and Economic Development to be accomplished;

(v) An explanation of how the proposed Project will result in newly created, increased, or supported jobs in the area and the number of projected new and supported jobs within the next 3 years;

(vi) A description of the applicant's demonstrated capability and experience in providing the proposed Project assistance, including experience of key staff members and persons who will be providing the proposed Project activities and managing the Project;

(vii) The method and rationale used to select the areas and businesses that will receive the service;

(viii) A brief description of how the work will be performed, including whether organizational staff or consultants or contractors will be used; and

(ix) Other information the Agency may request to assist it in making a grant award determination.

(e) The latest 3 years of financial information to show the applicant's financial capacity to carry out the proposed work. If the applicant is less than 3 years old, at a minimum, the information should include all balance sheet(s), income statement(s) and cash flow statement(s). A current audited report is required if available;

(f) Documentation regarding the availability and amount of other funds to be used in conjunction with the funds from RBDG;

(g) A budget which includes salaries, fringe benefits, consultant costs, indirect costs, and other appropriate direct costs for the Project.

2. *Cost Sharing or Matching.* Matching funds are not required.

3. *Other.*

Applications will only be accepted from qualified national Nonprofit organizations to provide Technical Assistance for RT. There are no ''responsiveness,'' or ''threshold'' eligibility criteria for these grants. There is no limit on the number of applications an applicant may submit under this announcement. In addition to the forms listed under program description, Form AD–3030 ''Representations Regulation Felony Conviction and Tax Delinquent Status for Corporate Applicants,'' must be completed in the affirmative.

None of the funds made available may be used to enter into a contract, memorandum of understanding, or cooperative agreement with, make a grant to, or provide a loan or loan guarantee to, any corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless a Federal agency has considered suspension or debarment of the corporation and has made a determination that this further action is not necessary to protect the interests of the Government.

None of the funds made available may be used to enter into a contract, memorandum of understanding, or cooperative agreement with, make a grant to, or provide a loan or loan guarantee to, any corporation that was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless a Federal agency has considered suspension or debarment of the corporation and has made a determination that this further action is not necessary to protect the interests of the Government.

4. *Completeness Eligibility.*

Applications will not be considered for funding if they do not provide sufficient information to determine eligibility or are missing required elements.

D. Application and Submission Information

1. *Address to Request Application Package.*

For further information, entities wishing to apply for assistance should contact the USDA Rural Development State Office provided in the **ADDRESSES** section of this Notice to obtain copies of the application package.

Applications must be submitted in paper format. Applications submitted to a USDA Rural Development State Office must be received by the closing date and local time.

2. *Content and Form of Application Submission.*

An application must contain all of the required elements. Each application received in a USDA Rural Development State Office will be reviewed to determine if it is consistent with the eligible purposes contained in section 310B(c) of the Consolidated Farm and Rural Development Act (7 U.S.C. 1932(c)). Each selection priority criterion outlined in 7 CFR 4280.435 must be addressed in the application. Failure to address any of the criterion will result in a zero-point score for that criterion and will impact the overall evaluation of the application. Copies of 7 CFR part 4280, subpart E, will be provided to any interested applicant making a request to a USDA Rural Development State Office.

All Projects to receive Technical Assistance through these passenger transportation grant funds are to be identified when the applications are submitted to the USDA Rural Development State Office. Multiple Project applications must identify each individual Project, indicate the amount of funding requested for each individual Project, and address the criteria as stated above for each individual Project.

For multiple-Project applications, the average of the individual Project scores will be the score for that application.

The applicant documentation and forms needed for a complete application are located in the PROGRAM DESCRIPTION section of this notice, and 7 CFR part 4280, subpart E.

(a) There are no specific formats, specific limitations on number of pages, font size and type face, margins, paper size, number of copies, and the sequence or assembly requirements.

(b) The component pieces of this application should contain original signatures on the original application.

(c) Since these grants are for Technical Assistance for transportation purposes, no additional information requirements other than those described in this Notice and 7 CFR part 4280, subpart E are required.

3. *Unique entity identifier and System for Award Management.*

All applicants must have a Dun and Bradstreet Data Universal Numbering System (DUNS) number which can be obtained at no cost via a toll-free request line at (866) 705–5711 or at *http://fedgov.dnb.com/webform.* Each applicant (unless the applicant is an individual or Federal awarding agency that is excepted from the requirements under 2 CFR 25.110(b)) or (c) or has an exception approved by the Federal awarding agency under 2 CFR 25.110(d) is required to: (i) Be registered in the System for Award Management (SAM) before submitting its application; (ii) provide a valid unique entity identifier in its application; and (iii) continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency. The Federal awarding agency may not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time the Federal awarding agency is ready to make a Federal award, the Federal awarding agency may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

4. *Submission Dates and Times.*

(a) Application Deadline Date: No later than 4:30 p.m. (local time) on March 31, 2017.

Explanation of Deadlines: Applications must be in the USDA Rural Development State Office by the local deadline date and time as indicated above. If the due date falls on a Saturday, Sunday, or Federal holiday, the application is due the next business day.

(b) The deadline date means that the completed application package must be received in the USDA Rural Development State Office by the deadline date established above. All application documents identified in this Notice are required.

(c) If complete applications are not received by the deadline established above, the application will neither be reviewed nor considered under any circumstances.

(d) The Agency will determine the application receipt date based on the actual date postmarked.

(e) This Notice is for RT Technical Assistance grants only and therefore, intergovernmental reviews are not required.

(f) These grants are for RT Technical Assistance grants only, no construction or equipment purchases are permitted. If the grantee has a previously approved indirect cost rate, it is permissible, otherwise, the applicant may elect to charge the 10 percent indirect cost permitted under 2 CFR 200.414(f) or request a determination of its Indirect Cost Rate. Due to the time required to evaluate Indirect Cost Rates, it is likely that all funds will be awarded by the time the Indirect Cost Rate is determined. No foreign travel is permitted. Pre-Federal award costs will only be permitted with prior written approval by the Agency.

(g) Applicants must submit applications in hard copy format as previously indicated in the APPLICATION AND SUBMISSION INFORMATION section of this notice. If the applicant wishes to hand deliver its application, the addresses for these deliveries can be located in the **ADDRESSES** section of this Notice.

(h) If you require alternative means of communication for program information (*e.g.,* Braille, large print, audiotape, etc.) please contact USDA's TARGET Center at (202) 720–2600 (voice and TDD).

E. Application Review Information

1. *Criteria.*

All eligible and complete applications will be evaluated and scored based on the selection criteria and weights contained in 7 CFR 4280.435 and will select grantees subject to the grantees' satisfactory submission of the additional items required by 7 CFR part 4280, subpart E and the USDA Rural Development Letter of Conditions. Failure to address any one of the criteria in 7 CFR 4280.435 by the application deadline will result in the application being determined ineligible, and the application will not be considered for funding. The amount of an RT grant may be adjusted, at the Agency's discretion, to enable the Agency to award RT grants to the applications with the highest priority scores in each category.

2. *Review and Selection Process.*

The State Offices will review applications to determine if they are eligible for assistance based on requirements contained in 7 CFR 4280.416 and 4280.417. If determined eligible, your application will be submitted to the National Office. Funding of Projects is subject to the applicant's satisfactory submission of the additional items required by that subpart and the USDA Rural Development Letter of Conditions. The Agency reserves the right to award additional discretionary points under 7 CFR 4280.435(k).

In awarding discretionary points, the Agency scoring criteria regularly assigns points to applications that direct loans or grants to Projects based in or serving census tracts with poverty rates greater than or equal to 20 percent. This emphasis will support Rural Development's mission of improving the quality of life for Rural Americans and commitment to directing resources to those who most need them.

F. Federal Award Administration Information

1. *Federal Award Notices.*

Successful applicants will receive notification for funding from their USDA Rural Development State Office. Applicants must comply with all applicable statutes and regulations before the grant award will be approved. Unsuccessful applications will receive notification by mail.

2. *Administrative and National Policy Requirements.*

Additional requirements that apply to grantees selected for this program can be found in 7 CFR 4280.408, 4280.410, and 4280.439. Awards are subject to USDA Departmental Grant Regulations at 2 CFR Chapter IV which incorporates the new Office of Management and Budget (OMB) regulations at 2 CFR part 200.

All successful applicants will be notified by letter, which will include a Letter of Conditions, and a Letter of Intent to Meet Conditions. This letter is not an authorization to begin performance. If the applicant wishes to consider beginning performance prior to the grant being officially closed, all pre-award costs must be approved in writing and in advance by the Agency. The grant will be considered officially awarded when all conditions in the Letter of Conditions have been met and the Agency obligates the funding for the Project.

Additional requirements that apply to grantees selected for this program can be found in 7 CFR part 4280, subpart E; the Grants and Agreements regulations of the U.S. Department of Agriculture codified in 2 CFR Chapter IV, and successor regulations.

In addition, all recipients of Federal financial assistance are required to report information about first-tier sub-awards and executive compensation (see 2 CFR part 170). You will be required to have the necessary processes and systems in place to comply with the Federal Funding Accountability and Transparency Act of 2006 (Pub. L. 109–282) reporting requirements (see 2 CFR 170.200(b), unless you are exempt under 2 CFR 170.110(b)). More information on these requirements can be found at *http://www.rd.usda.gov/programs-services/value-added-producer-grants.*

The following additional requirements apply to grantees selected for this program:

(a) Form RD 4280–2 ''Rural Business-Cooperative Service Financial Assistance Agreement.''

(b) Letter of Conditions.

(c) Form RD 1940–1, ''Request for Obligation of Funds.''

(d) Form RD 1942–46, ''Letter of Intent to Meet Conditions.''

(e) Form AD–1047, ''Certification Regarding Debarment, Suspension, and Other Responsibility Matters-Primary Covered Transactions.''

(f) Form AD–1048, ''Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions.''

(g) Form AD–1049, ''Certification Regarding a Drug-Free Workplace Requirement (Grants).''

(h) Form AD–3030, ''Assurance Regarding Felony Conviction or Tax Delinquent Status for Corporate Applicants.'' Must be signed by corporate applicants who receive an award under this Notice.

(i) Form RD 400–4, ''Assurance Agreement.'' Each prospective recipient must sign Form RD 400–4, Assurance Agreement, which assures USDA that the recipient is in compliance with Title VI of the Civil Rights Act of 1964, 7 CFR part 15 and other Agency regulations. That no person will be discriminated against based on race, color or national origin, in regard to any program or activity for which the re-lender receives Federal financial assistance. That nondiscrimination statements are in advertisements and brochures.

Collect and maintain data provided by ultimate recipients on race, sex, and national origin and ensure Ultimate Recipients collect and maintain this data. Race and ethnicity data will be collected in accordance with OMB **Federal Register** notice, ''Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity,'' (62 FR 58782), October 30, 1997. Sex data will be collected in accordance with Title IX of the Education Amendments of 1972. These items should not be submitted with the application but should be available upon request by the Agency.

The applicant and the ultimate recipient must comply with Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act of 1973, Age Discrimination Act of 1975, Executive Order 12250, Executive Order 13166 Limited English Proficiency (LEP), and 7 CFR part 1901, subpart E.

(j) SF LLL, ''Disclosure of Lobbying Activities,'' if applicable.

(k) Form SF 270, ''Request for Advance or Reimbursement.''

3. *Reporting.*

(a) A Financial Status Report and a Project performance activity report will be required of all grantees on a quarterly basis until initial funds are expended and yearly thereafter, if applicable, based on the Federal fiscal year. The grantee will complete the Project within the total time available to it in accordance with the Scope of Work and any necessary modifications thereof prepared by the grantee and approved by the Agency. A final Project performance report will be required with the final Financial Status Report. The final report may serve as the last quarterly report. The final report must provide complete information regarding the jobs created and supported as a result of the grant if applicable. Grantees must continuously monitor performance to ensure that time schedules are being met, projected work by time periods is being accomplished, and other performance objectives are being achieved. Grantees must submit an original of each report to the Agency no later than 30 days after the end of the quarter. The Project performance reports must include, but not be limited to, the following:

(1) A comparison of actual accomplishments to the objectives established for that period;

(2) Problems, delays, or adverse conditions, if any, which have affected or will affect attainment of overall Project objectives, prevent meeting time schedules or objectives, or preclude the attainment of particular Project work elements during established time periods. This disclosure shall be accompanied by a statement of the action taken or planned to resolve the situation;

(3) Objectives and timetable established for the next reporting period;

(4) Any special reporting requirements, such as jobs supported and created, businesses assisted, or Economic Development which results in improvements in median household incomes, and any other specific requirements, should be placed in the reporting section in the Letter of Conditions; and

(5) Within 90 days after the conclusion of the Project, the grantee will provide a final Project evaluation report. The last quarterly payment will be withheld until the final report is received and approved by the Agency. Even though the grantee may request reimbursement on a monthly basis, the last 3 months of reimbursements will be withheld until a final Project, Project performance, and financial status report are received and approved by the Agency.

G. Federal Awarding Agency Contact(s)

For general questions about this announcement, please contact your USDA Rural Development State Office provided in the **ADDRESSES** section of this Notice.

H. Civil Rights Requirements

All grants made under this Notice are subject to Title VI of the Civil Rights Act of 1964 as required by the USDA (7 CFR part 15, subpart A) and Section 504 of the Rehabilitation Act of 1973, Title VIII of the Civil Rights Act of 1968, Title IX, Executive Order 13166 (Limited English Proficiency), Executive Order 11246, and the Equal Credit Opportunity Act of 1974.

I. Other Information

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995, the information collection requirement contained in this Notice is approved by OMB under OMB Control Number 0570–0070.

Federal Funding Accountability and Transparency Act

All applicants, in accordance with 2 CFR part 25, must have a DUNS number, which can be obtained at no cost via a toll-free request line at (866) 705–5711 or online at *http://fedgov.dnb.com/webform.* Similarly, all applicants must be registered in SAM prior to submitting an application. Applicants may register for the SAM at *http://www.sam.gov.* All recipients of Federal financial assistance are required to report information about first-tier sub-awards and executive total compensation in accordance with 2 CFR part 170.

I. Nondiscrimination Statement

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (*e.g.,* Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720–2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877–8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD 3027, found online at *http://www.ascr.usda.gov/complaint_filing_cust.html* and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632–9992. Submit your completed form or letter to USDA by:

(1) Mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue SW., Washington, DC 20250–9410;
(2) Fax: (202) 690–7442; or
(3) Email: *program.intake@usda.gov.*

USDA is an equal opportunity provider, employer, and lender.

Dated: November 9, 2016.

Samuel H. Rikkers,

Administrator, Rural Business-Cooperative Service.

[FR Doc. 2016–27734 Filed 11–17–16; 8:45 am]

BILLING CODE 3410–XY–P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

Order Denying Export Privileges

In the Matter of: Luis Alberto Najera-Citalan, Inmate Number: 10656–279, FCI Beaumont Low, Federal Correctional Institution, P.O. Box 26020, Beaumont, TX 77720.

On June 9, 2015, in the U.S. District Court for the Southern District of Texas, Luis Alberto Najera-Citalan (''Najera-Citalan''), was convicted of violating Section 38 of the Arms Export Control Act (22 U.S.C. 2778 (2012)) (''AECA''). Specifically, Najera-Citalan intentionally and knowingly conspired to knowingly and willfully export, attempt to export, and cause to be exported to Mexico from the United States a defense article, that is, to wit: approximately five (5) AR–15 style rifles which were designated as defense articles on the United States Munitions List, without having first obtained from the Department of State a license for such export or written authorization for such export. Najera-Citalan was sentenced to 60 months in prison, three years of supervised release, and a $100 assessment.

Section 766.25 of the Export Administration Regulations (''EAR'' or ''Regulations'')[1] provides, in pertinent part, that ''[t]he Director of the Office of Exporter Services, in consultation with the Director of the Office of Export Enforcement, may deny the export privileges of any person who has been convicted of a violation of the Export Administration Act (''EAA''), the EAR, or any order, license or authorization issued thereunder; any regulation, license, or order issued under the International Emergency Economic Powers Act (50 U.S.C. 1701–1706); 18 U.S.C. 793, 794 or 798; section 4(b) of the Internal Security Act of 1950 (50 U.S.C. 783(b)), or section 38 of the Arms Export Control Act (22 U.S.C. 2778).'' 15 CFR 766.25(a); *see also* Section 11(h) of the EAA, 50 U.S.C. 4610(h). The denial of export privileges under this provision may be for a period of up to 10 years from the date of the conviction. 15 CFR 766.25(d); *see also* 50 U.S.C. 4610(h). In addition, Section 750.8 of the Regulations states that the Bureau of Industry and Security's Office of Exporter Services may revoke any Bureau of Industry and Security (''BIS'') licenses previously issued in which the person had an interest in at the time of his conviction.

BIS has received notice of Najera-Citalan's conviction for violating the AECA, and has provided notice and an opportunity for Najera-Citalan to make a written submission to BIS, as provided in Section 766.25 of the Regulations. BIS has not received a submission from Najera-Citalan.

Based upon my review and consultations with BIS's Office of Export Enforcement, including its Director, and the facts available to BIS, I have decided to deny Najera-Citalan's export privileges under the Regulations for a period of 10 years from the date of Najera-Citalan's conviction. I have also decided to revoke all licenses issued pursuant to the Act or Regulations in which Najera-Citalan had an interest at the time of his conviction.

Accordingly, it is hereby Ordered:

First, from the date of this Order until June 9, 2025, Luis Alberto Najera-Citalan, with a last known address of Inmate Number: 10656–279, FCI Beaumont Low, Federal Correctional Institution, P.O. Box 26020, Beaumont, TX 77720, and when acting for or on his behalf, his successors, assigns, employees, agents or representatives (the ''Denied Person''), may not, directly or indirectly, participate in any way in any transaction involving any commodity, software or technology (hereinafter collectively referred to as ''item'') exported or to be exported from the United States that is subject to the Regulations, including, but not limited to:

A. Applying for, obtaining, or using any license, License Exception, or export control document;

B. Carrying on negotiations concerning, or ordering, buying, receiving, using, selling, delivering, storing, disposing of, forwarding, transporting, financing, or otherwise servicing in any way, any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations; or

C. Benefitting in any way from any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations.

Second, no person may, directly or indirectly, do any of the following:

A. Export or reexport to or on behalf of the Denied Person any item subject to the Regulations;

B. Take any action that facilitates the acquisition or attempted acquisition by the Denied Person of the ownership, possession, or control of any item subject to the Regulations that has been or will be exported from the United States, including financing or other support activities related to a transaction whereby the Denied Person acquires or attempts to acquire such ownership, possession or control;

C. Take any action to acquire from or to facilitate the acquisition or attempted acquisition from the Denied Person of any item subject to the Regulations that has been exported from the United States;

[1] The Regulations are currently codified in the Code of Federal Regulations at 15 CFR parts 730–774 (2016). The Regulations issued pursuant to the Export Administration Act (50 U.S.C. 4601–4623 (Supp. III 2015) (available at *http://uscode.house.gov*)). Since August 21, 2001, the Act has been in lapse and the President, through Executive Order 13222 of August 17, 2001 (3 CFR, 2001 Comp. 783 (2002)), which has been extended by successive Presidential Notices, the most recent being that of August 4, 2016 (81 FR 52,587 (Aug. 8, 2016)), has continued the Regulations in effect under the International Emergency Economic Powers Act (50 U.S.C. 1701, *et seq.* (2006 & Supp. IV 2010)).

D. Obtain from the Denied Person in the United States any item subject to the Regulations with knowledge or reason to know that the item will be, or is intended to be, exported from the United States; or

E. Engage in any transaction to service any item subject to the Regulations that has been or will be exported from the United States and which is owned, possessed or controlled by the Denied Person, or service any item, of whatever origin, that is owned, possessed or controlled by the Denied Person if such service involves the use of any item subject to the Regulations that has been or will be exported from the United States. For purposes of this paragraph, servicing means installation, maintenance, repair, modification or testing.

Third, after notice and opportunity for comment as provided in Section 766.23 of the Regulations, any other person, firm, corporation, or business organization related to Najera-Citalan by ownership, control, position of responsibility, affiliation, or other connection in the conduct of trade or business may also be made subject to the provisions of this Order in order to prevent evasion of this Order.

Fourth, in accordance with Part 756 of the Regulations, Najera-Citalan may file an appeal of this Order with the Under Secretary of Commerce for Industry and Security. The appeal must be filed within 45 days from the date of this Order and must comply with the provisions of Part 756 of the Regulations.

Fifth, a copy of this Order shall be delivered to the Najera-Citalan. This Order shall be published in the **Federal Register**.

Sixth, this Order is effective immediately and shall remain in effect until June 9, 2025.

Dated: November 9, 2016.

Karen H. Nies-Vogel,

Director, Office of Exporter Services.

[FR Doc. 2016–27780 Filed 11–17–16; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

Order Denying Export Privileges

In the Matter of: Jorge Santana, Jr., Inmate Number: 00927–180, FCI Beaumont Low, Federal Correctional Institution, P.O. Box 26020, Beaumont, TX 77720.

On May 5, 2014, in the U.S. District Court for the Southern District of Texas, Jorge Santana, Jr. (''Santana''), was convicted of violating Section 38 of the Arms Export Control Act (22 U.S.C. 2778 (2012)) (''AECA''). Specifically, Santana knowingly and willfully attempted to export and caused to be exported from the United States to Mexico a defense article, that is, a .357 caliber magazine, two (2) 9mm magazines, a Smith & Wesson .40 caliber magazine, approximately 5,440 rounds of 7.62 caliber ammunition, 200 rounds of .40 caliber ammunition, and 400 rounds of .38 super caliber ammunition, which were designed as a defense article on the United States Munitions List, without having first obtained from the Department of State a license for such export or written authorization for such export. Santana was sentenced to 66 months in prison, three years of supervised release, 100 hours of community service, and a $100 assessment.

Section 766.25 of the Export Administration Regulations (''EAR'' or ''Regulations'') [1] provides, in pertinent part, that ''[t]he Director of the Office of Exporter Services, in consultation with the Director of the Office of Export Enforcement, may deny the export privileges of any person who has been convicted of a violation of the Export Administration Act (''EAA''), the EAR, or any order, license or authorization issued thereunder; any regulation, license, or order issued under the International Emergency Economic Powers Act (50 U.S.C. 1701–1706); 18 U.S.C. 793, 794 or 798; section 4(b) of the Internal Security Act of 1950 (50 U.S.C. 783(b)), or section 38 of the Arms Export Control Act (22 U.S.C. 2778).'' 15 CFR 766.25(a); *see also* Section 11(h) of the EAA, 50 U.S.C. 4610(h). The denial of export privileges under this provision may be for a period of up to 10 years from the date of the conviction. 15 CFR 766.25(d); *see also* 50 U.S.C. 4610(h). In addition, Section 750.8 of the Regulations states that the Bureau of Industry and Security's Office of Exporter Services may revoke any Bureau of Industry and Security (''BIS'') licenses previously issued in which the person had an interest in at the time of his conviction.

BIS has received notice of Santana's conviction for violating the AECA, and has provided notice and an opportunity for Santana to make a written submission to BIS, as provided in Section 766.25 of the Regulations. BIS has not received a submission from Santana.

Based upon my review and consultations with BIS's Office of Export Enforcement, including its Director, and the facts available to BIS, I have decided to deny Santana's export privileges under the Regulations for a period of 10 years from the date of Santana's conviction. I have also decided to revoke all licenses issued pursuant to the Act or Regulations in which Santana had an interest at the time of his conviction.

Accordingly, it is hereby ordered:

First, from the date of this Order until May 5, 2024, Jorge Santana, Jr., with a last known address of Inmate Number: 00927–180, FCI Beaumont Low, Federal Correctional Institution, P.O. Box 26020, Beaumont, TX 77720, and when acting for or on his behalf, his successors, assigns, employees, agents or representatives (the ''Denied Person''), may not, directly or indirectly, participate in any way in any transaction involving any commodity, software or technology (hereinafter collectively referred to as ''item'') exported or to be exported from the United States that is subject to the Regulations, including, but not limited to:

A. Applying for, obtaining, or using any license, License Exception, or export control document;

B. Carrying on negotiations concerning, or ordering, buying, receiving, using, selling, delivering, storing, disposing of, forwarding, transporting, financing, or otherwise servicing in any way, any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations; or

C. Benefitting in any way from any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations.

Second, no person may, directly or indirectly, do any of the following:

A. Export or reexport to or on behalf of the Denied Person any item subject to the Regulations;

B. Take any action that facilitates the acquisition or attempted acquisition by the Denied Person of the ownership, possession, or control of any item subject to the Regulations that has been

[1] The Regulations are currently codified in the Code of Federal Regulations at 15 CFR parts 730–774 (2016). The Regulations issued pursuant to the Export Administration Act (50 U.S.C. 4601–4623 (Supp. III 2015) (available at *http://uscode.house.gov*)). Since August 21, 2001, the Act has been in lapse and the President, through Executive Order 13222 of August 17, 2001 (3 CFR, 2001 Comp. 783 (2002)), which has been extended by successive Presidential Notices, the most recent being that of August 4, 2016 (81 FR 52,587 (Aug. 8, 2016)), has continued the Regulations in effect under the International Emergency Economic Powers Act (50 U.S.C. 1701, *et seq.* (2006 & Supp. IV 2010)).

or will be exported from the United States, including financing or other support activities related to a transaction whereby the Denied Person acquires or attempts to acquire such ownership, possession or control;

C. Take any action to acquire from or to facilitate the acquisition or attempted acquisition from the Denied Person of any item subject to the Regulations that has been exported from the United States;

D. Obtain from the Denied Person in the United States any item subject to the Regulations with knowledge or reason to know that the item will be, or is intended to be, exported from the United States; or

E. Engage in any transaction to service any item subject to the Regulations that has been or will be exported from the United States and which is owned, possessed or controlled by the Denied Person, or service any item, of whatever origin, that is owned, possessed or controlled by the Denied Person if such service involves the use of any item subject to the Regulations that has been or will be exported from the United States. For purposes of this paragraph, servicing means installation, maintenance, repair, modification or testing.

Third, after notice and opportunity for comment as provided in Section 766.23 of the Regulations, any other person, firm, corporation, or business organization related to Santana by ownership, control, position of responsibility, affiliation, or other connection in the conduct of trade or business may also be made subject to the provisions of this Order in order to prevent evasion of this Order.

Fourth, in accordance with Part 756 of the Regulations, Santana may file an appeal of this Order with the Under Secretary of Commerce for Industry and Security. The appeal must be filed within 45 days from the date of this Order and must comply with the provisions of Part 756 of the Regulations.

Fifth, a copy of this Order shall be delivered to the Santana. This Order shall be published in the **Federal Register**.

Sixth, this Order is effective immediately and shall remain in effect until May 5, 2024.

Issued this 9th day of November, 2016.

Karen H. Nies-Vogel,

Director, Office of Exporter Services.

[FR Doc. 2016–27784 Filed 11–17–16; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

Submission for OMB Review; Comment Request

The Department of Commerce will submit to the Office of Management and Budget (OMB) for clearance the following proposal for collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. Chapter 35).

Agency: Bureau of Industry and Security.

Title: Foreign Availability Procedures.

Form Number(s): N/A.

OMB Control Number: 0694–0004.

Type of Request: Regular.

Burden Hours: 510.

Number of Respondents: 2.

Average Hours Per Response: 255.

Needs and Uses: This information is collected in order to respond to requests by Congress and industry to make foreign availability determinations in accordance with Section 768 of the Export Administration Regulations. Exporters are urged to voluntarily submit data to support the contention that items controlled for export for national security reasons are available-in-fact, from a non-U.S. source, in sufficient quantity and of comparable quality so as to render the control ineffective.

Affected Public: Businesses and other for-profit institutions.

Frequency: On occasion.

Respondent's Obligation: Voluntary.

OMB Desk Officer: Jasmeet Seehra, FAX number (202) 395–7285.

Copies of the above information collection proposal can be obtained by calling or writing Jennifer Jessup, Departmental Paperwork Clearance Officer, (202) 482–0266, Department of Commerce, Room 7845, 14th and Constitution Avenue NW., Washington, DC 20230 (or via the Internet at *dHynek@doc.gov*).

Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to Jasmeet Seehra, Office of Management and Budget (OMB), by email to *jseehra@omb.eop.gov,* or by fax to (202) 395–7285.

Sheleen Dumas,

PRA Departmental Lead, Office of the Chief Information Officer.

[FR Doc. 2016–27823 Filed 11–17–16; 8:45 am]

BILLING CODE 3510–33–P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

Order Denying Export Privileges

In the Matter of: Hassan Jamil Salame, Inmate Number: 40903–039, FCI Elkton, Federal Correctional Institution, P.O. Box 10, Lisbon, OH 44432

On November 3, 2015, in the U.S. District Court for the District of South Carolina, Hassan Jamil Salame (''Salame''), was convicted of violating Section 38 of the Arms Export Control Act (22 U.S.C. 2778 (2012)) (''AECA''). Specifically, Salame knowingly and willfully attempted to export and caused to be exported, defense articles, that is, firearms and ammunition, including a Ruger .44 Magnum revolver, two Bushmaster .223 caliber rifles, a Ruger .45 caliber pistol, a Glock .45 caliber pistol, and a Beretta 9mm pistol from the United States to Lebanon, without first having obtained a license or written approval from the United States Department of State. Salame was sentenced to 45 months in prison, three years of supervised release, and a $300 assessment.

Section 766.25 of the Export Administration Regulations (''EAR'' or ''Regulations'') [1] provides, in pertinent part, that ''[t]he Director of the Office of Exporter Services, in consultation with the Director of the Office of Export Enforcement, may deny the export privileges of any person who has been convicted of a violation of the Export Administration Act (''EAA''), the EAR, or any order, license or authorization issued thereunder; any regulation, license, or order issued under the International Emergency Economic Powers Act (50 U.S.C. 1701–1706); 18 U.S.C. 793, 794 or 798; section 4(b) of the Internal Security Act of 1950 (50 U.S.C. 783(b)), or section 38 of the Arms Export Control Act (22 U.S.C. 2778).'' 15 CFR 766.25(a); *see also* Section 11(h) of the EAA, 50 U.S.C. 4610(h). The denial of export privileges under this provision may be for a period of up to 10 years from the date of the conviction. 15 CFR 766.25(d); *see also* 50 U.S.C. 4610(h). In

[1] The Regulations are currently codified in the Code of Federal Regulations at 15 CFR parts 730–774 (2016). The Regulations issued pursuant to the Export Administration Act (50 U.S.C. 4601–4623 (Supp. III 2015) (available at *http://uscode.house.gov*)). Since August 21, 2001, the Act has been in lapse and the President, through Executive Order 13222 of August 17, 2001 (3 CFR, 2001 Comp. 783 (2002)), which has been extended by successive Presidential Notices, the most recent being that of August 4, 2016 (81 FR 52587 (Aug. 8, 2016)), has continued the Regulations in effect under the International Emergency Economic Powers Act (50 U.S.C. 1701, *et seq.* (2006 & Supp. IV 2010)).

addition, Section 750.8 of the Regulations states that the Bureau of Industry and Security's Office of Exporter Services may revoke any Bureau of Industry and Security (''BIS'') licenses previously issued in which the person had an interest in at the time of his conviction.

BIS has received notice of Salame's conviction for violating the AECA, and has provided notice and an opportunity for Salame to make a written submission to BIS, as provided in Section 766.25 of the Regulations. BIS has not received a submission from Salame.

Based upon my review and consultations with BIS's Office of Export Enforcement, including its Director, and the facts available to BIS, I have decided to deny Salame's export privileges under the Regulations for a period of 10 years from the date of Salame's conviction. I have also decided to revoke all licenses issued pursuant to the Act or Regulations in which Salame had an interest at the time of his conviction.

Accordingly, it is hereby *ordered*:

First, from the date of this Order until November 3, 2025, Hassan Jamil Salame, with a last known address of Inmate Number: 40903–039, FCI Elkton, Federal Correctional Institution, P.O. Box 10, Lisbon, OH 44432, and when acting for or on his behalf, his successors, assigns, employees, agents or representatives (the ''Denied Person''), may not, directly or indirectly, participate in any way in any transaction involving any commodity, software or technology (hereinafter collectively referred to as ''item'') exported or to be exported from the United States that is subject to the Regulations, including, but not limited to:

A. Applying for, obtaining, or using any license, License Exception, or export control document;

B. Carrying on negotiations concerning, or ordering, buying, receiving, using, selling, delivering, storing, disposing of, forwarding, transporting, financing, or otherwise servicing in any way, any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations; or

C. Benefitting in any way from any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations.

Second, no person may, directly or indirectly, do any of the following:

A. Export or reexport to or on behalf of the Denied Person any item subject to the Regulations;

B. Take any action that facilitates the acquisition or attempted acquisition by the Denied Person of the ownership, possession, or control of any item subject to the Regulations that has been or will be exported from the United States, including financing or other support activities related to a transaction whereby the Denied Person acquires or attempts to acquire such ownership, possession or control;

C. Take any action to acquire from or to facilitate the acquisition or attempted acquisition from the Denied Person of any item subject to the Regulations that has been exported from the United States;

D. Obtain from the Denied Person in the United States any item subject to the Regulations with knowledge or reason to know that the item will be, or is intended to be, exported from the United States; or

E. Engage in any transaction to service any item subject to the Regulations that has been or will be exported from the United States and which is owned, possessed or controlled by the Denied Person, or service any item, of whatever origin, that is owned, possessed or controlled by the Denied Person if such service involves the use of any item subject to the Regulations that has been or will be exported from the United States. For purposes of this paragraph, servicing means installation, maintenance, repair, modification or testing.

Third, after notice and opportunity for comment as provided in Section 766.23 of the Regulations, any other person, firm, corporation, or business organization related to Salame by ownership, control, position of responsibility, affiliation, or other connection in the conduct of trade or business may also be made subject to the provisions of this Order in order to prevent evasion of this Order.

Fourth, in accordance with Part 756 of the Regulations, Salame may file an appeal of this Order with the Under Secretary of Commerce for Industry and Security. The appeal must be filed within 45 days from the date of this Order and must comply with the provisions of Part 756 of the Regulations.

Fifth, a copy of this Order shall be delivered to the Salame. This Order shall be published in the **Federal Register**.

Sixth, this Order is effective immediately and shall remain in effect until November 3, 2025.

Dated: November 9, 2016.

Karen H. Nies-Vogel,

Director, Office of Exporter Services.

[FR Doc. 2016–27776 Filed 11–17–16; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

Order Denying Export Privileges

In the Matter of: Daniel Miranda-Mendoza, Inmate Number: 73420–379, Great Plains, Correctional Institution, P.O. Box 400, Hinton, OK 73047

On August 25, 2015, in the U.S. District Court for the Southern District of Texas, Daniel Miranda-Mendoza (''Miranda-Mendoza''), was convicted of violating Section 38 of the Arms Export Control Act (22 U.S.C. 2778 (2012)) (''AECA''). Specifically, Miranda-Mendoza intentionally and knowingly conspired to knowingly and willfully export, attempt to export, and caused to be exported from the United States to Mexico, a defense article, that is, to wit: Approximately one Kel-Tec pistol, Model PMR–30, .22 caliber, one Remington rifle, Model 7400, .30–06 caliber, and one Browning rifle, Model X-bolt, .270 caliber, which were designated as defense articles on the United States Munitions List, without having first obtained from the Department of State a license for such export or written authorization for such export. Miranda-Mendoza was sentenced to 37 months in prison and a $100 assessment.

Section 766.25 of the Export Administration Regulations (''EAR'' or ''Regulations'') [1] provides, in pertinent part, that ''[t]he Director of the Office of Exporter Services, in consultation with the Director of the Office of Export Enforcement, may deny the export privileges of any person who has been convicted of a violation of the Export Administration Act (''EAA''), the EAR, or any order, license or authorization issued thereunder; any regulation, license, or order issued under the International Emergency Economic

[1] The Regulations are currently codified in the Code of Federal Regulations at 15 CFR parts 730–774 (2016). The Regulations issued pursuant to the Export Administration Act (50 U.S.C. 4601–4623 (Supp. III 2015) (available at *http://uscode.house.gov*)). Since August 21, 2001, the Act has been in lapse and the President, through Executive Order 13222 of August 17, 2001 (3 CFR, 2001 Comp. 783 (2002)), which has been extended by successive Presidential Notices, the most recent being that of August 4, 2016 (81 FR 52,587 (Aug. 8, 2016)), has continued the Regulations in effect under the International Emergency Economic Powers Act (50 U.S.C. 1701, *et seq.* (2006 & Supp. IV 2010)).

Powers Act (50 U.S.C. 1701–1706); 18 U.S.C. 793, 794 or 798; section 4(b) of the Internal Security Act of 1950 (50 U.S.C. 783(b)), or section 38 of the Arms Export Control Act (22 U.S.C. 2778).'' 15 CFR 766.25(a); *see also* Section 11(h) of the EAA, 50 U.S.C. 4610(h). The denial of export privileges under this provision may be for a period of up to 10 years from the date of the conviction. 15 CFR 766.25(d); *see also* 50 U.S.C. 4610(h). In addition, Section 750.8 of the Regulations states that the Bureau of Industry and Security's Office of Exporter Services may revoke any Bureau of Industry and Security (''BIS'') licenses previously issued in which the person had an interest in at the time of his conviction.

BIS has received notice of Miranda-Mendoza's conviction for violating the AECA, and has provided notice and an opportunity for Miranda-Mendoza to make a written submission to BIS, as provided in Section 766.25 of the Regulations. BIS has not received a submission from Miranda-Mendoza.

Based upon my review and consultations with BIS's Office of Export Enforcement, including its Director, and the facts available to BIS, I have decided to deny Miranda-Mendoza's export privileges under the Regulations for a period of 10 years from the date of Miranda-Mendoza's conviction. I have also decided to revoke all licenses issued pursuant to the Act or Regulations in which Miranda-Mendoza had an interest at the time of his conviction.

Accordingly, it is hereby *ordered:*

First, from the date of this Order until August 25, 2025, Daniel Miranda-Mendoza, with a last known address of Inmate Number: 73420–379, Great Plains, Correctional Institution, P.O. Box 400, Hinton, OK 73047, and when acting for or on his behalf, his successors, assigns, employees, agents or representatives (the ''Denied Person''), may not, directly or indirectly, participate in any way in any transaction involving any commodity, software or technology (hereinafter collectively referred to as ''item'') exported or to be exported from the United States that is subject to the Regulations, including, but not limited to:

A. Applying for, obtaining, or using any license, License Exception, or export control document;

B. Carrying on negotiations concerning, or ordering, buying, receiving, using, selling, delivering, storing, disposing of, forwarding, transporting, financing, or otherwise servicing in any way, any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations; or

C. Benefitting in any way from any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations.

Second, no person may, directly or indirectly, do any of the following:

A. Export or reexport to or on behalf of the Denied Person any item subject to the Regulations;

B. Take any action that facilitates the acquisition or attempted acquisition by the Denied Person of the ownership, possession, or control of any item subject to the Regulations that has been or will be exported from the United States, including financing or other support activities related to a transaction whereby the Denied Person acquires or attempts to acquire such ownership, possession or control;

C. Take any action to acquire from or to facilitate the acquisition or attempted acquisition from the Denied Person of any item subject to the Regulations that has been exported from the United States;

D. Obtain from the Denied Person in the United States any item subject to the Regulations with knowledge or reason to know that the item will be, or is intended to be, exported from the United States; or

E. Engage in any transaction to service any item subject to the Regulations that has been or will be exported from the United States and which is owned, possessed or controlled by the Denied Person, or service any item, of whatever origin, that is owned, possessed or controlled by the Denied Person if such service involves the use of any item subject to the Regulations that has been or will be exported from the United States. For purposes of this paragraph, servicing means installation, maintenance, repair, modification or testing.

Third, after notice and opportunity for comment as provided in Section 766.23 of the Regulations, any other person, firm, corporation, or business organization related to Miranda-Mendoza by ownership, control, position of responsibility, affiliation, or other connection in the conduct of trade or business may also be made subject to the provisions of this Order in order to prevent evasion of this Order.

Fourth, in accordance with Part 756 of the Regulations, Miranda-Mendoza may file an appeal of this Order with the Under Secretary of Commerce for Industry and Security. The appeal must be filed within 45 days from the date of this Order and must comply with the provisions of Part 756 of the Regulations.

Fifth, a copy of this Order shall be delivered to the Miranda-Mendoza. This Order shall be published in the **Federal Register**.

Sixth, this Order is effective immediately and shall remain in effect until August 25, 2025.

Issued this __9____d day of ____ November________, 2016.

Karen H. Nies-Vogel,

Director, Office of Exporter Services.

[FR Doc. 2016–27787 Filed 11–17–16; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

Order Denying Export Privileges

In the Matter of: Javier Nenos Rea, Inmate Number: 06713–104, D. Ray James, Correctional Institution, P.O. Box 2000, Folkston, GA 31537

On January 13, 2015, in the U.S. District Court for the Southern District of Florida, Javier Nenos Rea (''Nenos Rea''), was convicted of violating Section 38 of the Arms Export Control Act (22 U.S.C. 2778 (2012)) (''AECA''). Specifically, Nenos Rea knowingly and willfully attempted to export defense articles, that is, AK–47 assault rifles and a .40 caliber semi-automatic pistol, from the United States to Bolivia without having first obtained a license or written approval from the United States Department of State. Nenos Rea was sentenced to 46 months in prison, two years of supervised release, and a $100 assessment.

Section 766.25 of the Export Administration Regulations (''EAR'' or ''Regulations'') [1] provides, in pertinent part, that ''[t]he Director of the Office of Exporter Services, in consultation with the Director of the Office of Export Enforcement, may deny the export privileges of any person who has been convicted of a violation of the Export Administration Act (''EAA''), the EAR,

[1] The Regulations are currently codified in the Code of Federal Regulations at 15 CFR parts 730–774 (2016). The Regulations issued pursuant to the Export Administration Act (50 U.S.C. 4601–4623 (Supp. III 2015) (available at *http://uscode.house.gov*)). Since August 21, 2001, the Act has been in lapse and the President, through Executive Order 13222 of August 17, 2001 (3 CFR, 2001 Comp. 783 (2002)), which has been extended by successive Presidential Notices, the most recent being that of August 4, 2016 (81 FR 52587 (Aug. 8, 2016)), has continued the Regulations in effect under the International Emergency Economic Powers Act (50 U.S.C. 1701, *et seq.* (2006 & Supp. IV 2010)).

or any order, license or authorization issued thereunder; any regulation, license, or order issued under the International Emergency Economic Powers Act (50 U.S.C. 1701–1706); 18 U.S.C. 793, 794 or 798; section 4(b) of the Internal Security Act of 1950 (50 U.S.C. 783(b)), or section 38 of the Arms Export Control Act (22 U.S.C. 2778).'' 15 CFR 766.25(a); *see also* Section 11(h) of the EAA, 50 U.S.C. 4610(h). The denial of export privileges under this provision may be for a period of up to 10 years from the date of the conviction. 15 CFR 766.25(d); *see also* 50 U.S.C. 4610(h). In addition, Section 750.8 of the Regulations states that the Bureau of Industry and Security's Office of Exporter Services may revoke any Bureau of Industry and Security (''BIS'') licenses previously issued in which the person had an interest in at the time of his conviction.

BIS has received notice of Nenos Rea's conviction for violating the AECA, and has provided notice and an opportunity for Nenos Rea to make a written submission to BIS, as provided in Section 766.25 of the Regulations. BIS has not received a submission from Nenos Rea.

Based upon my review and consultations with BIS's Office of Export Enforcement, including its Director, and the facts available to BIS, I have decided to deny Nenos Rea's export privileges under the Regulations for a period of 10 years from the date of Nenos Rea's conviction. I have also decided to revoke all licenses issued pursuant to the Act or Regulations in which Nenos Rea had an interest at the time of his conviction.

Accordingly, it is hereby *ordered:*

First, from the date of this Order until January 13, 2025, Javier Nenos Rea, with a last known address of Inmate Number: 06713–104, D. Ray James, Correctional Institution, P.O. Box 2000, Folkston, GA 31537, and when acting for or on his behalf, his successors, assigns, employees, agents or representatives (the ''Denied Person''), may not, directly or indirectly, participate in any way in any transaction involving any commodity, software or technology (hereinafter collectively referred to as ''item'') exported or to be exported from the United States that is subject to the Regulations, including, but not limited to:

A. Applying for, obtaining, or using any license, License Exception, or export control document;

B. Carrying on negotiations concerning, or ordering, buying, receiving, using, selling, delivering, storing, disposing of, forwarding, transporting, financing, or otherwise servicing in any way, any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations; or

C. Benefitting in any way from any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations.

Second, no person may, directly or indirectly, do any of the following:

A. Export or reexport to or on behalf of the Denied Person any item subject to the Regulations;

B. Take any action that facilitates the acquisition or attempted acquisition by the Denied Person of the ownership, possession, or control of any item subject to the Regulations that has been or will be exported from the United States, including financing or other support activities related to a transaction whereby the Denied Person acquires or attempts to acquire such ownership, possession or control;

C. Take any action to acquire from or to facilitate the acquisition or attempted acquisition from the Denied Person of any item subject to the Regulations that has been exported from the United States;

D. Obtain from the Denied Person in the United States any item subject to the Regulations with knowledge or reason to know that the item will be, or is intended to be, exported from the United States; or

E. Engage in any transaction to service any item subject to the Regulations that has been or will be exported from the United States and which is owned, possessed or controlled by the Denied Person, or service any item, of whatever origin, that is owned, possessed or controlled by the Denied Person if such service involves the use of any item subject to the Regulations that has been or will be exported from the United States. For purposes of this paragraph, servicing means installation, maintenance, repair, modification or testing.

Third, after notice and opportunity for comment as provided in Section 766.23 of the Regulations, any other person, firm, corporation, or business organization related to Nenos Rea by ownership, control, position of responsibility, affiliation, or other connection in the conduct of trade or business may also be made subject to the provisions of this Order in order to prevent evasion of this Order.

Fourth, in accordance with Part 756 of the Regulations, Nenos Rea may file an appeal of this Order with the Under Secretary of Commerce for Industry and Security. The appeal must be filed within 45 days from the date of this Order and must comply with the provisions of Part 756 of the Regulations.

Fifth, a copy of this Order shall be delivered to the Nenos Rea. This Order shall be published in the **Federal Register**.

Sixth, this Order is effective immediately and shall remain in effect until January 13, 2025.

Issued this ____9____ day of ____ November ____, 2016.

Karen H. Nies-Vogel,

Director, Office of Exporter Services.

[FR Doc. 2016–27786 Filed 11–17–16; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

Proposed Information Collection; Comment Request; Voluntary Self-Disclosure of Violations of the Export Administration Regulations

AGENCY: Bureau of Industry and Security.

ACTION: Notice.

SUMMARY: The Department of Commerce, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995.

DATES: Written comments must be submitted on or before January 17, 2017.

ADDRESSES: Direct all written comments to Jennifer Jessup, Departmental Paperwork Clearance Officer, Department of Commerce, Room 6616, 14th and Constitution Avenue NW., Washington, DC 20230 (or via the Internet at *JJessup@doc.gov*).

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the information collection instrument and instructions should be directed to Mark Crace, BIS ICB Liaison, (202) 482–4895, *Mark.Crace@bis.doc.gov.*

SUPPLEMENTARY INFORMATION:

I. Abstract

This collection of information is needed to detect violations of the Export Administration Act and Regulations, and determine if an investigation or prosecution is necessary and to reach a settlement with violators. Voluntary self-disclosure of EAR violations strengthens BIS's enforcement efforts by allowing BIS to conduct investigations of the disclosed incidents faster than would be the case if BIS had to detect the violations without such disclosures. BIS evaluates the seriousness of the violation and either (1) Informs the person making the is closure that no action is warranted; (2) issues a warning letter; (3) issues a proposed charging letter and attempts to settle the matter; (4) issues a charging letter if settlement is not reached; and/or (5) refers the matter to the U.S. Department of Justice for criminal prosecution.

II. Method of Collection

Submitted on paper.

III. Data

OMB Control Number: 0694–0058.

Form Number(s): N/A.

Type of Review: Regular submission.

Affected Public: Business or other for-profit organizations.

Estimated Number of Respondents: 388.

Estimated Time per Response: 10 hours.

Estimated Total Annual Burden Hours: 3880.

Estimated Total Annual Cost to Public: $194,000.

IV. Request for Comments

Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden (including hours and cost) of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval of this information collection; they also will become a matter of public record.

Sheleen Dumas,

PRA Departmental Lead, Office of the Chief Information Officer.

[FR Doc. 2016–27824 Filed 11–17–16; 8:45 am]

BILLING CODE 3510–33–P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

Order Denying Export Privileges

In the Matter of: Julio Cesar Solis-Castilleja, Inmate Number: 56152–379, FCI Victorville Medium I, Federal Correctional Institution, Correctional Institution, P.O. Box 3725, Adelanto, CA 92301.

On June 30, 2014, in the U.S. District Court for the Southern District of Texas, Julio Cesar Solis-Castilleja (''Solis-Castilleja''), was convicted of violating Section 38 of the Arms Export Control Act (22 U.S.C. 2778 (2012)) (''AECA''). Specifically, Solis-Castilleja knowingly and willfully attempted to export and caused to be exported from the United States to Mexico a defense article, that is, a Norinco MAK 90 Sporter 7.62 × 39mm caliber rifle, a Bushmaster .308 caliber rifle, a DPMS Panther .308 caliber rifle, a FN Herstal .308 caliber rifle, a PTR 91C .308 caliber rifle, four (4) 7.62 × 51mm magazines, and one (1) 7.62 × 39mm magazine, which were designated as a defense article on the United States Munitions List, without having first obtained from the Department of State a license for such export or written authorization for such export. Solis-Castilleja was sentenced to 46 months in prison, three years of supervised release, and a $100 assessment.

Section 766.25 of the Export Administration Regulations (''EAR'' or ''Regulations'')[1] provides, in pertinent part, that ''[t]he Director of the Office of Exporter Services, in consultation with the Director of the Office of Export Enforcement, may deny the export privileges of any person who has been convicted of a violation of the Export Administration Act (''EAA''), the EAR, or any order, license or authorization issued thereunder; any regulation, license, or order issued under the International Emergency Economic Powers Act (50 U.S.C. 1701–1706); 18 U.S.C. 793, 794 or 798; section 4(b) of the Internal Security Act of 1950 (50 U.S.C. 783(b)), or section 38 of the Arms Export Control Act (22 U.S.C. 2778).'' 15 CFR 766.25(a); *see also* Section 11(h) of the EAA, 50 U.S.C. 4610(h). The denial of export privileges under this provision may be for a period of up to 10 years from the date of the conviction. 15 CFR 766.25(d); *see also* 50 U.S.C. 4610(h). In addition, Section 750.8 of the Regulations states that the Bureau of Industry and Security's Office of Exporter Services may revoke any Bureau of Industry and Security (''BIS'') licenses previously issued in which the person had an interest in at the time of his conviction.

BIS has received notice of Solis-Castilleja's conviction for violating the AECA, and has provided notice and an opportunity for Solis-Castilleja to make a written submission to BIS, as provided in Section 766.25 of the Regulations. BIS has not received a submission from Solis-Castilleja.

Based upon my review and consultations with BIS's Office of Export Enforcement, including its Director, and the facts available to BIS, I have decided to deny Solis-Castilleja's export privileges under the Regulations for a period of 10 years from the date of Solis-Castilleja's conviction. I have also decided to revoke all licenses issued pursuant to the Act or Regulations in which Solis-Castilleja had an interest at the time of his conviction.

Accordingly, it is hereby ordered:

First, from the date of this Order until June 30, 2024, Julio Cesar Solis-Castilleja, with a last known address of Inmate Number: 56152–379, FCI Victorville Medium I, Federal Correctional Institution, P.O. Box 3725, Adelanto,CA 92301, and when acting for or on his behalf, his successors, assigns, employees, agents or representatives (the ''Denied Person''), may not, directly or indirectly, participate in any way in any transaction involving any commodity, software or technology (hereinafter collectively referred to as ''item'') exported or to be exported from the United States that is subject to the Regulations, including, but not limited to:

A. Applying for, obtaining, or using any license, License Exception, or export control document;

B. Carrying on negotiations concerning, or ordering, buying, receiving, using, selling, delivering, storing, disposing of, forwarding, transporting, financing, or otherwise servicing in any way, any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations; or

---

[1] The Regulations are currently codified in the Code of Federal Regulations at 15 CFR parts 730–774 (2016). The Regulations issued pursuant to the Export Administration Act (50 U.S.C. 4601–4623 (Supp. III 2015) (available at *http://uscode.house.gov*)). Since August 21, 2001, the Act has been in lapse and the President, through Executive Order 13222 of August 17, 2001 (3 CFR, 2001 Comp. 783 (2002)), which has been extended by successive Presidential Notices, the most recent being that of August 4, 2016 (81 FR 52,587 (Aug. 8, 2016)), has continued the Regulations in effect under the International Emergency Economic Powers Act (50 U.S.C. 1701, *et seq.* (2006 & Supp. IV 2010)).

C. Benefitting in any way from any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations.

Second, no person may, directly or indirectly, do any of the following:

A. Export or reexport to or on behalf of the Denied Person any item subject to the Regulations;

B. Take any action that facilitates the acquisition or attempted acquisition by the Denied Person of the ownership, possession, or control of any item subject to the Regulations that has been or will be exported from the United States, including financing or other support activities related to a transaction whereby the Denied Person acquires or attempts to acquire such ownership, possession or control;

C. Take any action to acquire from or to facilitate the acquisition or attempted acquisition from the Denied Person of any item subject to the Regulations that has been exported from the United States;

D. Obtain from the Denied Person in the United States any item subject to the Regulations with knowledge or reason to know that the item will be, or is intended to be, exported from the United States; or

E. Engage in any transaction to service any item subject to the Regulations that has been or will be exported from the United States and which is owned, possessed or controlled by the Denied Person, or service any item, of whatever origin, that is owned, possessed or controlled by the Denied Person if such service involves the use of any item subject to the Regulations that has been or will be exported from the United States. For purposes of this paragraph, servicing means installation, maintenance, repair, modification or testing.

Third, after notice and opportunity for comment as provided in Section 766.23 of the Regulations, any other person, firm, corporation, or business organization related to Solis-Castilleja by ownership, control, position of responsibility, affiliation, or other connection in the conduct of trade or business may also be made subject to the provisions of this Order in order to prevent evasion of this Order.

Fourth, in accordance with Part 756 of the Regulations, Solis-Castilleja may file an appeal of this Order with the Under Secretary of Commerce for Industry and Security. The appeal must be filed within 45 days from the date of this Order and must comply with the provisions of Part 756 of the Regulations.

Fifth, a copy of this Order shall be delivered to the Solis-Castilleja. This Order shall be published in the **Federal Register**.

Sixth, this Order is effective immediately and shall remain in effect until June 30, 2024.

Issued this 9th day of November, 2016.

Karen H. Nies-Vogel,

Director, Office of Exporter Services.

[FR Doc. 2016–27785 Filed 11–17–16; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

International Trade Administration

[A–821–801]

Solid Urea From Russia: Final Results of Antidumping Duty Administrative and New Shipper Reviews; 2014–2015

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

SUMMARY: On August 12, 2016, the Department of Commerce (the Department) published the preliminary results of the administrative review and new shipper review of the antidumping duty order on solid urea from Russia. The period of review (POR) is July 1, 2014, through June 30, 2015. For the final results of these reviews, we continue to find that subject merchandise has not been sold at less than normal value.

DATES: Effective November 18, 2016.

FOR FURTHER INFORMATION CONTACT: Michael A. Romani or Andre Gziryan, AD/CVD Operations, Office I, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482–0198, and (202) 482–2201, respectively.

SUPPLEMENTARY INFORMATION:

Background

On August 12, 2016, the Department published the *Preliminary Results* of the administrative review and new shipper review of the antidumping duty order on solid urea from Russia.[1] The administrative review covers MCC EuroChem; the new shipper review covers Joint Stock Company PhosAgro-Cherepovets (PhosAgro). The Department gave interested parties an opportunity to comment on the *Preliminary Results.* We received no comments. The Department conducted these reviews in accordance with section 751(a)(2) of the Tariff Act of 1930, as amended (the Act).

Scope of the Order

The merchandise subject to the order is solid urea, a high-nitrogen content fertilizer which is produced by reacting ammonia with carbon dioxide. The product is currently classified under the Harmonized Tariff Schedules of the United States (HTSUS) item number 3102.10.0010. Previously such merchandise was classified under item number 480.3000 and 3102.10.0000 of the HTSUS. Although the HTSUS subheading is provided for convenience and customs purposes, the written description of the merchandise subject to the order is dispositive.

Final Results of the Administrative Review

The Department made no changes to its calculations announced in the *Preliminary Results.* As a result of this administrative review, we determine that an estimated weighted-average dumping margin of 0.00 percent exists for MCC EuroChem for the period July 1, 2014, through June 30, 2015.

Final Results of the New Shipper Review

The Department made no changes to its calculations announced in the *Preliminary Results.* As a result of this new shipper review, we determine that an estimated weighted-average dumping margin of 0.00 percent exists for merchandise produced and exported by PhosAgro for the period July 1, 2014, through June 30, 2015.

Assessment

In accordance with 19 CFR 351.212 and the *Final Modification,*[2] the Department will instruct U.S. Customs and Border Protection (CBP) to liquidate all appropriate entries for MCC EuroChem and PhosAgro without regard to antidumping duties.

For entries of subject merchandise during the period of review produced by MCC EuroChem and PhosAgro for which they did not know their merchandise was destined for the United States, we will instruct CBP to liquidate unreviewed entries at the all-others rate if there is no rate for the

---

[1] *See Solid Urea from the Russian Federation: Preliminary Results of Antidumping Duty Administrative and New Shipper Reviews and Rescission of Administrative Review, in Part; 2014–2015,* 81 FR 53414 (August 12, 2016) (*Preliminary Results*).

[2] *See Antidumping Proceedings: Calculation of the Weighted-Average Dumping Margin and Assessment Rate in Certain Antidumping Duty Proceedings; Final Modification,* 77 FR 8101, 8102 (February 14, 2012) (*Final Modification*).

intermediate company(ies) involved in the transaction.[3]

We intend to issue instructions to CBP 15 days after publication of the final results of this review.

Cash Deposit Requirements

The following cash deposit requirements will be effective upon publication of the notice of final results of the administrative and new shipper reviews for all shipments of solid urea from Russia entered, or withdrawn from warehouse, for consumption on or after the date of publication as provided by section 751(a)(2) of the Act: (1) The cash deposit rate with respect to the administrative review respondent, MCC EuroChem, will be 0.00 percent, the weighted average dumping margin established in the final results of the administrative review; (2) for merchandise exported by manufacturers or exporters not covered in this administrative review but covered in a prior segment of the proceeding, the cash deposit rate will continue to be the company-specific rate published for the most recently completed segment of this proceeding in which that manufacturer or exporter participated; (3) if the exporter is not a firm covered in this administrative review, a prior review, or the original investigation, but the manufacturer is, the cash deposit rate will be the rate established for the most recently completed segment of this proceeding for the manufacturer of subject merchandise; and (4) the cash deposit rate for all other manufacturers or exporters will continue to be 64.93 percent, the all-others rate established in the original less-than-fair-value investigation.[4]

With respect to PhosAgro, the new shipper respondent, the Department established a combination cash deposit rate for this company, consistent with its practice, as follows: (1) For subject merchandise produced and exported by PhosAgro, the cash deposit rate will be 0.00 percent; (2) for subject merchandise exported by PhosAgro, but not produced by PhosAgro, the cash deposit rate will be the rate for the all-others established in the less-than-fair-value investigation; and (3) for subject merchandise produced by PhosAgro but not exported by PhosAgro, the cash deposit rate will be the rate applicable to the exporter.

These cash deposit requirements, when imposed, shall remain in effect until further notice.

Notification to Importers

This notice serves as a final reminder to importers of their responsibility under 19 CFR 351.402(f)(2) to file a certificate regarding the reimbursement of antidumping duties prior to liquidation of the relevant entries during this review period. Failure to comply with this requirement could result in the Secretary's presumption that reimbursement of antidumping duties occurred and the subsequent assessment of double antidumping duties.

Notification Regarding Administrative Protective Orders

This notice also serves as a reminder to parties subject to administrative protective order (APO) of their responsibility concerning the destruction of proprietary information disclosed under APO in accordance with 19 CFR 351.305(a)(3). Timely written notification of the return or destruction of APO materials or conversion to judicial protective order is hereby requested. Failure to comply with the regulations and terms of an APO is a sanctionable violation.

We are issuing and publishing these results of administrative and new shipper reviews in accordance with sections 751(a)(1) 751(a)(2)(B)(iii), 751(a)(3)and 777(i)(1) of the Act and 19 CFR 351.213(h), 351.214 and 351.221(b)(5).

Dated: November 14, 2016.

Paul Piquado,

Assistant Secretary for Enforcement and Compliance.

[FR Doc. 2016–27819 Filed 11–17–16; 8:45 am]

BILLING CODE 3510–DS–P

[3] *See Antidumping and Countervailing Duty Proceedings: Assessment of Antidumping Duties,* 68 FR 23954 (May 6, 2003).

[4] *See Urea From the Union of Soviet Socialist Republics; Final Determination of Sales at Less Than Fair Value,* 52 FR 19557 (May 26, 1987). Also note that following the break-up of the Soviet Union, the antidumping duty order on solid urea from the Soviet Union was transferred to the individual members of the Commonwealth of Independent States. *See Solid Urea From the Union of Soviet Socialist Republics; Transfer of the Antidumping Order on Solid Urea From the Union of Soviet Socialist Republics to the Commonwealth of Independent States and the Baltic States and Opportunity to Comment,* 57 FR 28828 (June 29, 1992).

DEPARTMENT OF COMMERCE

Submission for OMB Review; Proposed Information Collection; Comment Request; Limited Access Death Master File Accredited Conformity Assessment Body Application for Firewalled Status

The Department of Commerce will submit to the Office of Management and Budget (OMB) for clearance the following proposal for collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. Chapter 35).

Agency: National Technical Information Service (NTIS), Commerce.

Title: Limited Access Death Master File Accredited Conformity Assessment Body Application for Firewalled Status (Firewalled Status Application Form).

OMB Control Number: [0692–XXXX].

Form Number(s): NTIS FM101.

Type of Request: New information collection.

Number of Respondents: NTIS expects to receive approximately 560 applications and renewals for certification every year for access to the Limited Access Death Master File, of which it expects that approximately 20% of the required assessments will be provided by Accredited Conformity Assessment Bodies that will seek firewalled status in a given year. Accordingly, NTIS estimates that it will receive approximately 112 Firewalled Status Application Forms.

Average Hours Per Response: 1 hour.

Burden Hours: 112 (112 × 1 hour = 112)

Needs and Uses: NTIS issued a final rule establishing a program through which persons may become eligible to obtain access to Death Master File (DMF) information about an individual within three years of that individual's death. The final rule was promulgated under Section 203 of the Bipartisan Budget Act of 2013, Pub. L. 113–67 (Act). The Act prohibits the Secretary of Commerce (Secretary) from disclosing DMF information during the three-year period following an individual's death (Limited Access DMF), unless the person requesting the information has been certified to access the Limited Access DMF pursuant to certain criteria in a program that the Secretary establishes. The Secretary delegated the authority to carry out Section 203 to the Director of NTIS.

The final rule requires that, in order to become certified, a Person or Certified Person must submit a written attestation from an ''Accredited Conformity Assessment Body'' (ACAB), as defined in the final rule, that such Person has information security systems, facilities and procedures in place to protect the security of the Limited Access DMF, as required under Section 1110.102(a)(2) of the final rule. A Certified Person also must provide a new written attestation periodically for renewal of its certification as specified in the final rule. The ACAB must be independent of the Person or Certified Person seeking certification, unless it is a third party conformity assessment body which qualifies for ''firewalled status'' pursuant to Section 1110.502 of the final rule.

The Firewalled Status Application Form collects information that NTIS will use to evaluate whether the respondent qualifies for ''firewalled status'' under the rule, and, therefore, can provide a written attestation in lieu of an independent ACAB's attestation. This information includes specific requirements of Section 1110.502(b) of the final rule, which the respondent ACAB must certify are satisfied, and the provision of specific information by the respondent ACAB, such as the identity of the Person or Certified Person that would be the subject of the attestation and the basis upon which the certifications were made.

Affected Public: ACABs seeking firewalled status under 15 CFR 1110.502 because they are ''owned, managed or controlled'' by the Person or Certified Person for whom they are providing assessment(s) and/or audit(s) under the final rule for ''Certification Program for Access to the Death Master File.''

Frequency: Once per attestation.

Respondent's Obligation: Voluntary.

This information collection request may be viewed at reginfo.gov. Follow the instructions to view Department of Commerce collections currently under review by OMB.

Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to *OIRA_Submission@omb.eop.gov* or fax to (202) 395–5806.

Sheleen Dumas,

PRA Departmental Lead, Office of the Chief Information Officer.

[FR Doc. 2016–27822 Filed 11–17–16; 8:45 am]

BILLING CODE 3510–13–P

DEPARTMENT OF COMMERCE

National Technical Information Service

Proposed Information Collection; Comment Request; Limited Access Death Master File Systems Safeguards Attestation Forms

AGENCY: National Technical Information Service (NTIS), Commerce.

ACTION: Notice.

SUMMARY: The Department of Commerce, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995. The purpose of this notice is to allow for 60 days of public comment.

DATES: Written comments must be submitted on or before January 17, 2017.

ADDRESSES: Direct all written comments to Jennifer Jessup, Departmental Paperwork Clearance Officer, Department of Commerce, Room 6616, 14th and Constitution Avenue NW., Washington, DC 20230 (or via the Internet at *JJessup@doc.gov*).

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the information collection instrument and instructions should be directed to John W. Hounsell, Business and Industry Specialist, Office of Product and Program Management, National Technical Information Service, Department of Commerce, 5301 Shawnee Road, Alexandria, VA 22312, email: *jhounsell@ntis.gov* or telephone: 703–605–6184.

SUPPLEMENTARY INFORMATION:

I. Abstract

This notice informs the public that the National Technical Information Service (NTIS) is requesting approval of a new information collection described in Section II for use in connection with the final rule for the ''Certification Program for Access to the Death Master File.'' The final rule was published on June 1, 2016 (81 FR 34882), with the rule to become effective on November 28, 2016. The new information collection described in Section II, if approved, will become effective on the effective date of the final rule.

II. Method of Collection

Title of Information Collection

(A) ''Limited Access Death Master File (LADMF) Accredited Conformity Assessment Body Systems Safeguards Attestation Form'' (ACAB Systems Safeguards Attestation Form)

(B) ''Limited Access Death Master File (LADMF) State or Local Government Auditor General (AG) or Inspector General (IG) Systems Safeguards Attestation Form'' (AG or IG Systems Safeguards Attestation Form)

Description of the need for the information and the proposed use: NTIS issued a final rule establishing a program through which persons may become eligible to obtain access to Death Master File (DMF) information about an individual within three years of that individual's death. The final rule was promulgated under Section 203 of the Bipartisan Budget Act of 2013, Public Law 113–67 (Act). The Act prohibits the Secretary of Commerce (Secretary) from disclosing DMF information during the three-year period following an individual's death (Limited Access DMF), unless the person requesting the information has been certified to access the Limited Access DMF pursuant to certain criteria in a program that the Secretary establishes. The Secretary delegated the authority to carry out Section 203 to the Director of NTIS.

On December 30, 2014, NTIS initially described a ''Limited Access Death Master File Systems Safeguards Attestation Form'' in the notice of proposed rulemaking (79 FR 78314 at 78321). To accommodate the requirements of the final rule, NTIS is using both the ACAB Systems Safeguards Attestation Form and the AG or IG Systems Safeguards Attestation Form.

The ACAB Systems Safeguards Attestation Form requires an ''Accredited Conformity Assessment Body'' (ACAB), as defined in the final rule, to attest that a Person seeking certification or a Certified Person seeking renewal of certification has information security systems, facilities and procedures in place to protect the security of the Limited Access DMF, as required under Section 1110.102(a)(2) of the final rule. The ACAB Systems Safeguards Attestation Form collects information based on an assessment by the ACAB conducted within three years prior to the date of the Person or Certified Person's submission of a completed certification statement under Section 1110.101(a) of the final rule. This collection includes specific requirements of the final rule, which the ACAB must certify are satisfied, and the provision of specific information by the ACAB, such as the date of the assessment and the auditing standard(s) used for the assessment.

Section 1110.501(a)(2) of the final rule provides that a state or local government office of AG or IG and a Person or Certified Person that is a department or agency of the same state or local government, respectively, are not considered to be owned by a common ''parent'' entity under Section 1110.501(a)(1)(ii) for the purpose of determining independence, and attestation by the AG or IG is possible. The AG or IG Systems Safeguards Attestation Form is for the use of a state or local government AG or IG to attest on behalf of a state or local government department or agency Person or Certified Person. The AG or IG Systems Safeguards Attestation Form requires the state or local government AG or IG to attest that a Person seeking certification or a Certified Person seeking renewal of certification has information security systems, facilities and procedures in place to protect the security of the Limited Access DMF, as required under Section 1110.102(a)(2) of the final rule. The AG or IG Systems Safeguards Attestation Form collects information based on an assessment by the state or local government AG or IG conducted within three years prior to the date of the Person or Certified Person's submission of a completed certification statement under Section 1110.101(a) of the final rule. This collection includes specific requirements of the final rule, which the state or local government AG or IG must certify are satisfied, and the provision of specific information by the state or local government AG or IG, such as the date of the assessment.

III. Data

OMB Control Number: [*0692–XXXX*].

Form Number(s): NTIS FM100A and NTIS FM100B.

Type of Review: New information collection.

Affected Public: Accredited Conformity Assessment Bodies and state or local government Auditors General or Inspectors General attesting that a Person seeking certification or a Certified Person seeking renewal of certification under the final rule for the ''Certification Program for Access to the Death Master File'' has information security systems, facilities and procedures in place to protect the security of the Limited Access DMF, as required by the final rule.

Estimated Number of Respondents

ACAB Systems Safeguards Attestation Form: NTIS expects to receive approximately 500 ACAB Systems Safeguards Attestation Forms from Persons and Certified Persons annually.

AG or IG Systems Safeguards Attestation Form: NTIS expects to receive approximately 60 AG or IG Systems Safeguards Attestation Forms from Persons and Certified Persons annually.

Estimated Time per Response

ACAB Systems Safeguards Attestation Form: 3 hours.

AG or IG Systems Safeguards Attestation Form: 3 hours.

Estimated Total Annual Burden Hours: 1680.

ACAB Systems Safeguards Attestation Form: 1500 (500 × 3 hours = 1500 hours).

AG or IG Systems Safeguards Attestation Form: 180 (60 × 3 hours = 180 hours).

Estimated Total Annual Cost to Public

ACAB Systems Safeguards Attestation Form: NTIS expects to receive approximately 500 ACAB Systems Safeguards Attestation Forms annually at a fee of $525 per form, for a total cost of $262,500. This total annual cost reflects the cost to the Federal Government for the ACAB Systems Safeguards Attestation Forms, which consists of the expenses associated with NTIS personnel reviewing and processing these forms. NTIS estimates that it will take an ACAB's senior auditor three hours to complete the form at a rate of approximately $135 per hour, for a total additional cost to the public of $202,500 (1500 burden hours × $135/hour = $202,500). NTIS estimates the total annual cost to the public for the ACAB Systems Safeguards forms to be $465,000 ($262,500 in fees + $202,500 in staff time = $465,000).

AG or IG Systems Safeguards Attestation Form: NTIS expects to receive approximately 60 AG or IG Systems Safeguards Attestation Forms annually at a fee of $525 per form, for a total cost of $31,500. This total annual cost reflects the cost to the Federal Government for the AG or IG Systems Safeguards Attestation Forms, which consists of the expenses associated with NTIS personnel reviewing and processing these forms. NTIS estimates that it will take an AG or IG senior auditor three hours to complete the form at a rate of approximately $100 per hour, for a total additional cost to the public of $18,000 (180 burden hours × $100/hour = $18,000). NTIS estimates the total annual cost to the public for AG or IG Systems Safeguards Attestation Forms to be $49,500 ($31,500 in fees + $18,000 in staff time = $49,500).

NTIS estimates the total annual cost to the public for both the ACAB Systems Safeguards Attestation Forms and the AG or IG Systems Safeguards Attestation Forms to be $514,500 ($465,000 for ACAB Systems Safeguards Attestation Forms + $49,500 for AG or IG Systems Safeguards Attestation Forms.

IV. Request for Comments

Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden (including hours and cost) of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval of this information collection; they also will become a matter of public record.

Sheleen Dumas,

PRA Departmental Lead, Office of the Chief Information Officer.

[FR Doc. 2016–27707 Filed 11–17–16; 8:45 am]

BILLING CODE 3510–13–P

DEPARTMENT OF COMMERCE

Patent and Trademark Office

[Docket No.: PTO–P–2016–0046]

Request for Comments and Notice of Public Meeting on a Preliminary Draft Convention on the Recognition and Enforcement of Foreign Judgments Currently Being Negotiated at The Hague Conference on Private International Law

AGENCY: United States Patent and Trademark Office, Department of Commerce.

ACTION: Notice of public meeting; request for comments.

SUMMARY: The Hague Conference on Private International Law (''The Hague Conference''), an international organization in the Netherlands, is sponsoring negotiations for a convention on the recognition and enforcement of foreign judgments in civil and commercial matters. In February 2016, the Council on General Affairs and Policy of The Hague Conference created a Special Commission on the Recognition and Enforcement of Foreign Judgments (''the Special Commission'') to prepare a preliminary draft text of the convention, which is subject to a formal diplomatic negotiation open to member States of The Hague Conference. At its first session in June 2016, the Special Commission produced a Preliminary Draft Convention that contains general and specific provisions that would apply to the recognition and enforcement of judgments arising from transnational intellectual property disputes. The United States Patent and Trademark Office (USPTO) seeks public comments on the June 2016 Preliminary Draft Convention (the ''Preliminary

Draft'') as it relates to intellectual property matters.

To assist the USPTO in determining the best way to address this topic, the USPTO will host a public meeting to obtain public input. The meeting will be open to the public and will provide a forum for discussion of the questions identified in this notice. Written comments in response to the questions set forth in this notice also are requested.

DATES: The public meeting will be held on January 12, 2017, beginning at 1:00 p.m. Eastern Standard Time (EST) and ending at 4:00 p.m. EST.

Public Meeting Registration Deadline: Registration to attend the public meeting in person or via webcast is required by January 5, 2017. Additionally, requests to participate in the public meeting as a speaker must be submitted in writing no later than December 29, 2016. See the ''Event Registration Information'' section of this notice for additional details on how to register and how to request to present as a speaker.

Written Comments: Written comments must be received on or before January 9, 2017.

ADDRESSES:

Event Address: The public meeting will be held in the USPTO Headquarters, Global Intellectual Property Academy (GIPA), Madison Building (East), Second Floor, 600 Dulany Street, Alexandria, Virginia 22314.

Written Comments: Interested parties are encouraged to file written comments electronically by email to *judgmentsproject@uspto.gov.* Comments submitted by email should be machine-searchable and should not be copy-protected. Written comments also may be submitted by mail to the Office of Policy and International Affairs, United States Patent and Trademark Office, Mail Stop International Affairs, P.O. Box 1450, Alexandria, Virginia 22313–1450. Responders should include the name of the person or organization filing the comment, as well as a page number, on each page of their submissions. Paper submissions should also include a CD or DVD containing the submission in MS Word®, WordPerfect®, or pdf format. CDs or DVDs should be labeled with the name and organizational affiliation of the filer, and the name of the word processing program used to create the document. All personally identifiable information (for example, name, address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information. The USPTO will accept anonymous written comments (enter ''N/A'' in the required fields if you wish to remain anonymous).

All comments received are part of the public record and will be available for public inspection without change via the USPTO's Web site at *www.uspto.gov/learning-and-resources/ip-policy/hague-conference-private-international-law* and at the Office of the Director, Policy and International Affairs, located in Madison West, Tenth Floor, 600 Dulany Street, Alexandria, Virginia 22314, upon request. Because comments will be available for public inspection, information that is not desired to be made public, such as name, an address or phone number, etc., should not be included in the written comments.

FOR FURTHER INFORMATION CONTACT: Requests for additional information should be directed to the attention of Michael Shapiro, Senior Counsel, Office of Policy and International Affairs, USPTO, by telephone at 571–272–9300, or by email to *judgmentsproject@uspto.gov.*

SUPPLEMENTARY INFORMATION:

Background

The Hague Conference is sponsoring negotiations for a convention on the recognition and enforcement of foreign judgments. Following preparatory work on the draft convention by a Working Group beginning in 2012, in February 2016, the Council on General Affairs and Policy of The Hague Conference established a Special Commission to prepare a preliminary draft convention on the recognition and enforcement of foreign judgments in civil and commercial matters. The first meeting of the Special Commission took place June 1–9, 2016, at The Hague, Netherlands. The second meeting of the Special Commission is scheduled to take place February 16–24, 2017, at The Hague. The text of the Preliminary Draft produced at the first session of the Special Commission, along with other documents relating to the convention is available at: *https://www.hcch.net/en/projects/legislative-projects/judgments/special-commission1.*

Brief Summary of the Draft Convention

The Preliminary Draft currently contains 16 articles organized into two chapters. Chapter I (Articles 1–3) sets forth the scope and definitions for the draft treaty. Chapter II (Articles 4–16) sets forth the basic rules governing the recognition and enforcement of judgments under the treaty.

Scope, Exclusions From Scope, and Definitions

The Preliminary Draft applies to the recognition and enforcement of judgments in a Contracting State of judgments relating to civil or commercial matters in another Contracting State (Article 1). The term ''judgment'' means any decision on the merits, including determinations of costs or expenses related to such decisions (Article 3). Judgments related to revenue, customs, and administrative matters are excluded from the scope of the Convention (Article 1) as well as more specific subject matter such as family law matters, wills and succession, and insolvency, but judgments related to intellectual property matters (Article 2) are not excluded.

Bases for Recognition and Enforcement

The Preliminary Draft requires that a judgment of a court in a Contracting State (the ''State of origin'') be recognized and enforced in another Contracting State (the ''requested State'') without reviewing its merits (Article 4). Recognition and enforcement, however, may be refused but only under the grounds set forth in the treaty. The Preliminary Draft sets forth the bases for recognition and enforcement of judgments (Article 5).

Of particular importance to the intellectual property community are paragraphs 5(1)(k) and 5(1)(l), which set forth the bases for the recognition and enforcement of judgments for infringements of a patent, trademark, design, or other similar right, and judgments on the validity or infringement of a copyright or a related right, respectively. It should also be noted (subject to Article 6, discussed below), a judgment in such an infringement case might also be enforceable if one of the other bases for recognition and enforcement of the judgment set forth in Article 5 exists (for example, the person against whom recognition or enforcement is sought brought the claim on which the judgment is based) applies.

Exclusive Bases for Recognition and Enforcement

Notwithstanding Article 5, a judgment on the registration or validity of patents, trademarks, designs, or other similar rights that are required to be deposited or registered is eligible for recognition and enforcement in a requested State ''if and only if'' the State of origin is the State where the deposit or registration took place, or is deemed to have taken place under an international or regional instrument (Article 6). Judgments on the validity of copyrights or related rights, however, are not subject to the exclusive jurisdiction rule in Article 6. The Preliminary Draft also lists several bases on which a court of a Contracting State may refuse to recognize and enforce foreign judgments (Article 7).

Preliminary Questions

The Preliminary Draft bars the recognition and enforcement of rulings on the registration or validity of patents, trademarks, and designs, or other similar rights that arose as a preliminary question in courts other than those with exclusive jurisdiction under Article 6 (Article 8(1)). The Explanatory Note Providing Background on the Proposed Draft Text and Identifying Outstanding Issues (Prel. Doc. No. 2) provides the following example of a preliminary question: a ruling on the validity of a patent raised as a defense to an infringement claim (Prel. Doc. No. 2, para. 111). In such instances, however, a court may refuse or postpone the recognition or enforcement of a ruling on validity only (1) where the ruling is inconsistent with a judgment or a decision of a competent authority on the matter or (2) where the proceedings on validity took place in the State with exclusive jurisdiction under Article 6 (Article 8(3)). A court may refuse to recognize a judgment ''if, and to the extent that, it was based on'' a ruling on registration or validity as a preliminary question by in courts other than those with exclusive jurisdiction under Article 6.

Damages and Other Remedies

The Preliminary Draft allows the court of the requested State to refuse recognition and enforcement of judgment awarding damages if and to the extent that those damages (including exemplary or punitive damages) do not compensate a party for actual loss or harm suffered (Article 9). The Preliminary Draft does not expressly address enforcement of judgments for injunctive relief. However, the Explanatory on the Preliminary Draft notes, without expressly mentioning injunctive relief, that ''non-money judgments have been included in the scope of the Proposed Draft Text'' (Prel. Doc. No 2, para. 52).

Questions Posed

The USPTO is seeking comments on the Preliminary Draft as it relates to intellectual property. Interested members of the public are invited to present written comments on any issues they believe to be relevant to protection of intellectual property or any aspect of the proposed Convention as it relates to intellectual property. Comments also are invited on any or all of the questions listed below.

As used in the Preliminary Draft, the term ''intellectual property rights'' includes patents, trademarks, designs, and copyrights or related rights. If your response does not apply to all of these intellectual property rights, please state the specific intellectual property right, or rights, to which your response applies. Other intellectual property rights that are outside the scope of the current text of the Preliminary Draft, such as trade secrets, are identified separately in this notice where appropriate.

With respect to these and any other issues raised by the Preliminary Draft, in your responses, please: (1) Clearly identify the matter being addressed; (2) provide examples where appropriate; (3) identify any relevant legal authorities to support your comment; (4) indicate approaches and provisions that are unacceptable; and (5) express preferences for approaches, effective solutions to specific challenges, and drafting recommendations to address the matter being addressed.

1. What are your experiences in having U.S. judgments involving intellectual property matters recognized and enforced in foreign courts?

2. What are the benefits, if any, of increasing the recognition and enforcement of U.S. judgments involving intellectual property matters in foreign courts through joining a multilateral treaty?

3. What are your experiences in having foreign judgments recognized in U.S. courts, including on the basis of comity or under state statutes?

4. What are the risks, if any, of increasing the recognition and enforcement of foreign judgments involving intellectual property matters by U.S. courts through joining a multilateral treaty?

5. Are uniform rules for international enforcement of intellectual property judgments desirable?

6. What impact, if any, would the territorial nature of intellectual property rights have on enforcing rights across borders?

7. What impact, if any, would differences in procedural practices across borders have on enforcing intellectual property rights across borders?

8. What impact, if any, would differences in substantive law have on enforcing intellectual property rights across borders?

9. Would this convention have any disproportionate effects on a particular technology sector? If so, which ones and how?

10. Please identity problems that could occur from recognizing or enforcing judgments rendered on intellectual property matters in other Contracting States that have policies or laws that are inconsistent with U.S. intellectual property laws and policies.

11. Please identify any challenges with respect to enforcement in foreign courts of U.S. judgments, or in U.S. courts of foreign judgments, involving intellectual property matters.

12. How often are U.S. nationals also foreign intellectual property owners who would then be able to use this Convention to have judgments they obtain in foreign courts enforced by U.S. courts? Would that be useful for U.S. nationals?

13. What changes, if any, to U.S. law would be needed to implement the proposed convention? Please identify any drawbacks and/or advantages to such changes.

14. What effect, if any, would the Preliminary Draft have on the enforcement of intellectual property rights in the digital environment? In particular, should the language in the Preliminary Draft be revised to take into account issues that arise in connection with infringement and enforcement of intellectual property rights on the Internet?

Exclusions From Scope

15. Should judgments on the validity and/or the infringements of intellectual property rights, other than copyright and related rights, be excluded from the scope of the treaty under Article 2(2)? Please identify the specific intellectual property right at issue and the specific concerns, if any, raised by including it within the scope of this convention?

16. Should judgments on the validity, ownership, subsistence, and/or the infringement of copyright and related rights be excluded from the scope of the treaty under Article 2(2)? Please state the specific concerns, if any, raised by including copyrights or related rights within the scope of this convention.

17. Should judgments on the validity or misappropriation and/or theft of trade secrets be excluded from the scope of the treaty under Article 2(2)? Please state the specific concerns, if any, raised by including judgments on the validity or misappropriation and/or theft of trade secrets within the scope of this convention.

Bases for Recognition and Enforcement

18. Should judgments on the infringement of intellectual property rights, other than copyright and related

rights, be included as bases for recognition and enforcement in Article 5(1)(k)?

19. Should judgments on the infringements of plant breeders' rights be included in Article 5(1)(k)?

20. Should judgments on the infringements of service marks, trade dress, and geographical indications rights be expressly included in Article 5(1)(k)?

21. Should judgments on the validity or infringement of unregistered designs and trademarks be included in Article 5(1)(l)?

22. Should judgments on the validity or the misappropriation and/or theft of trade secrets be included in Article 5(1)(l)?

23. Should the bracketed language in Article 5(1)(l) be included?

24. Should judgments on the validity, ownership, subsistence or infringement of copyright or related rights be included in Article 5(1)(l) in cases where the right arose under the law of the State of origin?

25. Should such judgments be included in Article 5(1)(l) where the right did not arise under the law of the State of origin but where another basis for jurisdiction set forth in Article 5 is satisfied?

Exclusive Jurisdiction

26. With respect to a judgment on the registration or validity of patents, trademarks, designs, or other similar rights that are required to be deposited, registered, or issued, the Preliminary Draft provides for exclusive jurisdiction of the court in the State of origin where the right issued or registration took place, or is deemed to have taken place under an international or regional instrument (Article 6). Please comment on the appropriateness of this rule.

27. Should a judgment on the registration or validity of mask works or vessel designs that are required to be deposited, registered, or issued be included in Article 6?

Preliminary Matters

28. What are your experiences in having U.S. rulings on preliminary questions, or judgments based on such rulings, involving the registration or validity of patents, trademarks, and designs, or other similar rights, by courts other than those with exclusive jurisdiction recognized and enforced by a foreign court?

29. Should a judgment on the registration or validity of mask works or vessel designs that are required to be deposited, registered, or issued be included in Article 8?

30. Does Article 8 provide an appropriate framework for resolving problems, if any, related to recognition and enforcement of rulings on preliminary questions and judgments based on such rulings?

31. How much discretion should a court in the requested State have to refuse or postpone the recognition or enforcement of a ruling on the validity of a patent, trademark, design, and other similar rights raised as preliminary matter in a court in the State of origin?

Remedies

32. Article 9 provides that recognition or enforcement of a judgment may be refused if, and to the extent that, the judgment awards damages, including exemplary or punitive damages, that do not compensate a party for actual loss or harm suffered. Should the court in a requested State be allowed to recognize and enforce non-compensatory damages in judgments involving intellectual property matters?

33. Does Article 9 include the types of damages that would provide effective relief for intellectual property right owners? If not, what other types of damages or other remedies ought to be included? Why?

34. How should statutory damages for copyright infringement be treated under this Article, and should Article 9 be amended to address statutory damages expressly?

35. When a judgment for infringement of an intellectual property covered by the convention includes injunctive relief, should a court in the requested State be required to recognize and enforce the award of injunctive relief?

36. If so, should there be any limitation on the circumstances under which such awards should be recognized and enforced (for example, by specifying the limitation in Article 5)? If not, should a judgment for infringement of an intellectual property right covered by the convention that includes injunctive relief be excluded as a basis for recognition and enforcement, or whole or in part, under Article 5?

Event Registration Information: To register to attend or to request to present as a speaker, please send an email message to *judgmentsproject@uspto.gov* and provide the following information: (1) Your name, title, company or organization (if applicable), address, phone number, and email address; (2) whether you wish to attend in person or via webcast; and (3) whether you wish to make an oral presentation at the meeting and, if so, which question(s) identified in the supplementary information section of this notice will be addressed and the approximate desired length of your presentation. Each attendee, even if from the same organization, must register separately. In order to give all speakers a meaningful opportunity to speak, the USPTO may not be able to accommodate all persons who wish to make a presentation. However, the USPTO will attempt to accommodate as many persons as possible who wish to make a presentation. After reviewing the speaker requests and the information regarding the presentations provided in the requests, the USPTO will contact each speaker prior to the event with the amount of time available and the approximate time that the speaker's presentation is scheduled to begin. The amount of time available for each speaker presentation and selected speakers without a formal presentation may be limited to ensure that all persons selected to speak will have a meaningful opportunity to do so. Speakers who opt to employ slides as part of their presentation must send final electronic copies of the slides in Microsoft PowerPoint® to *judgmentsproject@uspto.gov* by January 5, 2017, so that the slides can be displayed at the meeting. Additionally, and only if time allows, the USPTO will provide an opportunity for persons in the audience, who did not register as speakers or were not selected as speakers, to speak at the meeting without a formal presentation. For more information on the meeting, including webcast access instructions, agenda, and a list of speakers, please visit USPTO's Web site at *www.uspto.gov/learning-and-resources/ip-policy/hague-conference-private-international-law.* If special accommodations due to a disability are needed, please inform the contact person(s) identified under the heading FOR FURTHER INFORMATION CONTACT.

Dated: November 14, 2016.

Michelle K. Lee,

Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.

[FR Doc. 2016–27799 Filed 11–17–16; 8:45 am]

BILLING CODE 3510–16–P

COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY; DISABLED

Procurement List; Proposed Deletions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Proposed Deletions from the Procurement List.

SUMMARY: The Committee is proposing to delete products previously furnished by a nonprofit agency employing persons who are blind or have other severe disabilities.

DATES: *Comments must be received on or before:* December 18, 2016.

ADDRESSES: Committee for Purchase From People Who Are Blind or Severely Disabled, 1401 S. Clark Street, Suite 715, Arlington, Virginia 22202–4149.

FOR FURTHER INFORMATION CONTACT: Barry S. Lineback, Telephone: (703) 603–7740, Fax: (703) 603–0655, or email *CMTEFedReg@AbilityOne.gov.*

SUPPLEMENTARY INFORMATION: This notice is published pursuant to 41 U.S.C. 8503 (a)(2) and 41 CFR 51–2.3. Its purpose is to provide interested persons an opportunity to submit comments on the proposed actions.

Deletions

The following products are proposed for deletion from the Procurement List:

Products

NSN(s)—Product Name(s)—

7510–01–545–3778—DAYMAX System, 2015, Calendar Pad, Type II
7510–01–545–3782—DAYMAX System, 2015, Calendar Pad, Type I
Mandatory Source(s) of Supply: Anthony Wayne Rehabilitation Center for Handicapped and Blind, Inc., Fort Wayne, IN
Contracting Activity: General Services Administration, New York, NY

Barry S. Lineback,

Director, Business Operations.

[FR Doc. 2016–27841 Filed 11–17–16; 8:45 am]

BILLING CODE 6353–01–P

COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED

Procurement List; Additions

AGENCY: Committee for Purchase From People Who Are Blind or Severely Disabled.

ACTION: Additions to the Procurement List.

SUMMARY: This action adds products to the Procurement List that will be furnished by a nonprofit agency employing persons who are blind or have other severe disabilities.

DATES: *Effective Date:* 12/18/2016.

ADDRESSES: Committee for Purchase From People Who Are Blind or Severely Disabled,1401 S. Clark Street, Suite 715, Arlington Virginia, 22202–4149.

FOR FURTHER INFORMATION CONTACT: Barry S. Lineback, Telephone: (703) 603–7740, Fax: (703) 603–0655, or email *CMTEFedReg@AbilityOne.gov.*

SUPPLEMENTARY INFORMATION:

ADDITIONS

On 9/23/2016 (81 FR 65629–65630), the Committee for Purchase From People Who Are Blind or Severely Disabled published notice of proposed additions to the Procurement List.

After consideration of the material presented to it concerning capability of qualified nonprofit agencies to provide the products and impact of the additions on the current or most recent contractors, the Committee has determined that the products listed below are suitable for procurement by the Federal Government under 41 U.S.C. 8501–8506 and 41 CFR 51–2.4.

Regulatory Flexibility Act Certification

I certify that the following action will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

1. The action will not result in any additional reporting, recordkeeping or other compliance requirements for small entities other than the small organization that will furnish the products to the Government.

2. The action will result in authorizing a small entity to furnish the products to the Government.

3. There are no known regulatory alternatives which would accomplish the objectives of the Javits-Wagner-O'Day Act (41 U.S.C. 8501–8506) in connection with the products proposed for addition to the Procurement List.

End of Certification

Accordingly, the following products are added to the Procurement List:

Products

Product Name(s)

NSN: 7520–00–SAM–0208—File Folder, Expanding, 12 Tab, Flap and Cord Closure, Polypropylene, Smoke Gray
NSN: 7520–00–SAM–0209—File Folder, Expanding, 12 Tab, Flap and Cord Closure, Polypropylene, Blue
NSN: 7520–00–SAM–0210—File Folder, Expanding, 12 Tab, Flap and Cord Closure, Polypropylene, Purple
NSN: 7520–00–SAM–0212—File Storage Box, Expanding, Flap and Cord Closure, Polypropylene, Black
NSN: 7520–00–SAM–0216—File Storage Box, Expanding, 19 Tab, Alpha/Subject, Latch Closure, Pressboard and Kraft Paper, Black
NSN: 7520–00–SAM–0218—File Folder, Expanding, 7 Tab with Pockets, Flap and Cord Closure, Polypropylene, Black
Mandatory for: Total Government Requirement
Mandatory Source(s) of Supply: Exceptional Children's Foundation, Culver City, CA
Contracting Activity: General Services Administration, New York, NY
Distribution: A-List

Barry S. Lineback,

Director, Business Operations.

[FR Doc. 2016–27820 Filed 11–17–16; 8:45 am]

BILLING CODE 6353–01–P

BUREAU OF CONSUMER FINANCIAL PROTECTION

Fair Credit Reporting Act Disclosures

AGENCY: Bureau of Consumer Financial Protection.

ACTION: Notice regarding charges for certain disclosures under the Fair Credit Reporting Act.

SUMMARY: The Bureau of Consumer Financial Protection (Bureau) announces that the ceiling on allowable charges under section 612(f) of the Fair Credit Reporting Act (FCRA) will remain unchanged at $12.00, effective for 2017. The Bureau is required to increase the $8.00 amount referred to in section 612(f)(1)(A)(i) of the FCRA on January 1 of each year, based proportionally on changes in the Consumer Price Index for All Urban Consumers (CPI–U), with fractional changes rounded to the nearest fifty cents. The CPI–U increased 49.77 percent between September 1997, when the FCRA amendments took effect, and September 2016. This increase in the CPI–U, and the requirement that any increase be rounded to the nearest fifty cents, result in a maximum allowable charge of $12.00.

DATES: Effective January 1, 2017.

FOR FURTHER INFORMATION CONTACT: Jaclyn Maier, Counsel, Office of Regulations, Consumer Financial Protection Bureau, 1700 G Street NW., Washington, DC 20552, at (202) 435–7700.

SUPPLEMENTARY INFORMATION: Section 612(f)(1)(A) of the Fair Credit Reporting Act (FCRA) provides that a consumer reporting agency may charge a consumer a reasonable amount for making a disclosure to the consumer pursuant to section 609 of the FCRA. Section 612(f)(1)(A)(i) of the FCRA provides that, where a consumer reporting agency is permitted to impose a reasonable charge on a consumer for making a disclosure to the consumer pursuant to section 609 of the FCRA, the charge shall not exceed $8.00 and shall be indicated to the consumer before making the disclosure. Section 612(f)(2) of the FCRA states that the Bureau shall increase the $8.00 maximum amount on

January 1 of each year, based proportionally on changes in the Consumer Price Index, with fractional changes rounded to the nearest fifty cents. The Bureau's calculations are based on the CPI–U, which is the most general Consumer Price Index and covers all urban consumers and all items.

Section 612(a) of the FCRA gives consumers the right to a free disclosure upon request once every 12 months. The maximum allowable charge established by this notice does not apply to requests made under that provision. The charge does apply when a consumer who orders a file disclosure has already received a free annual disclosure and does not otherwise qualify for an additional free disclosure.

The Bureau is using the $8.00 amount set forth in section 612(f)(1)(A)(i) of the FCRA as the baseline for its calculation of the increase in the ceiling on reasonable charges for certain disclosures made under section 609 of the FCRA. Since the effective date of section 612(a) was September 30, 1997, the Bureau calculated the proportional increase in the CPI–U from September 1997 to September 2016. The Bureau then determined what modification, if any, from the original base of $8.00 should be made effective for 2017, given the requirement that fractional changes be rounded to the nearest fifty cents.

Between September 1997 and September 2016, the CPI–U increased by 49.77 percent from an index value of 161.2 in September 1997 to a value of 241.428 in September 2016. An increase of 49.77 percent in the $8.00 base figure would lead to a figure of $11.98. However, because the statute directs that the resulting figure be rounded to the nearest $0.50, the maximum allowable charge is $12.00. The Bureau therefore determines that the maximum allowable charge for the year 2017 will remain at $12.00, effective January 1, 2017.

Dated: November 8, 2016.

Richard Cordray,

Director, Bureau of Consumer Financial Protection.

[FR Doc. 2016–27735 Filed 11–17–16; 8:45 am]

BILLING CODE 4810–AM–P

DEPARTMENT OF DEFENSE

Department of the Army

Notice of Intent To Grant Exclusive Patent License to Per Vivo Labs, Inc.; Kingsport, TN

AGENCY: Department of the Army, DoD.

ACTION: Notice of intent.

SUMMARY: The Department of the Army hereby gives notice of its intent to grant to Per Vivo Labs, Inc.; a corporation having its principle place of business at 2002 Brookside Lane, Kingsport, TN 37660, an exclusive license.

DATES: Written objections must be filed not later than 15 days following publication of this announcement.

ADDRESSES: Send written objections to U.S. Army Research Laboratory Technology Transfer and Outreach Office, RDRL–DPT/Thomas Mulkern, Building 321 Room 110, Aberdeen Proving Ground, MD 21005–5425.

FOR FURTHER INFORMATION CONTACT: Thomas Mulkern, (410) 278–0889, E-Mail: *ORTA@arl.army.mil.*

SUPPLEMENTARY INFORMATION: The Department of the Army plans to grant an exclusive license to Per Vivo Labs, Inc., in the field of use related to physical therapy/rehabilitation resistance bands incorporating rate-actuated tethers (RATs) relative to the following:

- ''Rate-Responsive, Stretchable Devices'', US Patent No.: 9,303,717, Filing Date June 26, 2013, Issue Date April 5, 2016.
- ''Rate-Responsive, Stretchable Devices (Further Improvements)'', US Patent Application No.: 15/057,944, Filing Date March 1, 2016.

The prospective exclusive license may be granted unless within fifteen (15) days from the date of this published notice, the U.S. Army Research Laboratory receives written objections including evidence and argument that establish that the grant of the license would not be consistent with the requirements of 35 U.S.C. 209(e) and 37 CFR 404.7(a)(1)(i),. Competing applications completed and received by the U.S. Army Research Laboratory within fifteen (15) days from the date of this published notice will also be treated as objections to the grant of the contemplated exclusive license.

Objections submitted in response to this notice will not be made available to the public for inspection and, to the extent permitted by law, will not be released under the Freedom of Information Act, 5 U.S.C. 552.

Brenda S. Bowen,

Army Federal Register Liaison Officer.

[FR Doc. 2016–27782 Filed 11–17–16; 8:45 am]

BILLING CODE 5001–03–P

DEPARTMENT OF DEFENSE

Department of the Army

Lake Eufaula Advisory Committee Meeting Notice

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of open committee meeting.

SUMMARY: The Department of the Army is publishing this notice to announce the following Federal advisory committee meeting of the Lake Eufaula Advisory Committee (LEAC). The meeting is open to the public.

DATES: The Committee will meet from 10:00 a.m.–12:00 p.m. on Monday, December 12, 2016.

ADDRESSES: The meeting will be held at Three Forks Harbor, 5201 Three Forks Road, Fort Gibson, OK 74434.

FOR FURTHER INFORMATION CONTACT: Mr. Jeff Knack; Designated Federal Officer (DFO) for the Committee, in writing at Eufaula Lake Office, 102 E. BK 200 Rd, Stigler, OK 74462–1829, or by email at *Jeff.Knack@usace.army.mil,* or by phone at 1–918–484–5135.

SUPPLEMENTARY INFORMATION: This meeting is being held under the provisions of the Federal Advisory Committee Act of 1972 (5 U.S.C., Appendix, as amended), the Sunshine in the Government Act of 1976 (U.S.C. 552b, as amended) and 41 Code of the Federal Regulations (CFR 102–3.150).

Purpose of the Meeting: The Lake Eufaula Advisory Committee is an independent Federal advisory committee established as directed by Section 3133(b) of the Water Resources Development Act of 2007 (WRDA 2007) (Pub. L. 110–114). The committee is advisory in nature only with duties to include providing information and recommendations to the Corps of Engineers regarding operations of Eufaula Lake, Oklahoma for project purposes. In accordance with Sections 3133(c)(2) and 3133(d)(1) of WRDA 2007, the committee will also provide recommendations on a reallocation study concerning current and future use of the Lake Eufaula storage capacity for authorized project purposes as well as a subsequent pool management plan.

Agenda: This will be the second meeting of the LEAC. The committee will nominate a new committee member to replace the chair currently authorized for the Muscogee Creek Nation, have a question and answer session with U.S. Army Corps of Engineers representatives about Eufaula Lake's development and management, discuss white papers generated from first meeting about what each member hopes to see this committee accomplish, and discuss future direction.

Public's Accessibility to the Meeting: Pursuant to 5 U.S.C. 552b and 41 CFR 102–3.140 through 102–3.165, and the availability of space, this meeting is open to the public. Seating is on a first-come basis. The Three Forks Harbor is readily accessible to and usable by persons with disabilities. For additional information about public access procedures, contact Mr. Jeff Knack, the Committee's Designated Federal Officer, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section.

Written Comments and Statements: Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the Committee, in response to the stated agenda of the open meeting or in regard to the Committee's mission in general. Written comments or statements should be submitted to Mr. Knack, the Committee's Designated Federal Officer, via electronic mail, the preferred mode of submission, at the address listed in the **FOR FURTHER INFORMATION CONTACT** section. Each page of the comment or statement must include the author's name, title or affiliation, address, and daytime phone number. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the Designated Federal Officer at least seven business days prior to the meeting to be considered by the Committee. The Designated Federal Officer and the Committee Chair will review all timely submitted written comments or statements and ensure the comments are provided to all members of the Committee before the meeting. Written comments or statements received after this date may not be provided to the Committee until its next meeting. Please note that because the LEAC operates under the provisions of the Federal Advisory Committee Act, as amended, all written comments will be treated as public documents and will be made available for public inspection.

Pursuant to 41 CFR 102–3.140d, the Committee is not obligated to allow a member of the public to speak or otherwise address the Committee during the meeting. Members of the public will be permitted to make verbal comments during the Committee meeting only at the time and in the manner described below. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least three (3) days in advance to the Committee's Designated Federal Officer, via electronic mail, the preferred mode of submission, at the addresses listed in the **FOR FURTHER INFORMATION CONTACT** section. The Designated Federal Officer will log each request, in the order received, and in consultation with the Committee Chair determine whether the subject matter of each comment is relevant to the Committee's mission and/or the topics to be addressed in this public meeting. A 15-minute period near the end of meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described above, will be allotted no more than three (3) minutes during this period, and will be invited to speak in the order in which their requests were received by the Designated Federal Officer.

Brenda S. Bowen,

Army **Federal Register** *Liaison Officer.*

[FR Doc. 2016–27783 Filed 11–17–16; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Office of the Secretary

Government-Industry Advisory Panel; Notice of Federal Advisory Committee Meeting

AGENCY: Office of the Under Secretary of Defense (Acquisition, Technology, and Logistics), Department of Defense (DoD).

ACTION: Federal advisory committee meeting notice.

SUMMARY: The Department of Defense is publishing this notice to announce the following Federal advisory committee meeting of the Government-Industry Advisory Panel. This meeting is open to the public.

DATES: The meeting will be held from 9:00 a.m. to 5:00 p.m. on Tuesday, November 29, 2016. Public registration will begin at 8:45 a.m. For entrance into the meeting, you must meet the necessary requirements for entrance into the Pentagon. For more detailed information, please see the following link: *http://www.pfpa.mil/access.html.*

ADDRESSES: Pentagon Library, Washington Headquarters Services, 1155 Defense Pentagon, Washington, DC 20301–1155. The meeting will be held in Room B7. The Pentagon Library is located in the Pentagon Library and Conference Center (PLC2) across the Corridor 8 bridge.

FOR FURTHER INFORMATION CONTACT: LTC Andrew Lunoff, Office of the Assistant Secretary of Defense (Acquisition), 3090 Defense Pentagon, Washington, DC 20301–3090, email: *andrew.s.lunoff.mil@mail.mil,* phone: 571–256–9004.

SUPPLEMENTARY INFORMATION: Due to circumstances beyond the control of the Designated Federal Officer and the Department of Defense, the Government-Industry Advisory Panel is unable to provide public notification, as required by 41 CFR 102–3.150(a), for its meeting on Tuesday, November 29, 2016. Accordingly, the Advisory Committee Management Officer for the Department of Defense, pursuant to 41 CFR 102–3.150(b), waives the 15-calendar day notification requirement.

Purpose of the Meeting: This meeting is being held under the provisions of the Federal Advisory Committee Act of 1972 (FACA) (5 U.S.C., Appendix, as amended), the Government in the Sunshine Act of 1976 (5 U.S.C. 552b, as amended), and 41 CFR 102–3.150. The Government-Industry Advisory Panel will review sections 2320 and 2321 of title 10, United States Code (U.S.C.), regarding rights in technical data and the validation of proprietary data restrictions and the regulations implementing such sections, for the purpose of ensuring that such statutory and regulatory requirements are best structured to serve the interest of the taxpayers and the national defense. The scope of the panel is as follows: (1) Ensuring that the Department of Defense (DoD) does not pay more than once for the same work, (2) Ensuring that the DoD contractors are appropriately rewarded for their innovation and invention, (3) Providing for cost-effective reprocurement, sustainment, modification, and upgrades to the DoD systems, (4) Encouraging the private sector to invest in new products, technologies, and processes relevant to the missions of the DoD, and (5) Ensuring that the DoD has appropriate access to innovative products, technologies, and processes developed by the private sector for commercial use.

Agenda: This will be the tenth meeting of the Government-Industry Advisory Panel with a series of meetings planned through December 14, 2016. The panel will cover details of 10 U.S.C. 2320 and 2321, begin understanding the implementing regulations and detail the necessary groups within the private sector and government to provide supporting documentation for their review of these codes and regulations during follow-on meetings. Agenda items for this meeting will include the following: (1) Final discussions and deliberations on 10 U.S.C. 2320 and 2321 tension points; (2) Report framework and collaboration; (3) Comment Adjudication and Planning for follow-on meeting.

Availability of Materials for the Meeting: A copy of the agenda or any updates to the agenda for the November 29, 2016 meeting will be available as requested or at the following site: *https://database.faca.gov/committee/meetings.aspx?cid=2561.* It will also be distributed upon request.

Minor changes to the agenda will be announced at the meeting. All materials will be posted to the FACA database after the meeting.

Public Accessibility to the Meeting: Pursuant to 5 U.S.C. 552b, as amended, and 41 CFR 102–3.140 through 102–3.165, and subject to the availability of space, this meeting is open to the public. Registration of members of the public who wish to attend the meeting will begin upon publication of this meeting notice and end three business days (November 23) prior to the start of the meeting. All members of the public must contact LTC Lunoff at the phone number or email listed in the **FOR FURTHER INFORMATION CONTACT** section to make arrangements for Pentagon escort, if necessary. Public attendees should arrive at the Pentagon's Visitor's Center, located near the Pentagon Metro Station's south exit and adjacent to the Pentagon Transit Center bus terminal with sufficient time to complete security screening no later than 8:30 a.m. on November 29. To complete security screening, please come prepared to present two forms of identification of which one must be a pictured identification card. Government and military DoD CAC holders are not required to have an escort, but are still required to pass through the Visitor's Center to gain access to the Building. Seating is limited and is on a first-to-arrive basis. Attendees will be asked to provide their name, title, affiliation, and contact information to include email address and daytime telephone number to the Designated Federal Officer (DFO) listed in the **FOR FURTHER INFORMATION CONTACT** section. Any interested person may attend the meeting, file written comments or statements with the committee, or make verbal comments from the floor during the public meeting, at the times, and in the manner, permitted by the committee.

Special Accommodations: The meeting venue is fully handicap accessible, with wheelchair access.

Individuals requiring special accommodations to access the public meeting or seeking additional information about public access procedures, should contact LTC Lunoff, the committee DFO, at the email address or telephone number listed in the **FOR FURTHER INFORMATION CONTACT** section, at least five (5) business days prior to the meeting so that appropriate arrangements can be made.

Written Comments or Statements: Pursuant to 41 CFR 102–3.105(j) and 102–3.140 and section 10(a)(3) of the Federal Advisory Committee Act, the public or interested organizations may submit written comments or statements to the Government-Industry Advisory Panel about its mission and/or the topics to be addressed in this public meeting. Written comments or statements should be submitted to LTC Lunoff, the committee DFO, via electronic mail, the preferred mode of submission, at the email address listed in the **FOR FURTHER INFORMATION CONTACT** section in the following formats: Adobe Acrobat or Microsoft Word. The comment or statement must include the author's name, title, affiliation, address, and daytime telephone number. Written comments or statements being submitted in response to the agenda set forth in this notice must be received by the committee DFO at least five (5) business days prior to the meeting so that they may be made available to the Government-Industry Advisory Panel for its consideration prior to the meeting. Written comments or statements received after this date may not be provided to the panel until its next meeting. Please note that because the panel operates under the provisions of the Federal Advisory Committee Act, as amended, all written comments will be treated as public documents and will be made available for public inspection.

Verbal Comments: Members of the public will be permitted to make verbal comments during the meeting only at the time and in the manner allowed herein. If a member of the public is interested in making a verbal comment at the open meeting, that individual must submit a request, with a brief statement of the subject matter to be addressed by the comment, at least three (3) business days in advance to the committee DFO, via electronic mail, the preferred mode of submission, at the email address listed in the **FOR FURTHER INFORMATION CONTACT** section. The committee DFO will log each request to make a comment, in the order received, and determine whether the subject matter of each comment is relevant to the panel's mission and/or the topics to be addressed in this public meeting. A 30-minute period near the end of the meeting will be available for verbal public comments. Members of the public who have requested to make a verbal comment and whose comments have been deemed relevant under the process described in this paragraph, will be allotted no more than five (5) minutes during this period, and will be invited to speak in the order in which their requests were received by the DFO.

Dated: November 15, 2016.

Aaron Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2016–27773 Filed 11–17–16; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Public Meetings for the Draft Environmental Impact Statement for EA–18G "Growler" Airfield Operations at the Naval Air Station Whidbey Island Complex, Washington

AGENCY: Department of the Navy, DoD

ACTION: Notice.

SUMMARY: Pursuant to Section 102(2)(c) of the National Environmental Policy Act of 1969 and regulations implemented by the Council on Environmental Quality (40 Code of Federal Regulations parts 1500–1508), the Department of the Navy (DoN) has prepared and filed with the U.S. Environmental Protection Agency a Draft Environmental Impact Statement (EIS) to assess the potential environmental impacts of adding up to 36 Growler aircraft at the Naval Air Station (NAS) Whidbey Island complex, and continuing and increasing Growler airfield operations. The NAS Whidbey Island complex is located in Island County, Washington, on Whidbey Island, in the northern Puget Sound region. The complex includes the main air station (Ault Field), which is in the north-central part of the island, adjacent to the city of Oak Harbor, and Outlying Landing Field (OLF) Coupeville. The OLF is approximately 10 miles south of Ault Field and is dedicated primarily to Field Carrier Landing Practice (FCLP).

With the filing of the Draft EIS, the DoN is initiating an extended public comment period of 75 days, beginning on November 10, 2016 and ending on January 25, 2017. Public meetings are scheduled to inform the public and receive comments on the environmental analysis presented in the Draft EIS. This notice announces the dates, times, and

locations of the public meetings and provides supplementary information about the Draft EIS.

DATES AND ADDRESSES: The DoN will hold public meetings to inform the public about the Draft EIS and the proposed action and alternatives under consideration and to provide opportunities for the public to comment on the Draft EIS. Federal, state, and local agencies and officials, Native American Indian Tribes and Nations, and interested organizations and individuals are encouraged to provide comments in person at the public meetings or in writing during the 75-day public review period. Public meetings will be held at the following dates, times, and locations:

1. Monday, December 5, 2016, from 3:00 p.m. to 6:00 p.m., at the Fort Worden State Park Conference Center, USO Hall, 200 Battery Way, Port Townsend, Washington 98368.

2. Tuesday, December 6, 2016, from 4:00 p.m. to 7:00 p.m., at the Oak Harbor Elks Lodge Grande Hall, 155 NE Ernst Street, Oak Harbor, Washington 98277.

3. Wednesday, December 7, 2016, from 3:00 p.m. to 6:00 p.m., at the Lopez Center for Community and the Arts, 204 Village Road, Lopez Island, Washington 98261.

4. Thursday, December 8, 2016, from 3:00 p.m. to 6:00 p.m., at the Seafarers' Memorial Park Building, 601 Seafarers Way, Anacortes, Washington 98221.

5. Friday, December 9, 2016, from 4:00 p.m. to 7:00 p.m., at the Coupeville High School Commons, 501 South Main Street, Coupeville, Washington 98239.

The public meetings will be open house sessions with informational poster stations. Members of the public will have the opportunity to ask questions of DoN representatives and subject matter experts. Attendees will also be able to provide verbal comments to a stenographer or submit written comments during the public meetings. In addition to participating in the public meetings, members of the public may submit comments via the U.S. Postal Service using the mailing address identified in the contact information later in this notice or electronically using the project Web site (*http://www.whidbeyeis.com*). All comments made at the public meetings or postmarked or received online by January 25 will become part of the public record and be considered in the Final EIS.

The DoN may release the city, state, and 5-digit zip code of individuals who provide comments during the Draft EIS public review period. However, the names, street addresses, email addresses and screen names, telephone numbers, or other personally identifiable information of those individuals will not be released by the DoN unless required by law. Prior to each commenter making verbal comments to the stenographer at the public meetings the commenter will be asked whether he/she agrees to a release of their personally identifiable information. Those commenters submitting written comments, either using comment forms or via the project Web site, will be asked whether they authorize release of personally identifiable information by checking a ''release'' box.

FOR FURTHER INFORMATION CONTACT: EA–18G EIS Project Manager, Naval Facilities Engineering Command (NAVFAC) Atlantic, Attention: Code EV21/SS; 6506 Hampton Boulevard, Norfolk, Virginia 23508.

SUPPLEMENTARY INFORMATION: On September 5, 2013, the DoN published a notice of intent (NOI) in the **Federal Register** (78 FR 54635) to analyze the potential addition of 13 Growler aircraft to the existing Growler community stationed at NAS Whidbey Island. A revised NOI was published in the **Federal Register** on October 10, 2014 (79 FR 61296), which modified the proposed action by increasing the number of aircraft analyzed to 36 in order to account for the possible procurement of additional aircraft. Comments received during the two scoping periods were used to shape the analysis contained in the Draft EIS.

The DoN's proposed action is to: (1) Continue and expand existing Growler operations at Ault Field and OLF Coupeville; (2) increase capabilities to accommodate up to 36 additional aircraft, including the construction and renovation of facilities at Ault Field; (3) support flight operations of other aircraft, and (4) station additional personnel in the region.

The purpose of the proposed action is to augment the DoN's existing Electronic Attack community at NAS Whidbey Island by operating additional Growler aircraft as appropriated by Congress. The DoN needs to effectively and efficiently increase electronic attack capabilities in order to counter increasingly sophisticated threats and provide more aircraft per squadron in order to give operational commanders more flexibility in addressing future threats and missions. The need for the proposed action is to maintain and expand Growler operational readiness to support national defense requirements under Title 10, United States Code (U.S.C.), Section 5062.

In developing the proposed range of alternatives that meet the purpose of and need for the proposed action, the DoN carefully reviewed important considerations unique to the Growler community that is single-sited at NAS Whidbey Island, as well as Growler squadron training in light of Title 10 responsibilities; existing training requirements and regulations; existing DoN infrastructure; and Chief of Naval Operations guidance to support operating Naval Forces. Furthermore, the DoN evaluated past home basing decisions, reconsidered alternatives previously eliminated from analysis, and thoughtfully considered basing and training options suggested by the public during the two scoping periods. The Draft EIS explains the DoN's reasons for eliminating some alternatives and suggested options from further consideration. In addition, the Draft EIS explains why some alternatives presented in the October 10, 2014 revised NOI were not carried forward.

The action alternatives evaluated in the Draft EIS vary in terms of force structure and operations to accommodate the proposed increase in Growler aircraft. In addition, three operational scenarios (sub-alternatives) are evaluated, all of which focus on the distribution of annual FCLP airfield operations between Ault Field and OLF Coupeville.

In addition to the action alternatives, the DoN evaluated the potential environmental effects of the No Action Alternative. Under this alternative, the proposed action would not occur. Although the No Action Alternative would not meet the purpose of or need for the proposed action, the conditions associated with the No Action Alternative serve as reference points for describing and quantifying the potential environmental impacts associated with the proposed action alternatives. For this Draft EIS, the DoN is using the year 2021 for the No Action Alternative because it represents conditions when events at Ault Field affecting aircraft loading, facility and infrastructure assets, personnel levels, and number of aircraft are expected to be fully implemented and complete from previous aircraft home basing, aircraft retirement, and other related decisions.

The Draft EIS provides an analysis of the potential environmental effects of the proposed action on the following resources: Airspace and airfield operations; noise; public health and safety; air quality; land use; cultural resources; American Indian traditional resources; biological resources; water resources; socioeconomics; environmental justice; transportation;

infrastructure; geological resources; hazardous materials and wastes; and climate change and greenhouse gases. Consultation with the Washington State Historic Preservation Officer under Section 106 of the National Historic Preservation Act is pending. The Navy will also engage in consultations with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, Washington State Department of Ecology, and Native American Tribes and Nations.

The Draft EIS was distributed to federal, state, and local agencies and elected officials, Native American Indian Tribes and Nations, and other interested individuals and organizations. The Draft EIS is available for public electronic viewing or download at the project Web site (*http://www.whidbeyeis.com*). A paper copy of the Draft EIS may be reviewed at 22 public libraries in the northern Puget Sound region. The full list of and addresses for each of the libraries may be found at the project Web site.

To be included on the DoN's mailing list for future updates on the EIS, submit a request electronically using the project Web site or submit a written request to the address previously identified for further information. The same policy for release of personally identifiable information as identified above will be maintained by the DoN for individuals requesting to be included on the EIS mailing list.

Dated: November 9, 2016.

C.D. Mora,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2016–27827 Filed 11–17–16; 8:45 am]

BILLING CODE 3810–FF–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 2082–062; Project No. 2082–063; Project No. 14803–000; Project No. 14803–001]

PacifiCorp, Klamath River Renewal Corporation; Notice of Applications Filed With the Commission

Take notice that the following hydroelectric applications have been filed with the Commission and are available for public inspection:

a. *Types of Applications:* Application for Amendment and Partial Transfer of License; Application for Surrender of License.

b. *Project Nos.:* 2082–062 and 14803–000 (amendment and transfer application); 2082–063 and 14803–001 (surrender application).

c. *Date Filed:* September 23, 2016.

d. *Applicants:* For license amendment and transfer: PacifiCorp (transferor) and Klamath River Renewal Corporation (transferee).

For license surrender: Klamath River Renewal Corporation.

e. *Name of Projects:* Klamath Project (P–2082).

Lower Klamath Project (P–14803).

f. *Locations:* Klamath Project—on the Klamath River in Klamath County, Oregon, and on the Klamath River and Fall Creek in Siskiyou County, California. The project includes about 477 acres of federal lands administered by the Bureau of Reclamation and the Bureau of Land Management.

Lower Klamath Project—on the Klamath River in Klamath County, Oregon, and Siskiyou County, California. The project would include about 395 acres of federal lands administered by the Bureau of Land Management.

g. *Filed Pursuant to:* Federal Power Act, 16 U.S.C. 791a–825r.

h. *Applicants Contact:* Sarah Kamman, Vice President and General Counsel, PacifiCorp, 825 NE Multnomah Street, Suite 2000, Portland, OR 97232, (503) 813–5865, sarah *kamman@pacificorp.com.*

Michael Carrier, President, Klamath River Renewal Corporation, 423 Washington Street, 3rd Floor, San Francisco, CA 94111, (415) 820–4441, *michael@klamathrenewal.org.*

i. *FERC Contacts:* Amendment and Transfer: Steve Hocking, (202) 502–8753, *Steve.Hocking@ferc.gov.*

Surrender: John Mudre: (202) 502–8902, *john.mudre@ferc.gov.*

j. *Description of Amendment and Transfer Request:* The applicants request that the Commission transfer the J.C. Boyle, Copco No. 1, Copco No. 2, and Iron Gate developments of the existing Klamath Project No. 2082 from PacifiCorp to the Klamath River Renewal Corporation (Renewal Corporation) and create a new project, the Lower Klamath Project, for the transferred developments with the Renewal Corporation as the sole licensee. PacifiCorp requests that the license for Project No. 2082 be amended to delete references to the four transferred developments. The applicants state that they will make a supplemental filing on or before March 1, 2017, demonstrating the legal, technical, and financial capabilities of the Renewal Corporation to perform its responsibilities as transferee. Applicants further request that the Commission act on the amendment and transfer application by December 31, 2017, and allow the Renewal Corporation six months from the issuance date of the order approving transfer to submit proof of its acceptance of license transfer.

k. *Description of Surrender Request:* The Renewal Corporation's request to surrender and decommission the Lower Klamath Project, including removal of the project dams is contingent upon a Commission order amending PacifiCorp's existing Klamath Project (P–2082) license to create a new project, the Lower Klamath Project, and transferring the Lower Klamath Project to the Renewal Corporation, as described in item (j), above. The Lower Klamath Project, as envisioned by the Renewal Corporation, would consist of the J.C. Boyle, Copco No. 1, Copco No. 2, and Iron Gate developments of the existing Klamath Project No. 2082, and the Renewal Corporation would be the sole licensee. The Renewal Corporation requests that the Commission not act on this request until it is ready to accept license transfer and states that it will file, by December 31, 2017, its decommissioning plan to serve as the basis for Commission staff's environmental and engineering review of the surrender application. Because only a licensee may file to surrender a license and the Commission does not accept contingent applications, the surrender application is deemed to be filed by both PacifiCorp and the Renewal Corporation. *See* 18 CFR 6.1 and 4.32(j). Therefore, while action on the amendment and transfer application is pending, the Commission will maintain both applications in the dockets for both project numbers. If the Commission approves the transfer and the Renewal Corporation accepts the license, following which the Renewal Corporation would become the sole licensee, the surrender proceeding would continue solely in Project No. 14803.

l. With this notice, we are initiating informal consultation with: (a) the U.S. Fish and Wildlife Service and NOAA Fisheries under section 7 of the Endangered Species Act and the joint agency implementing regulations at 50 CFR part 402; (b) NOAA Fisheries under section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and implementing regulations at 50 CFR 600.920; and (c) the California and Oregon State Historic Preservation Officers, as required by section 106 of the National Historic Preservation Act, and the implementing regulations of the Advisory Council on Historic Preservation at 36 CFR part 800.

m. With this notice, we are designating PacifiCorp and the Renewal

Corporation as the Commission's non-federal representative for carrying out informal consultation, pursuant to section 7 of the Endangered Species Act, section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act, and section 106 of the National Historic Preservation Act and the Advisory Council's regulations at 36 CFR 800.2(c)(4).

n. *Locations of the Applications:* Copies of the applications are available for inspection and reproduction at the Commission's Public Reference Room, located at 888 First Street, NE., Room 2A, Washington, DC 20426, or by calling (202) 502–8371. These filings may also be viewed on the Commission's Web site at *http://www.ferc.gov/docs-filing/elibrary.asp.* Enter the docket number excluding the last three digits in the docket number field to access the document. You may also register online at *http://www.ferc.gov/docs-filing/esubscription.asp* to be notified via email of new filings and issuances related to this or other pending projects. For assistance, call 1–866–208–3676 or email *FERCOnlineSupport@ferc.gov,* for TTY, call (202) 502–8659. Copies are also available for inspection and reproduction at the addresses in item (h), above.

o. Individuals desiring to be included on the Commission's mailing list for these proceedings should so indicate by writing to the Secretary of the Commission.

p. *Additional Information:* We are not requesting comments at this time. After receiving the applicants' supplemental filings on or before March 1, 2017, for the license transfer and December 31, 2017, for the surrender, the Commission will issue notices requesting comments, protests, and motions to intervene.

Kimberly D. Bose,

Secretary

[FR Doc. 2016–27806 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 12514–074]

Northern Indiana Public Service Company; Notice of Availability of Final Environmental Assessment

In accordance with the National Environmental Policy Act of 1969 and the Federal Energy Regulatory Commission's (Commission or FERC's) regulations, 18 Code of Federal Regulations (CFR) Part 380, the Office of Energy Projects has reviewed Northern Indiana Public Service Company's application for amendment of the license for the Norway-Oakdale Hydroelectric Project (FERC Project No. 12514–074), on the Tippecanoe River near the city of Monticello in Carroll and White Counties, Indiana, and prepared a final environmental assessment (EA) for the project. The project does not occupy any federal lands.

The final EA contains staff's analysis of the potential environmental effects of implementing the proposed modified definition of abnormal flow conditions that would be included in a revised article 403, which defines the operation of the project. Staff concludes that authorizing the amendment, with staff's recommended modification to the definition of abnormal river conditions, would not constitute a major federal action that would significantly affect the quality of the human environment.

A copy of the final EA is available for review at the Commission in the Public Reference Room or may be viewed on the Commission's Web site at *www.ferc.gov* using the ''eLibrary'' link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance, contact FERC Online Support at *FERCOnlineSupport@ferc.gov* or toll-free at 1–866–208–3676, or for TTY, 202–502–8659.

You may also register online at *www.ferc.gov/docs-filing/esubscription.asp* to be notified via email of new filings and issuances related to this or other pending projects. For assistance, contact FERC Online Support.

For further information, contact Mark Pawlowski at 202–502–6052.

Dated: November 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27807 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

Take notice that the Commission received the following electric corporate filings:

Docket Numbers: EC17–30–000.
Applicants: Kelly Creek Wind, LLC.
Description: Application for Authorization under Section 203 of the Federal Power Act and Request for Expedited Consideration and Confidential Treatment of Kelly Creek Wind, LLC.
Filed Date: 11/9/16.
Accession Number: 20161109–5161.
Comments Due: 5 p.m. ET 11/30/16.

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER14–1193–002.
Applicants: West Deptford Energy, LLC.
Description: Compliance filing: Informational Filing Regarding Planned Transfer to be effective N/A.
Filed Date: 11/7/16.
Accession Number: 20161107–5254.
Comments Due: 5 p.m. ET 11/28/16.

Docket Numbers: ER15–1682–005.
Applicants: TransCanyon DCR, LLC.
Description: Compliance filing: Formula Rate Template Compliance Filing to be effective 7/6/2015.
Filed Date: 11/9/16.
Accession Number: 20161109–5152.
Comments Due: 5 p.m. ET 11/30/16.

Docket Numbers: ER17–336–000.
Applicants: Duke Energy Florida, LLC.
Description: § 205(d) Rate Filing: Mount Dora NITSA–NOA Amendment SA No. 151 to be effective 1/1/2017.
Filed Date: 11/10/16.
Accession Number: 20161110–5060.
Comments Due: 5 p.m. ET 12/1/16.

Take notice that the Commission received the following electric reliability filings:

Docket Numbers: RR17–1–000.
Applicants: North American Electric Reliability Corporation.
Description: Petition of the North American Electric Reliability Corporation for Approval of Amendments to the Florida Reliability Coordinating Council Regional Reliability Standard Development Process Manual.
Filed Date: 11/10/16.
Accession Number: 20161110–5072.
Comments Due: 5 p.m. ET 12/1/16.

The filings are accessible in the Commission's eLibrary system by clicking on the links or querying the docket number.

Any person desiring to intervene or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) on or before 5:00 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: *http://www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: November 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27809 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ER17–243–000]

Lawrenceburg Power, LLC; Supplemental Notice That Initial Market-Based Rate Filing Includes Request For Blanket Section 204 Authorization

This is a supplemental notice in the above-referenced proceeding Lawrenceburg Power, LLC's application for market-based rate authority, with an accompanying rate tariff, noting that such application includes a request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability.

Any person desiring to intervene or to protest should file with the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant.

Notice is hereby given that the deadline for filing protests with regard to the applicant's request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability, is November 30, 2016.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 5 copies of the intervention or protest to the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

The filings in the above-referenced proceeding are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for electronic review in the Commission's Public Reference Room in Washington, DC. There is an eSubscription link on the Web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email *FERCOnlineSupport@ferc.gov.* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: November 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27815 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #1

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER10–2984–029.
Applicants: Merrill Lynch Commodities, Inc.
Description: Notice of Non-Material Change in Status of Merrill Lynch Commodities, Inc.
Filed Date: 11/10/16.
Accession Number: 20161110–5226.
Comments Due: 5 p.m. ET 12/1/16.

Docket Numbers: ER16–1990–001.
Applicants: North Star Solar PV LLC.
Description: Notice of Change in Status of North Star Solar PV LLC.
Filed Date: 11/9/16.
Accession Number: 20161109–5177.
Comments Due: 5 p.m. ET 11/30/16.

Docket Numbers: ER16–2298–002.
Applicants: Duke Energy Kentucky, Inc.
Description: Tariff Amendment: DEK Revised RS No. 14 Filing to be effective 10/1/2016.
Filed Date: 11/10/16.
Accession Number: 20161110–5180.
Comments Due: 5 p.m. ET 12/1/16.

Docket Numbers: ER17–340–000.
Applicants: Southern California Edison Company.
Description: § 205(d) Rate Filing: Filing of Service Agreement No. 916 and cancellation of Service Agmt No. 911 to be effective 11/14/2016.
Filed Date: 11/10/16.
Accession Number: 20161110–5178.
Comments Due: 5 p.m. ET 12/1/16.

Docket Numbers: ER17–341–000.
Applicants: James River Genco, LLC.
Description: Petition for Limited Waiver of Tariff Deadlines and Request for Expedited Action of James River Genco, LLC.
Filed Date: 11/10/16.
Accession Number: 20161110–5216.
Comments Due: 5 p.m. ET 12/1/16.

Docket Numbers: ER17–342–000.
Applicants: Southwest Power Pool, Inc.
Description: § 205(d) Rate Filing: 3281 Mountrail-Williams Electric and Otter Tail Inter Agr to be effective 11/7/2016.
Filed Date: 11/14/16.
Accession Number: 20161114–5070.
Comments Due: 5 p.m. ET 12/5/16.

Docket Numbers: ER17–343–000.
Applicants: Southwest Power Pool, Inc.
Description: § 205(d) Rate Filing: 2252R5 Cottonwood Wind Project GIA to be effective 10/31/2016.
Filed Date: 11/14/16.
Accession Number: 20161114–5097.
Comments Due: 5 p.m. ET 12/5/16.

Take notice that the Commission received the following public utility holding company filings:

Docket Numbers: PH17–3–000.
Applicants: GIC (Ventures) Pte. Ltd.
Description: GIC (Ventures) Pte. Ltd. submits FERC 65–B Material Change in Facts of Waiver Notification.
Filed Date: 11/10/16.
Accession Number: 20161110–5217.
Comments Due: 5 p.m. ET 12/1/16.

Docket Numbers: PH17–4–000.
Applicants: Starwood Energy Group Global, L.L.C.
Description: Starwood Energy Group Global, L.L.C. submits FERC 65–B Material Change in Facts of Waiver Notification.
Filed Date: 11/9/16.
Accession Number: 20161109–5172.
Comments Due: 5 p.m. ET 11/30/16.

The filings are accessible in the Commission's eLibrary system by clicking on the links or querying the docket number.

Any person desiring to intervene or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) on or before 5:00 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: *http://www.ferc.gov/*

docs-filing/efiling/filing-req.pdf. For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: November 14, 2016.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2016–27754 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ER17–318–000]

Three Peaks Power, LLC; Supplemental Notice That Initial Market-Based Rate Filing Includes Request for Blanket Section 204 Authorization

This is a supplemental notice in the above-referenced proceeding Three Peaks Power, LLCs application for market-based rate authority, with an accompanying rate tariff, noting that such application includes a request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability.

Any person desiring to intervene or to protest should file with the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant.

Notice is hereby given that the deadline for filing protests with regard to the applicant's request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability, is November 30, 2016.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 5 copies of the intervention or protest to the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

The filings in the above-referenced proceeding are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for electronic review in the Commission's Public Reference Room in Washington, DC. There is an eSubscription link on the Web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email *FERCOnlineSupport@ferc.gov.* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: November 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27803 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. EL16–66–000]

Midwest Generation, LLC; Notice of Filing

Take notice that on November 14, 2016, Midwest Generation, LLC submitted tariff filing per: Refund Report to be effective N/A, pursuant to Federal Energy Regulatory Commission's (Commission) October 11, 2016 Order.[1]

Any person desiring to intervene or to protest this filing must file in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211, 385.214). Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a notice of intervention or motion to intervene, as appropriate. Such notices, motions, or protests must be filed on or before the comment date. On or before the comment date, it is not necessary to serve motions to intervene or protests on persons other than the Applicant.

The Commission encourages electronic submission of protests and interventions in lieu of paper using the ''eFiling'' link at *http://www.ferc.gov.* Persons unable to file electronically should submit an original and 5 copies of the protest or intervention to the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

[1] *Order Directing Refunds,* 157 FERC ¶ 61,016 (2016).

This filing is accessible on-line at *http://www.ferc.gov,* using the ''eLibrary'' link and is available for review in the Commission's Public Reference Room in Washington, DC. There is an ''eSubscription'' link on the Web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email *FERCOnlineSupport@ferc.gov,* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Comment Date: 5:00 p.m. Eastern Time on December 5, 2016.

Dated: November 14, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27801 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 271–146]

Entergy Arkansas, Inc.; Notice of Application Accepted for Filing, Soliciting Comments, Motions To Intervene, and Protests

Take notice that the following hydroelectric application has been filed with the Federal Energy Regulatory Commission and is available for public inspection:

a. *Type of Application:* Non-project use of project lands and water.

b. *Project No:* 271–146.

c. *Date Filed:* October 11, 2016.

d. *Applicant:* Entergy Arkansas Inc. (licensee).

e. *Name of Project:* Carpenter-Remmel Hydroelectric Project.

f. *Location:* Lake Catherine in Garland County, Arkansas.

g. *Filed Pursuant to:* Federal Power Act, 16 U.S.C. 791a–825r.

h. *Applicant Contact:* Eugene Knighten, Manager, Entergy Arkansas, Inc., 141 West County Line Road, Malvern, Arkansas 72104; phone (501) 844–2168.

i. *FERC Contact:* Ms. Joy Kurtz at 202–502–6760, or *joy.kurtz@ferc.gov.*

j. Deadline for filing comments, motions to intervene, and protests is 30 days from the issuance of this notice by the Commission. The Commission strongly encourages electronic filing. Please file motions to intervene, protests, and comments using the Commission's eFiling system at *http://www.ferc.gov/docs-filing/efiling.asp.* Commenters can submit brief comments up to 6,000 characters, without prior registration, using the eComment system at *http://www.ferc.gov/docs-filing/ecomment.asp.* You must include your name and contact information at the end of your comments. For assistance, please contact FERC Online Support at *FERCOnlineSupport@ferc.gov,* (866) 208–3676 (toll free), or (202) 502–8659 (TTY). In lieu of electronic filing, please send a paper copy to: Secretary, Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426. The first page of any filing should include docket number P–271–146.

k. *Description of Request:* The licensee requests Commission approval to grant the City of Hot Springs, Arkansas permission to use project lands and water within the project boundary to increase its discharge of treated sewage effluent from the Hot Springs Wastewater Treatment Plant into Lake Catherine from the currently-approved 12 million gallons per day (mgd) to 16 mgd. There are no physical improvements or additions to the treatment plant proposed within the project boundary, hence no ground-disturbing work is necessary within the project boundary to facilitate the discharge increase. All discharge would be subject to meeting the Arkansas Department of Environmental Quality's discharge permit requirements. The increase in discharge is necessary to support the growth of the City of Hot Springs and its service area.

l. *Locations of the Application:* A copy of the application is available for inspection and reproduction at the Commission's Public Reference Room, located at 888 First Street NE., Room 2A, Washington, DC 20426, or by calling 202–502–8371. This filing may also be viewed on the Commission's Web site at *http://www.ferc.gov* using the ''eLibrary'' link. Enter the docket number excluding the last three digits in the docket number field to access the document. You may also register online at *http://www.ferc.gov/docs-filing/esubscription.asp* to be notified via email of new filings and issuances related to this or other pending projects. For assistance, call 866–208–3676 or email *FERCOnlineSupport@ferc.gov,* for TTY, call 202–502–8659. A copy is also available for inspection and reproduction at the address in item (h) above.

m. Individuals desiring to be included on the Commission's mailing list should so indicate by writing to the Secretary of the Commission.

n. *Comments, Protests, or Motions to Intervene:* Anyone may submit comments, a protest, or a motion to intervene in accordance with the requirements of Rules of Practice and Procedure, 18 CFR 385.210, .211, .214. In determining the appropriate action to take, the Commission will consider all protests or other comments filed, but only those who file a motion to intervene in accordance with the Commission's Rules may become a party to the proceeding. Any comments, protests, or motions to intervene must be received on or before the specified comment date for the particular application.

o. *Filing and Service of Responsive Documents:* Any filing must (1) bear in all capital letters the title ''COMMENTS''; ''PROTEST'', or ''MOTION TO INTERVENE'' as applicable; (2) set forth in the heading the name of the applicant and the project number of the application to which the filing responds; (3) furnish the name, address, and telephone number of the person protesting or intervening; and (4) otherwise comply with the requirements of 18 CFR 385.2001 through 385.2005. All comments, motions to intervene, or protests must set forth their evidentiary basis and otherwise comply with the requirements of 18 CFR 4.34(b). All comments, motions to intervene, or protests should relate to the non-project use application. Agencies may obtain copies of the application directly from the applicant. A copy of any protest or motion to intervene must be served upon each representative of the applicant specified in the particular application. If an intervener files comments or documents with the Commission relating to the merits of an issue that may affect the responsibilities of a particular resource agency, they must also serve a copy of the document on that resource agency. A copy of all other filings in reference to this application must be accompanied by proof of service on all persons listed in the service list prepared by the Commission in this proceeding, in accordance with 18 CFR 4.34(b) and 385.2010.

Dated: November 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27805 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #2

Take notice that the Commission received the following exempt wholesale generator filings:

Docket Numbers: EG17–27–000.
Applicants: American Falls Solar, LLC.
Description: American Falls Solar, LLC submits Notice of Self-Certification of Exempt Wholesale Generator Status.
Filed Date: 11/10/16.
Accession Number: 20161110–5161.
Comments Due: 5 p.m. ET 12/1/16.

Docket Numbers: EG17–28–000.
Applicants: American Falls Solar II, LLC.
Description: American Falls Solar II, LLC submits Notice of Self-Certification of Exempt Wholesale Generator Status.
Filed Date: 11/10/16.
Accession Number: 20161110–5163.
Comments Due: 5 p.m. ET 12/1/16.

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER17–337–000.
Applicants: ISO New England Inc., New England Power Pool Participants Committee.
Description: § 205(d) Rate Filing: Change to Natural Gas Price Index to be effective 1/10/2017.
Filed Date: 11/10/16.
Accession Number: 20161110–5129.
Comments Due: 5 p.m. ET 12/1/16.

Docket Numbers: ER17–338–000.
Applicants: AEP Generation Resources Inc.
Description: § 205(d) Rate Filing: Reactive Supply and Voltage Control Amendment_Lightstone to be effective 12/31/9998.
Filed Date: 11/10/16.
Accession Number: 20161110–5149.
Comments Due: 5 p.m. ET 12/1/16.

Docket Numbers: ER17–339–000.
Applicants: 96WI 8ME, LLC.
Description: Baseline eTariff Filing: 96WI 8ME Initial MBR Application and Request for Expedited Consideration to be effective 1/1/2017.
Filed Date: 11/10/16.
Accession Number: 20161110–5171.
Comments Due: 5 p.m. ET 12/1/16.

The filings are accessible in the Commission's eLibrary system by clicking on the links or querying the docket number.

Any person desiring to intervene or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's

Regulations (18 CFR 385.211 and 385.214) on or before 5:00 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: *http://www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: November 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27811 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ER17–245–000]

Waterford Power, LLC; Supplemental Notice That Initial Market-Based Rate Filing Includes Request for Blanket Section 204 Authorization

This is a supplemental notice in the above-referenced proceeding Waterford Power, LLC's application for market-based rate authority, with an accompanying rate tariff, noting that such application includes a request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability.

Any person desiring to intervene or to protest should file with the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant.

Notice is hereby given that the deadline for filing protests with regard to the applicant's request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability, is November 30, 2016.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 5 copies of the intervention or protest to the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

The filings in the above-referenced proceeding are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for electronic review in the Commission's Public Reference Room in Washington, DC. There is an eSubscription link on the Web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email *FERCOnlineSupport@ferc.gov.* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: November 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27816 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. IC16–13–000]

Commission Information Collection Activities (FERC–547); Comment Request

AGENCY: Federal Energy Regulatory Commission, DOE.

ACTION: Comment request.

SUMMARY: In compliance with the requirements of the Paperwork Reduction Act of 1995, 44 U.S.C. 3507(a)(1)(D), the Federal Energy Regulatory Commission (Commission or FERC) is submitting its information collection FERC–547 (Gas Pipeline Rates: Refund Report Requirements) to the Office of Management and Budget (OMB) for review of the information collection requirements. Any interested person may file comments directly with OMB and should address a copy of those comments to the Commission as explained below. The Commission previously issued a Notice in the **Federal Register** (81 FR 49970, 7/29/2016) requesting public comments. The Commission received no comments on the FERC–547 and is making this notation in its submittal to OMB.

DATES: Comments on the collection of information are due by December 19, 2016.

ADDRESSES: Comments filed with OMB, identified by the OMB Control No. 1902–0084, should be sent via email to the Office of Information and Regulatory Affairs: *oira_submission@omb.gov.* Attention: Federal Energy Regulatory Commission Desk Officer. The Desk Officer may also be reached via telephone at 202–395–4718.

A copy of the comments should also be sent to the Commission, in Docket No. IC16–13–000, by either of the following methods:

- eFiling at Commission's Web site: *http://www.ferc.gov/docs-filing/efiling.asp.*
- *Mail/Hand Delivery/Courier:* Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street NE., Washington, DC 20426.

Instructions: All submissions must be formatted and filed in accordance with submission guidelines at: *http://www.ferc.gov/help/submission-guide.asp.* For user assistance contact FERC Online Support by email at *ferconlinesupport@ferc.gov,* or by phone at: (866) 208–3676 (toll-free), or (202) 502–8659 for TTY.

Docket: Users interested in receiving automatic notification of activity in this docket or in viewing/downloading comments and issuances in this docket may do so at *http://www.ferc.gov/docs-filing/docs-filing.asp.*

FOR FURTHER INFORMATION CONTACT: Ellen Brown may be reached by email at *DataClearance@FERC.gov,* by telephone at (202) 502–8663, and by fax at (202) 273–0873.

SUPPLEMENTARY INFORMATION:

Title: Gas Pipeline Rates: Refund Report Requirements.

OMB Control No.: 1902–0084.

Type of Request: Three-year extension of the FERC–547 information collection requirements with no changes to the reporting requirements.

Abstract: The Commission uses FERC–547 (Gas Pipeline Rates: Refund Report Requirements) to implement the statutory refund provisions governed by Sections 4, 5 and 16 of the Natural Gas Act (NGA).[1] Sections 4 and 5 authorize the Commission to order a refund (with interest) for any portion of a natural gas company's increased rate or charge found to be unjust or unreasonable. Refunds may also be instituted by a natural gas company as a stipulation to a Commission-approved settlement agreement or a provision under the company's tariff. Section 16 of the NGA

[1] 15 U.S.C. 717–717w.

authorizes the Commission to prescribe rules and regulations necessary to administer its refund mandates. The Commission's refund reporting requirements are located in 18 CFR 154.501 and 154.502.

The Commission uses the data to monitor refunds owed by natural gas companies to ensure that the flow-through of refunds owed by these companies are made as expeditiously as possible and to assure that refunds are made in compliance with the Commission's regulations.

Type of Respondents: Natural gas companies.

Estimate of Annual Burden [2]*:* The Commission estimates the annual public reporting burden for the information collection as:

FERC–547—GAS PIPELINE RATES: REFUND REPORT REQUIREMENTS

	Number of respondents (1)	Annual number of responses per respondent (2)	Total number of Responses (1)*(2)=(3)	Average burden and cost per response [3] (4)	Total annual burden hours and total annual cost (3)*(4)=(5)	Cost per respondent ($) (5)÷(1)
Natural Gas Pipelines	11	1	11	75 hrs.; $5,587.50	825 hrs.; $61,462.50	$5,587.50

Comments: Comments are invited on: (1) whether the collection of information is necessary for the proper performance of the functions of the Commission, including whether the information will have practical utility; (2) the accuracy of the agency's estimate of the burden and cost of the collection of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility and clarity of the information collection; and (4) ways to minimize the burden of the collection of information on those who are to respond, including the use of automated collection techniques or other forms of information technology.

Dated: November 14, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27804 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ER17–256–000]

Darby Power, LLC; Supplemental Notice That Initial Market-Based Rate Filing Includes Request for Blanket Section 204 Authorization

This is a supplemental notice in the above-referenced proceeding Darby Power, LLC's application for market-based rate authority, with an accompanying rate tariff, noting that such application includes a request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability.

Any person desiring to intervene or to protest should file with the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant.

Notice is hereby given that the deadline for filing protests with regard to the applicant's request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability, is November 30, 2016.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 5 copies of the intervention or protest to the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

The filings in the above-referenced proceeding are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for electronic review in the Commission's Public Reference Room in Washington, DC. There is an eSubscription link on the Web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email *FERCOnlineSupport@ferc.gov.* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: November 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27802 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

Combined Notice of Filings #2

Take notice that the Commission received the following electric rate filings:

Docket Numbers: ER10–3145–007; ER10–3116–007; ER10–3120–007; ER11–2036–007; ER13–1544–004; ER16–930–001; ER10–3128–007; ER10–1800–008; ER10–3136–007; ER11–2701–009; ER10–1728–007.

Applicants: AES Alamitos, LLC, AES Energy Storage, LLC, AES Laurel Mountain, LLC, AES Huntington Beach, L.L.C., AES ES Tait, LLC, AES Ohio Generation, LLC, AES Redondo Beach, L.L.C., Indianapolis Power and Light Company, Mountain View Power Partners, LLC, Mountain View Power Partners IV, LLC, The Dayton Power and Light Company.

Description: Supplement to June 30, 2016 Triennial Market Power Analysis

---

[2] The Commission defines burden as the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. For further explanation of what is included in the information collection burden, reference 5 Code of Federal Regulations 1320.3.

[3] The cost is based on FERC's 2016 average cost (salary plus benefits) of $74.50/hour. The Commission staff believes that the industry's level and skill set is comparable to FERC.

for Southwestern Region of AES MBR Affiliates.
Filed Date: 11/10/16.
Accession Number: 20161110–5238.
Comments Due: 5 p.m. ET 12/1/16.

Docket Numbers: ER15–1706–000.
Applicants: Newark Energy Center, LLC.
Description: Report Filing: Refund Report re EL15–97 et al. to be effective N/A.
Filed Date: 11/14/16.
Accession Number: 20161114–5330.
Comments Due: 5 p.m. ET 12/5/16.

Docket Numbers: ER16–1346–001.
Applicants: Midcontinent Independent System Operator, Inc.
Description: Compliance filing: 2016–11–14_SA 2911 LEPA–MISO External NRIS (J373) Compliance to be effective 4/5/2016.
Filed Date: 11/14/16.
Accession Number: 20161114–5329.
Comments Due: 5 p.m. ET 12/5/16.

Docket Numbers: ER16–1817–001.
Applicants: Midcontinent Independent System Operator, Inc.
Description: Compliance filing: 2016–11–14_Attachment X_E–NRIS Compliance Filing to be effective 4/5/2016.
Filed Date: 11/14/16.
Accession Number: 20161114–5328.
Comments Due: 5 p.m. ET 12/5/16.

Docket Numbers: ER16–2187–001.
Applicants: Midcontinent Independent System Operator, Inc.
Description: Compliance filing: 2016–11–14_Schedule 2 Rule to Show Cause Follow-Up Compliance EL16–61 to be effective 6/22/2016.
Filed Date: 11/14/16.
Accession Number: 20161114–5152.
Comments Due: 5 p.m. ET 12/5/16.

Docket Numbers: ER17–54–001.
Applicants: PacifiCorp.
Description: Tariff Amendment: EDF Trading MDUSA Rev 1 Amendment to be effective 10/4/2016.
Filed Date: 11/14/16.
Accession Number: 20161114–5219.
Comments Due: 5 p.m. ET 12/5/16.

Docket Numbers: ER17–344–000.
Applicants: Public Service Company of Colorado.
Description: § 205(d) Rate Filing: PSCo-TSGT–E&P–420–0.1.0–NOC to be effective 11/15/2016.
Filed Date: 11/14/16.
Accession Number: 20161114–5162.
Comments Due: 5 p.m. ET 12/5/16.

Docket Numbers: ER17–345–000.
Applicants: Chisholm View Wind Project, LLC.
Description: Baseline eTariff Filing: Chisholm View Wind Project, LLC Shared Facilities Agreement to be effective 11/15/2016.
Filed Date: 11/14/16.
Accession Number: 20161114–5244.
Comments Due: 5 p.m. ET 12/5/16.

Docket Numbers: ER17–346–000.
Applicants: PJM Interconnection, L.L.C.
Description: § 205(d) Rate Filing: ISA No. 4095 and CSAs, SA Nos. 4107 and 4567, Queue No. Z2–060/AA2–170 to be effective 10/13/2016.
Filed Date: 11/14/16.
Accession Number: 20161114–5295.
Comments Due: 5 p.m. ET 12/5/16.

Docket Numbers: ER17–347–000.
Applicants: PJM Interconnection, L.L.C.
Description: § 205(d) Rate Filing: Cancellation of Schedule 10—Michigan—Ontario Interface to be effective 11/14/2016.
Filed Date: 11/14/16.
Accession Number: 20161114–5312.
Comments Due: 5 p.m. ET 12/5/16.

Docket Numbers: ER17–348–000.
Applicants: ITC Midwest LLC.
Description: § 205(d) Rate Filing: Filing of a DTIA with the City of Stanhope to be effective 1/13/2017.
Filed Date: 11/14/16.
Accession Number: 20161114–5314.
Comments Due: 5 p.m. ET 12/5/16.

Docket Numbers: ER17–349–000.
Applicants: PJM Interconnection, L.L.C.
Description: § 205(d) Rate Filing: Original Designated Entity Agreement No. 4579, Projects b2743 and b2752 to be effective 11/2/2016.
Filed Date: 11/14/16.
Accession Number: 20161114–5331.
Comments Due: 5 p.m. ET 12/5/16.

The filings are accessible in the Commission's eLibrary system by clicking on the links or querying the docket number.

Any person desiring to intervene or protest in any of the above proceedings must file in accordance with Rules 211 and 214 of the Commission's Regulations (18 CFR 385.211 and 385.214) on or before 5:00 p.m. Eastern time on the specified comment date. Protests may be considered, but intervention is necessary to become a party to the proceeding.

eFiling is encouraged. More detailed information relating to filing requirements, interventions, protests, service, and qualifying facilities filings can be found at: *http://www.ferc.gov/docs-filing/efiling/filing-req.pdf.* For other information, call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: November 14, 2016.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2016–27755 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ER17–196–000]

Pima Energy Storage System, LLC; Supplemental Notice That Initial Market-Based Rate Filing Includes Request For Blanket Section 204 Authorization

This is a supplemental notice in the above-referenced proceeding Pima Energy Storage System, LLC's application for market-based rate authority, with an accompanying rate tariff, noting that such application includes a request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability.

Any person desiring to intervene or to protest should file with the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant.

Notice is hereby given that the deadline for filing protests with regard to the applicant's request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability, is November 30, 2016.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 5 copies of the intervention or protest to the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

The filings in the above-referenced proceeding are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for electronic review in the Commission's Public Reference Room in Washington, DC. There is an eSubscription link on the Web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email *FERCOnlineSupport@ferc.gov.* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: November 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27813 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. ER17–242–000]

Gavin Power, LLC; Supplemental Notice That Initial Market-Based Rate Filing Includes Request for Blanket Section 204 Authorization

This is a supplemental notice in the above-referenced proceeding Gavin Power, LLC's application for market-based rate authority, with an accompanying rate tariff, noting that such application includes a request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability.

Any person desiring to intervene or to protest should file with the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 CFR 385.211 and 385.214). Anyone filing a motion to intervene or protest must serve a copy of that document on the Applicant.

Notice is hereby given that the deadline for filing protests with regard to the applicant's request for blanket authorization, under 18 CFR part 34, of future issuances of securities and assumptions of liability, is November 30, 2016.

The Commission encourages electronic submission of protests and interventions in lieu of paper, using the FERC Online links at *http://www.ferc.gov.* To facilitate electronic service, persons with Internet access who will eFile a document and/or be listed as a contact for an intervenor must create and validate an eRegistration account using the eRegistration link. Select the eFiling link to log on and submit the intervention or protests.

Persons unable to file electronically should submit an original and 5 copies of the intervention or protest to the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

The filings in the above-referenced proceeding are accessible in the Commission's eLibrary system by clicking on the appropriate link in the above list. They are also available for electronic review in the Commission's Public Reference Room in Washington, DC. There is an eSubscription link on the Web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email *FERCOnlineSupport@ferc.gov.* or call (866) 208–3676 (toll free). For TTY, call (202) 502–8659.

Dated: November 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27814 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. CP17–11–000]

Columbia Gas Transmission, LLC; Notice of Request Under Blanket Authorization

Take notice that on November 3, 2016 Columbia Gas Transmission, LLC (Columbia Gas), 5151 San Felipe, Suite 2500, Houston, Texas 77056 filed a prior notice request pursuant to sections 157.205 and 157.213(b) of the Commission's regulations under the Natural Gas Act for authorization to construct and operate certain natural gas storage facilities located in Jackson County, West Virginia. Specifically, Columbia proposes to construct and operate three new storage wells and related pipeline to tie the wells into existing pipelines at Columbia's Ripley Storage Field. It is estimated that the three new directional wells will provide a combined total of 15 MMcf per day of improved deliverability to the Columbia system, all as more fully set forth in the application which is on file with the Commission and open to public inspection. The filing may also be viewed on the web at *http://www.ferc.gov* using the ''eLibrary'' link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance, contact FERC at *FERCOnlineSupport@ferc.gov* or call toll-free, (866) 208–3676 or TTY, (202) 502–8659.

Any questions regarding this Application should be directed to Robert D. Jackson, Manager, Certificates & Regulatory Administration, Columbia Gas Transmission, LLC, 700 Louisiana Street, Suite 700, Houston, Texas 77002, by calling (832) 320–5487, or by fax (832) 320–6487, or by email at *Robert_jackson@transcanada.com.*

Any person may, within 60 days after the issuance of the instant notice by the Commission, file pursuant to Rule 214 of the Commission's Procedural Rules (18 CFR 385.214) a motion to intervene or notice of intervention. Any person filing to intervene or the Commission's staff may, pursuant to section 157.205 of the Commission's Regulations under the NGA (18 CFR 157.205) file a protest to the request. If no protest is filed within the time allowed therefore, the proposed activity shall be deemed to be authorized effective the day after the time allowed for protest. If a protest is filed and not withdrawn within 30 days after the time allowed for filing a protest, the instant request shall be treated as an application for authorization pursuant to section 7 of the NGA.

Pursuant to section 157.9 of the Commission's rules, 18 CFR 157.9, within 90 days of this Notice the Commission staff will either: Complete its environmental assessment (EA) and place it into the Commission's public record (eLibrary) for this proceeding; or issue a Notice of Schedule for Environmental Review. If a Notice of Schedule for Environmental Review is issued, it will indicate, among other milestones, the anticipated date for the Commission staff's issuance of the final environmental impact statement (FEIS) or EA for this proposal. The filing of the EA in the Commission's public record for this proceeding or the issuance of a Notice of Schedule for Environmental Review will serve to notify federal and state agencies of the timing for the completion of all necessary reviews, and the subsequent need to complete all federal authorizations within 90 days of the date of issuance of the Commission staff's FEIS or EA.

Persons who wish to comment only on the environmental review of this project should submit an original and two copies of their comments to the Secretary of the Commission. Environmental commenter's will be placed on the Commission's environmental mailing list, will receive copies of the environmental documents, and will be notified of meetings associated with he Commission's environmental review process. Environmental commenter's will not be required to serve copies of filed documents on all other parties. However, the non-party commentary, will not receive copies of all documents filed by other parties or issued by the Commission (except for the mailing of environmental documents issued by the Commission) and will not have the right to seek court review of the Commission's final order.

The Commission strongly encourages electronic filings of comments, protests, and interventions via the internet in lieu of paper. See 18 CFR 385.2001(a) (1) (iii) and the instructions on the Commission's Web site (*www.ferc.gov*) under the ''e-Filing'' link. Persons unable to file electronically should submit original and 5 copies of the protest or intervention to the Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426.

Dated: November 10, 2016.

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27812 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. IC16–12–000]

Commission Information Collection Activities (FERC–511, FERC–515, & FERC–574); Comment Request

AGENCY: Federal Energy Regulatory Commission, Department of Energy.

ACTION: Comment request.

SUMMARY: In compliance with the requirements of the Paperwork Reduction Act of 1995, 44 U.S.C. 3507(a)(1)(D), the Federal Energy Regulatory Commission (Commission or FERC) is submitting its information collections [FERC–511 (Transfer of Electric License), FERC–515 (Rules of Practice and Procedure: Declaration of Intention), and FERC–574 (Gas Pipeline Certificates: Hinshaw Exemption)] to the Office of Management and Budget (OMB) for review of the information collection requirements. Any interested person may file comments directly with OMB and should address a copy of those comments to the Commission as explained below. The Commission previously issued a Notice in the **Federal Register** (81 FR 45145, 7/12/2016) requesting public comments. The Commission received no comments on the FERC–511, the FERC–515, or the FERC–574 and is making this notation in its submittal to OMB.

DATES: Comments on the collection of information are due by December 19, 2016.

ADDRESSES: Comments filed with OMB, identified by the OMB Control No. 1902–0069 (FERC–511), 1902–0079 (FERC–515), or 1902–0116 (FERC–574) should be sent via email to the Office of Information and Regulatory Affairs: *oira_submission@omb.gov.* Attention: Federal Energy Regulatory Commission Desk Officer. The Desk Officer may also be reached via telephone at 202–395–4718.

A copy of the comments should also be sent to the Commission, in Docket No. IC16–12–000, by either of the following methods:

- *eFiling at Commission's Web site: http://www.ferc.gov/docs-filing/efiling.asp.*
- *Mail/Hand Delivery/Courier:* Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street NE., Washington, DC 20426.

Instructions: All submissions must be formatted and filed in accordance with submission guidelines at: *http://www.ferc.gov/help/submission-guide.asp.* For user assistance contact FERC Online Support by email at *ferconlinesupport@ferc.gov,* or by phone at: (866) 208–3676 (toll-free), or (202) 502–8659 for TTY.

Docket: Users interested in receiving automatic notification of activity in this docket or in viewing/downloading comments and issuances in this docket may do so at *http://www.ferc.gov/docs-filing/docs-filing.asp.*

FOR FURTHER INFORMATION CONTACT: Ellen Brown may be reached by email at *DataClearance@FERC.gov,* by telephone at (202) 502–8663, and by fax at (202) 273–0873.

SUPPLEMENTARY INFORMATION:

Type of Request: Three-year extension of the information collection requirements for all collections described below with no changes to the current reporting requirements. Please note that each collection is distinct from the next.

Comments: Comments are invited on: (1) Whether the collections of information are necessary for the proper performance of the functions of the Commission, including whether the information will have practical utility; (2) the accuracy of the agency's estimates of the burden and cost of the collections of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility and clarity of the information collections; and (4) ways to minimize the burden of the collections of information on those who are to respond, including the use of automated collection techniques or other forms of information technology.

FERC–511, Transfer of Electric License

OMB Control No.: 1902–0069.

Type of Request: Three-year extension of the FERC–511 information collection requirements with no changes to the current reporting requirements.

Abstract: The Commission uses the information collected under the requirements of FERC–511 to implement the statutory provisions of Sections 4(e) and 8 of the Federal Power Act (FPA).[1] Section 4(e) authorizes the Commission to issue licenses for the construction, operation and maintenance of reservoirs, powerhouses, and transmission lines or other facilities necessary for the development and improvement of navigation and for the development, transmission, and utilization of power.[2] Section 8 of the FPA provides that the voluntary transfer of any license is made only with the written approval of the Commission. Any successor to the licensee may assign the rights of the original licensee but is subject to all of the conditions of the license. The information filed with the Commission is a mandatory requirement contained in the format of a written application for transfer of license, executed jointly by the parties of the proposed transfer. The sale or merger of a licensed hydroelectric project may occasion the transfer of a license. The Commission's staff uses the information collection to determine the qualifications of the proposed transferee to hold the license and to prepare the transfer of the license order. Approval by the Commission of transfer of a license is contingent upon the transfer of title to the properties under license, delivery of all license instruments, and evidence that such transfer is in the public interest. The Commission implements these filing requirements in the Code of Federal Regulations (CFR) under 18 CFR part 9.

Type of Respondents: Hydropower Project Licensees.

Estimate of Annual Burden: The Commission estimates the annual public reporting burden for the information collection as:

[1] 16 U.S.C. 797(e) and 801.

[2] Refers to facilities across, along, from, or in any of the streams or other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States, or upon any part of public lands and reservations of the United States, or for the purpose of utilizing the surplus water or water power from any Government dam.

FERC–511—TRANSFER OF ELECTRIC LICENSE

	Number of respondents (1)	Annual number of responses per respondent (2)	Total number of responses (1) * (2) = (3)	Average burden hrs. & cost per response (4)	Total annual burden hours & total annual cost (3) * (4) = (5)	Cost per respondent (5) ÷ (1)
Hydropower Project Licensees	46	1	46	40 hrs.; $2,980	1,840 hrs.; $137,080.	$2,980

FERC–515, Rules of Practice and Procedure: Declaration of Intention

OMB Control No.: 1902–0079.

Type of Request: Three-year extension of the FERC–515 information collection requirements with no changes to the current reporting requirements.

Abstract: The Commission uses the information collected under the requirements of FERC–515 to implement the statutory provisions of Section 23(b) of the Federal Power Act (FPA).[3] Section 23(b) authorizes the Commission to make a determination as to whether it has jurisdiction over a proposed water project[4] not affecting navigable waters[5] but across, along, over, or in waters over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States. Section 23(b) requires that any person intending to construct project works on such waters must file a declaration of their intention with the Commission. If the Commission finds the proposed project will have an impact on interstate or foreign commerce, then the entity intending to construct the project must obtain a Commission license or exemption before starting construction.[6] The information is collected in the form of a written application, containing sufficient details to allow the Commission staff to research the jurisdictional aspects of the project. This research includes examining maps and land ownership records to establish whether or not there is Federal jurisdiction over the lands and waters affected by the project. A finding of non-jurisdictional by the Commission eliminates a substantial paperwork burden for the applicant who might otherwise have to file for a license or exemption application. The Commission implements these filing requirements under 18 CFR part 24.

Type of Respondents: Persons intending to construct project works on certain waters described above.

Estimate of Annual Burden: The Commission estimates the annual public reporting burden for the information collection as:

FERC–515—RULES OF PRACTICE AND PROCEDURE: DECLARATION OF INTENTION

Number of respondents (1)	Annual number of responses per respondent (2)	Total number of responses (1) * (2) = (3)	Average burden hrs. & cost per response (4)	Total annual burden hours & total annual cost (3) * (4) = (5)	Cost per respondent ($) (5) ÷ (1)
6	1	6	80 hrs.; $5,960	480 hrs.; $35,760.	$5,960

FERC–574, Gas Pipeline Certificates: Hinshaw Exemption

OMB Control No.: 1902–0116.

Type of Request: Three-year extension of the FERC–574 information collection requirements with no changes to the current reporting requirements.

Abstract: The Commission uses the information collected under the requirements of FERC–574 to implement the statutory provisions of Sections 1(c), 4 and 7 of the Natural Gas Act (NGA).[7] Natural gas pipeline companies file applications with the Commission furnishing information in order to facilitate a determination of an applicant's qualification for an exemption under the provisions of the Section 1(c). If the Commission grants exemption, the natural gas pipeline company is not required to file certificate applications, rate schedules, or any other applications or forms prescribed by the Commission.

The exemption applies to companies engaged in the transportation, sale, or resale of natural gas in interstate commerce if: (a) They receive gas at or within the boundaries of the state from another person at or within the boundaries of that state; (b) such gas is ultimately consumed in such state; (c) the rates, service and facilities of such company are subject to regulation by a State Commission; and (d) that such State Commission is exercising that jurisdiction. 18 CFR part 152 specifies the data required to be filed by pipeline companies for an exemption.

Type of Respondents: Pipeline companies.

Estimate of Annual Burden: The Commission estimates the annual public reporting burden for the information collection as:

[3] 16 U.S.C. 817

[4] Dams or other project works. (See 16 U.S.C. 817.)

[5] See 16 U.S.C. 796 (8) for the definition of ''Navigable Waters.''

[6] Upon a finding of non-jurisdictional by the Commission, and if the project does not utilize surplus water or waterpower from a government dam and no public lands or reservations are affected, permission is granted upon compliance with State laws.

[7] 15 U.S.C. 717–717w.

FERC–574—GAS PIPELINE CERTIFICATES: HINSHAW EXEMPTION

	Number of respondents (1)	Annual number of responses per respondent (2)	Total number of responses (1) * (2) = (3)	Average burden hrs. & cost per response (4)	Total annual burden hours & total annual cost (3) * (4) = (5)	Cost per respondent (5) ÷ (1)
Pipeline Companies	1	1	1	60 hrs.; $4,470	60 hrs.; $4,470	$4,470

Kimberly D. Bose,

Secretary.

[FR Doc. 2016–27808 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket No. AD16–25–000]

Utilization In the Organized Markets of Electric Storage Resources as Transmission Assets Compensated Through Transmission Rates, for Grid Support Services Compensated in Other Ways, and for Multiple Services; Notice Inviting Post-Technical Conference Comments

On November 9, 2016, the Federal Energy Regulatory Commission staff convened a technical conference to discuss the utilization of electric storage resources as transmission assets compensated through transmission rates, for grid support services that are compensated in other ways, and for multiple services.

All interested persons are invited to file post-technical conference comments on the topics discussed in the Supplemental Notice of Technical Conference issued in this proceeding on November 1, 2016 (Supplemental Notice), including the questions listed therein. Commenters need not respond to all topics or questions asked. Commenters should organize responses consistent with the organization of the topics and questions in the Supplemental Notice. Commenters may reference material previously filed in this docket, including the technical conference transcript, but are encouraged to submit new or additional information rather than reiterate information that is already in the record. In particular, commenters are encouraged, when possible, to provide examples in support of their answers. These comments are due within 30 days of the date of this notice.

For more information about this notice, please contact:

Rahim Amerkhail (Technical Information), Office of Energy Policy and Innovation, Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426, (202) 502–8266, *rahim.amerkhail@ferc.gov.*

Heidi Nielsen (Legal Information), Office of the General Counsel, Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426, (202) 502–8435, *heidi.nielsen@ferc.gov.*

Sarah McKinley (Logistical Information), Office of External Affairs, Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426, (202) 502–8004, *sarah.mckinley@ferc.gov.*

Dated: November 14, 2016.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2016–27753 Filed 11–17–16; 8:45 am]

BILLING CODE 6717–01–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPP–2016–0577; FRL–9953–55]

Notice of Receipt of Requests to Voluntarily Cancel Certain Pesticide Registrations and Amend Registrations To Terminate Certain Uses

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: In accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA is issuing a notice of receipt of requests by the registrants to voluntarily cancel their registrations and to amend product registrations to terminate uses.

EPA intends to grant these requests at the close of the comment period for this announcement unless the Agency receives substantive comments within the comment period that would merit its further review of the requests, or unless the registrants withdraw its requests. If these requests are granted, any sale, distribution, or use of products listed in this notice will be permitted after the registrations have been cancelled and uses terminated only if such sale, distribution, or use is consistent with the terms as described in the final order.

DATES: Comments must be received on or before December 19, 2016.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPP–2016–0577, by one of the following methods:

• *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.

• *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001.

• *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.html.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Christopher Green, Information Technology and Resources Management Division (7502P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (703) 347–0367; email address: *green.christopher@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

This action is directed to the public in general, and may be of interest to a wide range of stakeholders including environmental, human health, and agricultural advocates; the chemical industry; pesticide users; and members of the public interested in the sale, distribution, or use of pesticides. Since others also may be interested, the Agency has not attempted to describe all the specific entities that may be affected by this action.

B. What should I consider as I prepare my comments for EPA?

1. *Submitting CBI.* Do not submit this information to EPA through *regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD–ROM that you mail to EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. *Tips for preparing your comments.* When preparing and submitting your comments, see the commenting tips at *http://www.epa.gov/dockets/comments.html.*

II. What action is the agency taking?

This notice announces receipt by EPA of requests from registrants to cancel certain pesticide products and amend product registrations to terminate certain uses. The affected products and the registrants making the requests are identified in Tables 1–3 of this unit.

Unless a request is withdrawn by the registrant or if the Agency determines that there are substantive comments that warrant further review of this request, EPA intends to issue an order in the **Federal Register** canceling and amending the affected registrations.

TABLE 1—PRODUCT REGISTRATIONS WITH PENDING REQUESTS FOR CANCELLATION

Registration No.	Company No.	Product name	Active ingredient
100–951	100	Hurricane	Metalaxyl-M & Fludioxonil.
100–1051	100	Talon-G Rodenticide Bait Pack Pellets with Bitrex	Brodifacoum.
100–1052	100	Talon-G Rodenticide Pellets with Bitrex	Brodifacoum.
100–1057	100	Talon-G Rodenticide Mini-Pellets with Bitrex	Brodifacoum.
100–1064	100	Diquat Weed Killer 'D'	Diquat dibromide.
100–1095	100	Lambda-Cyhalothrin TC Insecticide	Lambda-Cyhalothrin.
100–1114	100	Rapid Kill #1	Diquat dibromide.
100–1115	100	Rapid Kill #1 Concentrate	Diquat dibromide.
100–1143	100	Touchdown Ready-To-Use Herbicide	Glyphosate.
100–1144	100	Touchdown Home and Garden Concentrate	Glyphosate.
100–1170	100	Optigard ZT Insecticide	Thiamethoxam.
100–1180	100	Touchdown Diquat Home and Garden Ready To Use.	Diquat dibromide & Glyphosate.
100–1209	100	Abamectin Granular Fire Ant Killer	Abamectin.
100–1302	100	Cypermethrin ME 2.0% Concentrate	Cypermethrin.
100–1303	100	Cypermethrin ME 0.2% RTU	Cypermethrin.
100–1329	100	Glyphosate Diquat Prodiamine EW RTU	Glyphosate, Diquat dibromide & Prodiamine.
100–1331	100	Prodiamine/Diquat/Glyphosate EW Concentrate	Diquat dibromide, Prodiamine & Glyphosate.
100–1332	100	Prodiamine/Diquat/Glyphosate EW Manufacturing use Concentrate.	Diquat dibromide, Glyphosate & Prodiamine.
100–1355	100	Departure Herbicide	Glyphosate.
100–1393	100	Hurricane WDG	Fludioxonil & Metalaxyl-M.
100–1403	100	Glyphosate 500	Glyphosate.
100–1429	100	Foxfire Herbicide	Pinoxaden & Fenoxaprop-p-ethyl.
228–679	228	ETI 107 02 G	Paclobutrazol.
228–680	228	ETI 107 01 G	Paclobutrazol.
279–3195	279	Authority First Herbicide	Sulfentrazone.
279–3231	279	Gauntlet	Sulfentrazone & Cloransulam-methyl.
279–3247	279	Gauntlet 70 WP Herbicide	Sulfentrazone & Cloransulam-methyl.
352–713	352	DuPont Sulfentrazone XP Herbicide	Sulfentrazone.
499–497	499	Whitmire Micro-Gen TC 232	D-Limonene.
499–508	499	TC 246	Imazalil.
499–519	499	TC 232 W&H	D-Limonene.
2724–819	2724	Pyrocide Pressurized Ant & Roach Spray 70451	Propoxur, Pyrethrins, Piperonyl butoxide & MGK 264.
2792–45	2792	No Scald DPA EC–283	Diphenylamine (Not selected for InertFinder).
5905–583	5905	HM–0739	2,4–D, diethanolamine salt, Benzoic acid, 3,6-dichloro-2-methoxy-, compd with 2,2′-iminobis(ethanol) (1:1) & 3-Quinolinecarboxylic acid, 2-(4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl)-, monoammonium salt.
7969–341	7969	Cando Limonene Wasp & Hornet Jet Spray	D-Limonene.
7969–344	7969	Cando Limonene Indoor/Outdoor Multi-Insect Spray.	D-Limonene.
9688–307	9688	TAT Total Release Water Based Fogger	MGK 264, Tetramethrin & Esfenvalerate.
35935–101	35935	Azoxystrobin Technical	Azoxystrobin.
59639–80	59639	Valent Bolero 10 G (Herbicide)	Thiobencarb.
61282–01	61282	Technical Diphacinone	Diphacinone.
61282–03	61282	Zinc Phosphide 93	Zinc phosphide (Zn3P2).
61282–20	61282	Zinc Phosphide Corn Bait	Zinc phosphide (Zn3P2).
61842–20	61842	Layby Pro Herbicide	Diuron & Linuron.
61842–21	61842	Linex 4L Herbicide	Linuron.
61842–22	61842	Linuron Technical	Linuron.
61842–23	61842	Lorox DF	Linuron.

TABLE 1—PRODUCT REGISTRATIONS WITH PENDING REQUESTS FOR CANCELLATION—Continued

Registration No.	Company No.	Product name	Active ingredient
61842–24	61842	Linuron Flake Technical	Linuron.
61842–32	61842	Linuron Technical	Linuron.
66222–32	66222	Captan Technical	Captan.
66330–260	66330	Flomet 4L	Fluometuron.
67760–43	67760	Cheminova Methyl Parathion 4 EC	Methyl parathion.
70506–180	70506	Accelerate a Harvest Aid for Cotton	Endothall, mono(N,N,-dimethyl alkyl amine) salt.
70506–190	70506	Desicate II	Endothall, mono(N,N,-dimethyl alkyl amine) salt.
70506–296	70506	Thinrite Blossom Thinner	Endothal-dipotassium.
70506–297	70506	UPI Captan Technical	Captan.
82437–1	82437	K & W Agrochemicals 5–15–5 with Gro-Root Liquid (GRL) Root & Transplant Stimulator with 2 Hormones.	1-Naphthaleneacetic acid & Indole-3-butyric acid.
82437–3	82437	Kingro RTU (Ready-to-use)	Cytokinin (as kinetin).
82437–4	82437	Rootaid Gel	Indole-3-butyric acid.
82437–6	82437	Prostim L	Indole-3-butyric acid & Cytokinin (as kinetin).
82437–8	82437	Prostim II	Cytokinin (as kinetin) & Indole-3-butyric acid.
88342–1	88342	Odor Rescue	Sodium chlorite.
89461–2	89461	Shiner Concentrated Shock Granules	Trichloro-s-triazinetrione.
89461–3	89461	Shiner Dichlor Shock Granules	Sodium dichloroisocyanurate dihydrate.
CO–010006	10163	Hexygon WDG	Hexythiazox.
SC–140001	59639	V–10233 Herbicide	Flumioxazin & Pyroxasulfone.
WA–060021	10163	Onager 1E	Hexythiazox.

TABLE 2—PRODUCT REGISTRATIONS WITH PENDING REQUESTS FOR AMENDMENT

Registration No.	Company No.	Product name	Active ingredient	Uses to be terminated
100–1093	100	Heritage Fungicide	Azoxystrobin	Artichoke, Globe, Bananas, Plantains (post-harvest uses only), Barley, Canola, Carrots, Corn, Cotton, Cranberry, Grasses (grown for seed), Legume vegetables, dry and succulent, Oilseed crops, Peanuts, Potatoes, Rice, Soybean, Tobacco, Vegetable, leaves of root and tubers, Vegetable, root subgroup, Vegetable, tuberous and corm subgroup, Watercress, Wheat, Triticale & Indoor residual mold spray (use on carpet; wood and drywall; hard, non-porous surfaces).
100–1218	100	Demon Max Insecticide	Cypermethrin	Remove the directions for use for material protection. Remove the section entitled, Treatment of Preconstruction Lumber and Logs.
264–736	264	Bayleton Technical Fungicide.	Triadimefon	Pineapple.
264–740	264	Bayleton 50% Concentrate.	Triadimefon	Pineapple.
2792–45	2792	No Scald DPA EC–283	Diphenylamine (Not selected for InertFinder).	Pear use.
6218–45	6218	Pyrethrins Fogging Concentrate II.	MGK 264, Piperonyl butoxide & Pyrethrins.	Outdoor Use, all outdoor uses except building perimeters (spot treatments).
43410–33	43410	Chem-Tek 100	Thiabendazole	In or on paints, nylon carpeting & canvas textiles.
70506–179	70506	Ziram Manufacturing Use Product.	Ziram	Blackberries.
85678–8	85678	Captan Technical	Captan	Turf Use.
85678–13	85678	Captan 4L	Captan	Turf Use.
85678–14	85678	Captan 80 WDG	Captan	Turf Use.
85678–28	85678	Captan Technical II	Captan	Turf Use.
87290–61	87290	Willowood Mesotrione 4SC.	Mesotrione	Directions for use on soybeans.
87290–62	87290	Willowood Mesotrione 480SC.	Mesotrione	Directions for use on soybeans.

Table 3 of this unit includes the names and addresses of record for the registrants of the products listed in Table 1 and Table 2 of this unit, in sequence by EPA company number. This number corresponds to the first part of the EPA registration numbers of the products listed in Table 1 and Table 2 of this unit.

TABLE 3—REGISTRANTS REQUESTING VOLUNTARY CANCELLATION AND/OR AMENDMENTS

EPA company No.	Company name and address
100	Syngenta Crop Protection, LLC, 410 Swing Road, P.O. Box 18300, Greensboro, NC 27419–8300.
228	NuFarm Americas, Inc., 4020 Aerial Center Pkwy., Ste. 101, Morrisville, NC 27560.
264	Bayer CropScience, LP, 2 T.W. Alexander Drive, P.O. Box 12014, Research Triangle Park, NC 27709.
279	FMC Corporation, 2929 Walnut Street, Philadelphia, PA 19104.
352	E.I. Du Pont De Nemours and Company (S300/419), Attn: Manager, U.S. Registration, Dupont Crop Protection, Chestnut Run Plaza, 974 Centre Road, P.O. Box 2915, Wilmington, DE 19805.
499	BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709–3528.
2724	Wellmark International, 1501 E. Woodfield Road, Suite 200 West, Schaumburg, IL 60173.
2792	Decco US Post-Harvest, Inc., 1713 South California Avenue, Monrovia, CA 91016–0120.
5905	Helena Chemical Company, Agent Name: Helena Products Group, 7664 Smythe Farm Road, Memphis, TN 38120.
6218	Summit Chemical Co., 8322 Sharon Drive, Frederick, MD 21704.
7969	BASF Corporation, 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC 27709–3528.
9688	Chemsico, A Division of United Industries Corp., P.O. Box 142642, St. Louis, MO 63114–0642.
10163	Gowan Company, P.O. Box 5569, Yuma, AZ 85366.
35935	NuFarm Limited, Agent Name: NuFarm Americas, Inc., 4020 Aerial Center Pkwy., Ste. 103, Morrisville, NC 27560.
43410	Agri-Chem Consulting, Inc., 27536 CR 561, Tavares, FL 32778.
59639	Valent U.S.A. Corporation, 1600 Riviera Avenue, Suite 200, Walnut Creek, CA 94596.
61282	Hacco, Inc., 110 Hopkins Drive, Randolph, WI 53956–1316.
61842	Tessenderlo Kerley, Inc., Agent Name: Pyxis Regulatory Consulting, Inc., 4110 136th Street Ct NW., Gig Harbor, WA 98332.
66222	Makhteshim Agan of North America, Inc., D/B/A Adama, 3120 Highwoods Blvd., Suite 100, Raleigh, NC 27604.
66330	Arysta LifeScience North America, LLC, 15401 Weston Parkway, Suite 150, Cary, NC 27513.
67760	Cheminova, Inc., 1600 Wilson Blvd., Suite 700, Arlington, VA 22209.
70506	United Phosphorus, Inc., Agent Name: Pyxis Regulatory Consulting, Inc., 4110 136th Street Ct NW., Gig Harbor, WA 98332.
82437	K & W Agrichemicals, Inc., Agent Name: Wagner Regulatory Associates, Inc., P.O. Box 640, Hockessin, DE 19707–0640.
85678	Redeagle International, LLC, Agent Name: Wagner Regulatory Associates, Inc., P.O. Box 640, Hockessin, DE 19707.
87290	Willowood, LLC, Agent Name: Wagner Regulatory Associates, Inc., P.O. Box 640, Hockessin, DE 19707–0640.
88342	CLO2 Systems, 3427 Pearl Road, Medina, OH 44256.
89461	Global Chem Tech, LLC, 34 Lake Havasu Avenue N.—14–204, Lake Havasu City, AZ 86403.

III. What is the agency's authority for taking this action?

Section 6(f)(1) of FIFRA (7 U.S.C. 136d(f)(1)) provides that a registrant of a pesticide product may at any time request that any of its pesticide registrations be canceled or amended to terminate one or more uses. FIFRA further provides that, before acting on the request, EPA must publish a notice of receipt of any such request in the **Federal Register**.

Section 6(f)(1)(B) of FIFRA (7 U.S.C. 136d(f)(1)(B)) requires that before acting on a request for voluntary cancellation, EPA must provide a 30-day public comment period on the request for voluntary cancellation or use termination. In addition, FIFRA section 6(f)(1)(C) (7 U.S.C. 136d(f)(1)(C)) requires that EPA provide a 180-day comment period on a request for voluntary cancellation or termination of any minor agricultural use before granting the request, unless:

1. The registrants request a waiver of the comment period, or

2. The EPA Administrator determines that continued use of the pesticide would pose an unreasonable adverse effect on the environment.

The registrants listed in Table 3 of Unit II have requested that EPA waive the 180-day comment period. Accordingly, EPA will provide a 30-day comment period on the proposed requests.

IV. Procedures for Withdrawal of Requests

Registrants who choose to withdraw a request for product cancellation or use termination should submit the withdrawal in writing to the person listed under **FOR FURTHER INFORMATION CONTACT**. If the products(s) have been subject to a previous cancellation action, the effective date of cancellation and all other provisions of any earlier cancellation action are controlling.

V. Provisions for Disposition of Existing Stocks

Existing stocks are those stocks of registered pesticide products that are currently in the United States and that were packaged, labeled, and released for shipment prior to the effective date of the action. If the requests for voluntary cancellation and amendments to terminate uses are granted, the Agency intends to publish the cancellation order in the **Federal Register**.

In any order issued in response to these requests for cancellation of product registrations and for amendments to terminate uses, EPA proposes to include the following provisions for the treatment of any existing stocks of the products listed in Tables 1 and 2 of Unit II.

For voluntary product cancellations, registrants will be permitted to sell and distribute existing stocks of voluntarily canceled products for 1 year after the effective date of the cancellation, which will be the date of publication of the cancellation order in the **Federal Register**. Thereafter, registrants will be prohibited from selling or distributing the products identified in Table 1 of Unit II., except for export consistent with FIFRA section 17 (7 U.S.C. 136o) or for proper disposal.

Once EPA has approved the product labels reflecting the requested amendments to terminate uses, registrants will be permitted to sell or distribute the products under the previously approved labeling for a period of 18 months after the date of **Federal Register** publication of the cancellation order, unless other restrictions have been imposed. Thereafter, the registrants will be prohibited from selling or distributing the products whose labels include the terminated uses identified in Table 2 of Unit II., except for export consistent with FIFRA section 17 or for proper disposal.

Authority: 7 U.S.C. 136 *et seq.*

Dated: October 13, 2016.

Delores J. Barber,

Director, Information Technology and Resources Management Division, Office of Pesticide Programs.

[FR Doc. 2016–27865 Filed 11–17–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OPP–2009–0317; FRL–9955–18]

Registration Review; Draft Malathion Human Health Risk Assessment; Extension of Comment Period

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice; extension of comment period.

SUMMARY: EPA issued a notice in the **Federal Register** of September 22, 2016 (81 FR 65355) (FRL–9952–53), opening a 60-day comment period for the draft malathion human health risk assessment. This document extends that comment period for 30 days. The new closing date will be December 21, 2016 rather than November 21, 2016. The comment period is being extended in response to a request from FMC Corporation citing the scope and complexity of the assessments, including the use of new models, risk assessment approaches, and science policy issues that require additional review time.

DATES: Comments, identified by docket identification (ID) number EPA–HQ–OPP–2009–0317, must be received on or before December 21, 2016.

ADDRESSES: Follow the detailed instructions provided under **ADDRESSES** in the **Federal Register** document of September 22, 2016.

FOR FURTHER INFORMATION CONTACT: Richard Dumas, Pesticide Re-Evaluation Division (7508P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (703) 308–8015; email address: *dumas.richard@epa.gov.*

SUPPLEMENTARY INFORMATION: This document extends the public comment period established in the **Federal Register** document of September 22, 2016. In that document, EPA opened a 60-day comment period for a draft human health risk assessment for the registration review of malathion. EPA is hereby extending the closing date of the comment period by 30 days from November 21, 2016, to December 21, 2016.

To submit comments, or access the docket, please follow the detailed instructions provided under **ADDRESSES** in the **Federal Register** document of September 22, 2016. If you have questions, consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

Authority: 7 U.S.C. 136 *et seq.*

Dated: November 10, 2016.

Linda Arrington,

Acting Director, Pesticide Re-evaluation Division, Office of Pesticide Programs.

[FR Doc. 2016–27867 Filed 11–17–16; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

[ER–FRL–9030–3]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 564–7146 or *http://www.epa.gov/nepa.*

Weekly receipt of Environmental Impact Statements (EISs)

Filed 11/07/2016 Through 11/11/2016

Pursuant to 40 CFR 1506.9

Notice:

Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: *http://www.epa.gov/compliance/nepa/eisdata.html*

EIS No. 20160269, Draft, USAF, IN, KC–46A Third Main Operating Base (MOB–3) Beddown, Comment Period Ends: 01/03/2017, Contact: Hamid Kamalpour 210–925–3001

EIS No. 20160270, Final, FTA, WA, Federal Way Link Extension, Review Period Ends: 12/19/2016, Contact: Daniel Drais 206–220–7954

EIS No. 20160271, Draft, BLM, ID, Bruneau-Owyhee Sage-Grouse Habitat Project (BOSH), Comment Period Ends: 01/03/2017, Contact: Michael McGee 208–384–3464

EIS No. 20160272, Final Supplement, USFS, CO, Rulemaking for Colorado Roadless Areas, Review Period Ends: 12/19/2016, Contact: Jason Robertson 303–275–5470

Amended Notices:

EIS No. 20160200, Draft, USACE, NY, Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Comment Period Ends: 12/02/2016, Contact: Robert J. Smith 917–790–8729

Revision to Federal Register Notice Published 09/02/2016; Extending Comment Period from 11/17/2016 to 12/02/2016

Dated: November 15, 2016.

Karin Leff,

Acting Director, NEPA Compliance Division, Office of Federal Activities.

[FR Doc. 2016–27845 Filed 11–17–16; 8:45 am]

BILLING CODE 6560–50–P

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

SES Performance Review Board—Appointment of Members

AGENCY: Equal Employment Opportunity Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given of the appointment of members to the Performance Review Board of the Equal Employment Opportunity Commission.

FOR FURTHER INFORMATION CONTACT: Traci M. DiMartini, Chief Human Capital Officer, U.S. Equal Employment Opportunity Commission, 131 M Street NE., Washington, DC 20507, (202) 663–4306.

SUPPLEMENTARY INFORMATION: Publication of the Performance Review Board (PRB) membership is required by 5 U.S.C. 4314(c)(4). The PRB reviews and evaluates the initial appraisal of a senior executive's performance by the supervisor, and makes recommendations to the Chair, EEOC, with respect to performance ratings, pay level adjustments and performance awards.

The following are the names and titles of executives appointed to serve as members of the SES PRB. Members will serve a 12-month term, which begins on November 29, 2016.

PRB Chair:

- Ms. Germaine P. Roseboro, Chief Financial Officer, Equal Employment Opportunity Commission.

Members:

- Ms. Peggy R. Mastroianni, Legal Counsel, Equal Employment Opportunity Commission;
- Mr. Bryan C. Burnett, Chief Information Officer, Equal Employment Opportunity Commission;
- Ms. Veronica Venture, Director, EEO and Diversity, Department of Homeland Security;
- Mr. John M. Robinson, Director, Office of Civil Rights/Chief Diversity Officer, U.S. State Department.

By the direction of the Commission.

Dated: November 14, 2016.

Jenny R. Yang,

Chair.

[FR Doc. 2016–27710 Filed 11–17–16; 8:45 am]

BILLING CODE 6570–01–P

FEDERAL DEPOSIT INSURANCE CORPORATION

Notice to All Interested Parties of Intent To Terminate the Receivership of 10400, Sun Security Bank, Ellington, Missouri

Notice is hereby given that the Federal Deposit Insurance Corporation (''FDIC'') as Receiver for Sun Security Bank, Ellington, Missouri (''the Receiver'') intends to terminate its receivership for said institution. The FDIC was appointed receiver of Sun Security Bank on October 7, 2011. The liquidation of the receivership assets has been completed. To the extent permitted by available funds and in accordance with law, the Receiver will be making a final dividend payment to proven creditors.

Based upon the foregoing, the Receiver has determined that the continued existence of the receivership will serve no useful purpose. Consequently, notice is given that the receivership shall be terminated, to be effective no sooner than thirty days after the date of this Notice. If any person wishes to comment concerning the termination of the receivership, such comment must be made in writing and sent within thirty days of the date of this Notice to: Federal Deposit Insurance Corporation, Division of Resolutions and Receiverships, Attention: Receivership Oversight Department 34.6, 1601 Bryan Street, Dallas, TX 75201.

No comments concerning the termination of this receivership will be considered which are not sent within this time frame.

Dated: November 15, 2016.

Federal Deposit Insurance Corporation.

Valerie J. Best,

Assistant Executive Secretary.

[FR Doc. 2016–27760 Filed 11–17–16; 8:45 am]

BILLING CODE 6714–01–P

FEDERAL HOUSING FINANCE AGENCY

[No. 2016–N–11]

Proposed Collection; Comment Request

AGENCY: Federal Housing Finance Agency.

ACTION: 60-day notice of submission of information collection for approval from Office of Management and Budget.

SUMMARY: In accordance with the requirements of the Paperwork Reduction Act of 1995 (PRA), the Federal Housing Finance Agency (FHFA or the Agency) is seeking public comments concerning a new information collection known as ''Contractor Workforce Inclusion Good Faith Efforts.'' This information collection has not yet been assigned a control number by the Office of Management and Budget (OMB). FHFA intends to submit the information collection to OMB for review and approval of a three-year control number.

DATES: Interested persons may submit comments on or before January 17, 2017.

ADDRESSES: Submit comments to FHFA, identified by ''Proposed Collection; Comment Request: 'Contractor Workforce Inclusion Good Faith Efforts, (No. 2016–N–11)' '' by any of the following methods:

- *Agency Web site: www.fhfa.gov/open-for-comment-or-input.*
- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments. If you submit your comment to the *Federal eRulemaking Portal,* please also send it by *email* to FHFA at *RegComments@fhfa.gov* to ensure timely receipt by the agency.
- *Mail/Hand Delivery:* Federal Housing Finance Agency, Eighth Floor, 400 Seventh Street SW., Washington, DC 20219, ATTENTION: Proposed Collection; Comment Request: ''Contractor Workforce Inclusion Good Faith Efforts, (No. 2016–N–11)''.

We will post all public comments we receive without change, including any personal information you provide, such as your name and address, email address, and telephone number, on the FHFA Web site at *http://www.fhfa.gov.* In addition, copies of all comments received will be available for examination by the public on business days between the hours of 10 a.m. and 3 p.m., at the Federal Housing Finance Agency, Eighth Floor, 400 Seventh Street SW., Washington, DC 20219. To make an appointment to inspect comments, please call the Office of General Counsel at (202) 649–3804.

FOR FURTHER INFORMATION CONTACT: Eric Howard, Diversity and Inclusion Principal Advisor, Office of Minority and Women Inclusion, *Eric.Howard@fhfa.gov,* (202) 649–3009; Karen Lambert, Associate General Counsel, *Karen.Lambert@fhfa.gov,* (202) 649–3094; or Eric Raudenbush, Associate General Counsel, *Eric.Raudenbush@fhfa.gov,* (202) 649–3084 (these are not toll-free numbers); Federal Housing Finance Agency, 400 Seventh Street SW., Washington, DC 20219. The Telecommunications Device for the Hearing Impaired is (800) 877–8339.

SUPPLEMENTARY INFORMATION:

A. Need for and Use of the Information Collection

Section 342(a)(1)(A) of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the Dodd-Frank Act) requires FHFA and certain other Federal agencies each to establish an Office of Minority and Women Inclusion (OMWI) responsible for all matters of the agency relating to diversity in management, employment, and business activities.[1] Section 342(c)(1) requires the OMWI Director at each agency to develop and implement standards and procedures to ensure, to the maximum extent possible, the fair inclusion and utilization of minorities, women, and minority- and women-owned businesses in all business and activities of the agency at all levels, including procurement, insurance, and all types of contracts. Section 342(c)(2) requires that the OMWI Director include in the agency's procedures for evaluating contract proposals and hiring service providers a component that gives consideration to the diversity of an applicant, to the extent consistent with applicable laws. That statutory provision also requires that each agency's procedures include a written statement that a contractor shall ensure, to the maximum extent possible, the fair inclusion of women and minorities in the workforce of the contractor and, as applicable, subcontractors.

Further, section 342(c)(3)(A) of the Dodd-Frank Act requires that each agency's standards and procedures include a procedure for determining whether an agency contractor or subcontractor has failed to make a good faith effort to include minorities and women in its workforce. If the OMWI Director determines that a contractor or subcontractor has failed to make such a good faith effort, section 342(c)(3)(B)(i) provides that the OMWI Director shall recommend to the agency administrator that the contract be terminated. Section 342(c)(3)(B)(ii) provides that, upon receipt of such a recommendation, the agency administrator may either terminate the contract, make a referral to the Office of Federal Contract Compliance Programs (OFCCP) of the

[1] 12 U.S.C. 5452.

Department of Labor, or take other appropriate action.

As a means of implementing the requirements of section 342(c) of the Dodd-Frank Act, FHFA developed a Minority and Women Inclusion Clause (MWI Clause) that it now includes in all Agency contracts with a dollar value greater than the ''simplified acquisition threshold'' (currently, $150,000) established in the Federal Acquisition Regulation (FAR).[2] The MWI Clause requires a contractor to confirm its commitment to equal opportunity in employment and contracting, and to implement that commitment by ensuring, to the maximum extent possible consistent with applicable law, the fair inclusion of minorities and women in its workforce. The MWI Clause also requires that a contractor include the substance of the MWI Clause in all subcontracts with a dollar value greater than $150,000 awarded under the contract. (Hereinafter subcontractors that are subject to the MWI Clause are referred to as ''covered'' subcontractors.)

Finally, the MWI Clause requires a contractor to provide, when requested by FHFA, documentation demonstrating that it and any covered subcontractor has made a good faith effort to ensure the fair inclusion of minorities and women in its workforce. The MWI Clause provides that such documentation may include, but is not limited to: (1) The contractor's total number of employees, and the number of minority and women employees, by race, ethnicity, and gender (*e.g.,* an EEO–1 Employer Information Report (Form EEO–1)); (2) a list of the subcontracts the contractor awarded including the dollar amount, date of the award, and the ownership status of the subcontractor by race, ethnicity, and/or gender; (3) information similar to that required under item 1 above for each subcontractor; and (4) the contractor's plan to ensure that minorities and women have appropriate opportunities to enter and advance within its workforce, including outreach efforts (hereinafter, a ''workforce inclusion plan''). A request for documentation by FHFA pursuant to this provision of the MWI Clause would constitute a ''collection of information'' within the meaning of the PRA.

While FHFA has included the MWI Clause in all contracts with a dollar value greater than $150,000 consummated since November 7, 2013, the Agency has not, to this point, asked any contractor or covered subcontractor to provide documentation pursuant to the clause. FHFA is now developing procedures that the OMWI Director will follow in determining whether its contractors and covered subcontractors have made good faith efforts to comply with the MWI Clause. The Agency expects that, once it adopts those procedures, it will begin to request the types of documentation described in the MWI Clause from contractors and covered subcontractors.

The purpose of this information collection is to fulfill the requirements of section 342(c)(3)(B) of the Dodd-Frank Act. The collected information will allow FHFA's OMWI Director to determine whether contractors and covered subcontractors have complied with their obligations to make good faith efforts to ensure, to the maximum extent possible consistent with applicable law, the fair inclusion of minorities and women in their respective workforces.

B. Burden Estimate

FHFA estimates that the average annual burden imposed on all respondents by this information collection over the next three years will be 368 hours. All of the assumptions and calculations underlying the total burden estimate are described in detail below.

Because, as explained below, the amount of burden imposed upon a contractor by this information collection will differ depending upon whether the contractor has 50 or more employees, FHFA has based its total burden estimate on two separate sets of calculations—(I) one for contractors with 50 or more employees; and (II) another for contractors with fewer than 50 employees.

FHFA includes the MWI Clause in Agency contracts with a dollar value greater than $150,000. Under the MWI Clause, the FHFA may also request information about covered subcontractors' ownership status, workforce demographics, and workforce inclusion plans. Contractors would request this information from their covered subcontractors, who, because the substance of the MWI Clause would be included in their subcontracts, would have an obligation to keep records and report data as required under the MWI Clause.

FHFA data on the dollar value of contracts awarded by the Agency from the beginning of fiscal year 2013 through the third quarter of fiscal year 2016 shows that 63 contractors were subject to the MWI Clause. FHFA believes that 44 of those contractors have 50 or more employees, while 19 contractors have fewer than 50 employees. FHFA estimates that no more than two subcontracts with a dollar value of $150,000 or more were awarded by Agency contractors during that same time period. Both of those subcontractors have 50 or more employees each. Thus, over the preceding three years, a total of 65 contractors and subcontractors were subject to the MWI Clause—46 of which have 50 or more employees and 19 of which have fewer than 50 employees.

Based on these figures, FHFA estimates that, on average over the next three years, 48 contractors and subcontractors with 50 or more employees and 20 contractors or subcontractors with fewer than 50 employees will be subject to the MWI Clause at any given time. For purposes of these burden estimates, FHFA has assumed that each contractor or subcontractor will provide documentation under the MWI Clause once per year, although it is unlikely that the Agency will actually request documentation from every contractor in every year. (In the interest of brevity, the word ''contractor'' is intended also to include covered subcontractors in the explanation of the burden estimates that follows.)

I. Documentation Submitted by Contractors With 50 or More Employees

FHFA estimates that the average annual burden on contractors with 50 or more employees will be 48 hours (0 recordkeeping hours + 48 reporting hours).

Because Federal contractors with 50 or more employees are already required to maintain the same types of records that may be requested pursuant to the MWI Clause under regulations implementing Title VII of the Civil Rights Act of 1964[3] and Executive Order 11246 (E.O. 11246),[4] this information collection will not impose new recordkeeping burdens on such contractors. FAR 52.222–26, Equal Opportunity, requires that such contractors' contracts and subcontracts include a clause implementing E.O. 11246. OFCCP regulations require each contractor with 50 or more employees and a Federal contract or subcontract of $50,000 or more to maintain records on the race, ethnicity, gender, and EEO–1 job category of each employee.[5] OFCCP regulations also require each such contractor to: (1) Demonstrate that it has made a good faith effort to remove identified barriers, expand employment

[2] *See* FAR 2.101. The FAR appears at 48 CFR chapter 1.

[3] 42 U.S.C. 2000e, *et seq.*

[4] Exec. Order No. 11246, 30 FR 12319 (Sept. 28, 1965).

[5] *See* 41 CFR 60–1.7.

opportunities, and produce measureable results;[6] and (2) develop and maintain a written program summary describing the policies, practices, and procedures that the contractor uses to ensure that applicants and employees received equal opportunities for employment and advancement.[7] In lieu of creating and maintaining a separate workforce inclusion plan to submit in satisfaction of the MWI Clause, a contractor with 50 or more employees could submit the written program summary that it is already required to maintain under the OFCCP regulations to demonstrate its good faith efforts to ensure the fair inclusion of minorities and women in its workforce.

With respect to reporting burden, FHFA estimates that it will take each contractor approximately one hour to retrieve and submit to the FHFA the documentation specified in the MWI Clause. Thus, the estimate of the annual burden upon contractors with 50 or more employees associated with reporting requirements under this information collection is 48 hours (48 contractors × 1 hour per contractor).

II. Documentation Submitted by Contractors With Fewer Than 50 Employees

FHFA estimates that the average annual burden on contractors with fewer than 50 employees will be 320 hours (300 recordkeeping hours + 20 reporting hours).

OFCCP regulations require contractors with fewer than 50 employees to maintain records on the race, ethnicity, and gender of each employee.[8] FHFA believes that such contractors also keep EEO–1 job category information in the normal course of business, despite the fact that they are not required by law to do so. However, contractors with fewer than 50 employees may not have the type of written program summary that is required of larger contractors under the OFCCP regulations or any similar document that could be submitted as a workforce inclusion plan under the MWI Clause. Accordingly, such contractors may need to create a workforce inclusion plan to comply with the MWI Clause.

In order to estimate the burden associated with creating a workforce inclusion plan, FHFA considered the OFCCP's burden estimates for the time needed to develop the written program summaries required under its regulations.[9] In its OMB Supporting Statement, the OFCCP estimated that a contractor with 1 to 100 employees would take approximately 73 burden hours to create an initial written program summary. While the OFCCP regulations require contractors to perform time-consuming quantitative analyses when developing their written program summaries, such analyses would not be required in connection with the creation of a workforce inclusion plan. For this reason, FHFA believes that a contractor could develop a workforce inclusion plan in about one-third of the time that it would take to develop the written program summary required under the OFCCP regulations.

FHFA estimates that a contractor with fewer than 50 employees would spend approximately 25 hours creating a workforce inclusion plan for the first time. The Agency estimates that each contractor would then spend approximately 10 hours annually in updating and maintaining its plan. This results in an estimated average annual recordkeeping burden over the next three years on each contractor with fewer than 50 employees of 15 hours [(25 + 10 + 10)/3 years]. Thus, FHFA estimates that the average annual recordkeeping burden on all contractors with fewer than 50 employees over the next three years will be 300 hours (20 contractors × 15 hours per contractor).

FHFA estimates that it will take each contractor approximately one hour to retrieve and submit to FHFA the documentation specified in the MWI Clause. Thus, the estimate of the annual burden upon contractors with fewer than 50 employees associated with reporting requirements under this information collection is 20 hours (20 contractors × 1 hour per contractor).

C. Comments Request

FHFA requests written comments on the following: (1) Whether the collection of information is necessary for the proper performance of FHFA functions, including whether the information has practical utility; (2) the accuracy of FHFA's estimates of the burdens of the collection of information; (3) ways to enhance the quality, utility, and clarity of the information collected; and (4) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

[6] *See* 41 CFR 60–2.17.

[7] *See* 41 CFR 60–2.31.

[8] *See* 41 CFR 60–3.4.

[9] *See* PRA Supporting Statement for the OFCCP Recordkeeping and Requirements-Supply and Service Program, OMB Control No. 1250–0003, at *http://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=201602-1250-001.*

Dated: November 14, 2016.

Kevin Winkler,

Chief Information Officer, Federal Housing Finance Agency.

[FR Doc. 2016–27821 Filed 11–17–16; 8:45 am]

BILLING CODE 8070–01–P

FEDERAL RESERVE SYSTEM

Notice of Proposals To Engage in or To Acquire Companies Engaged in Permissible Nonbanking Activities

The companies listed in this notice have given notice under section 4 of the Bank Holding Company Act (12 U.S.C. 1843) (BHC Act) and Regulation Y, (12 CFR part 225) to engage *de novo,* or to acquire or control voting securities or assets of a company, including the companies listed below, that engages either directly or through a subsidiary or other company, in a nonbanking activity that is listed in § 225.28 of Regulation Y (12 CFR 225.28) or that the Board has determined by Order to be closely related to banking and permissible for bank holding companies. Unless otherwise noted, these activities will be conducted throughout the United States.

Each notice is available for inspection at the Federal Reserve Bank indicated. The notice also will be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing on the question whether the proposal complies with the standards of section 4 of the BHC Act.

Unless otherwise noted, comments regarding the applications must be received at the Reserve Bank indicated or the offices of the Board of Governors not later than December 13, 2016.

A. Federal Reserve Bank of Chicago (Colette A. Fried, Assistant Vice President) 230 South LaSalle Street, Chicago, Illinois 60690–1414:

1. *West Town Bancorp,* Raleigh, North Carolina; to acquire 43.5 percent of Windsor Advantage, LLC, Indianapolis, Indiana and thereby indirectly engage de novo in extending credit and servicing loans pursuant to section 225.28 (b)(1) of Regulation Y.

Board of Governors of the Federal Reserve System, November 15, 2016.

Yao-Chin Chao,

Assistant Secretary of the Board.

[FR Doc. 2016–27831 Filed 11–17–16; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL RESERVE SYSTEM

Change in Bank Control Notices; Acquisitions of Shares of a Bank or Bank Holding Company

The notificants listed below have applied under the Change in Bank Control Act (12 U.S.C. 1817(j)) and § 225.41 of the Board's Regulation Y (12 CFR 225.41) to acquire shares of a bank or bank holding company. The factors that are considered in acting on the notices are set forth in paragraph 7 of the Act (12 U.S.C. 1817(j)(7)).

The notices are available for immediate inspection at the Federal Reserve Bank indicated. The notices also will be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing to the Reserve Bank indicated for that notice or to the offices of the Board of Governors. Comments must be received not later than December 1, 2016.

A. Federal Reserve Bank of Kansas City (Dennis Denney, Assistant Vice President) 1 Memorial Drive, Kansas City, Missouri 64198–0001:

1. *Vivian Reedy, Bella Vista, Arkansas, and Sharon Meek, Broken Arrow, Oklahoma, co-trustees of the Coy E. Reedy Trust B, Bella Vista, Arkansas,* to retain voting shares of Farmers Bancshares Inc., and thereby retain Independent Farmers Bank, both of Maysville, Missouri.

Board of Governors of the Federal Reserve System, November 15, 2016.

Yao-Chin Chao,

Assistant Secretary of the Board.

[FR Doc. 2016–27830 Filed 11–17–16; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL RESERVE SYSTEM

Formations of, Acquisitions by, and Mergers of Bank Holding Companies

The companies listed in this notice have applied to the Board for approval, pursuant to the Bank Holding Company Act of 1956 (12 U.S.C. 1841 *et seq.*) (BHC Act), Regulation Y (12 CFR part 225), and all other applicable statutes and regulations to become a bank holding company and/or to acquire the assets or the ownership of, control of, or the power to vote shares of a bank or bank holding company and all of the banks and nonbanking companies owned by the bank holding company, including the companies listed below.

The applications listed below, as well as other related filings required by the Board, are available for immediate inspection at the Federal Reserve Bank indicated. The applications will also be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing on the standards enumerated in the BHC Act (12 U.S.C. 1842(c)). If the proposal also involves the acquisition of a nonbanking company, the review also includes whether the acquisition of the nonbanking company complies with the standards in section 4 of the BHC Act (12 U.S.C. 1843). Unless otherwise noted, nonbanking activities will be conducted throughout the United States.

Unless otherwise noted, comments regarding each of these applications must be received at the Reserve Bank indicated or the offices of the Board of Governors not later than December 14, 2016.

A. Federal Reserve Bank of Chicago (Colette A. Fried, Assistant Vice President) 230 South LaSalle Street, Chicago, Illinois 60690–1414:

1. *Arbor Bancorp, Inc., Ann Arbor, Michigan;* to merger with Birmingham Bloomfield Bancshares, Inc., and thereby indirectly acquire Bank of Birmingham, both of Birmingham, Michigan.

B. Federal Reserve Bank of New York (Ivan Hurwitz, Vice President) 33 Liberty Street, New York, New York 10045–0001. Comments can also be sent electronically to *Comments.applications@ny.frb.org:*

1. *Adirondack Trust Company Employee Stock Ownership Trust, Saratoga Springs, New York;* to acquire additional shares of 473 Broadway Holding Corporation and The Adirondack Trust Company, both of Saratoga Springs, New York.

Board of Governors of the Federal Reserve System, November 14, 2016.

Yao-Chin Chao,

Assistant Secretary of the Board.

[FR Doc. 2016–27718 Filed 11–17–16; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL RESERVE SYSTEM

Change in Bank Control Notices; Acquisitions of Shares of a Bank or Bank Holding Company

The notificants listed below have applied under the Change in Bank Control Act (12 U.S.C. 1817(j)) and § 225.41 of the Board's Regulation Y (12 CFR 225.41) to acquire shares of a bank or bank holding company. The factors that are considered in acting on the notices are set forth in paragraph 7 of the Act (12 U.S.C. 1817(j)(7)).

The notices are available for immediate inspection at the Federal Reserve Bank indicated. The notices also will be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing to the Reserve Bank indicated for that notice or to the offices of the Board of Governors. Comments must be received not later than December 5, 2016.

A. Federal Reserve Bank of Kansas City (Dennis Denney, Assistant Vice President) 1 Memorial Drive, Kansas City, Missouri 64198–0001:

1. *Matthew A. Michaelis, Wichita Kansas, as proposed trustee of the Isabella Michaelis EFC Trust, the Margaret Michaelis EFC Trust, and the Henry Michaelis EFC Trust; Amy L. Madsen, Wichita, Kansas, as proposed trustee of the Mallory Loflin EFC Trust, the Mick Madsen EFC Trust, and the Morgan Madsen EFC Trust; and Laura L. Haunschild, Redwood, California, as proposed trustee of the Walter Bachmann EFC Trust, the Karl Bachman EFC Trust, and the Markus Bachmann EFC Trust;* and each of the trusts, to acquire shares of Emprise Financial Corporation, Wichita, Kansas, as members of the Michaelis Family Group. Emprise Financial Corporation controls Emprise Bank, Wichita, Kansas.

Board of Governors of the Federal Reserve System, November 14, 2016.

Yao-Chin Chao,

Assistant Secretary of the Board.

[FR Doc. 2016–27719 Filed 11–17–16; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL RETIREMENT THRIFT INVESTMENT BOARD

Sunshine Act; Notice of Board Member Meeting

AGENCY: Federal Retirement Thrift Investment Board.

77 K Street NE., 10th Floor Board Room, Washington, DC 20002.

Agenda

Federal Retirement Thrift Investment Board Member Meeting.

November 29, 2016, In-Person, 8:30 a.m.

Open Session

1. Approval of the minutes for the October 31, 2016 Board Member Meeting
2. Monthly Reports
   (a) Participant Activity Report
   (b) Legislative Report (Verbal)
   (c) Investment Performance and Policy Report
3. Quarterly Reports
   (d) Metrics
   (e) Project Activity
4. Office of Investment Report

5. Capital Market and L Fund
6. 2017 Proposed Internal Audit Schedule
7. Blended Retirement Update

Closed Session

Information covered under 5 U.S.C. 552b(c)(4), c(6), and (c)(9)(B).

Adjourn

CONTACT PERSON FOR MORE INFORMATION: Kimberly Weaver, Director, Office of External Affairs, (202) 942–1640.

Dated: November 16, 2016.

Megan Grumbine,

General Counsel, Federal Retirement Thrift Investment Board.

[FR Doc. 2016–27980 Filed 11–16–16; 4:15 pm]

BILLING CODE 6760–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Agency for Healthcare Research and Quality

Agency Information Collection Activities: Proposed Collection; Comment Request

AGENCY: Agency for Healthcare Research and Quality, HHS.

ACTION: Notice.

SUMMARY: This notice announces the intention of the Agency for Healthcare Research and Quality (AHRQ) to request that the Office of Management and Budget (OMB) approve the proposed information collection project: ''*Pharmacy Survey on Patient Safety Culture Comparative Database.*'' In accordance with the Paperwork Reduction Act, 44 U.S.C. 3501–3521, AHRQ invites the public to comment on this proposed information collection.

DATES: Comments on this notice must be received by January 17, 2017.

ADDRESSES: Written comments should be submitted to: Doris Lefkowitz, Reports Clearance Officer, AHRQ, by email at *doris.lefkowitz@AHRQ.hhs.gov.*

Copies of the proposed collection plans, data collection instruments, and specific details on the estimated burden can be obtained from the AHRQ Reports Clearance Officer.

FOR FURTHER INFORMATION CONTACT: Doris Lefkowitz, AHRQ Reports Clearance Officer, (301) 427–1477, or by email at *doris.lefkowitz@AHRQ.hhs.gov.*

SUPPLEMENTARY INFORMATION:

Proposed Project

Pharmacy Survey on Patient Safety Culture Comparative Database

In 1999, the Institute of Medicine called for health care organizations to develop a ''culture of safety'' such that their workforce and processes focus on improving the reliability and safety of care for patients (IOM, 1999; To Err is Human: Building a Safer Health System). To respond to the need for tools to assess patient safety culture in health care, AHRQ developed and pilot tested the Pharmacy Survey on Patient Safety Culture with OMB approval (OMB NO. 0935–0183; Approved 08/12/2011). The survey is designed to enable pharmacies to assess staff opinions about patient and medication safety and quality-assurance issuesand includes 36 items that measure 11 dimensions of patient safety culture. AHRQ made the survey publicly available along with a Survey User's Guide and other toolkit materials in October 2012 on the AHRQ Web site.

The AHRQ Pharmacy Survey on Patient Safety Culture (Pharmacy SOPS) Comparative Database consists of data from the AHRQ Pharmacy Survey on Patient Safety Culture. Pharmacies in the U.S. are asked to voluntarily submit data from the survey to AHRQ, through its contractor, Westat. The Pharmacy SOPS Database is modeled after three other SOPS databases: Hospital SOPS [OMB NO. 0935–0162; Approved 05/04/2010]; Medical Office SOPS [OMB NO. 0935–0196; Approved 06/12/12]; and Nursing Home SOPS [OMB NO. 0935–0195; Approved 06/12/12] that were originally developed by AHRQ in response to requests from hospitals, medical offices, and nursing homes interested in knowing how their patient safety culture survey results compare to those of other similar health care organizations.

Rationale for the information collection. The Pharmacy SOPS survey and the Pharmacy SOPS Comparative Database will support AHRQ's goals of promoting improvements in the quality and safety of health care in pharmacy settings. The survey, toolkit materials, and comparative database results are all made publicly available on AHRQ's Web site. Technical assistance is provided by AHRQ through its contractor at no charge to pharmacies, to facilitate the use of these materials for pharmacy patient safety and quality improvement.

Request for information collection approval. The Agency for Healthcare Research and Quality (AHRQ) requests that the Office of Management and Budget (OMB) reapprove, under the Paperwork Reduction Act of 1995, AHRQ's collection of information for the AHRQ Pharmacy Survey on Patient Safety Culture (Pharmacy SOPS) Comparative Database; OMB NO. 0935–0218, last approved on June 12, 2014.

This database will:

(1) Allow pharmacies to compare their patient safety culture survey results with those of other pharmacies,

(2) provide data to pharmacies to facilitate internal assessment and learning in the patient safety improvement process, and

(3) provide supplemental information to help pharmacies identify their strengths and areas with potential for improvement in patient safety culture.

This study is being conducted by AHRQ through its contractor, Westat, pursuant to AHRQ's statutory authority to conduct and support research on health care and on systems for the delivery of such care, including activities with respect to the quality, effectiveness, efficiency, appropriateness and value of health care services; quality measure and development, and database development. 42 U.S.C. 299a(a)(1), (2), and 8.

Method of Collection

To achieve the goal of this project the following activities and data collections will be implemented:

(1) Pharmacy Eligibility and Registration Form—The point of contact (POC), often the pharmacy manager of a participating organization, completes a number of data submission steps and forms, beginning with completion of an online Eligibility and Registration Form. The purpose of this form is to collect basic demographic information about the pharmacy and initiate the registration process.

(2) Data Use Agreement—The purpose of the data use agreement, completed by the pharmacy POC, is to state how data submitted by pharmacies will be used and provides confidentiality assurances.

(3) Pharmacy Site Information Form—The purpose of this form, completed by the pharmacy POC, is to collect background characteristics of the pharmacy. This information will be used to analyze data collected with the Pharmacy SOPS survey.

(4) Data Files Submission—POCs upload their data file(s), using the community pharmacy or hospital pharmacy data file specifications, to ensure that users submit standardized and consistent data in the way variables are named, coded, and formatted.

The number of submissions to the database is likely to vary each year because pharmacies do not administer the survey and submit data every year. Data submission is typically handled by one POC who is either a pharmacy manager or a survey vendor who contracts with a pharmacy to collect and submit its data. POCs submit data on behalf of 3 pharmacies, on average, because many pharmacies are part of a multi-pharmacy system, or the POC is a vendor that is submitting data for multiple pharmacies.

Survey data from the AHRQ Pharmacy Survey on Patient Safety Culture are used to produce three types of products: (1) A Pharmacy SOPS Comparative Database Report that is made publicly available on the AHRQ Web site (see *http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/pharmacy/pharm-reports.html*), (2) Individual Pharmacy Survey Feedback Reports that are confidential, customized reports produced for each pharmacy that submits data to the database (the number of reports produced is based on the number of pharmacies submitting each year); and (3) Research data sets of individual-level and pharmacy-level de-identified data to enable researchers to conduct analyses. Pharmacies are asked to voluntarily submit their Pharmacy SOPS survey data to the comparative database. The data are then cleaned and aggregated and used to produce a Comparative Database Report that displays averages, standard deviations, and percentile scores on the survey's 36 items and 11 patient safety culture dimensions, as well as displaying these results by pharmacy characteristics (pharmacy type, number of locations, average number of prescriptions dispensed per week, etc.) and respondent characteristics (staff position, tenure, and hours worked per week).

Data submitted by pharmacies are also used to give each pharmacy its own customized survey feedback report that presents the pharmacy's results compared to the latest comparative database results. If a pharmacy submits data more than once, its survey feedback report also presents trend data, comparing its previous and most recent data.

Estimated Annual Respondent Burden

Exhibit 1 shows the estimated annualized burden hours for the respondents' time to participate in the database. An estimated 100 POCs from community pharmacies and 50 POCs from hospital pharmacies, each representing an average of 3 individual pharmacies, will complete the database submission steps and forms. Completing the eligibility and registration form will take about 5 minutes. The Pharmacy Site Information Form is completed by all POCs for each of their pharmacies ($150 \times 3 = 450$ forms in total) and is estimated to take 5 minutes to complete. Each POC will complete a data use agreement which takes 3 minutes to complete and submitting the data will take an hour on average. The total burden is estimated to be 209 hours.

Exhibit 2 shows the estimated annualized cost burden based on the respondents' time to submit their data. The cost burden is estimated to be $11,222 annually.

EXHIBIT 1—ESTIMATED ANNUALIZED BURDEN HOURS

Form name	Number of respondents/ POCs	Number of responses per POC	Hours per response	Total burden hours
Eligibility and Registration Form	150	1	5/60	13
Data Use Agreement	150	1	3/60	8
Pharmacy Site Information Form	150	3	5/60	38
Data Files Submission	150	1	1	150
Total	NA	NA	NA	209

EXHIBIT 2—ESTIMATED ANNUALIZED COST BURDEN

Form name	Number of respondents/ POCs	Total burden hours	Average hourly wage rate *	Total cost burden
Eligibility and Registration Form	150	13	$53.69	$698
Data Use Agreement	150	8	53.69	430
Pharmacy Site Information Form	150	38	53.69	2,040
Data Files Submission	150	150	53.69	8,054
Total	NA	209	NA	11,222

* Based on the weighted average hourly wage in community pharmacies for 100 General and Operations Managers (11–1021; $49.26) and 50 General and Operations Managers (11–1021; $62.56) obtained from the May 2015 National Industry-Specific Occupational Employment and Wage Estimates: NAICS 446110—Pharmacies and Drug Stores (located at *http://www.bls.gov/oes/current/naics5_446110.htm*) and NAICS 622000—Hospitals (located at *http://www.bls.gov/oes/current/naics3_622000.htm*).

Request for Comments

In accordance with the Paperwork Reduction Act, comments on AHRQ's information collection are requested with regard to any of the following: (a) Whether the proposed collection of information is necessary for the proper performance of AHRQ health care research and health care information dissemination functions, including whether the information will have practical utility; (b) the accuracy of AHRQ's estimate of burden (including hours and costs) of the proposed collection(s) of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information upon the respondents, including the use of automated collection techniques or other forms of information technology.

Comments submitted in response to this notice will be summarized and included in the Agency's subsequent request for OMB approval of the proposed information collection. All comments will become a matter of public record.

Sharon B. Arnold,

Deputy Director.

[FR Doc. 2016–27705 Filed 11–17–16; 8:45 am]

BILLING CODE 4160–90–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Medicare & Medicaid Services

[Document Identifier: CMS–R–244]

Agency Information Collection Activities: Proposed Collection; Comment Request

AGENCY: Centers for Medicare & Medicaid Services, HHS.

ACTION: Notice.

SUMMARY: The Centers for Medicare & Medicaid Services (CMS) is announcing an opportunity for the public to comment on CMS' intention to collect information from the public. Under the Paperwork Reduction Act of 1995 (the PRA), federal agencies are required to publish notice in the **Federal Register** concerning each proposed collection of information (including each proposed extension or reinstatement of an existing collection of information) and to allow 60 days for public comment on the proposed action. Interested persons are invited to send comments regarding our burden estimates or any other aspect of this collection of information, including any of the following subjects: (1) The necessity and utility of the proposed information collection for the proper performance of the agency's functions; (2) the accuracy of the estimated burden; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) the use of automated collection techniques or other forms of information technology to minimize the information collection burden.

DATES: Comments must be received by January 17, 2017.

ADDRESSES: When commenting, please reference the document identifier or OMB control number. To be assured consideration, comments and recommendations must be submitted in any one of the following ways:

1. *Electronically.* You may send your comments electronically to *http://www.regulations.gov.* Follow the instructions for ''Comment or Submission'' or ''More Search Options'' to find the information collection document(s) that are accepting comments.

2. *By regular mail.* You may mail written comments to the following address: CMS, Office of Strategic Operations and Regulatory Affairs, Division of Regulations Development, Attention: Document Identifier/OMB Control Number ______, Room C4–26–05, 7500 Security Boulevard, Baltimore, Maryland 21244–1850.

To obtain copies of a supporting statement and any related forms for the proposed collection(s) summarized in this notice, you may make your request using one of following:

1. Access CMS' Web site address at *http://www.cms.hhs.gov/PaperworkReductionActof1995.*

2. Email your request, including your address, phone number, OMB number, and CMS document identifier, to *Paperwork@cms.hhs.gov.*

3. Call the Reports Clearance Office at (410) 786–1326.

FOR FURTHER INFORMATION CONTACT: Reports Clearance Office at (410) 786–1326.

SUPPLEMENTARY INFORMATION:

Contents

This notice sets out a summary of the use and burden associated with the following information collections. More detailed information can be found in each collection's supporting statement and associated materials (see **ADDRESSES**).

CMS–R–244 Programs for All-Inclusive Care of the Elderly (PACE) and Supporting Regulations in 42 CFR Part 460

Under the PRA (44 U.S.C. 3501–3520), federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. The term ''collection of information'' is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) and includes agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. Section 3506(c)(2)(A) of the PRA requires federal agencies to publish a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension or reinstatement of an existing collection of information, before submitting the collection to OMB for approval. To comply with this requirement, CMS is publishing this notice.

Information Collection

1. *Type of Information Collection Request:* Revision of a currently approved collection; *Title of Information Collection:* Programs for All-inclusive Care of the Elderly (PACE) and Supporting Regulations in 42 CFR part 460; *Use:* This information collection addresses all operational components of the PACE program (as defined in 42 CFR part 460) with the exception of the application process (§ 460.12). In this iteration the application is removed from this control number and moved under a new information collection request with a new CMS identification number (CMS–10631). An OMB control number specific to the application process is pending.

The CMS–10631 information collection request was submitted to OMB on October 6, 2016, under ICR Reference No: 201610–0938–001. When approved, the control number can be found on *www.reginfo.gov/public/.*

We are removing the application requirements and burden since this CMS–R–244 package is lengthy and we recognize that it can be somewhat time consuming to review. We believe the change will help streamline the public and OMB's review of the application as well as the remaining requirements and burden under this CMS–R–244 package. *Form Number:* CMS–R–244 (OMB control number: 0938–0790); *Frequency:* Once and occasionally; *Affected Public:* Private sector (Business or other for-profits and Not-for-profit institutions); *Number of Respondents:* 130; *Total Annual Responses:* 145,455; *Total Annual Hours:* 61,350. (For policy questions regarding this collection contact Debbie Van Hoven at 410–786–6625).

Dated: November 15, 2016.

William N. Parham, III,

Director, Paperwork Reduction Staff, Office of Strategic Operations and Regulatory Affairs.

[FR Doc. 2016–27836 Filed 11–17–16; 8:45 am]

BILLING CODE 4120–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2013–N–0804]

Agency Information Collection Activities; Proposed Collection; Comment Request; Premarket Notification

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is announcing an opportunity for public comment on the

proposed collection of certain information by the Agency. Under the Paperwork Reduction Act of 1995 (the PRA), Federal Agencies are required to publish notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of an existing collection of information, and to allow 60 days for public comment in response to the notice. This notice solicits comments on medical device premarket notification.

DATES: Submit either electronic or written comments on the collection of information by January 17, 2017.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

- *Federal eRulemaking Portal: https://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *https://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *https://www.regulations.gov.*
- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

- *Mail/Hand delivery/Courier (for written/paper submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.
- For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. FDA–2013–N–0804 for ''Agency Information Collection Activities; Proposed Collection; Comment Request; Premarket Notification.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *https://www.regulations.gov* or at the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

- Confidential Submissions—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *https://www.regulations.gov.* Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm.*

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *https://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

FOR FURTHER INFORMATION CONTACT: FDA PRA Staff, Office of Operations, Food and Drug Administration, Three White Flint North, 10A63, 11601 Landsdown St., North Bethesda, MD 20852, *PRAStaff@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501–3520), Federal Agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. ''Collection of information'' is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) and includes Agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. Section 3506(c)(2)(A) of the PRA (44 U.S.C. 3506(c)(2)(A)) requires Federal Agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of an existing collection of information, before submitting the collection to OMB for approval. To comply with this requirement, FDA is publishing notice of the proposed collection of information set forth in this document.

With respect to the following collection of information, FDA invites comments on these topics: (1) Whether the proposed collection of information is necessary for the proper performance of FDA's functions, including whether the information will have practical utility; (2) the accuracy of FDA's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques, when appropriate, and other forms of information technology.

Premarket Notification—21 CFR Part 807, Subpart E OMB Control Number 0910–0120—Extension

Section 510(k) of the Federal Food, Drug, and Cosmetic Act (the FD&C Act) (21 U.S.C. 360(k)) and the implementing regulation under part 807 (21 CFR part 807, subpart E) requires a person who intends to market a medical device to submit a premarket notification submission to FDA at least 90 days before proposing to begin the introduction, or delivery for introduction into interstate commerce, for commercial distribution of a device intended for human use. Based on the information provided in the notification, FDA must determine whether the new device is substantially equivalent to a legally marketed device, as defined in § 807.92(a)(3) (21 CFR 807.92(a)(3)). If the device is determined to be not substantially equivalent to a legally marketed device, it must have an approved premarket approval application (PMA), product development protocol, humanitarian device exemption (HDE), petition for Evaluation of Automatic Class III Designation (de novo), or be reclassified into class I or class II before being marketed. FDA makes the final decision of whether a device is substantially equivalent or not equivalent.

Section 807.81 states when a premarket notification is required. A premarket notification is required to be submitted by a person who is: (1) Introducing a device to the market for the first time; (2) introducing a device into commercial distribution for the first time by a person who is required to register; and (3) introducing or reintroducing a device which is significantly changed or modified in design, components, method of manufacturer, or the intended use that could affect the safety and effectiveness of the device.

Form FDA 3514, a summary cover sheet form, assists respondents in categorizing administrative 510(k) information for submission to FDA. This form also assists respondents in categorizing information for other FDA medical device programs such as PMAs, investigational device exemptions, and HDEs. Under § 807.87(h), each 510(k) submitter must include in the 510(k) either a summary of the information in the 510(k) as required by § 807.92 (510(k) summary) or a statement certifying that the submitter will make available upon request the information in the 510(k) with certain exceptions as per § 807.93 (510(k) statement). If the 510(k) submitter includes a 510(k) statement in the 510(k) submission, § 807.93 requires that the official correspondent of the firm make available within 30 days of a request all information included in the submitted premarket notification on safety and effectiveness. This information will be provided to any person within 30 days of a request if the device described in the 510(k) submission is determined to be substantially equivalent. The information provided will be a duplicate of the 510(k) submission including any safety and effectiveness information, but excluding all patient identifiers and trade secret and commercial confidential information.

Section 204 of the Food and Drug Administration Modernization Act (FDAMA) (Pub. L. 105–115) amended section 514 of the FD&C Act (21 U.S.C. 360d). Amended section 514 allows FDA to recognize consensus standards developed by international and national organizations for use in satisfying portions of device premarket review submissions including premarket notifications or other requirements. FDA has published and updated the list of recognized standards regularly since enactment of FDAMA and has allowed 510(k) submitters to certify conformance to recognized standards to meet the requirements of § 807.87. Form FDA 3654, the 510(k) Standards Data Form, standardizes the format for submitting information on consensus standards that a 510(k) submitter chooses to use as a portion of their premarket notification submission (Form FDA 3654 is not for declarations of conformance to a recognized standard). FDA believes that use of this form will simplify the 510(k) preparation and review process for 510(k).

Under § 807.90, submitters may request information on their 510(k) review status 90 days after the initial login date of the 510(k). Thereafter, the submitter may request status reports every 30 days following the initial status request. To obtain a 510(k) status report, the submitter should complete the status request form, Form FDA 3541, and fax it to the Center for Devices and Radiological Health office identified on the form.

FDA estimates the burden of this collection of information as follows:

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN[1]

Activity and 21 CFR Part/Section	Form No.	Number of respondents	Number of responses per respondent	Total annual responses	Average burden per response	Total hours
510(k) submission (807 subpart E).		3,900	1	3,900	79	308,100
Summary cover sheet (807.87)	FDA 3514	1,956	1	1,956	0.5 (30 minutes)	978
Status request (807.90(a)(3))	FDA 3541	218	1	218	0.25 (15 minutes)	55
Standards (807.87(d) and (f))	FDA 3654	2,700	1	2,700	10	27,000
510(k) statement (807.93)		225	10	2,250	10	22,500
Total						358,633

[1] There are no capital costs or operating and maintenance costs associated with this collection of information.

Dated: November 15, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27851 Filed 11–17–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2012–D–0880]

Generic Drug User Fee Amendments of 2012: Questions and Answers Related to User Fee Assessments; Guidance for Industry; Availability

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of availability.

SUMMARY: The Food and Drug Administration (FDA or Agency) is announcing the availability of guidance for industry entitled ''Generic Drug User Fee Amendments of 2012: Questions and Answers Related to User Fee Assessments.'' This guidance provides updated answers to common questions from the generic drug industry and other interested parties involved in the development and/or testing of generic drug products regarding GDUFA user fees and finalizes the revised version of the guidance.

DATES: Submit either electronic or written comments on Agency guidances at any time.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

• *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *http://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *http://www.regulations.gov.*

• If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

• *Mail/Hand delivery/Courier (for written/paper submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

• For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. FDA–2012–D–0880 for ''Generic Drug User Fee Amendments of 2012: Questions and Answers Related to User Fee Assessments.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *http://www.regulations.gov* or at the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

• *Confidential Submissions*—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *http://www.regulations.gov.* Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm.*

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *http://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

Submit written requests for single copies of this guidance to the Division of Drug Information, Center for Drug Evaluation and Research, Food and Drug Administration, 10001 New Hampshire Ave., Hillandale Building, 4th Floor, Silver Spring, MD 20993–0002. Send one self-addressed adhesive label to assist that office in processing your requests. See the **SUPPLEMENTARY INFORMATION** section for electronic access to the guidance document.

FOR FURTHER INFORMATION CONTACT: Mehrban Iranshad, Division of User Fee Management and Budget Formulation staff, Center for Drug Evaluation and Research, Food and Drug Administration, 10001 New Hampshire Ave., Hillandale Bldg., Rm. 4145, Silver Spring, MD 20993, 301–796–7900, *AskGDUFA@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

FDA is announcing the availability of a guidance for industry entitled ''Generic Drug User Fee Amendments of 2012: Questions and Answers Related to User Fee Assessments.'' GDUFA (Pub. L. 112–144, Title III) was signed into law by the President on July 9, 2012. GDUFA is designed to speed the delivery of safe and effective generic drugs to the public and improve upon the predictability of the review process. GDUFA enables FDA to assess user fees to support critical and measurable enhancements to FDA's generic drugs program. GDUFA establishes fees for abbreviated new drug applications (ANDAs), prior approval supplements (PASs) to ANDAs, and drug master files (DMFs), annual facility fees, and a one-time fee for original ANDAs pending with FDA on October 1, 2012 (backlog fees). Fees are incurred for ANDAs and PASs submitted on or after October 1, 2012. An application fee is also incurred the first time a DMF is referenced in an ANDA or PAS submitted on or after October 1, 2012.

FDA previously announced GDUFA fees for fiscal year 2017 in the **Federal Register**. ANDA, PAS, DMF, and facility fees were published on July 27, 2016 (81 FR 49225), and the backlog fee was published on October 25, 2012 (77 FR 65199). On August 27, 2012, FDA announced the availability of a draft guidance for industry entitled ''Generic Drug User Fee Amendments of 2012: Questions and Answers'' (77 FR 51814). In response to comments received in the docket and to address additional questions that have arisen since the launch of the GDUFA program, FDA revised the draft guidance and re-issued it as ''Draft Guidance for Industry on Generic Drug User Fee Amendments of 2012: Questions and Answers (Revision 1)'' on September 10, 2013 (78 FR 55261). The guidance announced in this notice finalizes the section of Revision 1 relating to user fees, updating and clarifying the responses in some cases and adding questions and answers based on comments received from the public. Questions and answers related to GDUFA's self-identification, review of generic drug submissions, and inspections and compliance provisions that appeared in draft versions of this guidance will appear in updated form in a separately issued final guidance.

This guidance is being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). The guidance represents the Agency's current thinking on ''Generic Drug User Fee Amendments of 2012: Questions and Answers Related to User Fee Assessments.'' It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations.

II. Electronic Access

Persons with access to the Internet may obtain the guidance at either *http://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/default.htm* or *http://www.regulations.gov*.

Dated: November 14, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27761 Filed 11–17–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2016–N–3535]

Agency Information Collection Activities: Proposed Collection; Comment Request; Guidance for Industry on Special Protocol Assessment

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is announcing an opportunity for public comment on the proposed collection of certain information by the Agency. Under the Paperwork Reduction Act of 1995 (the PRA), Federal Agencies are required to publish notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of an existing collection of information, and to allow 60 days for public comment in response to the notice. This notice solicits comments on the information collection in the guidance for industry on special protocol assessment.

DATES: Submit either electronic or written comments on the collection of information by January 17, 2017.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

- Federal eRulemaking Portal: *https://www.regulations.gov*. Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *https://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *https://www.regulations.gov*.
- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

- Mail/Hand delivery/Courier (for written/paper submissions): Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.
- For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. FDA–2016–N–3535 for ''Agency Information Collection Activities: Proposed Collection; Comment Request; Guidance for Industry on Special Protocol Assessment.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *https://www.regulations.gov* or at the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

- Confidential Submissions—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *https://www.regulations.gov*. Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm*.

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *https://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

FOR FURTHER INFORMATION CONTACT: FDA PRA Staff, Office of Operations, Food and Drug Administration, Three White Flint North, 11601 Landsdown St., 10A–12M, North Bethesda, MD 20852, *PRAStaff@fda.hhs.gov*.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501–3520), Federal Agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. ''Collection of information'' is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) and includes Agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. Section 3506(c)(2)(A) of the PRA (44 U.S.C. 3506(c)(2)(A)) requires Federal Agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of an existing collection of information, before submitting the collection to OMB for approval. To comply with this requirement, FDA is publishing notice of the proposed collection of information set forth in this document.

With respect to the following collection of information, FDA invites comments on these topics: (1) Whether the proposed collection of information is necessary for the proper performance of FDA's functions, including whether the information will have practical utility; (2) the accuracy of FDA's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (3) ways to enhance the quality, utility, and clarity of the information to be collected; and (4) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques, when appropriate, and other forms of information technology.

Guidance for Industry on Special Protocol Assessment—OMB Control Number 0910–0470—Extension

The ''Guidance for Industry on Special Protocol Assessment'' describes Agency procedures to evaluate issues related to the adequacy (*e.g.,* design, conduct, analysis) of certain proposed studies. The guidance describes procedures for sponsors to request special protocol assessment and for the Agency to act on such requests. The guidance provides information on how the Agency interprets and applies provisions of the Food and Drug Administration Modernization Act of 1997 and the specific Prescription Drug User Fee Act of 1992 (PDUFA) goals for special protocol assessment associated with the development and review of PDUFA products. The guidance describes the following two collections of information: (1) The submission of a notice of intent to request special protocol assessment of a carcinogenicity protocol and (2) the submission of a request for special protocol assessment.

I. Notification for a Carcinogenicity Protocol

As described in the guidance, a sponsor interested in Agency assessment of a carcinogenicity protocol should notify the appropriate division in FDA's Center for Drug Evaluation and Research (CDER) or the Center for Biologics Evaluation and Research (CBER) of an intent to request special protocol assessment at least 30 days prior to submitting the request. With such notification, the sponsor should submit relevant background information so that the Agency may review reference material related to carcinogenicity protocol design prior to receiving the carcinogenicity protocol.

II. Request for Special Protocol Assessment

The guidance asks that a request for special protocol assessment be submitted as an amendment to the investigational new drug application (IND) for the underlying product and that it be submitted to the Agency in triplicate with Form FDA 1571 attached. The guidance also suggests that the sponsor submit the cover letter to a request for special protocol assessment via fax to the appropriate division in CDER or CBER. Agency regulations (21 CFR 312.23(d)) state that information provided to the Agency as part of an IND is to be submitted in triplicate and with the appropriate cover form, Form FDA 1571. An IND is submitted to FDA under existing regulations in part 312 (21 CFR part 312), which specifies the information that manufacturers must submit so that FDA may properly evaluate the safety and effectiveness of investigational drugs and biological products. The information collection requirements resulting from the preparation and submission of an IND under part 312 have been estimated by FDA and the reporting and recordkeeping burden has been approved by OMB under OMB control number 0910–0014.

FDA suggests that the cover letter to the request for special protocol assessment be submitted via fax to the appropriate division in CDER or CBER to enable Agency staff to prepare for the arrival of the protocol for assessment. The Agency recommends that a request for special protocol assessment be submitted as an amendment to an IND for two reasons: (1) To ensure that each request is kept in the administrative file with the entire IND and (2) to ensure that pertinent information about the request is entered into the appropriate tracking databases. Use of the information in the Agency's tracking databases enables the appropriate Agency official to monitor progress on the evaluation of the protocol and to ensure that appropriate steps will be taken in a timely manner.

The guidance recommends that the following information should be submitted to the appropriate Center with each request for special protocol assessment so that the Center may quickly and efficiently respond to the request:

- Questions to the Agency concerning specific issues regarding the protocol; and
- All data, assumptions, and information needed to permit an adequate evaluation of the protocol, including: (1) The role of the study in the overall development of the drug; (2) information supporting the proposed trial, including power calculations, the choice of study endpoints, and other critical design features; (3) regulatory outcomes that could be supported by the results of the study; (4) final labeling that could be supported by the results of the study; and (5) for a stability protocol, product characterization and relevant manufacturing data.

Description of Respondents: A sponsor, applicant, or manufacturer of a drug or biologic product regulated by the Agency under the Federal Food, Drug, and Cosmetic Act or section 351 of the Public Health Service Act (42 U.S.C. 262) who requests special protocol assessment.

Burden Estimate: Table 1 of this document provides an estimate of the annual reporting burden for notifications for a carcinogenicity protocol and requests for a special protocol assessment.

Notification for a Carcinogenicity Protocol: Based on the number of notifications for carcinogenicity protocols and the number of carcinogenicity protocols currently submitted to CDER and CBER, CDER estimates that it will receive approximately 52 notifications of an intent to request special protocol assessment of a carcinogenicity protocol per year from approximately 28 sponsors. CBER estimates that it will receive approximately one notification of an intent to request special protocol assessment of a carcinogenicity protocol per year from approximately one sponsor. The hours per response, which is the estimated number of hours that a sponsor would spend preparing the notification and background information to be submitted in accordance with the guidance, is estimated to be approximately 8 hours.

Requests for Special Protocol Assessment: Based on the number of requests for special protocol assessment currently submitted to CDER and CBER, CDER estimates that it will receive approximately 211 requests for special protocol assessment per year from approximately 112 sponsors. CBER estimates that it will receive approximately nine requests from approximately seven sponsors. The hours per response is the estimated number of hours that a respondent would spend preparing the information to be submitted with a request for special protocol assessment, including the time it takes to gather and copy questions to be posed to the Agency regarding the protocol and data, assumptions, and information needed to permit an adequate evaluation of the protocol. Based on the Agency's experience with these submissions, FDA estimates approximately 15 hours on average would be needed per response.

FDA estimates the burden of this collection as follows:

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN [1]

Information collection activity	Number of respondents	Number of responses per respondent	Total annual responses	Average burden per response	Total hours
Notification for Carcinogenicity Protocols	29	1.8	53	8	424
Requests for Special Protocol Assessment	119	1.8	220	15	3,300
Total					3,724

[1] There are no capital costs or operating and maintenance costs associated with this collection.

Dated: November 15, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27840 Filed 11–17–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2016–D–3456]

Bacillus Calmette-Guerin—Unresponsive Nonmuscle Invasive Bladder Cancer: Developing Drugs and Biologics for Treatment; Draft Guidance for Industry; Availability

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of availability.

SUMMARY: Summary: The Food and Drug Administration (FDA or Agency) is announcing the availability of a draft guidance for industry entitled ''Bacillus Calmette-Guerin (BCG)—Unresponsive Nonmuscle Invasive Bladder Cancer: Developing Drugs and Biologics for Treatment.'' The purpose of this guidance is to assist sponsors in the development of drugs and biologics to treat patients with a high-risk form of bladder cancer. The alternative is radical cystectomy, a surgical procedure with significant morbidity and mortality. This guidance will help overcome some of the obstacles in conducting the studies needed to establish efficacy of drugs and biologics for these patients with an unmet medical need.

DATES: Although you can comment on any guidance at any time (see 21 CFR 10.115(g)(5)), to ensure that the agency considers your comment on this draft guidance before it begins work on the final version of the guidance, submit either electronic or written comments on the draft guidance by February 16, 2017.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

• *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *http://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *http://www.regulations.gov.*

• If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

• *Mail/Hand delivery/Courier (for written/paper submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

• For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. [FDA–2016–D–3456] for ''BCG-Unresponsive Nonmuscle Invasive Bladder Cancer: Developing Drugs and Biologics for Treatment; Draft Guidance for Industry; Availability.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *http://www.regulations.gov* or at the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

• *Confidential Submissions*—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *http://www.regulations.gov.* Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm.*

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *http://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

Submit written requests for single copies of the draft guidance to the

Division of Drug Information, Center for Drug Evaluation and Research, Food and Drug Administration, 10001 New Hampshire Ave., Hillandale Building, 4th Floor, Silver Spring, MD 20993–0002, or the Office of Communication, Outreach, and Development, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm. 3128, Silver Spring, MD 20993–0002. Send one self-addressed adhesive label to assist that office in processing your requests. See the **SUPPLEMENTARY INFORMATION** section for electronic access to the draft guidance document.

FOR FURTHER INFORMATION CONTACT: V. Ellen Maher, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 22, Rm. 2352, Silver Spring, MD 20993–0002, 301–796–5017; or Stephen Ripley, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm. 7301, Silver Spring, MD 20993–0002, 240–402–7911.

SUPPLEMENTARY INFORMATION:

I. Background

FDA is announcing the availability of a draft guidance for industry entitled ''BCG-Unresponsive Nonmuscle Invasive Bladder Cancer: Developing Drugs and Biologics for Treatment.'' This draft guidance is intended to provide a framework for industry to facilitate the development of drugs and biologics to treat patients with nonmuscle invasive bladder cancer (NMIBC). The focus is on the subset of patients with BCG-unresponsive disease. In addition, the pathological diagnosis and staging, risk stratification, and trial design, including assessment of appropriate clinical endpoints, are discussed.

The preferred trial design for demonstrating efficacy of drugs developed to treat NMIBC is a randomized, controlled trial with a time-to-event endpoint of recurrence-free survival. Single-arm trials are appropriate in clinical settings for which a randomized, controlled trial is either unethical or not feasible. Therefore, single-arm trials of patients with BCG-unresponsive carcinoma in situ with or without papillary disease using an endpoint of complete response rate (and duration) may be appropriate.

This draft guidance is being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). The draft guidance, when finalized, will represent the current thinking of FDA on developing drugs and biologics for the treatment of BCG-unresponsive NMIBC. It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations.

II. The Paperwork Reduction Act of 1995

This draft guidance refers to previously approved collections of information found in FDA regulations. These collections of information are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520). The collections of information in 21 CFR parts 312 and 314 have been approved under OMB control numbers 0910–0014 and 0910–0001, respectively.

III. Electronic Access

Persons with access to the Internet may obtain the draft guidance at *http://www.fda.gov/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/default.htm, http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/default.htm,* or *http://www.regulations.gov.*

Dated: November 14, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27762 Filed 11–17–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2016–D–3750]

Revised Recommendations for Determining Eligibility of Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products Who Have Received Human-Derived Clotting Factor Concentrates; Guidance for Industry; Availability

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of availability.

SUMMARY: The Food and Drug Administration (FDA or Agency) is announcing the availability of a document entitled ''Revised Recommendations for Determining Eligibility of Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products Who Have Received Human-Derived Clotting Factor Concentrates; Guidance for Industry.'' The guidance document provides establishments that make donor eligibility (DE) determinations for donors of human cells, tissues, and cellular and tissue-based products (HCT/Ps) with information on infectious-disease risks related to receipt of FDA licensed human-derived clotting factor concentrates (HDCFCs). The guidance explains that FDA no longer considers FDA licensed HDCFCs as a risk factor for human immunodeficiency virus (HIV), Hepatitis B virus (HBV), or Hepatitis C virus (HCV). As such, receipt of FDA licensed HDCFCs, or sex with a person who has received FDA licensed HDCFCs, should not be considered a risk factor when determining eligibility of a donor of HCT/Ps. The guidance supplements the recommendations regarding HDCFCs that are contained in the guidance entitled ''Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps); Guidance for Industry'' dated August 2007.

DATES: The Agency is soliciting public comment, but is implementing this guidance immediately because the Agency has determined that prior public participation is not appropriate. Submit either electronic or written comments on Agency guidances at any time.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

• *Federal eRulemaking Portal: http://www.regulations.gov*. Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *http://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *http://www.regulations.gov*.

• If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

• *Mail/Hand delivery/Courier (for written/paper submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

• For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. FDA–2016–D–3750 for ''Revised Recommendations for Determining Eligibility of Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products Who Have Received Human-Derived Clotting Factor Concentrates; Guidance for Industry.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *http://www.regulations.gov* or at the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

• Confidential Submissions—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *http://www.regulations.gov*. Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm*.

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *http://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

Submit written requests for single copies of the guidance to the Office of Communication, Outreach and Development, Center for Biologics Evaluation and Research (CBER), Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm. 3128, Silver Spring, MD 20993–0002. Send one self-addressed adhesive label to assist the office in processing your requests. The guidance may also be obtained by mail by calling CBER at 1–800–835–4709 or 240–402–8010. See the **SUPPLEMENTARY INFORMATION** section for electronic access to the guidance document.

FOR FURTHER INFORMATION CONTACT: Melissa Segal, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm. 7301, Silver Spring, MD 20993–0002, 240–402–7911.

SUPPLEMENTARY INFORMATION:

I. Background

FDA is announcing the availability of a document entitled ''Revised Recommendations for Determining Eligibility of Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products Who Have Received Human-Derived Clotting Factor Concentrates; Guidance for Industry.'' The guidance document provides establishments that make DE determinations for donors of HCT/Ps with information on infectious disease risks related to receipt of HDCFCs. The guidance explains that FDA no longer considers FDA licensed HDCFCs as a risk factor for HIV, HBV, or HCV. As such, receipt of FDA licensed HDCFCs, or sex with a person who has received FDA licensed HDCFCs, should not be considered a risk factor when determining eligibility of a donor of HCT/Ps. The recommendations in the guidance supersede the recommendations contained in section IV.E.3. of the guidance entitled ''Eligibility Determination for Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps); Guidance for Industry'' dated August 2007.

This guidance is being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). FDA is issuing this guidance for immediate implementation in accordance with 21 CFR 10.115(g)(2) without initially seeking prior comment because the Agency has determined that prior public participation is not appropriate. This guidance recommends a less burdensome policy that is consistent with the public health. The guidance represents the current thinking of FDA on ''Revised Recommendations for Determining Eligibility of Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products Who Have Received Human-Derived Clotting Factor Concentrates.'' It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations.

II. Paperwork Reduction Act of 1995

This guidance refers to previously approved collections of information found in FDA regulations. These collections of information are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520). The collections of information in 21 CFR 1271.47 have been approved under OMB control number 0910–0543.

III. Electronic Access

Persons with access to the Internet may obtain the guidance at either *http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/default.htm* or *http://www.regulations.gov*.

Dated: November 14, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27768 Filed 11–17–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2016–N–3680]

Determination That BENEMID (Probenecid) Tablet and Other Drug Products Were Not Withdrawn From Sale for Reasons of Safety or Effectiveness

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA or Agency) has

determined that the drug products listed in this document were not withdrawn from sale for reasons of safety or effectiveness. This determination means that FDA will not begin procedures to withdraw approval of abbreviated new drug applications (ANDAs) that refer to these drug products, and it will allow FDA to continue to approve ANDAs that refer to the products as long as they meet relevant legal and regulatory requirements.

FOR FURTHER INFORMATION CONTACT: Stacy Kane, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 51, Rm. 6207, Silver Spring, MD 20993–0002, 301–796–8363, *Stacy.Kane@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION: In 1984, Congress enacted the Drug Price Competition and Patent Term Restoration Act of 1984 (Pub. L. 98–417) (the 1984 amendments), which authorized the approval of duplicate versions of drug products approved under an ANDA procedure. ANDA applicants must, with certain exceptions, show that the drug for which they are seeking approval contains the same active ingredient in the same strength and dosage form as the ''listed drug,'' which is a version of the drug that was previously approved. ANDA applicants do not have to repeat the extensive clinical testing otherwise necessary to gain approval of a new drug application (NDA).

The 1984 amendments include what is now section 505(j)(7) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355(j)(7)), which requires FDA to publish a list of all approved drugs. FDA publishes this list as part of the ''Approved Drug Products With Therapeutic Equivalence Evaluations,'' which is generally known as the ''Orange Book.'' Under FDA regulations, a drug is removed from the list if the Agency withdraws or suspends approval of the drug's NDA or ANDA for reasons of safety or effectiveness, or if FDA determines that the listed drug was withdrawn from sale for reasons of safety or effectiveness (21 CFR 314.162).

Under § 314.161(a) (21 CFR 314.161(a)), the Agency must determine whether a listed drug was withdrawn from sale for reasons of safety or effectiveness: (1) Before an ANDA that refers to that listed drug may be approved, (2) whenever a listed drug is voluntarily withdrawn from sale and ANDAs that refer to the listed drug have been approved, and (3) when a person petitions for such a determination under 21 CFR 10.25(a) and 10.30. Section 314.161(d) provides that if FDA determines that a listed drug was withdrawn from sale for safety or effectiveness reasons, the Agency will initiate proceedings that could result in the withdrawal of approval of the ANDAs that refer to the listed drug.

FDA has become aware that the drug products listed in the table in this document are no longer being marketed.

Application No.	Drug name	Active ingredient(s)	Strength(s)	Dosage form/route	Applicant
NDA 007898	BENEMID	Probenecid	500 milligrams (mg)	Tablet; Oral	Merck and Co., Inc.
NDA 008048	XYLOCAINE	Lidocaine	5%	Ointment; Topical	AstraZeneca Pharmaceuticals LP.
NDA 011111	VISTARIL	Hydroxyzine Hydrochloride (HCl).	25 mg/milliliter (mL); 50 mg/mL.	Injectable; Injection	Pfizer Inc.
NDA 012209	FLUOROURACIL	Fluorouracil	500 mg/10 mL (50 mg/mL)	Injectable; Injection	Spectrum Pharmaceuticals, Inc.
NDA 013220	PERIACTIN	Cyproheptadine HCl	2 mg/5 mL	Syrup; Oral	Merck and Co., Inc.
NDA 017534	FIORINAL	Aspirin; Butalbital; Caffeine.	325 mg; 50 mg; 40 mg	Tablet; Oral	Allergan Sales, LLC.
NDA 017577	DITROPAN	Oxybutynin Chloride	5 mg	Tablet; Oral	Ortho-McNeil-Janssen Pharmaceuticals, Inc.
NDA 017781	DIPROSONE	Betamethasone Dipropionate.	Equivalent to (EQ) 0.05% Base.	Lotion; Topical	Schering Corp.
NDA 018211	DITROPAN	Oxybutynin Chloride	5 mg/5 mL	Syrup; Oral	Ortho-McNeil-Janssen Pharmaceuticals, Inc.
NDA 018586	TOPICORT	Desoximetasone	0.05%	Gel; Topical	Taro Pharmaceuticals U.S.A., Inc.
NDA 018631	TRENTAL	Pentoxifylline	400 mg	Extended-Release Tablet; Oral.	U.S. Pharmaceutical Holdings II, LLC.
NDA 019155	LAC–HYDRIN	Ammonium Lactate	EQ 12% Base	Lotion; Topical	Ranbaxy Laboratories Inc.
NDA 019323	TEMOVATE	Clobetasol Propionate	0.05%	Ointment; Topical	Fougera Pharmaceuticals Inc.
NDA 019778	PRINZIDE	Hydrochlorothiazide; Lisinopril.	12.5 mg/10 mg; 12.5mg/20mg.	Tablet; Oral	Merck Sharp & Dohme Corp., Subsidiary of Merck & Co., Inc.
NDA 019842	MOTRIN	Ibuprofen	100 mg/5 mL	Suspension; Oral	McNeil Consumer Healthcare Division of McNEIL–PPC, Inc.
NDA 019915	MONOPRIL	Fosinopril Sodium	10 mg; 20 mg; 40 mg	Tablet; Oral	Bristol-Myers Squibb Co.
NDA 020343	PRIMACOR IN DEXTROSE 5% IN PLASTIC CONTAINER.	Milrinone Lactate	EQ 10 mg Base/100 mL; EQ 15 mg Base/100 mL; EQ 20 mg Base/100 mL; EQ 40 mg Base/200 mL.	Injectable; Injection	Sanofi-Aventis U.S. LLC.
NDA 020508	LAC–HYDRIN	Ammonium Lactate	EQ 12% Base	Cream; Topical	Ranbaxy Laboratories, Inc.
NDA 020635	LEVAQUIN IN DEXTROSE 5% IN PLASTIC CONTAINER.	Levofloxacin	EQ 250 mg/50 mL (EQ 5 mg/mL); EQ 500 mg/100 mL (EQ 5 mg/mL); EQ 750 mg/150 mL (EQ 5 mg/mL).	Injectable; Injection	Janssen Pharmaceuticals, Inc.
NDA 020863	PLETAL	Cilostazol	50 mg; 100 mg	Tablet; Oral	Otsuka Pharmaceutical Co., Ltd.
NDA 20950	DUONEB	Albuterol Sulfate; Ipratropium Bromide.	EQ 0.083% Base; 0.017%	Solution; Inhalation	Mylan Specialty, L.P.
NDA 21460	METAGLIP	Glipizide; Metformin HCl	2.5 mg/250 mg; 2.5 mg/500 mg; 5 mg/500 mg.	Tablet; Oral	Bristol-Myers Squibb Co.
NDA 021759	ELOXATIN	Oxaliplatin	200 mg/40 mL (5 mg/mL)	Injectable; Intravenous (Infusion).	Sanofi-Aventis U.S. LLC.
NDA 050442	VIBRAMYCIN	Doxycycline Hyclate	EQ 100 mg Base/Vial; EQ 200 mg Base/Vial.	Injectable; Injection	Pfizer Inc.

Application No.	Drug name	Active ingredient(s)	Strength(s)	Dosage form/route	Applicant
NDA 050624	ROCEPHIN W/DEXTROSE IN PLASTIC CONTAINER.	Ceftriaxone Sodium	EQ 10 mg Base/mL; EQ 20 mg Base/mL; EQ 40 mg Base/mL.	Injectable; Injection	Hoffmann-La Roche, Inc.
NDA 050739	OMNICEF	Cefdinir	300 mg	Capsule; Oral	AbbVie Inc.
NDA 050749	OMNICEF	Cefdinir	125 mg/5 mL; 250 mg/5 mL	For Suspension; Oral	AbbVie Inc.
ANDA 060003	V–CILLIN K	Penicillin V Potassium	EQ 125 mg Base; EQ 250 mg Base; EQ 500 mg Base.	Tablet; Oral	Eli Lilly and Company.
ANDA 060463	GARAMYCIN	Gentamicin Sulfate	EQ 0.1% Base	Ointment; Topical	Schering-Plough Corp.
ANDA 086833	CYPROHEPTADINE HYDROCHLORIDE.	Cyproheptadine HCl	2 mg/5mL	Syrup; Oral	Actavis Mid Atlantic LLC.
ANDA 088877	BENZTROPINE MESYLATE.	Benztropine Mesylate	0.5 mg	Tablet; Oral	Lannett Holdings, Inc.
ANDA 088894	BENZTROPINE MESYLATE.	Benztropine Mesylate	1 mg	Tablet; Oral	Lannett Holdings, Inc.
ANDA 088895	BENZTROPINE MESYLATE.	Benztropine Mesylate	2 mg	Tablet; Oral	Lannett Holdings, Inc.

FDA has reviewed its records and, under § 314.161, has determined that the drug products listed in this document were not withdrawn from sale for reasons of safety or effectiveness. Accordingly, the Agency will continue to list the drug products listed in this document in the ''Discontinued Drug Product List'' section of the Orange Book. The ''Discontinued Drug Product List'' identifies, among other items, drug products that have been discontinued from marketing for reasons other than safety or effectiveness.

Approved ANDAs that refer to the NDAs and ANDAs listed in this document are unaffected by the discontinued marketing of the products subject to those NDAs and ANDAs. Additional ANDAs that refer to these products may also be approved by the Agency if they comply with relevant legal and regulatory requirements. If FDA determines that labeling for these drug products should be revised to meet current standards, the Agency will advise ANDA applicants to submit such labeling.

Dated: November 14, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27855 Filed 11–17–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket Nos. FDA–2015–M–3249, FDA–2015–M–3251, FDA–2015–M–3253, FDA–2015–M–4130, FDA 2015–M–3254, FDA–2016–M–2210, FDA–2014–M–0740, FDA–2016–M–1072, FDA–2014–M–2304, FDA–2014–M–2305, FDA–2015–M–2100, FDA–2015–M–3255, FDA–2015–M–4981]

Medical Devices Regulated by the Center for Biologics Evaluation and Research; Availability of Safety and Effectiveness Summaries for Premarket Approval Applications

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is publishing a list of premarket approval applications (PMAs) that have been approved by the Center for Biologics Evaluation and Research (CBER). This list is intended to inform the public of the availability of safety and effectiveness summaries of approved PMAs through the Internet and the Agency's Division of Dockets Management.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

• *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *http://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *http://www.regulations.gov.*

• If you want to submit a comment with confidential information that you do not wish to be made available to the public submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

• *Mail/Hand delivery/Courier (for written/paper submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

• For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket Nos. FDA–2015–M–3249, FDA–2015–M–3251, FDA–2015–M–3253, FDA–2015–M–4130, 2015–M–3254, FDA–2016–M–2210, FDA–2014–M–0740, FDA–2016–M–1072, FDA–2014–M–2304, FDA–2014–M–2305, FDA–2015–M–2100, FDA–2015–M–3255, FDA–2015–M–4981 for ''Medical Devices Regulated by the Center for Biologics Evaluation and Research; Availability of Safety and Effectiveness Summaries for Premarket Approval Applications.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *http://www.regulations.gov* or at the Division of Dockets

Management between 9 a.m. and 4 p.m., Monday through Friday.

• Confidential Submissions—To submit a comment with confidential information that you do not wish to be made publicly available submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *http://www.regulations.gov.* Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm.*

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *http://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.

FOR FURTHER INFORMATION CONTACT: Jonathan McKnight, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm. 7301, Silver Spring, MD 20993–0002, 240–402–7911.

SUPPLEMENTARY INFORMATION:

I. Background

In accordance with sections 515(d)(4) and (e)(2) of the Federal Food, Drug, and Cosmetic Act (the FD&C Act) (21 U.S.C. 360e(d)(4) and (e)(2)), notification of an order approving, denying, or withdrawing approval of a PMA will continue to include a notice of opportunity to request review of the order under section 515(g) of the FD&C Act. The 30-day period for requesting reconsideration of an FDA action under § 10.33(b) (21 CFR 10.33(b)) for notices announcing approval of a PMA begins on the day the notice is placed on the Internet. Section 10.33(b) provides that FDA may, for good cause, extend this 30-day period. Reconsideration of a denial or withdrawal of approval of a PMA may be sought only by the applicant; in these cases, the 30-day period will begin when the applicant is notified by FDA in writing of its decision.

The regulations (21 CFR 814.44(d) and 814.45(d)) provide that FDA publish a quarterly list of available safety and effectiveness summaries of PMA approvals and denials that were announced during that quarter. The following is a list of PMAs approved by CBER for which safety and effectiveness summaries were placed on the Internet from October 1, 2010, through September 30, 2016. There were no denial actions during this period. The list provides the manufacturer's name, the product's generic name or the trade name, and the approval date.

TABLE 1—LIST OF SAFETY AND EFFECTIVENESS SUMMARIES FOR APPROVED PMAS MADE AVAILABLE FROM OCTOBER 1, 2010, THROUGH SEPTEMBER 30, 2016

PMA No., Docket No.	Applicant	Trade name	Approval date
BP090032, FDA–2015–M–3249	bioLytical Laboratories Inc	INSTI HIV–1 Antibody Test Kit	November 29, 2010.
BP100064, FDA–2015–M–3251	Bio-Rad Laboratories, Inc	GS HIV Combo Ag/Ab EIA	July 22, 2011.
BP120001, FDA–2015–M–3253	OraSure Technologies, Inc	OraQuick® In-Home HIV Test	July 3, 2012.
BP120032, FDA–2015–M–4130	Chembio Diagnostic Systems, Inc	DPP HIV ½ Assay	December 12, 2012.
BP120037, FDA–2015–M–3254	Alere Scarborough, Inc	Alere Determine™ HIV–1/2 Ag/Ab Combo	August 9, 2013.
BH110018, FDA–2016–M–2210	Miltenyi Biotec, Inc	CliniMACs CD34 Reagent System	January 23, 2014.
BP130026, FDA–2014–M–0740	BioArray Solutions, Ltd	Immucor PreciseType™ Human Erythrocyte Antigen Molecular BeadChip Test.	May 21, 2014.
BP140120, FDA–2016–M–1072	Bio-Rad Laboratories, Inc	Bio-Rad Geenius HIV ½ Supplemental Assay	October 24, 2014.
BP130076, FDA–2014–M–2304	Cerus Corporation	INTERCEPT® Blood System for Plasma	December 16, 2014.
BP140143, FDA–2014–M–2305	Cerus Corporation	INTERCEPT® Blood System for Platelets	December 18, 2014.
BP140103, FDA–2015–M–2100	Siemens Healthcare Diagnostics, Inc	ADVIA Centaur HIV Ag/Ab Combo (CHIV) Assay.	June 8, 2015.
BP140111, FDA–2015–M–3255	Bio-Rad Laboratories, Inc	BioPlex® 2200 HIV Ag-Ab	July 22, 2015.
BP150262, FDA–2015–M–4981	Roche Molecular Systems, Inc	Cobas HIV–1	December 18, 2015.

II. Electronic Access

Persons with access to the Internet may obtain the documents at *http://www.fda.gov/BiologicsBloodVaccines/BloodBloodProducts/ApprovedProducts/PremarketApprovalsPMAs/default.htm.*

Dated: November 14, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27769 Filed 11–17–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2015–D–2148]

Submission of Premarket Notifications for Magnetic Resonance Diagnostic Devices; Guidance for Industry and Food and Drug Administration Staff; Availability

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of availability.

SUMMARY: The Food and Drug Administration (FDA) is announcing the availability of the guidance entitled ''Submission of Premarket Notifications for Magnetic Resonance Diagnostic Devices.'' This guidance provides a detailed description of the information that should be included in a premarket notification for a magnetic resonance diagnostic device (MRDD).

DATES: Submit either electronic or written comments on this guidance at any time. General comments on Agency guidance documents are welcome at any time.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *http://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *http://www.regulations.gov.*
- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

- *Mail/Hand delivery/Courier (for written/paper submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.
- For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. FDA–2015–D–2148 for ''Submission of Premarket Notifications for Magnetic Resonance Diagnostic Devices.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *http://www.regulations.gov* or at the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

- Confidential Submissions—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *http://www.regulations.gov.* Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm.*

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *http://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

An electronic copy of the guidance document is available for download from the Internet. See the **SUPPLEMENTARY INFORMATION** section for information on electronic access to the guidance. Submit written requests for a single hard copy of the guidance document entitled ''Submission of Premarket Notifications for Magnetic Resonance Diagnostic Devices'' to the Office of the Center Director, Guidance and Policy Development, Center for Devices and Radiological Health, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 66, Rm. 5431, Silver Spring, MD 20993–0002. Send one self-addressed adhesive label to assist that office in processing your request.

FOR FURTHER INFORMATION CONTACT: Jana Delfino, Center for Devices and Radiological Health, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 66, Rm. 4236, Silver Spring, MD 20993–0002, 301–796–6503; or Sunder Rajan, Center for Devices and Radiological Health, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 62, Rm. 1113, Silver Spring, MD 20993–0002, 301–796–4194.

SUPPLEMENTARY INFORMATION:

I. Background

The purpose of this guidance is to provide a detailed description of the information that should be included in a premarket notification for an MRDD. This guidance is a recommendation of how to comply with certain requirements contained in 21 CFR 807.87 and is intended to be used in conjunction with information regarding the content and format of a 510(k) premarket notification. The approach outlined in this guidance document is intended to facilitate the timely review and marketing clearance of MRDDs.

MRDDs are also electronic products under section 531(2) (21 U.S.C. 360hh(2)) of Subchapter C (Electronic Product Radiation Control (EPRC)) of the Federal Food, Drug and Cosmetic Act (FD&C Act). As such, MRDDs are subject to the radiological health requirements in Title 21, Subchapter J, parts 1000 through 1050 of the Code of Federal Regulations, including applicability of general and specific performance standards (parts 1010–1050) and other general requirements for reporting and recordkeeping (part 1002), notification and corrective actions for defective or non-compliant electronic products (parts 1003 and 1004), and importation (part 1005).

This guidance is applicable to MRDDs as defined in 21 CFR 892.1000. An MRDD is intended for general diagnostic use to present images that reflect the spatial distribution and/or magnetic resonance spectra that reflect frequency and distribution of nuclei exhibiting nuclear magnetic resonance. Other physical parameters derived from the images and/or spectra may also be produced. The device includes hydrogen-1 (proton) imaging, sodium-23 imaging, hydrogen-1 spectroscopy, phosphorus-31 spectroscopy, and chemical shift imaging (preserving simultaneous frequency and spatial information). MRDDs are class II medical devices that require premarket notification and an agency determination of substantial equivalence prior to marketing.

The principal components of current MRDDs include the main magnet, shim and gradient systems, radiofrequency transmitter and receiver, transmit and receive coils, power supplies, computer and software, patient supports, and physiological gating devices. This guidance document is applicable to premarket notifications for new magnetic resonance imaging (MRI) and magnetic resonance spectroscopy systems, components, and accessories, and modifications to systems, components, and accessories that could significantly affect the safety or effectiveness of the MRDD. The information in this guidance document is also applicable to the MRI system components of dual-modality devices, such as positron emission tomography/MRI systems.

In the **Federal Register** of July 14, 2015 (80 FR 41046), FDA announced the availability of the draft guidance and interested persons were invited to comment by October 13, 2015. FDA has considered the comments received, and has incorporated changes suggested by the comments, as appropriate.

This guidance supersedes FDA's guidance entitled ''Guidance for Industry: Guidance for the Submissions of Premarket Notifications for Magnetic Resonance Diagnostic Devices'' dated November 14, 1998.

II. Significance of Guidance

This guidance is being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). The guidance represents the current thinking of FDA on ''Submission of Premarket Notifications for Magnetic Resonance Diagnostic Devices.'' It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations.

III. Electronic Access

Persons interested in obtaining a copy of the guidance may do so by downloading an electronic copy from the Internet. A search capability for all Center for Devices and Radiological Health guidance documents is available at *http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/default.htm.* Guidance documents are also available at *http://www.regulations.gov.* Persons unable to download an electronic copy of ''Submission of Premarket Notifications for Magnetic Resonance Diagnostic Devices'' may send an email request to *CDRH-Guidance@fda.hhs.gov* to receive an electronic copy of the document. Please use the document number 340 to identify the guidance you are requesting.

IV. Paperwork Reduction Act of 1995

This guidance refers to previously approved collections of information found in FDA regulations. These collections of information are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520). The collections of information in 21 CFR part 807, subpart E (premarket notification), have been approved under OMB control number 0910–0120; the collections of information in 21 CFR part 801 (labeling) have been approved under OMB control number 0910–0485; the collections of information in parts 1002 through 1050 (electronic product requirements) have been approved under OMB control number 0910–0025; and the collections of information in the guidance document ''Requests for Feedback on Medical Device Submissions: The Pre-Submission Program and Meetings with Food and Drug Administration Staff'' have been approved under OMB control number 0910–0756.

Dated: November 15, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27842 Filed 11–17–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2016–D–3004]

Use of The Seafood List To Determine Acceptable Seafood Names; Draft Compliance Policy Guide; Availability

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of availability.

SUMMARY: The Food and Drug Administration (FDA or we) is announcing the availability of a draft guidance for FDA staff entitled ''Compliance Policy Guide Sec. 540.750 Use of *The Seafood List* to Determine Acceptable Seafood Names'' (the draft Compliance Policy Guide (CPG)). The draft CPG, when finalized, will provide guidance for FDA staff regarding use of *The Seafood List* to determine whether a seafood name is acceptable.

DATES: Although you can comment on any CPG at any time (see 21 CFR 10.115(g)(5)), to ensure that we consider your comment on the draft CPG before we begin work on the final version of the CPG, submit either electronic or written comments on the draft CPG by January 17, 2017.

ADDRESSES: You may submit comments as follows:

Electronic Submissions

Submit electronic comments in the following way:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *http://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *http://www.regulations.gov.*
- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

- *Mail/Hand delivery/Courier (for written/paper submissions):* Division of Dockets Management (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.
- For written/paper comments submitted to the Division of Dockets Management, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. FDA–2016–D–3004 for ''Compliance Policy Guide Sec. 540.750 Use of *The Seafood List* to Determine Acceptable Seafood Names.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *http://www.regulations.gov* or at the Division of Dockets Management between 9 a.m. and 4 p.m., Monday through Friday.

- Confidential Submissions—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *http://www.regulations.gov.* Submit both copies to the Division of Dockets Management. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *http://www.fda.gov/regulatoryinformation/dockets/default.htm.*

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *http://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Division of Dockets Management, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.

Submit written requests for single copies of the draft CPG to the Food and Feed Policy Staff, Office of Policy and Risk Management, Office of Regulatory Affairs, Food and Drug Administration, 12420 Parklawn Dr., Rockville, MD 20857. Send two self-addressed adhesive labels to assist that office in processing your request. See the **SUPPLEMENTARY INFORMATION** section for electronic access to the draft CPG.

FOR FURTHER INFORMATION CONTACT: Spring C. Randolph, Center for Food Safety and Applied Nutrition (HFC–325), Food and Drug Administration, 5001 Campus Dr., College Park, MD 20740, 240–402–1421.

SUPPLEMENTARY INFORMATION:

I. Background

We are announcing the availability of the draft CPG entitled ''Compliance Policy Guide Sec. 540.750 Use of *The Seafood List* to Determine Acceptable Seafood Names.'' The draft CPG, if finalized, will update the previously issued ''CPG Sec. 540.750—Common or Usual Names for Seafood in Interstate Commerce.'' The draft CPG is intended to provide guidance for FDA staff regarding use of *The Seafood List* to determine whether a seafood name is acceptable. The draft CPG explains when we may consider a seafood product to be misbranded under section 403 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 343). The draft CPG also contains information that may be useful to the regulated industry and to the public.

We are issuing this draft CPG consistent with our good guidance practices regulation (21 CFR 10.115). The draft CPG, when finalized, will represent our current thinking on acceptable names for seafood in interstate commerce. It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternate approach if it satisfies the requirements of the applicable statutes and regulations.

II. Electronic Access

Persons with access to the Internet may obtain the draft CPG from FDA's Office of Regulatory Affairs CPG history page at *http://www.fda.gov/ICECI/ComplianceManuals/CompliancePolicyGuidanceManual/default.htm* or *http://www.regulations.gov.* Use the FDA Web site listed in the previous sentence to find the most current version of the guidance.

Dated: November 15, 2016.

Leslie Kux,

Associate Commissioner for Policy.

[FR Doc. 2016–27843 Filed 11–17–16; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Notice of Joint Meeting by the Urology Interagency Coordinating Committee and the Diabetes Mellitus Interagency Coordinating Committee Meeting

SUMMARY: The Diabetes Mellitus Interagency Coordinating Committee (DMICC) and the Urology Interagency Coordinating Committee (UICC) will hold a joint meeting on December 16, 2016. The subject of the meeting will be ''The Urologic Complications of Diabetes.'' The meeting is open to the public.

DATES: The meeting will be held on December 16, 2016; from 9:00 a.m. to 12:00 p.m. Individuals wanting to present oral comments must notify the contact person at least 10 days before the meeting date.

ADDRESSES: The meeting will be held in the Democracy 2 Building at 6707 Democracy Blvd., Bethesda, MD, in Conference Room 7050.

FOR FURTHER INFORMATION CONTACT: For further information concerning this meeting, see the DMICC Web site, *www.diabetescommittee.gov,* or contact Dr. B. Tibor Roberts, Executive Secretary of the Diabetes Mellitus Interagency Coordinating Committee, National Institute of Diabetes and Digestive and Kidney Diseases, 31 Center Drive, Building 31A, Room 9A19, MSC 2560, Bethesda, MD 20892–2560, telephone: 301–496–6623; FAX: 301–480–6741; email: *dmicc@mail.nih.gov.*

SUPPLEMENTARY INFORMATION: The DMICC and the UICC, both chaired by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) comprising members of the Department of Health and Human Services and other federal agencies that support diabetes-related or urologic-related activities respectively, facilitate cooperation, communication, and collaboration on diabetes among government entities. The Committees' meetings, held several times a year, provide an opportunity for their members to learn about and discuss current and relevant future programs in their member organizations and to identify opportunities for collaboration. The December 16, 2016 joint meeting will focus on The Urologic Complications of Diabetes.

Any member of the public interested in presenting oral comments to the Committees should notify the contact person listed on this notice at least 10 days in advance of the meeting. Interested individuals and representatives or organizations should submit a letter of intent, a brief description of the organization represented, and a written copy of their oral presentation in advance of the meeting. Only one representative of an organization will be allowed to present; oral comments and presentations will be limited to a maximum of 5 minutes. Printed and electronic copies are requested for the record. In addition, any interested person may file written comments with the Committees by forwarding their statement to the contact person listed on this notice. The statement should include the name, address, telephone number and when applicable, the business or professional affiliation of the interested person. Because of time constraints for the meeting, oral comments will be allowed on a first-come, first-serve basis.

Members of the public who would like to receive email notification about future DMICC meetings should register for the listserv available on the DMICC Web site, *www.diabetescommittee.gov.*

Dated: November 9, 2016.

B. Tibor Roberts,

Executive Secretary, Office of Scientific Program and Policy Analysis, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health.

[FR Doc. 2016–27825 Filed 11–17–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing and/or Co-Development

AGENCY: National Institutes of Health, Department of Health and Human Services.

ACTION: Notice.

SUMMARY: The invention listed below is owned by an agency of the U.S. Government and is available for licensing and/or co-development in the U.S. to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing and/or co-development.

ADDRESSES: Invention Development and Marketing Unit, Technology Transfer Center, National Cancer Institute, 9609 Medical Center Drive, Mail Stop 9702, Rockville, MD 20850–9702.

FOR FURTHER INFORMATION CONTACT: Information on licensing and co-development research collaborations, and copies of the U.S. patent applications listed below may be obtained by contacting: Attn. Invention Development and Marketing Unit, Technology Transfer Center, National Cancer Institute, 9609 Medical Center Drive, Mail Stop 9702, Rockville, MD 20850–9702, Tel. 240–276–5515 or email *ncitechtransfer@mail.nih.gov.* A signed Confidential Disclosure Agreement may be required to receive copies of the patent applications.

SUPPLEMENTARY INFORMATION: Technology description follows.

Title of invention: Methods of Making and Using Dopamine D3 Receptor Selective Antagonists/Partial Agonists

Summary of Technology: A library of novel compounds that selectively bind the dopamine D_3 receptor have been designed and characterized extensively. *In vivo* rodent studies indicate selected lead molecules may be useful to treat drug addiction/dependence.

Description of Technology: Dopamine is a major neurotransmitter in the central nervous system and among other functions is directly related to the rewarding effects of drugs of abuse. Dopamine signaling is mediated by D_1, D_2, D_3, D_4 and D_5 receptors. The dopamine D_3 receptor is a known target to treat a variety of neuropsychiatric disorders, including substance use disorders (*e.g.* cocaine and opioid), schizophrenia and depression. Despite extensive efforts, it has proven difficult to identify a lead molecule that selectively binds to D_3 receptors (versus D_2 receptors, for example), with the desired pharmacological and pharmacokinetic profile. For example, metabolic instability or predicted toxicity has precluded successful translation of previously reported D_3R-selective antagonists to clinical use for cocaine abuse.

The library of compounds is designed to have high affinity and specificity for the dopamine D_3 receptor. Preliminary studies at National Institute of Drug Abuse (NIDA) indicate that selected lead compounds have promising *in vivo* activity in rodents, including reduced acquisition to self-administration of oxycodone, inhibition of reinstatement to oxycodone seeking, and ameliorating naloxone-precipitated withdrawal from oxycodone dependence.

This invention is owned by an agency of the U.S. Government and is available for licensing and/or co-development in the U.S., in accordance with 35 U.S.C. 209 and 37 CFR part 404, to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing and/or co-development.

Potential Commercial Applications:

- Treatment of Opioid Use Disorders
- Treatment of Schizophrenia
- Treatment of Bipolar Disorder
- Treatment of cannabis (Tetrahydrocannabinol, THC) dependence

Value Proposition: Despite extensive efforts to develop D_3 receptor-selective compounds, it has proven difficult to identify a ligand with the desired pharmacological and pharmacokinetic profile for translation to the clinic. The D_3 receptor ligands described herein may be useful to treat a variety of diseases, including opioid use disorders and schizophrenia.

Development Stage: Pre-clinical (in vivo validation).

Inventor(s): Amy Newman and Vivek Kumar (NIDA).

Intellectual Property: E–053–2016 United States Provisional Patent Application No. 62/307,600, filed March 14, 2016, titled ''Dopamine D3 Receptor Selective Antagonists/Partial Agonists; Methods of Making and Use Thereof''.

Publications: J Med Chem. 2016 Aug 25;59(16):7634–50. doi: 10.1021/acs.jmedchem.6b00860. Epub 2016 Aug 10.

Collaboration Opportunity: Researchers at the NIDA seek licensing and/or co-development research collaborations for development of Dopamine D3 ligands to treat opioid use disorders.

Contact Information: Requests for copies of the patent application or inquiries about licensing, research collaborations, and co-development opportunities should be sent to John D. Hewes, Ph.D., email: *john.hewes@nih.gov.*

Dated: November 10, 2016.

John D. Hewes,

Technology Transfer Specialist, Technology Transfer Center, National Cancer Institute.

[FR Doc. 2016–27770 Filed 11–17–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Submission for OMB Review; 30-Day Comment Request: A National Survey of Nurse Coaches (NIH Clinical Center)

AGENCY: National Institutes of Health.

ACTION: Notice.

SUMMARY: In compliance with the Paperwork Reduction Act of 1995, the National Institutes of Health (NIH) has submitted to the Office of Management and Budget (OMB) a request for review and approval of the information collection listed below. This proposed information collection was previously published in the **Federal Register** on August 22, 2016, pages 56668–9 (81 FR 56668) and allowed 60-days for public comment. No public comments were received. The purpose of this notice is to allow an additional 30 days for public comment.

DATES: Comments regarding this information collection are best assured of having their full effect if received by December 19, 2016.

ADDRESSES: Written comments and/or suggestions regarding the item(s) contained in this notice, especially regarding the estimated public burden and associated response time, should be directed to the: Office of Management and Budget, Office of Regulatory Affairs, *OIRA_submission@omb.eop.gov* or by fax to 202–395–6974, Attention: Desk Officer for NIH.

FOR FURTHER INFORMATION CONTACT: To request more information on the proposed project or to obtain a copy of the data collection plans and instruments, contact: Dr. Alyson Ross, Nurse Researcher, Department of Nursing Research and Translational Science, NIH Clinical Center, Building 10, Room 2B07, MSC–1151, Bethesda, Maryland, 20892 or call non-toll-free number (301) 451–8338 or Email your request, including your address to: *Alyson.ross@nih.gov.* Formal requests for additional plans and instruments must be requested in writing.

SUPPLEMENTARY INFORMATION: The NIH Clinical Center, National Institutes of Health, may not conduct or sponsor, and the respondent is not required to respond to, an information collection that has been extended, revised, or implemented on or after October 1, 1995, unless it displays a currently valid OMB control number.

In compliance with Section 3507(a)(1)(D) of the Paperwork Reduction Act of 1995, the National Institutes of Health (NIH) has submitted to the Office of Management and Budget (OMB) a request for review and approval of the information collection listed below.

Proposed Collection: A National Survey of Nurse Coaches, 0925–NEW, National Institutes of Health Clinical Center (NIHCC), National Institutes of Health (NIH).

Need and Use of Information Collection: The purpose of this survey is to describe the role of Certified Nurse Coaches in order to gain insight into their clinical practice including: The settings in which they work, the types of clients/health conditions they see, the types of client records maintained and outcomes followed, as well as the personal benefits experienced by nurse coaches as a result of becoming a nurse coach. It provides information regarding two areas of interest to the Department of Nursing Research and Translational Science: The collection of patient-reported outcomes in novel clinical practice areas and the physical and psychosocial benefits of an intervention in nurses, a professional caregiver population. This study will provide preliminary data and guidance in: (1) Developing recommendations for collecting outcomes to longitudinally assess the effectiveness nurse coaching, and (2) developing an intervention to improve patient care and patient satisfaction targeting the nursing staff at the NIH Clinical Center.

OMB approval is requested for 1 year. There are no costs to respondents other than their time. The total estimated annualized burden hours are 104.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondent	Number of respondents	Number of responses per respondent	Average time per response (in hours)	Total annual burden hours
Certified Nurse Coaches	250	1	25/60	104
Total	250	250	....	104

Dated: November 9, 2016.

Laura M. Lee,

Project Clearance Liaison, NIH Clinical Center, National Institutes of Health.

[FR Doc. 2016–27839 Filed 11–17–16; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

[Docket No. USCG–2016–0965]

Certificate of Alternative Compliance for the TUG MAXWELL PAUL MORAN

AGENCY: Coast Guard, DHS.

ACTION: Notice.

SUMMARY: The Coast Guard announces that the First District Prevention Department's Inspections and Investigations Division has issued a Certificate of Alternate Compliance (COAC) from the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS) for the TUG MAXWELL PAUL MORAN as required by statue. Due to its operations as a harbor assistance and escort vessel it cannot fully comply with the sidelight, stern light, and towing light provisions of the 72 COLREGS without interfering with its ability to make up and assist other vessels. This notice promotes the Coast Guard's maritime safety and stewardship missions.

ADDRESSES: Documents mentioned in the preamble are part of docket USCG–2016–0965. To view documents mentioned in this preamble as being available in the docket, go to the Federal eRulemaking Portal at *http://www.regulations.gov,* type the docket number in the ''SEARCH'' box and click ''SEARCH.'' Click on Open Docket Folder on the line associate with this notice.

FOR FURTHER INFORMATION CONTACT: For information or questions about this notice call or email Mr. Kevin Miller, First District Towing Vessel/Barge Safety Specialist, U.S. Coast Guard; telephone (617) 223–8272, email <*Kevin.L.Miller2@uscg.mil*>.

SUPPLEMENTARY INFORMATION:

The United States is signatory to the International Maritime Organization's International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS), as amended. The special construction or purpose of some vessels makes them unable to comply with the light, shape, and sound signal provisions of the 72 COLREGS. Under statutory law [1] and Coast Guard regulation,[2] a vessel may instead meet alternative requirements and the vessel's owner, builder, operator, or agent may apply for a COAC. For vessels of special construction, the cognizant Coast Guard District Office determines whether the vessel for which the COAC is sought complies as closely as possible with the 72 COLREGS, and decides whether to issue the COAC. Once issued, a COAC remains valid until information supplied in the COAC application or the COAC terms become inapplicable to the vessel. Under the governing statute [3] and regulation,[4] the Coast Guard must publish notice of this action.

The Prevention Department's Inspection and Investigation Division, U.S. Coast Guard First District hereby finds and certifies that the TUG MAXWELL PAUL MORAN is a vessel of special construction or purpose, and that, with respect to the position of the

[1] 33 U.S.C. 1605(c).

[2] 33 CFR 81.3.

[3] 33 U.S.C. 1605(c).

[4] 33 CFR 81.18.

navigation and towing lights, it is not possible to comply fully with the requirements of the provisions enumerated in the 72 COLREGS, without interfering with the normal operation of the vessel. The Prevention Department's Inspection and Investigation Division, U.S. Coast Guard First District further finds and certifies that the sidelights (13′ 5.25″ from the vessel's side mounted on the pilot house) and stern/towing lights (3′ 5.75″ aft of frame 20 mounted on top of the pilot house) are in the closet possible compliance with the applicable provisions of the 72 COLREGS and that full compliance with the 72 COLREGS would not significantly enhance the safety of the vessel's operation.

This notice is issued under authority of 33 U.S.C. 1605(c) and 33 CFR 81.

Dated: November 3, 2016.

B.L. Black,

Captain, Chief, Prevention Department, First District, U.S. Coast Guard.

[FR Doc. 2016–27835 Filed 11–17–16; 8:45 am]

BILLING CODE 9110–04–P

DEPARTMENT OF HOMELAND SECURITY

Customs and Border Protection

[1651–0027]

Agency Information Collection Activities: Record of Vessel Foreign Repair or Equipment Purchase

AGENCY: U.S. Customs and Border Protection, Department of Homeland Security.

ACTION: 30-Day notice and request for comments; extension of an existing collection of information.

SUMMARY: U.S. Customs and Border Protection (CBP) of the Department of Homeland Security will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act: Record of Vessel Foreign Repair or Equipment Purchase (CBP Form 226). CBP is proposing that this information collection be extended with no change to the burden hours or to the information collected. This document is published to obtain comments from the public and affected agencies.

DATES: Written comments should be received on or before December 19, 2016 to be assured of consideration.

ADDRESSES: Interested persons are invited to submit written comments on this proposed information collection to the Office of Information and Regulatory Affairs, Office of Management and Budget. Comments should be addressed to the OMB Desk Officer for Customs and Border Protection, Department of Homeland Security, and sent via electronic mail to *oira_submission@omb.eop.gov* or faxed to (202) 395–5806.

FOR FURTHER INFORMATION CONTACT: Requests for additional information should be directed to Paperwork Reduction Act Officer, U.S. Customs and Border Protection, Regulations and Rulings, Office of Trade, 90 K Street NE., 10th Floor, Washington, DC 20229–1177, or via email (*CBP_PRA@cbp.dhs.gov*). Please note contact information provided here is solely for questions regarding this notice. Individuals seeking information about other CBP programs please contact the CBP National Customer Service Center at 877–227–5511, (TTY) 1–800–877–8339, or CBP Web site at *https://www.cbp.gov/*. For additional help: *https://help.cbp.gov/app/home/search/1*.

SUPPLEMENTARY INFORMATION: This proposed information collection was previously published in the **Federal Register** (81 FR 51459) on August 4, 2016, allowing for a 60-day comment period. This notice allows for an additional 30 days for public comments. This process is conducted in accordance with 5 CFR 1320.10. CBP invites the general public and other Federal agencies to comment on proposed and/or continuing information collections pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3507). The comments should address: (a) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimates of the burden of the collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; (d) ways to minimize the burden, including the use of automated collection techniques or the use of other forms of information technology; and (e) the annual costs to respondents or record keepers from the collection of information (total capital/startup costs and operations and maintenance costs). The comments that are submitted will be summarized and included in the CBP request for OMB approval. All comments will become a matter of public record. In this document, CBP is soliciting comments concerning the following information collection:

Title: Record of Vessel Foreign Repair or Equipment Purchase.

OMB Number: 1651–0027.

Form Number: CBP Form 226.

Abstract: 19 U.S.C. 1466(a) provides for a 50 percent *ad valorem* duty assessed on a vessel master or owner for any repairs, purchases, or expenses incurred in a foreign country by a commercial vessel registered in the United States. CBP Form 226, Record of Vessel Foreign Repair or Equipment Purchase, is used by the master or owner of a vessel to declare and file entry on equipment, repairs, parts, or materials purchased for the vessel in a foreign country. This information enables CBP to assess duties on these foreign repairs, parts, or materials. CBP Form 226 is provided for by 19 CFR 4.7 and 4.14 and is accessible at: *https://www.cbp.gov/document/forms/form-226-record-vessel-foreign-repair-or-equipment-purchase*.

Current Actions: This submission is being made to extend the expiration date with no change to the burden hours or to the information collected on Form 226.

Type of Review: Extension (without change).

Affected Public: Businesses.

Estimated Number of Respondents: 100.

Estimated Number of Responses per Respondent: 11.

Estimated Number of Total Annual Responses: 1,100.

Estimated Time per Response: 2 hours.

Estimated Total Annual Burden Hours: 2,200.

Dated: November 14, 2016.

Seth Renkema,

Branch Chief, Economic Impact Analysis Branch, U.S. Customs and Border Protection.

[FR Doc. 2016–27729 Filed 11–17–16; 8:45 am]

BILLING CODE 9111–14–P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR–5907–N–47]

Federal Property Suitable as Facilities To Assist the Homeless

AGENCY: Office of the Assistant Secretary for Community Planning and Development, HUD.

ACTION: Notice.

SUMMARY: This Notice identifies unutilized, underutilized, excess, and surplus Federal property reviewed by HUD for suitability for use to assist the homeless.

FOR FURTHER INFORMATION CONTACT: Juanita Perry, Department of Housing and Urban Development, 451 Seventh Street SW., Room 7266, Washington, DC

20410; telephone (202) 402–3970; TTY number for the hearing- and speech-impaired (202) 708–2565 (these telephone numbers are not toll-free), call the toll-free Title V information line at 800–927–7588 or send an email to *title5@hud.gov*.

SUPPLEMENTARY INFORMATION: In accordance with 24 CFR part 581 and section 501 of the Stewart B. McKinney Homeless Assistance Act (42 U.S.C. 11411), as amended, HUD is publishing this Notice to identify Federal buildings and other real property that HUD has reviewed for suitability for use to assist the homeless. The properties were reviewed using information provided to HUD by Federal landholding agencies regarding unutilized and underutilized buildings and real property controlled by such agencies or by GSA regarding its inventory of excess or surplus Federal property. This Notice is also published in order to comply with the December 12, 1988 Court Order in *National Coalition for the Homeless* v. *Veterans Administration,* No. 88–2503–OG (D.D.C.).

Properties reviewed are listed in this Notice according to the following categories: Suitable/available, suitable/unavailable, and suitable/to be excess, and unsuitable. The properties listed in the three suitable categories have been reviewed by the landholding agencies, and each agency has transmitted to HUD: (1) Its intention to make the property available for use to assist the homeless, (2) its intention to declare the property excess to the agency's needs, or (3) a statement of the reasons that the property cannot be declared excess or made available for use as facilities to assist the homeless.

Properties listed as suitable/available will be available exclusively for homeless use for a period of 60 days from the date of this Notice. Where property is described as for ''off-site use only'' recipients of the property will be required to relocate the building to their own site at their own expense. Homeless assistance providers interested in any such property should send a written expression of interest to HHS, addressed to: Ms. Theresa M. Ritta, Chief Real Property Branch, the Department of Health and Human Services, Room 12–07, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857, (301) -443–2265 (This is not a toll-free number.) HHS will mail to the interested provider an application packet, which will include instructions for completing the application. In order to maximize the opportunity to utilize a suitable property, providers should submit their written expressions of interest as soon as possible. For complete details concerning the processing of applications, the reader is encouraged to refer to the interim rule governing this program, 24 CFR part 581.

For properties listed as suitable/to be excess, that property may, if subsequently accepted as excess by GSA, be made available for use by the homeless in accordance with applicable law, subject to screening for other Federal use. At the appropriate time, HUD will publish the property in a Notice showing it as either suitable/available or suitable/unavailable.

For properties listed as suitable/unavailable, the landholding agency has decided that the property cannot be declared excess or made available for use to assist the homeless, and the property will not be available.

Properties listed as unsuitable will not be made available for any other purpose for 20 days from the date of this Notice. Homeless assistance providers interested in a review by HUD of the determination of unsuitability should call the toll free information line at 1–800–927–7588 or send an email to *title5@hud.gov* for detailed instructions, or write a letter to Ann Marie Oliva at the address listed at the beginning of this Notice. Included in the request for review should be the property address (including zip code), the date of publication in the **Federal Register**, the landholding agency, and the property number.

For more information regarding particular properties identified in this Notice (*e.g.,* acreage, floor plan, condition of property, existing sanitary facilities, exact street address), providers should contact the appropriate landholding agencies at the following address(es): AGRICULTURE: Ms. Debra Kerr, Department of Agriculture, OPPM, Property Management Division, Agriculture South Building, 300 7th Street SW., Washington, DC 20024, (202) 720–8873; COE: Ms. Brenda Johnson-Turner, HQUSACE/CEMP–CR, 441 G Street NW., Washington, DC 20314, (202) 761–7238; ENERGY: Mr. David Steinau, Department of Energy, Office of Asset Management (MA–50), 1000 Independence Ave. SW., Washington, DC 20585, (202) 287–1503; GSA: Mr. Flavio Peres, General Services Administration, Office of Real Property Utilization and Disposal, 1800 F Street NW., Room 7040, Washington, DC 20405, (202) 501–0084; NASA: Mr. William Brodt, National Aeronautics AND Space Administration, 300 E Street SW., Room 2P85, Washington, DC 20546, (202) 358–1117; NAVY: Ms. Nikki Hunt, Department of the Navy, Asset Management Division, Naval Facilities Engineering Command, Washington Navy Yard, 1330 Patterson Ave. SW., Suite 1000, Washington, DC 20374; (202) 685–9426 (These are not toll-free numbers).

Dated: November 10, 2016.

Brian P. Fitzmaurice,

Director, Division of Community Assistance, Office of Special Needs Assistance Programs.

TITLE V, FEDERAL SURPLUS PROPERTY PROGRAM FEDERAL REGISTER REPORT FOR 11/18/2016

Suitable/Available Properties

Building

Oklahoma

SWT-Skiatook Lake
Tall Chief Cove & Twin Points
HC 67 Box 135
Skiatook OK 74070
Landholding Agency: COE
Property Number: 31201640009
Status: Unutilized
Directions: TCAA13—160 sq. ft.; TPAA06—112 sq. ft.
Comments: Off-site removal only; no future agency need; gatehouse; deteriorated; repairs needed; contact COE for more info. on accessibility & a specific property listed above.

Suitable/Unavailable Properties

Building

Alabama

Former National Guard Support Facility
Intersection of 23rd & Industrial Dr.
Cullman AL 33055
Landholding Agency: GSA
Property Number: 54201620013
Status: Excess
GSA Number: 4–D–AL–0818–AA
Directions:
Disposal Agency: GSA; Landholding Agency: COE
Comments: 19,850 sq. ft.; storage/warehouse; 80% occupied; several roof leaks resulting in floor damage; contact GSA for more information.

Gadsden Federal Building and Courthouse
600 Broad Street
Gadsden AL 35901
Landholding Agency: GSA
Property Number: 54201620018
Status: Excess
GSA Number: 4–G–AL–0805–AA
Comments: 105+ yrs. old; 17,488 sq. ft.; office & courthouse; listed on the national historic register; access must be coordinated, contact GSA for more information.

Historic Hannah Houses
157 and 159 N Conception Street
Mobile AL 36603
Landholding Agency: GSA
Property Number: 54201620020
Status: Excess
GSA Number: 4–G–AL–0817AAA
Comments: 163+ yrs. old; 8,868 sq. ft.; office; residential; vacant 120+ mos.; rehabilitation work needed; contact GSA for more information.

Arizona

San Carlos Irrigation Project
BIA Old Main Office Bldg.
255 W. Roosevelt
Coolidge AZ 85128
Landholding Agency: GSA
Property Number: 54201440008
Status: Surplus
GSA Number: 9–I–AZ–1706–AA
Directions: Disposal Agency; GSA; Landholding Agency: Bureau of Indian Affairs.
Comments: 83+ yrs. old; 6,745 sq. ft.; 36mos. vacant; residential and commercial; brick structure; fair condition; asbestos & lead based paint; contact GSA for more information.

Arkansas

Former Eaker AFB Recreational
Property
630 Lansing Street
Blytheville AR 72315
Landholding Agency: GSA
Property Number: 54201620026
Status: Excess
GSA Number: 7–GR–AR–0582
Comments: 45+ yrs. old; 36,000 sq. ft.; recreational; building is in disrepair; accessible by appointment only; sits on 48.73 fee acres; contact GSA for more information.

California

Hawthorne Federal Building
15000 Aviation Blvd.,
Hawthorne CA 90250
Landholding Agency: GSA
Property Number: 54201620009
Status: Surplus
GSA Number: 9–G–CA–1695–AB
Directions: Built in 1971; listed on the National Register of Historic Places due to architecture significance; 168,874 sq. ft.; office; serious deficiencies—urgent seismic upgrades, outdated building systems, and environmental concerns
Comments: Contact GSA for more information.

Colorado

East Central Board of Cooperative Educational Services Property
47156 State Highway 71
Limon CO 80828
Landholding Agency: GSA
Property Number: 54201630007
Status: Surplus
GSA Number: 7–GR–CO–0640–2
Comments: 46+ yrs. old; 2,640 sq. ft.; alternative school; possible asbestos & lead-based paint; remediation needed; contact GSA for more information.

District of Columbia

49 L St. SE.
Washington DC 20003
Landholding Agency: GSA
Property Number: 54201520003
Status: Excess
GSA Number: DC–496–1
Comments: 32,013 sq. ft.; storage; 67+ mons. vacant; poor condition; roof leaks; extensive structural repairs needed; cracks in walls; contamination; est. repair cost $4,000,000; contact GSA for more info.

Cotton Annex
300 12th Street, SW.
Washington DC 20024
Landholding Agency: GSA
Property Number: 54201620003
Status: Excess
GSA Number: DC–0510–AB
Comments: 118,456 sq. ft., office/product testing facility sited of 1.42 acres; 108+ months vacant poor conditions PBCs; asbestos; lead; remediation needed; contact GSA for more information.

Illinois

(MED) Outer Marker (OM) Facility
297 Spring Lake Drive
Itasca IL 60143
Landholding Agency: GSA
Property Number: 54201540006
Status: Surplus
GSA Number: 1–U–IL–805
Directions: Land Holding Agency: FAA?
Disposal Agency: GSA
Comments: .441 acres; FAA tower site; contact GSA for more information.

Federal Bldg. & Courthouse
201 N. Vermillion St.
Danville IL 61832
Landholding Agency: GSA
Property Number: 54201610003
Status: Excess
GSA Number: 1–G–IL–810
Comments: 67,845 sq. ft.; office & courthouse; good condition; asbestos and LBPs identified; remediation needed; contact GSA for more information.

4 Buildings
202–220 S. State Street
Chicago IL 60604
Landholding Agency: GSA
Property Number: 54201620016
Status: Excess
GSA Number: 1–G–IL–0812–AA
Directions: Building 202 (68,200 sq. ft.); 208 (11,499 sq. ft.); 214 (7,200 sq. ft.); 220 (198,400 sq. ft.)
Comments: 96+ –128+ yrs. old; poor to very poor conditions; major repairs needed; sq. ft. above; office & commercial; 18+ –24+ mos. vacant; Contact GSA for more information.

Rockford USARC
1130 Arthur Ave.
Rockford IL 61101
Landholding Agency: GSA
Property Number: 54201630006
Status: Surplus
GSA Number: 1–D–IL–800
Directions:
Disposal Agency: GSA; Landholding Agency: Army; Unusual physical feature of property: only small portion flat, rest is heavily sloped as it abuts interstate hwy
Comments: 16,411 sq. ft.; office; 15+ months vacant; repairs needed; accessible by easement through neighboring company's parking lot; contact GSA for more details.

Iowa

Creston Memorial U.S.
Army Reserve Center
705 East Taylor Street
Creston IA 50801
Landholding Agency: GSA
Property Number: 54201620015
Status: Surplus
GSA Number: 7–D–IA–0520–AA
Directions: RPUID:629976; Disposal Agency: GSA; Landholding Agency: Corp of Engineers
Comments: 57+ yrs. old; 6,500 sq. ft.; training facility; 29+ mos. vacant; sits on 2.22 acres of land; contact GSA for more information.

Louisiana

3 Buildings & 12.9 Fee Acres
400 Edwards Ave./Harahan FSS Depot
Elmwood LA 70123
Landholding Agency: GSA
Property Number: 54201610009
Status: Surplus
GSA Number: 7–G–LA–0532–AA
Directions: Warehouse 201,964.79 sq. ft.; office/garage 5,034.67 sq. ft.; pump house 1,493.33 sq. ft.
Comments: 47+ yrs. old; warehouse storage; roof leaks; walls deteriorated; contact GSA for more information.

Baton Rouge Depot
2695 North Sherwood Forest Drive
Baton Rouge LA 70814
Landholding Agency: GSA
Property Number: 54201620025
Status: Surplus
GSA Number: 7–G–LA–0523–AH
Directions: Baton Rouge Depot building's (Building 74–20,000 sq. ft.; Building 28–20,000 sq. ft., Building 70–2,312 sq. ft.)
Comments: 67+ yrs. old; 42,312 total sq. ft.; warehouse, storage; 8+ mos. vacant; sits on 128.50 acres of land; contact GSA for more information.

Maine

Former Radio Communication
Link Repeater
78 Libby Hill Rd.
Gardiner ME 04345
Landholding Agency: GSA
Property Number: 54201630003
Status: Excess
GSA Number: 1–U–ME–0699–AA
Directions:
Landholding Agency: Transportation; Disposal Agency: GSA
Comments: 381 sq. ft.; 40+ months vacant; sits on 2.05 +/− acres; contact GSA Real Property Utilization & Disposal for access at 617–565–5072.

2 Buildings
3 Customs Street
Calais ME 04619
Landholding Agency: GSA
Property Number: 54201630009
Status: Unutilized
GSA Number: ME–0698–AC
Comments: off-site removal only; 15+ yrs. old; 3,338 sq. ft.; difficult to relocate; storage & vehicle maintenance; 4+ mos. vacant; contact GSA for more information.

Michigan

Natl Weather Svc Ofc
214 West 14th Ave.
Sault Ste. Marie MI
Landholding Agency: GSA
Property Number: 54200120010
Status: Excess
GSA Number: 1–C–MI–802
Comments: 2230 sq. ft., presence of asbestos, most recent use—office.

Former Newport Nike Missile
Site D–58
800 East Newport Road

Newport MI 48166
Landholding Agency: GSA
Property Number: 54201530010
Status: Excess
GSA Number: 1–D–MI–0536
Directions:
Disposal Agency: GSA?
Landholding Agency: COE
Comments: 70+ yrs. old; 3 buildings totaling 11,447 sq. ft.; sits on 36.35 acres; industrial; training site; extremely poor/hazardous condition; remediation required; contact GSA for more information.

Minnesota

FM Repeater Station Install. #3
Sec. 24, T. 105N, R 5W
Dresbach MN
Landholding Agency: GSA
Property Number: 54201540004
Status: Excess
GSA Number: 1–D–MN–598
Directions:
Land Holding Agency: COE?
Disposal Agency: GSA
Comments: 50+ yrs. old; 80 sq. ft.; storage; average condition; contact GSA for more information.

Henry H. Sibley USARC
600 N. Brown Avenue
Winthrop MN 55396
Landholding Agency: GSA
Property Number: 54201620002
Status: Excess
GSA Number: 1–D–MN–0601–AA
Directions:
Landholding Agency. US Army Reserve, Disposed Agency GSA
Comments: 3.67-acre parcel of land with a 4.316 sq. ft. admin. Building & 1,170 Sq. ft. maintenance building; contact GSA for more information.

Missouri

3 Buildings
90, 91 & 92 Grant Avenue
St. Louis MO 63125
Landholding Agency: GSA
Property Number: 54201610011
Status: Surplus
GSA Number: 7–D–MO–0421–6
Directions: Former St. Louis Air Force Station Family Housing Annex?
Disposal Agency: GSA; Landholding Agency: AF
Comments: 77+ yrs. old; 19,350 sq. ft.; 15+ yrs. vacant; residential; buildings in state of disrepair; listed on Nat'l Register of Historic Places; contact GSA for more information.

U.S. Army Reserve Center #2
4100 Goodfellow Blvd.
St. Louis MO 63120
Landholding Agency: GSA
Property Number: 54201630008
Status: Surplus
GSA Number: 7–D–MO–0857–AA
Directions:
Disposal Agency: GSA, Landholding Agency: COE
Comments: 45+ yrs. old; 32,368 sq. ft.; office/classroom; 24+ mos. vacant; leaky roof; possible mold & asbestos; prior approval needed to gain access; contact GSA for more information.

Nevada

Alan Bible Federal Bldg.
600 S. Las Vegas Blvd.
Las Vegas NV 89101
Landholding Agency: GSA
Property Number: 54201210009
Status: Surplus
GSA Number: 9–G–NV–565
Directions: Building does not meet GSA's life/safety performance objective
Comments: 81,247 sq. ft. suited on 0.55 acres; extensive structural issues; major repairs needed; Federal Office Bldg.; 25–30% occupied until Dec. 2016; contact GSA for more info.

2 Buildings
Military Circle
Tonopah NV
Landholding Agency: GSA
Property Number: 54201240012
Status: Excess
GSA Number: 9–I–NV–514–AK
Directions: Bldg. 102: 2,508 sf.; bldg. 103: 2,880 sf.
Comments: total sf. for both bldgs. 5,388; Admin.; vacant since 1998; sits on 0.747 acres; fair conditions; lead/asbestos present.

Boulder City Airport
Hangar TW 4–1
1201 Airport Rd.,
Boulder City NV 89005
Landholding Agency: GSA
Property Number: 54201620014
Status: Surplus
GSA Number: 9–I–NV–0575–AA
Directions:
Disposal Agency: GSA; Landholding Agency: Interior
Comments: off-site removal only; 27+ yrs. old; 1,600 sq. ft.; storage; 16+ mos. vacant; fair condition; no future agency need; contact GSA for more information.

New Jersey

Portion of former Sievers-Sandberg US Army Reserves Center (Camp Pedric)
Artillery Ave at Garrison St.
Oldmans NJ 08067
Landholding Agency: GSA
Property Number: 54201320003
Status: Surplus
GSA Number: 1–D–NJ–0662–AB
Directions: On the north side of Rte. 130, between Perkintown Road (Rte 644) and Pennsgove-Pedricktown Rd (Rte 642)
Comments: #171; mess hall bldg. #173; 14,282 total sf.; fair/poor conditions; asbestos/lead-based paint; potential legal constraints in accessing property; Contact GSA for more info.

Portion of Former Sievers-Sandberg US Army Reserves Center- Tract 1
NW Side of Artillery Ave. at Rte. 130
Oldmans NJ 08067
Landholding Agency: GSA
Property Number: 54201320015
Status: Excess
GSA Number: 1–D–NJ–0662–AA
Directions: Previously reported under 54200740005 as suitable/available; 16 bldgs. usage varies: barracks/med./warehouses/garages; property is being parcelized.
Comments: 87,011 sf.; 10+ yrs. vacant fair/poor conditions; property may be landlocked; transferee may need to request access from Oldmans Township planning & zoning comm.; contact GSA for more info.

New York

Portion of GSA Binghamton ''Hillcrest'' Depot—Tract 1
1151 Hoyt Ave.
Fenton NY 13901
Landholding Agency: GSA
Property Number: 54201320017
Status: Surplus
GSA Number: 1–G–NY0760–AC
Directions: Previously reported on March 24, 2006 under 54200610016; this property includes 40 acres of land w/6 structures; property is being parcelized
Comments: warehouses range from approx. 16,347 sf.-172,830 sf.; admin. bldg. approx. 5,700 sf; guard house & butler bldg. sf. is unknown; 10 vacant; fair conditions; bldgs. locked; entry by appt. w/GSA.

A Scotia Depot
One Amsterdam Road
Scotia NY 12302
Landholding Agency: GSA
Property Number: 54201420003
Status: Surplus
GSA Number: NY–0554–4
Directions: Previously reported in 2006 but has been subdivided into smaller parcel.
Comments: 325,000 sq. ft.; storage; 120+ months vacant; poor conditions; holes in roof; contamination; access easement, contact GSA for more information.

Michael J. Dillon
U.S. Memorial Courthouse
68 Court Street
Buffalo NY 14202
Landholding Agency: GSA
Property Number: 54201540010
Status: Excess
GSA Number: NY–0993–AA
Comments: 180950 gross sq. ft.; sits on 0.75 acres; 48+ months vacant; asbestos/LBP maybe present; eligible for Nat'l Register; subject to Historic Preserv. covenants; contact GSA for more info.

North Carolina

Bryson City Federal Building and Courthouse
50 Main Street
Bryson City NC 28713
Landholding Agency: GSA
Property Number: 54201620019
Status: Excess
GSA Number: 4–G–NC–0838–AA
Comments: 54+ yrs. old; 34,156 sq. ft.; office & courthouse; access must be coordinated; lease expires less than 6 mos.; sits on 1.3 acres of land; contact GSA for more information.

Ohio

N. Appalachian Experimental Watershed Research Ctr.
28850 State Rte. 621
Coshocton OH 43824
Landholding Agency: GSA
Property Number: 54201420006
Status: Excess
GSA Number: 1–A–OH–849
Directions:
Landholding Agency: Agriculture; Disposal Agency: GSA

Comments: 70,539 total sq. ft. for two bldgs.; storage/office; fair to poor conditions; lead-based paint; asbestos; PCBs; mold; remediation required; contact GSA for more information.

Oregon

FAA Non Directional Beacon
(NDB) sites on 0.92 acres
93924 Pitney Lane., Sec 6, T 16S R4W, W.M.
Junction City OR 97448
Landholding Agency: GSA
Property Number: 54201540009
Status: Unutilized
GSA Number: 9–OR–0806
Directions:
Disposal Agency: GSA; Landholding Agency: FAA?
Tax Lot number 16040600; Lane County zoning is a 5 AC min. for residential (RR5)
Comments: 25+ yrs. old; 50 sq. ft.; storage; 24+ mos. vacant; poor condition; 0.92 acres of land; contact GSA for more information.

12 Buildings
580 Fish Lake Road
Butte Falls OR 97522
Landholding Agency: GSA
Property Number: 54201620004
Status: Excess
GSA Number: 9–I–OR–0787AA
Directions: Buildings 15111–1,800 sq. ft.; 15039–192; 15114–1,222; 15112–1,416; 15029–240; 15014–6,750; 15034–2,700; 15036–396; 15037–400; 15028–150; 15033–880; 15054–unknown; 15032–unknown
Comments: 63+ –85+ yrs. old; historic buildings; fish hatchery w/residences; 60+ mos. vacate; contact GSA for more information.

South Carolina

Former US Vegetable Lab
2875 Savannah Hwy
Charleston SC 29414
Landholding Agency: GSA
Property Number: 54201310001
Status: Excess
GSA Number: 4–A–SC–0609AA
Directions: headhouse w/3 greenhouses, storage bins
Comments: 6,400 sf.; lab; 11 yrs. vacant; w/in 100 yr. floodplain/floodway; however, is contained; asbestos & lead based paint.

Texas

Building 55=620240B055
Texas A&M Bldg. #7042
RPUID: 03.54361
Bryan TX 77805
Landholding Agency: Agriculture
Property Number: 15201640005
Status: Unutilized
Comments: 3,000 sq. ft.; aircraft storage; reasonable conditions; 29+ yrs. old; 100% occupied; expiration: 08/30/2017; contact Agriculture for more details.

Building 54=620240B054
Texas A&M Bldg. #7041
RPUID: 03.54360
Bryan TX 77805
Landholding Agency: Agriculture
Property Number: 15201640006
Status: Unutilized
Comments: 3,000 sq. ft.; reasonable conditions; wind tunnel studies; 29+ yrs. old; 100% occupied; expiration 08/30/2017; contact Agriculture for more details.

Building 53=620240B053
Texas A&M Bldg. #7044
RPUID: 03.54359
Bryan TX 77805
Landholding Agency: Agriculture
Property Number: 15201640007
Status: Unutilized
Comments: 3,000 sq. ft.; reasonable conditions; storage of aircraft; 29+ yrs.-old; 100% occupied; expiration: 08/30/2017; contact Agriculture for more details.

Building 52=620240B052
Texas A&M Bldg. #7043
RPUID: 03.54358
Bryan TX 77805
Landholding Agency: Agriculture
Property Number: 15201640008
Status: Unutilized
Comments: 3,000 sq. ft.; reasonable conditions; storage of aircraft; 29+ yrs. old; 100% occupied; expiration: 08/30/2017; contact Agriculture for more details.

Building 51=620240B051
Texas A&M Bldg. #7045
RPUID: 03.54357
Bryan TX 77805
Landholding Agency: Agriculture
Property Number: 15201640009
Status: Unutilized
Comments: 5,000 sq. ft.; reasonable conditions; machine shop; 42+ yrs. old; 100% occupied; expiration: 08/30/2017; contact Agriculture for more details.

Building 50=620240B050
Texas A&M Bldg. #7040
RPUID: 03.54356
Bryan TX 77845
Landholding Agency: Agriculture
Property Number: 15201640010
Status: Unutilized
Comments: 1,456 sq. ft.; reasonable conditions; office space; 30+ yrs. old; 100% occupied; expiration: 08/30/2017; contact Agriculture for more details.

Austin U.S. Courthouse
200 W. 8th Street
Austin TX 78701
Landholding Agency: GSA
Property Number: 54201620010
Status: Excess
GSA Number: 7–G–TX–1170–AA
Comments: 63,264 sq. ft.; sits on 0.81 fee acres; on National Register of Historic Places; contact GSA for more information.

Washington

USARC Moses Lake
Arnold Dr., at Newell St.,
Building 4306
Moses Lake WA 98837
Landholding Agency: GSA
Property Number: 54201610010
Status: Excess
GSA Number: 9–I–WA–1141
Directions:
Sits on 2.86 acres?
Direction: Disposal Agency GSA; Landholding Agency: Nat'l Park Service
Comments: 62+ yrs. old; 4,499 sq. ft.; boys & girls club; 4+ yrs. vacant; roof needs repair; contact GSA for more information.

Wenatchee Federal Building
301 Yakima Street
Wenatchee WA 98001
Landholding Agency: GSA
Property Number: 54201620012
Status: Excess
GSA Number: 9–G–WA–1286
Directions: The property is leased to governmental tenants and will continue to be leased 24 months from the date of sale with the option, to renew for a 5-year term.
Comments: 104,414 sf 4 story office building with full basement and mechanical penthouse constructed in 1973 on a 2.7-acre lot with 129 parking spaces; contact GSA for more information.

N Border Housing at the Laurie LOPE
27107 Highway 395 North
Laurier WA 99146
Landholding Agency: GSA
Property Number: 54201620022
Status: Excess
GSA Number: 9–G–WA–1297–AA
Comments: off-site removal only; 80+ yrs. old; 1,970 sq. ft.; due to size/+yrs. relocation extremely difficult; storage; 144+ mos. vacant; contacts GSA for more information.

South Border Housing at the Laurier LOPE
27107 Highway 395 North
Laurier WA 99146
Landholding Agency: GSA
Property Number: 54201620023
Status: Excess
GSA Number: 9–G–WA–1297–AB
Comments: off-site removal only; 80+ yrs. old; 2,200 sq. ft.; due to size/+yrs. relocation extremely difficult storage; 144+ mos. vacant; contact GSA for more information.

USMC Reserve Center
1702 Tahoma Ave.,
Yakima WA 98902
Landholding Agency: GSA
Property Number: 54201630004
Status: Excess
GSA Number: 9–D–WA–1278AA
Directions:
Landholding Agency: USMC; Disposal Agency: GSA
Comments: 4 Buildings & 1 Structure ranging from 270 to 20,000 sq. ft.; 48+ months vacant; sits on 4.64 acres; contact GSA for more information.

West Virginia

Naval Information Operations Center
133 Hedrick Drive
Sugar Grove WV 26815
Landholding Agency: GSA
Property Number: 54201430015
Status: Excess
GSA Number: 4–N–WV–0560
Directions:
Land holding agency—Navy; Disposal Agency GSA
Comments: 118 Buildings; 445,134 sq. ft.; Navy base; until 09/15 military checkpoint; wetlands; contact GSA for more info.

Wisconsin

FM Repeater Station Install. #3
Sec. 36, T. 25N, R 13W
Bay City WI
Landholding Agency: GSA
Property Number: 54201540002
Status: Excess
GSA Number: 1–D–WI–621
Directions:
Land Holding Agency: COE; Disposal Agency: GSA

Comments: 50+ yrs. old; 80 sq. ft.; storage; average condition; contact GSA for more information.

FM Repeater Station Install. #3
Sec. 26, T. 9N, R 6W
Lynxville WI 54626
Landholding Agency: GSA
Property Number: 54201540003
Status: Excess
GSA Number: 1–D–WI–622
Directions:
Land Holding Agency: COE; Disposal Agency: GSA
Comments: CORRECTION from June 24 FR: Property is suitable and unavailable; reason: Advertised for sale; 50+ yrs. old; 80 sq. ft.; storage; average condition; contact GSA for more information.

Social Security Office Bldg.
606 N. 9th Street
Sheboygan WI
Landholding Agency: GSA
Property Number: 54201540012
Status: Excess
GSA Number: 1–W–623–AA
Directions: WI0098ZZ
Comments: 37+yrs. old; 4,566 sq. ft.; office building; contact GSA for more information.

William J. Huempfner USARC
2426 Prairie Avenue
Beloit WI 54656
Landholding Agency: GSA
Property Number: 54201620028
Status: Surplus
GSA Number: I–D–WI–612
Directions:
Landholding Agency: Army; Disposal Agency: GSA
Comments: 54+ yrs. old; 4,316 sq. ft.; office; can only access through neighboring company parking lot; sits on 3.56 acres of land; contact GSA for more information.

Land

California

Delano Transmitting Station
1105 Melcher Rd.
Delano CA 93215
Landholding Agency: GSA
Property Number: 54201330005
Status: Excess
GSA Number: 9–X–CA–1671
Directions:
Landholding Agency: Broadcasting Board of Governors Disposal Agency: GSA
Comments: 800 acres; mostly land and some blogs.; unavailable due to Federal interest; transmitting station; vacant since 2007; access can be gain by appt. only; contact GSA for more info.

FAA Sacramento Middle Maker Site
1354 Palomar Circle
Sacramento CA 95831
Landholding Agency: GSA
Property Number: 54201530007
Status: Surplus
GSA Number: 9–U–CA–1707–AA
Directions:
Disposal Agency: GSA; Landholding Agency: FAA
Comments: 0.29 Acres; contact GSA for more information.

Florida

Former Outer Maker Site
105th Ave. North
Royal Palm Beach FL 33411
Landholding Agency: GSA
Property Number: 54201610001
Status: Surplus
GSA Number: 4–U–FL_1332AA
Directions:
Landholding Agency: FAA; Disposal Agency: GSA
Comments: 0.92 acres; contact GSA for more information.

Former Radio Communication Receiver Site
SW Kanner Hwy
Martin FL 34956
Landholding Agency: GSA
Property Number: 54201610002
Status: Surplus
GSA Number: 4–U–FL–1321
Directions:
Landholding Agency: FAA; Disposal Agency: GSA
Comments: 1.06 acres; contact GSA for more information.

Former Locator Outer Marker (LOM/OM)
17364 Dumont Drive
Fort Myers FL 33967
Landholding Agency: GSA
Property Number: 54201630002
Status: Excess
GSA Number: 4–U–FL–1334AA
Comments: 0.50 acres of land; partially gravel; outer marker locator.

Iowa

Exira Repeater Site
41.590672, –94.954396
Exira IA 50076
Landholding Agency: GSA
Property Number: 54201630005
Status: Surplus
GSA Number: 7–D–IA–0521–AA
Directions:
Disposal Agency: GSA, Land Holding Agency: DOE
Comments: 5.06 acres of land; contact GSA for more information.

Nevada

Ditchrider South East Street
207 South East St.
Fallon NV 89406
Landholding Agency: GSA
Property Number: 54201440007
Status: Surplus
GSA Number: 9–I–NV–0572–AA
Directions:
Disposal Agency; GSA; Land Holding Agency; Interior.
Comments: 0.32 acres; formerly used us contractor/employee housing structure demolished on land 02/2011. Contact GSA for more information.

USGS Elko Parcel
1701 North 5th Street
Elko NV 89801
Landholding Agency: GSA
Property Number: 54201540013
Status: Surplus
GSA Number: 9–I–NV–0465–AE
Directions: previous ''H Facility''
Comments: 0.90 acres; contact GSA for more information.

Oklahoma

Caney Creek
33.925152–96.690155
Unincorporated OK 73152
Landholding Agency: GSA
Property Number: 54201610005
Status: Excess
GSA Number: 7–G–OK–0852–AA
Comments: 9.82 acres; endangered species in area not specially on land; contact GSA for more information.

Oregon

Crowfoot Road Egg Taking Station
Crowfoot Road
Jackson OR 97522
Landholding Agency: GSA
Property Number: 54201620001
Status: Excess
GSA Number: 9–I–OR–0787 AB
Directions:
Landholding Agency; FWS; Disposal Agency; GSA
Comments: 10.23 acres; contact GSA for more information.

South Carolina

Marine Corps Reserve Training Center
2517 Vector Ave.
Goose Creek SC 29406
Landholding Agency: GSA
Property Number: 54201410009
Status: Excess
GSA Number: 4–N–SC–0630–AA
Directions:
Landholding Agency: Navy; Disposal Agency: GSA
Comments: 5.59 acres; contact GSA for more information.

Formerly the FAA's D7 Remote Communications Link Receiver Fac.
Latitude N. 33.418194 & Longitude W. 80.13738
Eadytown SC
Landholding Agency: GSA
Property Number: 54201540011
Status: Surplus
GSA Number: 4–U–SC–0633–AA
Directions:
Landholding Agency: Transportation; Disposal Agency: GSA
Comments: 5.5 acres; Remote Communications Link Receiver Facility; contact GSA for more information.

Tennessee

Parcel ED–3 E and W (168.30 +/− acres)
South Side of Oak Ridge Turnpike
Oak Ridge TN 37763
Landholding Agency: GSA
Property Number: 54201520015
Status: Surplus
GSA Number: 4–B–TN–0664–AG
Directions:
GSA—Disposal Agency; Energy—Landholding Agency; (State Rte. 58)
Comments: accessibility/usage subjected to Federal, state, & local laws including but not limited to historic preservation, floodplains, wetlands, endangered species, Nat'l EPA; contact GSA for more information.

Parcels ED–13, 3A, 16
Portions of D–8 & ED–4
N. Side of Oak Ridge Turnpike (State Rte. 58)
Oak Ridge TN 37763
Landholding Agency: GSA
Property Number: 54201530001
Status: Surplus
GSA Number: 4–B–TN–0664–AF
Directions:

Energy: Landholding Agency; GSA: Disposal Agency
Comments: 168 +/− acres; legal constraints: ingress/egress utility easement; groundwater constraints; contact GSA for more information.

Self-Sufficiency Parcel 13
Anderson County
Oak Ridge TN 37830
Landholding Agency: GSA
Property Number: 54201620005
Status: Surplus
GSA Number: 4–B–TN–0664–AH
Directions:
Landholding Agency: Energy; Disposal Agency: GSA
Comments: 20 acres; 2 sink-holes with eroded wet weather conveyance draining to them; contact GSA for more information.

Parcel G, 20.96+ acres
Bethel Valley Road
Oak Ridge TN 37830
Landholding Agency: GSA
Property Number: 54201630001
Status: Surplus
GSA Number: 4–B–TN–0664–AE
Directions:
Landholding Agency: Energy; Disposal Agency: GSA; The parcel is located off Bethel Valley Road southeast of the intersection of Bethel Valley and Scarboro Roads. Vacant land w/mixed grasses, herbaceous plants, large shrubs, & scattered trees; groundwater not permitted for use for agricultural, drinking, or industrial purposes; must connect to a regulatory approved water system to use property; creek flows through site with floodplain & wetlands; sanitary water sewer easements on property; Energy will retain an ingress/egress easement on the property; man-made ponds formerly used to treat swine waste.
Comments: Contact GSA for more details regarding property.

Washington

Paine Field
Everett Facility Section 27
Everett WA
Landholding Agency: GSA
Property Number: 54201610012
Status: Excess
GSA Number: 9–U–WA–1284
Directions:
Landholding Agency: FAA; disposal Agency: GSA
Comments: 0.54 acres; used as Outer Maker facility for aircraft approaches; contact GSA for more information

Wisconsin

TACAN Annex
6400 Block of Lake Rd.
Windsor WI 53598
Landholding Agency: GSA
Property Number: 54201320005
Status: Excess
GSA Number: 1–D–WI–611
Comments: 1 acre; moderate conditions

Unsuitable Properties

Building

Florida

248—Banana River Pump Station
M7–1098; NASA CswyE
KSC FL
Landholding Agency: NASA
Property Number: 71201640001
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

253—Hypergol Module
Processing, South; M7–1211
G Ave. SE
KSC FL 32899
Landholding Agency: NASA
Property Number: 71201640002
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

1062—Generator Enclosure
M6–0342D; 2nd St. SE
KSC FL
Landholding Agency: NASA
Property Number: 71201640003
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

914—Loading Dock
M6–0486A; 3rd St. SE
KSC FL
Landholding Agency: NASA
Property Number: 71201640004
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

864—Hazardous Waste Staging
Area; M6–0342B; 2nd St. SE
KSC FL
Landholding Agency: NASA
Property Number: 71201640005
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

978—GN2 Storage Area
M6–0342C; 2nd St. SE
KSC FL
Landholding Agency: NASA
Property Number: 71201640006
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

286—Truck Weight Scale
77605; Samuel C. Phillips Pkwy
cape Canaveral AFS FL 32925
Landholding Agency: NASA
Property Number: 71201640007
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

288—Scales Equipment Building
77630; Samuel C. Phillips Pkwy
CCAFS FL 32925
Landholding Agency: NASA
Property Number: 71201640008
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

1191—Compressor Room
K6–1996T; Contractors Rd.
KSC FL
Landholding Agency: NASA
Property Number: 71201640009
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

283—septic Tank
73003; Samuel C. Phillips Pkwy
KSC FL 32925
Landholding Agency: NASA
Property Number: 71201640010
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

285—Neutralization Pit
77603; Samuel C. Phillips Pkwy
CCAFS FL 32925
Landholding Agency: NASA
Property Number: 71201640011
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

266—Tank Rainwater Sump
1042–I; Samuel C. Phillips Pkwy
CCAFS FL 32925
Landholding Agency: NASA
Property Number: 71201640012
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

22–JP–8 Pump House/
Transfer Slips; 1044; Samuel C. Phillips Pkwy
CCAFS FL 32925
Landholding Agency: NASA
Property Number: 71201640013
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

23—Hydrocarbon Equipment Stagi
CCAFS; 1046; Samuel C. Phillips Pkwy
CCAFS FL 32925
Landholding Agency: NASA
Property Number: 71201640014
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

265—Tank, rainwater Sump
1040–1; Samuel C. Phillips Pkwy
CCAFS FL 32925
Landholding Agency: NASA
Property Number: 71201640015
Status: Unutilized
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

2 Buildings
Naval Station Mayport
Mayport FL 32228
Landholding Agency: Navy
Property Number: 77201640005
Status: Excess
Directions: 46 (NFA100001475183) and 373 (NFA10000995738)
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

Idaho

2 Buildings
Lucky Peak Dam & Lake 9723 E Hwy 21
Boise ID 83716
Landholding Agency: COE
Property Number: 31201640010
Status: Unutilized
Directions: 2 Brick & Morter Vault Toilets
Comments: property is inaccessible because it is located on a (small) off-shore island; only accessible by boat.
Reasons: Isolated area

Missouri

Table Rock Lake Project
Cape Fair Recreation Area Pit Toilet
1092 Shadrack Rd.
Cape Fair MO 65624
Landholding Agency: COE
Property Number: 31201640007
Status: Underutilized
Comments: documented deficiencies: cracks in foundation; clear threat to physical safety.
Reasons: Extensive deterioration

Table Rock Lake Project
Aunts Creek Recreation Area Pit Toilet
2837 State Hwy OO
Reeds Springs MO 65737
Landholding Agency: COE
Property Number: 31201640008
Status: Underutilized
Comments: documented deficiencies: cracks in foundation; clear threat to physical safety.
Reasons: Extensive deterioration

MCRC Bakerfield
4201 Chester Ave.
Bakersfield MO 93301
Landholding Agency: Navy
Property Number: 77201640004
Status: Excess
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

Nevada

8 Buildings
Sandia National Laboratories
Tonopah NV 89049
Landholding Agency: Energy
Property Number: 41201640003
Status: Excess
Directions: 02–00, 02–01, 09–18, 12–00, 21–00, 22–00, 23–20, 19–00
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

4 Buildings
Nevada National Security Site
Mercury NV 89093
Landholding Agency: Energy
Property Number: 41201640004
Status: Unutilized
Directions: 300578 (25–3901) 408287 (25–3113A), 408081 (25–3220), 301839 (25–3900)
Comments: public access denied and no alternative method to gain access without compromising national security, contaminants; chemical and radiological are located on property.
Reasons: Secured Area Contamination

6 Buildings
Nevada National Security Site, Area 25
Mercury NV 89093
Landholding Agency: Energy
Property Number: 41201640005
Status: Unutilized
Directions: 408312 (25–4314), 999343 (06–CP–160), 998679 (12–M), 998634 (09–300), 998638 (12–358), 998682 (12–830)
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

New York

Biosciences—Greenhouse at Bldg. 0463G
Brookhaven National Lab
Upton NY 11973
Landholding Agency: Energy
Property Number: 41201640002
Status: Excess
Comments: public access denied and no alternative method to gain access without compromising national security.
Reasons: Secured Area

4 Buildings
Gateway National Recreation Area
Queens NY 11697
Landholding Agency: Interior
Property Number: 61201640001
Status: Excess
Directions: 15, 16, 17, and 18
Comments: documented deficiencies: shell remains; one bldg. partially collapsed; all severely damaged by Hurricane Sandy; clear threat to physical safety.
Reasons: Extensive deterioration

Washington

D4 Mtn. Leona Radio Bldg. (57673010700)
Bldg. #2866 (07491 00)
Malo WA 99166
Landholding Agency: Agriculture
Property Number: 15201640011
Status: Excess
Directions: C584–FS2157 end of FS2157300, Top of Leona Mtn.
Comments: documented deficiencies: cracking fiberglass walls; structure falling apart; clear threat to physical safety.
Reasons: Extensive deterioration

D4 Togo Mtn. Com. Bldg.
(26205010450); Bldg. #2850 (07491 00)
Danville WA 99121
Landholding Agency: Agriculture
Property Number: 15201640012
Status: Excess
Directions: C595–FS9776 other FS roads-end FS6129360, Top of Togo Mtn.
Comments: documented deficiencies: cracking in fiberglass; cracks in foundation; clear threat to physical safety.
Reasons: Extensive deterioration

D4 Radio Bldg., Quartz Mtn. (1520.005691)
Bldg. #2839 (07491 00)
Republic WA 99166
Landholding Agency: Agriculture
Property Number: 15201640013
Status: Excess
Directions: WA20–C99–FS2000053—8 miles-FS2100500, Top of Quartz Mtn.
Comments: documented deficiencies: cracking fiberglass & patched bullet holes; structure is falling apart; clear threat to physical safety.
Reasons: Extensive deterioration

FR Doc. 2016–27561 Filed 11–17–16; 8:45 am]
BILLING CODE 4210–67–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–R4–ES–2016–N197; FXES11140400000–178–FF04E00000]

Incidental Take Permit Applications for Alabama Beach Mouse; Gulf Shores, Alabama

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of availability; request for comments.

SUMMARY: Under the Endangered Species Act, we, the U.S. Fish and Wildlife Service, announce the receipt and availability of three proposed low-effect habitat conservation plans and accompanying incidental take permit applications for take of Alabama beach mouse habitat incidental to construction in Orange Beach and Gulf Shores, Alabama. We invite public comments on these documents.

DATES: We must receive any written comments at our Alabama Field Office (see **ADDRESSES**) on or before December 19, 2016.

ADDRESSES: *Obtaining Documents:* Documents are available for public inspection by appointment during normal business hours at the Fish and Wildlife Service's Alabama Field Office, 1208–B Main Street, Daphne, AL 36526. Please submit comments by U.S. mail to the Fish and Wildlife Service's Alabama Field Office.

Submitting Comments: For information on how to submit comments, see Public Comments under **SUPPLEMENTARY INFORMATION**, below.

FOR FURTHER INFORMATION CONTACT: Mr. Bill Lynn, Wildlife Biologist, Alabama Field Office (see **ADDRESSES**); telephone: 251–441–5868.

SUPPLEMENTARY INFORMATION:

Introduction

We announce the availability of three proposed low-effect habitat conservation plans (HCPs), which analyze the take of the Alabama beach mouse (*Peromyscus polionotus ammobates*) (ABM) incidental to construction of one single-family home by Charles L. Jones on a 0.779-acre lot in Orange Beach, Alabama, and construction of two single-family homes by Duane A. Baker and Joe Colich on two 0.68-acre lots in Gulf Shores, Alabama. The applicants request incidental take permits (ITP) under section 10(a)(1)(B) of the Endangered Species Act (Act; 16 U.S.C. 1531 *et seq.*). If we approve these three ITPs, Charles L. Jones anticipates the taking of up to 0.11 acres of ABM habitat over a 50-year ITP, and Duane Baker and Joe Colich anticipate the taking of up to 0.10 acres on each lot of ABM habitat over a 50-year ITP.

Applicants' Proposals

Charles L. Jones

The applicant proposes to minimize and mitigate the take of up to 0.11 acres of ABM habitat at a lot off Highway 182 in Orange Beach, Alabama, by using standard ABM conservation measures at the proposed development and by donating an ''in-lieu'' fee to the Alabama Coastal Heritage Trust (ACHT) group (ACHT). The lot proposed for development currently is undeveloped, but developers will utilize an existing driveway to minimize impacts. The ''in-lieu'' fee will be donated to the ACHT group, which will use the fee to either manage, maintain, or acquire ABM habitat within the Gulf State Park critical habitat unit and/or immediately adjacent lands.

Baker-Colich

The applicants propose to minimize and mitigate the take of up to 0.20 acres of ABM habitat at two lots off Dacus Lane in Gulf Shores, Alabama, by using standard ABM conservation measures at the proposed development (such as minimizing construction footprint, restoration of native vegetation, and measures to minimize effects to ABM during occupancy and use of the development) and by donating a 0.14-acre lot in the proposed Gulf Highlands conservation area of the Fort Morgan Peninsula. The lots proposed for development are interior scrub lots that are part of a subdivided larger lot. The lot proposed for mitigation is within the proposed Gulf Highlands conservation area, contains high-quality interior scrub habitat, and will be donated to ACHT. ACHT will either place a conservation easement on the lot or eventually convey it as part of the future Gulf Highlands Conservation Area.

Our Preliminary Determination

We have made a preliminary determination that the applicants' projects, including the mitigation measures, will individually and cumulatively have a minor or negligible effect on the species covered in the HCPs. Therefore, our proposed issuance of the requested ITPs qualifies as a categorical exclusion under the National Environmental Policy Act (NEPA), as provided by Department of the Interior implementing regulations in part 46 of title 43 of the Code of Federal Regulations (516 DM 8.5C(1)).

We base our determination that issuance of each ITP qualifies as a low-effect action on the following three criteria: (1) Implementation of the project would result in minor or negligible effects on federally listed, proposed, and candidate species and their habitats; (2) implementation of the project would result in minor or negligible effects on other environmental values or resources; and (3) impacts of the plan, considered together with the impacts of other past, present, and reasonably foreseeable similarly situated projects, would not result, over time, in cumulative effects to environmental values or resources that would be considered significant. As more fully explained in our environmental action statement and associated Low-Effect Screening Form, the applicants' proposed projects qualify as ''low-effect'' projects. This preliminary determination may be revised based on our review of public comments that we receive in response to this notice.

Public Comments

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

If you wish to comment, you may submit comments by any one of several methods. Please reference TE11097C–0 (Charles L. Jones), or TE11183C–0 (Duane A. Baker) and TE11182C–0 (Joe Colich) in such comments. You may mail comments to the Fish and Wildlife Service's Alabama Field Office (see **ADDRESSES**). Alternately, you may email comments to: *william_lynn@fws.gov*. Please include your name and return address in your email message. If you do not receive a confirmation from us that we have received your email message, contact us directly at the telephone number listed under **FOR FURTHER INFORMATION CONTACT**. Finally, you may hand-deliver comments to the Service's Alabama Field Office (see **ADDRESSES**).

Covered Area

The area encompassed by the HCPs and applications is the 0.779-acre lot located at 22756 Perdido Beach Boulevard, in Orange Beach, Alabama and the two 0.68-acre lots located off Dacus Lane, in Gulf Shores, Alabama.

Next Steps

We will evaluate the ITP applications, including the HCPs and any comments we receive, to determine whether the applications meet the requirements of section 10(a)(1)(B) of the Act. We will also evaluate whether issuance of a section 10(a)(1)(B) ITP complies with section 7 of the Act by conducting an intra-Service section 7 consultation. We will use the results of this consultation, in combination with the above findings, in our final analysis to determine whether or not to issue the ITPs. If we determine that the requirements are met, we will issue the ITPs for the incidental take of ABM habitat.

Authority

We provide this notice under section 10 of the Act (16 U.S.C. 1531 *et seq.*) and NEPA regulations (40 CFR 1506.6).

Dated: November 14, 2016.

William J. Pearson,

Field Supervisor, Alabama Ecological Services Field Office.

[FR Doc. 2016–27766 Filed 11–17–16; 8:45 am]

BILLING CODE 4333–15–P

DEPARTMENT OF THE INTERIOR

Invasive Species Advisory Committee; Meeting

AGENCY: Office of the Secretary, Interior.

ACTION: Notice of public meetings of the Invasive Species Advisory Committee.

SUMMARY: Pursuant to the provisions of the Federal Advisory Committee Act, notice is hereby given of meetings of the Invasive Species Advisory Committee (ISAC). Comprised of 25 nonfederal invasive species experts and stakeholders from across the nation, the purpose of the Advisory Committee is to provide advice to the National Invasive Species Council, as authorized by Executive Order 13112, on a broad array of issues related to preventing the introduction of invasive species and providing for their eradication and

control. The Council is co-chaired by the Secretary of the Interior, the Secretary of Agriculture, and the Secretary of Commerce. The duty of the Council is to provide national leadership regarding invasive species issues.

Purpose of Meeting: To convene the full ISAC and to provide expert input and recommendations to NISC federal agencies and their partners on invasive species matters of national importance. While in session, ISAC will continue work on NISC priority initiatives through subcommittees (task teams) focused on: (a) Strengthening Federal/State coordination; (b) strengthening Federal/Tribal coordination; (c) identifying risks and opportunities for the application of advanced biotechnologies for the eradication or control of invasive species; (d) compiling case studies of invasive species that impact infrastructure; and, (e) compiling case studies of invasive species that impact wildlife health. Two additional task teams will be tentatively instituted to explore managed relocation policy and practice from an invasive species perspective, as well as the movement of watercraft. The meeting agenda is available on the NISC Web site at *http://www.invasivespecies.gov.* Supplemental reference materials will be posted on or about Tuesday, November 22, 2016.

DATES: Meeting of the Invasive Species Advisory Committee: Tuesday, December 6, 2016: 8:30 a.m. to 5:00 p.m.; Wednesday, December 7, 2016: 8:30 a.m. to 5:30 p.m.; Thursday, December 8, 2016; 8:00 a.m.–12:00 p.m.

ADDRESSES: Smithsonian Institution National Museum of the American Indian, 4th and Independence Avenue SW., Washington, DC 20560. The general session will be held in the Conference Center (4th Floor). **Note:** All meeting participants and interested members of the public must register their attendance online at *https://goo.gl/forms/K1kYHgeuqf15zAik2.* Attendees must pass through security screening upon entering the facility.

FOR FURTHER INFORMATION CONTACT: Kelsey Brantley, National Invasive Species Council Program Specialist and ISAC Coordinator, Phone: (202) 208–4122; Fax: (202) 208–4118, email: *Kelsey_Brantley@ios.doi.gov.*

Dated: November 14, 2016.

Jamie K. Reaser,

Executive Director, National Invasive Species Council (NISC) Secretariat.

[FR Doc. 2016–27704 Filed 11–17–16; 8:45 am]

BILLING CODE 4334–63–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLOR957000–L63100000–BJ0000–17XL1109AF: HAG 17–0034]

Filing of Plats of Survey: Oregon/Washington

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: The plats of survey of the following described lands are scheduled to be officially filed in the Bureau of Land Management, Oregon State Office, Portland, Oregon, 30 days from the date of this publication.

Willamette Meridian, Oregon

Tps. 23 & 24 S., R. 1 W., accepted October 14, 2016.

ADDRESSES: A copy of the plats may be obtained from the Public Room at the Bureau of Land Management, Oregon State Office, 1220 SW. 3rd Avenue, Portland, Oregon 97204, upon required payment.

FOR FURTHER INFORMATION CONTACT: Kyle Hensley, (503) 808–6124, Branch of Geographic Sciences, Bureau of Land Management, 1220 SW. 3rd Avenue, Portland, Oregon 97204. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 1–800–877–8339 to contact the above individual during normal business hours. The service is available 24 hours a day, 7 days a week, to leave a message or question with the above individual. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION: A person or party who wishes to protest against this survey must file a written notice with the Oregon State Director, Bureau of Land Management, stating that they wish to protest. A statement of reasons for a protest may be filed with the notice of protest and must be filed with the Oregon State Director within thirty days after the protest is filed. If a protest against the survey is received prior to the date of official filing, the filing will be stayed pending consideration of the protest. A plat will not be officially filed until the day after all protests have been dismissed or otherwise resolved. Before including your address, phone number, email address, or other personally identifying information in your comment, you should be aware that your entire comment—including your personally identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personally identifying information from public review, we cannot guarantee that we will be able to do so.

Mary J.M. Hartel,

Chief Cadastral Surveyor of Oregon/Washington.

[FR Doc. 2016–27763 Filed 11–17–16; 8:45 am]

BILLING CODE 4310–33–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLCA930000.L19200000.ET0000.XXX.LRORBX619600]

Notice of Proposed Withdrawal and Notice of Public Meeting; California

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: On behalf of the National Park Service (NPS) and subject to valid existing rights, the Secretary of the Interior proposes to withdraw approximately 22,462 acres of public lands for 20 years from all forms of entry, appropriation, or disposal under the public land laws; from location, entry, and patent under the United States mining laws; and from disposition under all laws pertaining to mineral and geothermal leasing, and mineral materials, and all amendments thereto and to transfer administrative jurisdiction over such lands from the Bureau of Land Management (BLM) to the NPS for administration as part of Joshua Tree National Park (JTNP). This notice temporarily segregates the lands for up to 2 years, gives the public an opportunity to comment on the proposed withdrawal application, and announces the date and time of a public meeting.

DATES: Comments must be received by February 16, 2017. A public meeting on the proposed withdrawal will be held on January 18, 2017 from 6:00 to 9:00 p.m. at UC Riverside Palm Desert, 75080 Frank Sinatra Drive, Palm Desert, California 92211.

ADDRESSES: Comments should be sent to the Superintendent, Joshua Tree National Park, 74485 National Park Drive, Twentynine Palms, California 92277.

FOR FURTHER INFORMATION CONTACT: David Smith, Superintendent, Joshua Tree National Park, 760–367–5502 or Doug Herrema, Field Manager, Bureau of Land Management, Palm Springs South Coast Field Office, 760–833–7100. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay

Service at 800–877–8339 to contact either of the above individuals. The Service is available 24 hours a day, 7-days a week, to leave a message or question with either of the above individuals. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION: The applicant is the NPS and its petition/application requests that the Secretary of the Interior: (i) Withdraw, subject to valid existing rights, the following public lands adjacent to JTNP from all forms of entry, appropriation, or disposal under the public land laws; from location, entry, and patent under the United States mining laws; and from disposition under all laws pertaining to mineral and geothermal leasing, and mineral materials, and all amendments thereto; and, (ii) transfer jurisdiction over such lands to the NPS for administration as part of JTNP.

All that land situated within the Eagle Mountain Area Segregation boundary, located in Townships 3 and 4 South, Ranges 13, 14, and 15 East, San Bernardino Meridian, Riverside County, California; said boundary more particularly described as follows:

Commencing at the corner of sections 16, 17, 20, and 21 in T. 3 S., R. 15 E., San Bernardino Meridian, on the Joshua Tree National Park Boundary;

Thence, westerly on the line between sections 17 and 20, coincident with said Park boundary, to the ¼ section corner of sections 17 and 20, said corner being the Point Of Beginning;

Thence, leaving said Park boundary, southerly on the north-south centerline of section 20, to the center ¼ section corner;

Thence, westerly on the east-west centerline of section 20, to the ¼ section corner of sections 19 and 20;

Thence, southerly on the line between sections 19 and 20, to the corner of sections 19, 20, 29 and 30;

Thence, westerly on the line between sections 19 and 30, to the ¼ section corner of sections 19 and 30;

Thence, southerly on the north-south centerline of section 30, to the center ¼ section corner;

Thence, westerly on the east-west centerline of section 30, to the center west 1/16 section corner;

Thence, southerly on the north-south centerline of the southwest ¼ of section 30, to the southwest 1/16 section corner;

Thence, westerly on the east-west centerline of the southwest ¼ of section 30, to the south 1/16 section corner of section 30 only, on the range line between Tp. 3 S., Rs. 14 and 15 E.;

Thence, southerly on said range line, to the corner of sections 30 and 31 only, Tp. 3 S., R. 15 E.;

Thence, along the following 19 courses as shown on the map recorded January 4, 1998 in Records of Survey, book 103, pages 76 thru 80, Riverside County, California:

1. North 89°56′01″ East on the line between sections 30 and 31, a distance of 1426.96 feet, to a ¾″ rebar with a 2″ aluminum cap stamped ''R.C.E. 30846'', at the west 1/16 section corner of sections 30 and 31;
2. South 0°50′38″ West on the north-south centerline of the northwest ¼ of section 31, a distance of 272.58 feet, to a ¾″ rebar with a 2″ aluminum cap stamped ''R.C.E. 30846'';
3. South 82°58′51″ West, a distance of 162.64 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T3S R15E AP8 S31 MWD 1991'';
4. South 50°34′58″ East, a distance of 206.07 feet, to a ¾″ rebar, with a 2″ aluminum cap, stamped ''R.C.E. 30846'', at the point of intersection with the north-south centerline of the northwest ¼ of section 31;
5. South 0°50′38″ West on the north-south centerline of the northwest ¼ of section 31, a distance of 906.11 feet, to a ¾″ rebar, with a 2″ aluminum cap, stamped ''R.C.E. 30846'', at the northwest 1/16 section corner;
6. North 89°52′22″ East on the east-west centerline of the northwest ¼ of section 31, a distance of 1112.67 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T3S R15E S31 MWD N–N 1991'';
7. South 50°35′17″ East, a distance of 501.65 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T3S R15E AP4 S31 MWD 1991'', being the beginning of a non-tangent curve concave easterly, having a radius of 825.0 feet, to which beginning of curve a radial line bears South 89°13′53″ West;
8. Southerly along said curve through a central angle of 3°58′07″, a distance of 57.14 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T3S R15E AP3 S31 MWD 1991'';
9. South 4°44′14″ East, a distance of 954.13 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T3S R15E S31 MWD C–C 1991'', at the point of intersection with the east-west centerline of section 31;
10. South 89°47′42″ West on the east-west centerline of section 31, a distance of 268.59 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T3S R15E C ¼ S31 1991'', at the center ¼ section corner;
11. Continuing South 89°47′42″ West on the east-west centerline of section 31, a distance of 666.27 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T3S R15E S31 CEW 1/64 1991'', at the center east west 1/64 section corner;
12. South 0°49′44″ West on the north-south centerline of the northeast ¼ of the southwest ¼ of section 31, a distance of 1329.96 feet, to a 2½″ diameter stainless steel post with a brass cap erroneously marked ''T3S R15E S31 CE SE 1/64 1991'', at the center east southwest 1/64 section corner;
13. North 89°45′56″ East on the east-west centerline of the southwest ¼ of section 31, a distance of 665.4 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T3S R15E S 1/16 C–C S31 1991'', at the center south 1/16 section corner;
14. North 89°44′23″ East on the east-west centerline of the southeast ¼ of section 31, a distance of 398.72 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T3S R15E MWD S–S S31 1991'';
15. South 4°43′20″ East, a distance of 356.97 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T3S R15E AP2 S31 MWD 1991'';
16. South 12°45′10″ East, a distance of 892.3 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T3S R15E AP1 S31 MWD 1991'';
17. South 5°52′24″ East, crossing the township line between Tps. 3 and 4 S., R. 15 E., a distance of 2621.95 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T4S R15E AP2 S6 MWD 1991'' in section 6, Tp. 4 S., R. 15 E.;
18. South 2°12′31″ East, crossing the east-west centerline of section 6, a distance of 1467.27 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T4S R15E AP1 S6 MWD 1991'';
19. South 14°34′05″ West, on the line between a 2½″ diameter stainless steel post with a brass cap marked ''T4S R15E AP1 S6 MWD 1991'' and a 2½″ diameter stainless steel post with a brass cap marked ''T4S R15E AP3 S7 MWD 1991'', a distance of 1292.87 feet, to a ¾″ rebar, with a 2″ aluminum cap, stamped ''R.C.E. 30846'', at the point of intersection with the line between sections 6 and 7, from which a 2″ I.P. with partially illegible 2″ bronze tablet stamped ''T4S R15E ¼ S6 S7 L.S. 4339'' bears North 88°38′08″ West a distance of 765.31 feet, and a 2½″ diameter stainless steel post with a brass cap marked ''E 1/16 S6 S7 1991'' bears South 88°38′08″ East a distance of 555.26 feet;

Thence, along the following 8 courses as shown on the map recorded January 20, 1994 in Records of Survey, book 95, pages 97 thru 105, Riverside County, California, having a new basis of bearing:

1. Continuing on the line between a 2½″ diameter stainless steel post with a brass cap marked ''T4S R15E AP1 S6 MWD 1991'' and a 2½″ diameter stainless steel post with a brass cap marked ''T4S R15E AP3 S7 MWD 1991'', South 14°09′14″ West, a distance of 392.44 feet, to the 2½″ diameter stainless steel post with a brass cap marked ''T4S R15E AP3 S7 MWD 1991'';
2. South 17°42′07″ West, a distance of 2113.85 feet, to the point of intersection with the north-south centerline of section 7;
3. Continuing South 17°42′07″ West, a distance of 133.81 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T4S R15E AP2 S7 MWD 1991'';
4. South 0°37′28″ West, a distance of 1808.72 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T4S R15E AP1 S7 MWD 1991'';

5. South 15°13′54″ West, a distance of 1078.45 feet, to a point of intersection with the line between sections 7 and 18, from which a 2½″ diameter stainless steel post with a brass cap marked ''T4S R15E ¼ S7 S18 1991'' bears North 88°07′45″ East, a distance of 376.92 feet;
6. South 88°07′45″ West on the line between sections 7 and 18, a distance of 933.31 feet, to a 2½″ diameter stainless steel post with a brass cap marked ''T4S R15E W 1/16 S7 S18 1991'', at the west 1/16 section corner of sections 7 and 18;
7. South 0°21′46'' West a distance of 5204.46 feet, to a 2'' I.P. with brass cap stamped ''T4S MWD R15E W 1/16 S18 S19 1992 L.S. 5113'', at the west 1/16 section corner of section 18 and partially unsurveyed section 19;
8. South 86°53′42'' West on the line between section 18 and partially unsurveyed section 19, a distance of 1399.76 feet, to a 2'' diameter iron post with a brass cap marked ''T4S T4S R14E S13 S18 S19 R15E 1956'', at the corner of section 18 and partially unsurveyed section 19 only, T. 4 S., R.15 E.;

Thence, southerly on the range line between partially unsurveyed section 19 and unsurveyed section 24, T. 4 S., Rs. 14 and 15 E., to the ¼ section corner of section 19 only, T. 4 S., R. 15 E.;

Thence, southerly on said range line, to the south south 1/64 section corner of unsurveyed section 24 only, T. 4 S., R. 15 E.;

Thence, westerly on the east-west centerline of the southeast ¼ of the southeast ¼ of unsurveyed section 24, to the center south southeast 1/64 section corner;

Thence, southerly on the north-south centerline of the southeast ¼ of unsurveyed section 24, to the east 1/16 section corner of unsurveyed sections 24 and 25;

Thence, westerly on the line between unsurveyed sections 24 and 25, to a point of intersection with the boundary of Joshua Tree National Park;

Thence, along the following 12 courses coincident with the Joshua Tree National Park boundary as specified in the final legal description of said National Park dated July 18, 1996:

1. Northwesterly, through unsurveyed section 24, to the corner of unsurveyed sections 13, 14, 23 and 24;
2. Northerly on the line between unsurveyed sections 13 and 14, to the corner of sections 11 and 12 and unsurveyed sections 13 and 14;
3. Westerly on the line between section 11 and unsurveyed section 14, to the corner of section 11 and unsurveyed sections 10, 14 and 15;
4. Northwesterly, through unsurveyed section 10, to the corner of unsurveyed sections 3, 4, 9 and 10;
5. Westerly on the line between unsurveyed sections 4 and 9, 5 and 8, and 6 and 7, Tp. 4 S., R. 14 E., and between unsurveyed sections 1 and 12 and 2 and 11, Tp. 4 S., R. 13 E., to the corner of unsurveyed sections 2, 3, 10, and 11;
7. Northwesterly, through unsurveyed section 3, to the ¼ section corner of unsurveyed sections 3 and 4;
8. Northerly between unsurveyed sections 3 and 4, T. 4 S., R. 13 E., and unsurveyed sections 33 and 34, T. 3 S., R. 13 E. to a point parallel with and 30 feet northerly of the centerline of Black Eagle Mine Road;
9. Westerly, changing to northerly, parallel with and 30 feet northerly, changing to easterly, of the centerline of said road following the northern fork towards Mystery Mine, the fork of these roads occurs very close to the section line between unsurveyed sections 33 and 34, to the intersection with the line between unsurveyed sections 16 and 21 on the old Joshua Tree National Monument boundary;
10. Easterly along the Old Joshua Tree National Monument boundary as depicted on the 1977 survey maps 156–41035A between unsurveyed sections 16 and 21, 15 and 22, 14 and 23, and 13 and 24, T. 3 S., R. 13 E., and between section 18 and unsurveyed section 19, section 20 and unsurveyed section 17, unsurveyed sections 16 and 21, 15 and 22, 14 and 23, and 13 and 24, T. 3 S., R. 14 E., to the corner of unsurveyed sections 13 and 24 only;
11. Northerly between section 19, T. 3 S., R. 15 E., and unsurveyed section 13, T. 3 S., R. 14 E., to the corner of section 19 and unsurveyed section 18 only;
12. Easterly between section 19 and unsurveyed section 18 and between sections 17 and 20, T. 3 S., R. 15 E., to the ¼ section corner of sections 17 and 20, said corner being the Point Of Beginning.

Excepting therefrom all privately owned or state school lands with the lands described above.

Said excepted parcels encompass 5,566 acres, more or less.

Also excepting therefrom all the land situated within the project boundary of FERC Project No. 13123 as described in Figure G–1- entitled ''Exhibit G-Project Boundary FERC Project No. 13123, Sheet 1, Eagle Mountain Pumped Storage, Eagle Mountain, California, Eagle Crest Energy Company,'' dated August 2014 within the sections described below:

T. 3 S., R. 14 E.,
Sections 26, 27, 28, 29, 32, 33, 34, 35, 36
T. 3 S., R. 15 E.,
Section 31
T. 4 S., R. 14 E.,
Sections 1, 2, 4, 11, 12
T. 4 S., R. 15 E.,
Section 6, 7, 18

Said excepted parcels encompass 627 acres, more or less.

The area described above contains approximately 22,462 acres in Riverside County. Records and maps relating to this application can be examined by interested parties at the following locations: NPS, Pacific West Region, 333 Bush Street, Suite 600, San Francisco, California 94104, and BLM, Palm Springs South Coast Field Office, 1201 Bird Center Drive, Palm Springs, California 92262.

The Deputy Secretary of the Interior approved the NPS's petition/application to withdraw the above-described lands. The Deputy Secretary's approval of the application constitutes his proposal to withdraw the subject lands and transfer administrative jurisdiction over them to the NPS for inclusion in and management as part of JTNP.

The purpose of the proposed withdrawal is to transfer administrative jurisdiction of the described public lands from the BLM to the NPS for administration as part of JTNP. These lands were included within the original boundary of the JTNM in 1936, but were removed from the JTNM in 1950 for iron ore development. Most of the lands within the proposed withdrawal boundary are untrammeled and retain the characteristics that led to their inclusion in the original boundary of the former JTNM. In particular, the area contains valuable habitat for desert species, including important habitat linkages for bighorn sheep, and provides landscape scale conservation opportunities.

If transferred, the lands would be included in an expanded national park boundary and administered as part of the JTNP in accordance with the NPS Organic Act and other applicable laws. The Secretary is authorized by 54 U.S.C. 100506(c)(1)(B) to acquire lands adjacent to units of the NPS by transfer from another Federal agency and to expand the park boundary accordingly.

The NPS is preparing a boundary study for JTNP that is related to the proposed withdrawal. The boundary study will explore whether it would be appropriate and feasible to transfer the segregated lands to JTNP and manage them for national park purposes. As part of that process, the NPS is preparing an environmental assessment under the National Environmental Policy Act that will serve as the environmental analysis of boundary alternatives and the proposed withdrawal. The NPS will coordinate public involvement in the boundary study process with public involvement in the proposed withdrawal process to the extent feasible.

The use of a right-of-way, interagency, or cooperative agreement, or surface management by the BLM instead of withdrawal may not adequately constrain nondiscretionary uses which could result in permanent loss of significant values and irreplaceable resources at the site. They also would not transfer jurisdiction over the lands to the NPS for administration as part of JTNP.

Licenses, permits, cooperative agreements, or other discretionary land use authorizations may be allowed with the approval of an authorized officer of the BLM during the temporary segregative period, after coordination with the NPS. The lands included within FERC Project No. 13123, which is licensed by FERC, are not proposed for withdrawal and the Department does not intend to include any additional lands ultimately included in the associated BLM right-of-way in the final withdrawal, if approved.

Subject to analysis under the NEPA, 42 U.S.C. 4321 *et seq.,* the NPS is not aware of any alternatives that would provide protection of the cultural, natural, and scenic resources, and values fundamental to the established purpose of JTNP. At this time, the uses contemplated by the NPS would not require water to fulfill the purposes of the requested withdrawal action.

Comments, including names and street addresses of respondents, will be available for public review on the following Web site *http://parkplanning.nps.gov/eaglemountain.* Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Notice is hereby given that a public meeting will be held in connection with the proposed withdrawal at the time and location indicated in the **DATES** section above. A notice about this public meeting will also be published in a local newspaper at least 30 days before the scheduled date of the meeting.

Records relating to the application may be examined by contacting JTNP park superintendent David Smith at 760–367–5502 or BLM Field Manager at 760–833–7100.

For a period until February 16, 2017, all persons who wish to submit comments, suggestions, or objections in connection with the proposed withdrawal may present their views in writing to the JTNP Superintendent or the BLM Field Manager at the **ADDRESSES** noted above.

For a period until November 19, 2018, the lands described in this notice will be segregated from all forms of entry, appropriation, or disposal under the public land laws; from location, entry, and patent under the United States mining laws; and from disposition under all laws pertaining to mineral and geothermal leasing, and mineral materials, and all amendments thereto, unless the application is denied or canceled or the withdrawal is approved prior to that date. The 2 years also allows time for the NPS to conduct the necessary analyses under FLPMA, the statutes pertaining to the NPS, and the NEPA. It is intended that these analyses will support a final decision on whether to expand the park boundary to complete the proposed withdrawal and to modify accordingly the boundary of JTNP.

The application will be processed in accordance with the regulations set forth in 43 CFR part 2300.

Jerome E. Perez,

State Director, Bureau of Land Management, California.

[FR Doc. 2016–27869 Filed 11–17–16; 8:45 am]

BILLING CODE 4310–40–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLES964000.L54100000.FR0000]

Notice of Realty Action: Application for Conveyance of Federally Owned Mineral Interests in Lee County, FL

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of realty action.

SUMMARY: The Bureau of Land Management (BLM) is processing an application under the Federal Land Policy and Management Act of 1976 (FLPMA), to convey the undivided phosphate mineral interest owned by the United States in 160 acres located in Lee County, Florida, to the surface owner, Stonewater II, LLC, a Michigan Limited Liability Company. The fair market value of the phosphate mineral interest has been determined to be $4,000.

DATES: Interested persons may submit written comments to the BLM at the address listed below. Comments must be received no later than January 3, 2017.

ADDRESSES: Bureau of Land Management, Eastern States State Office, 20 M Street SE., Suite 950, Washington, DC 20003. Detailed information concerning this action is available for review at this address.

FOR FURTHER INFORMATION CONTACT: Charles Johnson, Land Law Examiner, by telephone at 202–912–7737 or by email at *c35johns@blm.gov.* Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 1–800–877–8339 to contact the above individuals during normal business hours. The Service is available 24 hours a day, 7 days a week, to leave a message or question for the above individuals. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION: Stonewater II, LLC, the surface owner, has applied to purchase the undivided federally owned phosphate mineral interest located in Lee County, Florida, in a parcel described as follows:

Tallahassee Meridian, Florida

T. 44 S., R. 23 E.,
sec. 10, NE¼.
The area described contains 160 acres.

As required under Section 209(3)(i) of FLPMA, the applicant deposited a sum of money determined sufficient to cover administrative costs, including, but not limited to, the cost for the Mineral Potential Report. The objective of Section 209 is to allow consolidation of the surface and mineral interests when either one of the following conditions exists: (1) There are no known mineral values in the land; or (2) Where continued Federal ownership of the mineral interests interferes with or precludes appropriate non-mineral development and such development is a more beneficial use of the land than mineral development.

Stonewater II, LLC, a Michigan Limited Liability Company, the surface owner, filed an application for the conveyance of federally owned phosphate mineral interests in the above-described tract of land, subject to valid existing rights.

On November 18, 2016 the federally owned mineral interests in the lands described above are hereby segregated from all forms of appropriation under the public land laws, including the mining laws, while the application is being processed to determine if either one of the two specified conditions exists and, if so, to otherwise comply with the procedural requirements of 43 CFR part 2720. The segregation shall terminate: (1) Upon issuance of a patent or other document of conveyance as to such mineral interests; (2) upon final rejection of the application; or (3) on November 19, 2018, whichever occurs first.

Please submit all comments in writing to the address listed above.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal identifying information, may be made available to the public at any time. While you can ask in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Authority: 43 CFR 2720.1–1(b).

Karen Mouritsen,

State Director, Eastern States Office.

[FR Doc. 2016–27868 Filed 11–17–16; 8:45 am]

BILLING CODE 4310–GJ–P

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLNV952000 L14400000.BJ0000.LXSSF2210000.241A; 13–08807; MO# 4500101550; TAS: 15X1109]

Filing of Plats of Survey; NV

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice.

SUMMARY: The purpose of this notice is to inform the public and interested State and local government officials of the filing of Plats of Survey in Nevada.

DATES: *Effective Dates:* Unless otherwise stated filing is effective at 10:00 a.m. on the dates indicated below.

FOR FURTHER INFORMATION CONTACT: Michael O. Harmening, Chief, Branch of Geographic Sciences, Bureau of Land Management, Nevada State Office, 1340 Financial Blvd., Reno, NV 89502–7147, phone: 775–861–6490. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 to contact the above individual during normal business hours. The FIRS is available 24 hours a day, 7 days a week, to leave a message or question with the above individual. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION:

1. The Plat of Survey of the following described lands was officially filed at the Bureau of Land Management (BLM) Nevada State Office, Reno, Nevada on August 25, 2016:

The plat, in 1 sheet, representing the dependent resurvey of a portion of the subdivisional lines, the subdivision or section 24, and a metes-and-bounds survey of a portion of the centerline of Nevada State Route 147 (Lake Mead Blvd.) in section 24, Township 20 South, Range 62 East, Mount Diablo Meridian, Nevada, under Group No. 944, was accepted August 24, 2016. This survey was executed to identify the boundaries for disposal of certain public lands for the Las Vegas Police Shooting Range, authorized under Public Law 113–291.

2. The Plat of Survey of the following described lands was officially filed at the Bureau of Land Management (BLM) Nevada State Office, Reno, Nevada on August 26, 2016:

The plat, in 1 sheet, representing the dependent resurvey of a portion of the north boundary, a portion of the subdivisional lines and portions of Mineral Survey No. 4960, Township 20 South, Range 59 East, Mount Diablo Meridian, Nevada, under Group No. 950, was accepted August 25, 2016. This survey was executed to locate specific high-risk boundaries and to describe additions to the Red Rock Canyon National Conservation Area authorized by Public Law 113–291.

3. The Plat of Survey of the following described lands was officially filed at the Bureau of Land Management (BLM) Nevada State Office, Reno, Nevada on September 12, 2016:

The plat, in 3 sheets, representing the dependent resurvey of a portion of the east boundary and a portion of the subdivisional lines, the subdivision of sections 14, 24 and 25, a metes-and-bounds survey through sections 13 and 14, and a metes-and-bounds survey of a portion of the centerline of Las Vegas Boulevard in section 25, Township 19 South, Range 62 East, Mount Diablo Meridian, Nevada, under Group No. 959, was accepted September 1, 2016. This survey was executed to identify lands to be withdrawn for addition to Nellis Air Force Base, authorized by Public Law 113–291 and shown on the maps entitled ‘‘Nellis Dunes OHV Recreation Area’’, dated June 26, 2012 and ‘‘North Las Vegas Valley Overview’’, dated November 5, 2013.

4. The Plat of Survey of the following described lands was officially filed at the Bureau of Land Management (BLM) Nevada State Office, Reno, Nevada on September 30, 2016:

The plat, in 1 sheet, representing the dependent resurvey of a portion of the south boundary, a portion of the subdivisional lines and the subdivision of section 34, Township 43 North, Range 26 East, Mount Diablo Meridian, Nevada, under Group No. 936, was accepted September 28, 2016. This survey was executed to meet certain administrative needs of the Bureau of Land Management.

The surveys listed above are now the basic record for describing the lands for all authorized purposes. These records have been placed in the open files in the BLM Nevada State Office and are available to the public as a matter of information. Copies of the surveys and related field notes may be furnished to the public upon payment of the appropriate fees.

Dated: November 9, 2016.

Michael O. Harmening,

Chief Cadastral Surveyor, Nevada.

[FR Doc. 2016–27764 Filed 11–17–16; 8:45 am]

BILLING CODE 4310–HC–P

DEPARTMENT OF THE INTERIOR

National Park Service

[NPS–WASO–CONC–22082; PPWOBSADC0, PPMVSCS1Y.Y00000]

Notice of Extension of Concession Contracts

AGENCY: National Park Service, Interior.

ACTION: Public notice.

SUMMARY: The National Park Service hereby gives public notice that it proposes to extend the expiring concession contracts listed below for the period specified, or until the effective date of a new contract, whichever occurs sooner.

DATES: Effective January 1, 2017.

FOR FURTHER INFORMATION CONTACT: Brian Borda, Program Chief, Commercial Services Program, National Park Service, 1201 Eye Street NW., 11th Floor, Washington, DC 20005, Telephone: 202–513–7156.

SUPPLEMENTARY INFORMATION: All of the listed concession authorizations will expire by their terms on or before December 31, 2016. The National Park Service has determined the proposed extensions are necessary to avoid interruption of visitor services and has taken all reasonable and appropriate steps to consider alternatives to avoid such interruption. The publication of this notice merely reflects the intent of the National Park Service and does not bind the National Park Service to extend any of the contracts listed below.

The information in the first table shows concession contracts intended to be extended until December 31, 2017, or until the effective date of a new concession contract, whichever occurs first. The information in the second table shows concession contracts intended to be extended until December 31, 2018, or until the effective date of a new concession contract, whichever occurs first. Under the provisions of current concession contracts, the National Park Service authorizes extension of visitor services for the contracts below under the terms and conditions of the current contract (as amended if applicable). The extension of operations does not affect any rights with respect to selection for award of a new concession contract.

TABLE 1—CONCESSION CONTRACTS EXTENDED UNTIL DECEMBER 31, 2017 OR UNTIL THE EFFECTIVE DATE OF A NEW CONTRACT

Park unit	CONCID	Concessioner
Aniakchak NM	ANIA903–05	Joe Klutsch.
Aniakchak NM	ANIA904–05	Jay M. King.
Aniakchak NM	ANIA906–05	Cinder River Lodge Alaska, LLC.
Apostle Islands NL	APIS001–06	Apostle Island Cruises, Inc.
Bandelier NM	BAND001–06	Pajarito Plateau Trading Co. LLC.
Bryce Canyon NP	BRCA002–07	Bryce-Zion Trail Rides, Inc.
Buffalo NR	BUFF001–06	Buffalo Point Concession.
Buck Island Reef NM	BUIS006–06	Teroro II, Inc.
Buck Island Reef NM	BUIS008–06	Llewellyn's Charters, Inc.
Buck Island Reef NM	BUIS014–06	Michael Klein.
Buck Island Reef NM	BUIS019–06	Dragon Fly.
Cabrillo NM	CABR001–06	Cabrillo National Monument Foundation.
Canyonlands NP	CANY001–05	Adventure Bound, Inc.
Canyonlands NP	CANY002–05	Sheri Griffith Holding, LLC.
Canyonlands NP	CANY003–05	NavTec Expeditions, Inc.
Canyonlands NP	CANY004–05	Outward Bound Wilderness.
Canyonlands NP	CANY005–05	Colorado River and Trail Expeditions, Inc.
Canyonlands NP	CANY006–05	O.A.R.S. Canyonlands, Inc.
Canyonlands NP	CANY007–05	Holiday River Expeditions, Inc.
Canyonlands NP	CANY009–05	Moki Mac River Expeditions, Inc.
Canyonlands NP	CANY010–05	O.A.R.S. Canyonlands, Inc.
Canyonlands NP	CANY011–05	Western River Expeditions, Inc.
Canyonlands NP	CANY012–05	Niskanen & Jones, Inc.
Canyonlands NP	CANY014–05	Niskanen & Jones, Inc.
Canyonlands NP	CANY015–05	ARAMARK Sports and Entertainment, LLC.
Canyonlands NP	CANY019–05	Niskanen & Jones, Inc.
Canyonlands NP	CANY020–05	Raft Moab, Inc.
Canyonlands NP	CANY031–07	Holiday River Expeditions, Inc.
Canyonlands NP	CANY032–07	Escape Adventures, Inc.
Canyonlands NP	CANY033–07	Mike & Maggie Adventures, LLC.
Canyonlands NP	CANY034–07	Rim Tours, Inc.
Canyonlands NP	CANY035–07	Western Spirit Cycling, Inc.
Channel Islands NP	CHIS002–06	Channel Islands Aviation.
Colonial NHP	COLO007–05	The Association for the Preservation of Virginia Antiquities.
Craters of the Moon NM&P	CRMO001–06	Craters of the Moon Natural History Ass'n.
Denali NP&P	DENA013–07	Denali Nat'l Park Wilderness Centers LTD.
Denali NP&P	DENA015–07	Doyon, Limited.
Denali NP&P	DENA016–07	Alaskan Park Properties, INC.
Denali NP&P	DENA018–05	Jon M. Nierenberg.
Denali NP&P	DENA024–07	Sheldon Air Service LLC.
Denali NP&P	DENA025–07	Rust's Air Service, Inc.
Denali NP&P	DENA028–07	Fly Denali, Inc.
Denali NP&P	DENA029–07	Talkeetna Air Taxi, INC.
Death Valley NP	DEVA004–06	Death Valley Natural History Association.
Eisenhower NHS	EISE001–05	Gettysburg Tours, Inc.
Fire Island NS	FIIS007–05	Fire Island Concessions, LLC.
Fort Sumter NM	FOSU001–07	Fort Sumter Tours, Inc.
Gates of the Arctic NP&P	GAAR001–05	Richard A. Guthrie.
Glacier Bay NP&P	GLBA008–05	Alaska Discovery, Inc.
Glacier Bay NP&P	GLBA011–05	Chilkat Guides, Ltd. (new owners 2014).
Glacier Bay NP&P	GLBA012–05	Colorado River & Trail Expeditions, Inc.
Glacier Bay NP&P	GLBA013–05	James Henry River Journeys.
Glacier Bay NP&P	GLBA014–05	Mountain Travel.
Glacier Bay NP&P	GLBA017–05	Wilderness River Outfitters.
Glacier Bay NP&P	GLBA020–05	Vernon W. Schumacher & Jill Schumacher.
Glacier Bay NP&P	GLBA029–05	Janice Lowenstein.
Glacier Bay NP&P	GLBA033–05	Alsek River Lodge.
Glacier Bay NP&P	GLBA901–05	Alsek River Guide Service, Inc.
Glacier Bay NP&P	GLBA902–05	Alsek River Guide Service, Inc.
Great Smoky Mountain NP	GRSM006–07	Smoky Mountain Stables, Inc.
Golden Gate NRA	GOGA007–06	Golden Gate National Parks Conservancy.
Hawai'i Volcanoes NP	HAVO002–06	Hawai'i Pacific Parks Association, Ltd.
Jefferson NEM	JEFF002–07	Jefferson National Parks Association.
Joshua Tree NP	JOTR001–06	Joshua Tree National Park Association.
Lava Beds NM	LABE001–06	Lava Beds Natural History Association.
Northeast Reg. Office	NERO001–05	Eastern National Parks Association.
Oregon Caves NM&P	ORCA002–06	Oregon Caves Natural History Association.
Ozark NSR	OZAR010–05	The Landing and Rosecliff Lodge.

TABLE 1—CONCESSION CONTRACTS EXTENDED UNTIL DECEMBER 31, 2017 OR UNTIL THE EFFECTIVE DATE OF A NEW CONTRACT—Continued

Park unit	CONCID	Concessioner
Ozark NSR	OZAR013–05	Yellow Paddle Adventures, LLC.
Ozark NSR	OZAR014–05	C&R Boating Company, Inc.
Ozark NSR	OZAR020–05	Darrel Blackwell.
Ozark NSR	OZAR023–05	The Landing and Rosecliff Lodge.
Ozark NSR	OZAR024–05	Tom and Della Bedell.
Ozark NSR	OZAR025–05	The Landing and Rosecliff Lodge.
Ozark NSR	OZAR028–05	Jack and Lois Peters.
Ozark NSR	OZAR036–05	George Eugene and Eleanor Maggard.
Ozark NSR	OZAR049–05	The Landing and Rosecliff Lodge.
Ozark NSR	OZAR050–05	John Kladiva.
Point Reyes NS	PORE004–06	Point Reyes National Seashore Association.
Pacific West Reg. Office	PWRO001–06	Western National Parks Association.
Rocky Mountain NP	ROMO001–07	Xanterra Parks & Resorts, Inc.
Sagamore Hill NHS	SAHI001–05	The Theodore Roosevelt Association.
World War II Valor in the Pacific NM	USAR002–06	Arizona Memorial Museum Association.
Virgin Islands NP	VIIS008–05	CBI Acquisitions, LLC.

TABLE 2—CONCESSION CONTRACTS EXTENDED UNTIL DECEMBER 31, 2018 OR UNTIL THE EFFECTIVE DATE OF A NEW CONTRACT

Park unit	CONCID	Concessioner
Glacier Bay NP&P	GLBA009–07	Alaska Discovery, Inc.
Glacier Bay NP&P	GLBA015–06	Paul Johnson.
Glacier Bay NP&P	GLBA018–06	Alaska Glacier Guides, Inc.
Glacier Bay NP&P	GLBA019–06	Anchor Excursions Inc.
Glacier Bay NP&P	GLBA021–07	Glacier Bay Sea Kayaks, Inc.
Glacier Bay NP&P	GLBA022–06	Craig S. Loomis.
Glacier Bay NP&P	GLBA023–06	Alaskan Sailing Expeditions, LLC.
Glacier Bay NP&P	GLBA024–06	Jimmie L. Rosenbrunch.
Glacier Bay NP&P	GLBA025–06	James S. Kearns.
Glacier Bay NP&P	GLBA026–06	Denny Paul Corbin.
Glacier Bay NP&P	GLBA027–06	InnerSea Discoveries, LLC.
Glacier Bay NP&P	GLBA028–06	Francis and Linda Kadrlik.
Glacier Bay NP&P	GLBA030–06	Ronn Patterson.
Glacier Bay NP&P	GLBA031–06	Geoff Wilson and Debbie Kay Bennett.
Glacier Bay NP&P	GLBA032–06	Sea Wolf Adventures, Inc.
Glacier Bay NP&P	GLBA034–06	InnerSea Discoveries, LLC.
Glacier Bay NP&P	GLBA048–07	Alaska Mountain Guides & Climbing School, Inc.
Noatak NP	NOAT901–06	Philip E. Driver.
Noatak NP	NOAT904–06	James P. Jacobson.
Noatak NP	NOAT906–06	Edmund Mont Mahoney.
Wrangell-St Elias NP&P	WRST001–07	Ultima Thule Outfitters, Inc.
Wrangell-St Elias NP&P	WRST002–07	Johnny W. McMahan.
Wrangell-St Elias NP&P	WRST003–07	Wendell Kirk Ellis.
Wrangell-St Elias NP&P	WRST004–07	W. Cole Ellis.
Wrangell-St Elias NP&P	WRST005–07	Majestic Mountain Outfitters, Inc.
Wrangell-St Elias NP&P	WRST006–07	Rough & Ready Guide Service, INC.
Wrangell-St Elias NP&P	WRST007–07	Kichatna Guide Service.
Wrangell-St Elias NP&P	WRST009–07	W. Cole Ellis.
Wrangell-St Elias NP&P	WRST010–07	Majestic Mountain Outfitters, Inc.
Wrangell-St Elias NP&P	WRST012–07	Urban E. Rahoi.
Wrangell-St Elias NP&P	WRST013–07	Thomas Vaden.
Wrangell-St Elias NP&P	WRST014–07	Ultima Thule Outfitters, Inc.
Wrangell-St Elias NP&P	WRST015–07	Ultima Thule Outfitters, Inc.
Wrangell-St Elias NP&P	WRST016–07	Wrangell Outfitters, Inc.
Wrangell-St Elias NP&P	WRST017–07	Chuck McMahan.

Dated: October 17, 2016.

Lena McDowall,

Chief Financial Officer.

[FR Doc. 2016–27723 Filed 11–17–16; 8:45 am]

BILLING CODE 4312–52–P

DEPARTMENT OF THE INTERIOR

National Park Service

[NPS–WASO–CONC–22177; PPWOBSADC0, PPMVSCS1Y.Y0000]

Notice of Temporary Concession Contracts for Certain Visitor Services in Acadia National Park

AGENCY: National Park Service, Interior.

ACTION: Notice.

SUMMARY: The National Park Service intends to award two temporary concession contracts to a qualified person for the conduct of certain visitor services within Acadia National Park for a term not to exceed 3 years. The visitor services include guided bus tours.

FOR FURTHER INFORMATION CONTACT: Judy Bassett, Northeast Regional Concession Chief, Northeast Region, 200 Chestnut Street, Suite 502, Philadelphia, PA 19106; Telephone (215) 597–4903, by email at *judy_bassett@nps.gov*.

SUPPLEMENTARY INFORMATION: The National Park Service intends to award each contract to a concessioner currently operating under a long-term concessions contract. If the National Park Service is unable to reach acceptable terms, however, it may find other qualified persons for the award of each of the temporary contracts. The National Park Service has determined that the issuance of temporary concession contracts not to exceed 3 years is necessary to avoid interruption of visitor services and has taken all reasonable and appropriate steps to consider alternatives to avoid an interruption of visitor services in accordance with 36 CFR 51.24.

Authority: This action is issued pursuant to 36 CFR 51.24(a). This is not a request for proposals.

Dated: November 1, 2016.

Michael Reynolds,

Deputy Director, Operations.

[FR Doc. 2016–27732 Filed 11–17–16; 8:45 am]

BILLING CODE 4312–52–P

DEPARTMENT OF THE INTERIOR

National Park Service

[NPS–WASO–CONC–22080; PPWOBSADC0, PPMVSCS1Y.Y00000]

Notice of Continuation of Concession Contracts

AGENCY: National Park Service, Interior.

ACTION: Public notice.

SUMMARY: Pursuant to the terms of existing concession contracts, public notice is hereby given that the National Park Service intends to request a continuation of visitor services for a period not to exceed one year.

DATES: Effective January 1, 2017.

FOR FURTHER INFORMATION CONTACT: Brian Borda, Chief, Commercial Services Program, National Park Service, 1201 Eye Street NW., 11th Floor, Washington, DC 20005, Telephone: 202–513–7156.

SUPPLEMENTARY INFORMATION: The contracts listed below have been extended to the maximum allowable under 36 CFR 51.23. Under the provisions of the respective concession contracts and pending the completion of the public solicitation of a prospectus for a new concession contract, the National Park Service authorizes continuation of visitor services for a period not-to-exceed 1 year under the terms and conditions of the current contract as amended. The continuation of operations does not affect any rights with respect to selection for award of a new concession contract. The publication of this notice merely reflects the intent of the National Park Service but does not bind the National Park Service to continue any of the contracts listed below.

CONCID	Concessioner	Park unit
NACC001–89	Golf Course Specialists, Inc	National Mall and Memorial Parks.
NACC003–86	Guest Services, Inc	National Mall and Memorial Parks.
INDE001–94	Concepts by Staib, Ltd	Independence National Historical Park.
BLRI001–83	Southern Highland Handicraft Guild, Inc	Blue Ridge Parkway.
CAHA001–98	Koru Village Incorporated	Cape Hatteras National Seashore.
CAHA004–98	Oregon Inlet Fishing Center, Inc	Cape Hatteras National Seashore.
GLCA002–88	ARAMARK Sports and Entertainment Services, Inc	Glen Canyon National Recreation Area.
GLCA003–69	ARAMARK Sports and Entertainment Services, Inc	Glen Canyon National Recreation Area.
LAKE001–73	Rex G. Maughan & Ruth G. Maughan	Lake Mead National Recreation Area.
LAKE002–82	Lake Mead R.V. Village, LLC	Lake Mead National Recreation Area.
LAKE005–97	Rex G. Maughan & Ruth G. Maughan	Lake Mead National Recreation Area.
LAKE006–74	Las Vegas Boat Harbor, Inc	Lake Mead National Recreation Area.
LAKE007–84	Seven Resorts, Inc	Lake Mead National Recreation Area.
LAKE009–88	Temple Bar Marina, LLC	Lake Mead National Recreation Area.

Dated: October 17, 2016.

Lena McDowall,

Chief Financial Officer.

[FR Doc. 2016–27728 Filed 11–17–16; 8:45 am]

BILLING CODE 4312–52–P

INTERNATIONAL TRADE COMMISSION

[Investigation Nos. 701–TA–558 and 731–TA–1316 (Final)]

1-Hydroxyethylidene-1,1-Diphosphonic Acid from China; Scheduling of the Final Phase of Countervailing Duty and Antidumping Duty Investigations

AGENCY: United States International Trade Commission.

ACTION: Notice.

SUMMARY: The Commission hereby gives notice of the scheduling of the final phase of antidumping and countervailing duty investigation Nos. 701–TA–558 and 731–TA–1316 (Final) pursuant to the Tariff Act of 1930 (''the Act'') to determine whether an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports of 1-hydroxyethylidene-1,1-diphosphonic acid (''HEDP'') from China, provided for in subheading 2931.90.90 of the Harmonized Tariff Schedule of the United States, preliminarily determined by the Department of Commerce to be

subsidized and sold at less-than-fair-value.[1]

EFFECTIVE DATE: November 4, 2016.

FOR FURTHER INFORMATION CONTACT: Edward Petronzio (202–205–3176), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202–205–1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202–205–2000. General information concerning the Commission may also be obtained by accessing its internet server (*https://www.usitc.gov*). The public record for these investigations may be viewed on the Commission's electronic docket (EDIS) at *https://edis.usitc.gov*.

SUPPLEMENTARY INFORMATION:

Background.—The final phase of these investigations is being scheduled pursuant to sections 705(b) and 731(b) of the Tariff Act of 1930 (19 U.S.C. 1671d(b) and 1673d(b)), as a result of affirmative preliminary determinations by the Department of Commerce that certain benefits which constitute subsidies within the meaning of section 703 of the Act (19 U.S.C. 1671b) are being provided to manufacturers, producers, or exporters in China of HEDP, and that such products are being sold in the United States at less than fair value within the meaning of section 733 of the Act (19 U.S.C. 1673b). The investigations were requested in petitions filed on March 31, 2016, by Compass Chemical International LLC, Smyrna, Georgia.

For further information concerning the conduct of this phase of the investigations, hearing procedures, and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A and B (19 CFR part 201), and part 207, subparts A and C (19 CFR part 207).

Participation in the investigations and public service list.—Persons, including industrial users of the subject merchandise and, if the merchandise is sold at the retail level, representative consumer organizations, wishing to participate in the final phase of these investigations as parties must file an entry of appearance with the Secretary to the Commission, as provided in section 201.11 of the Commission's rules, no later than 21 days prior to the hearing date specified in this notice. A party that filed a notice of appearance during the preliminary phase of the investigations need not file an additional notice of appearance during this final phase. The Secretary will maintain a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigations.

Limited disclosure of business proprietary information (BPI) under an administrative protective order (APO) and BPI service list.—Pursuant to section 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in the final phase of these investigations available to authorized applicants under the APO issued in the investigations, provided that the application is made no later than 21 days prior to the hearing date specified in this notice. Authorized applicants must represent interested parties, as defined by 19 U.S.C. 1677(9), who are parties to the investigations. A party granted access to BPI in the preliminary phase of the investigations need not reapply for such access. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

Staff report.—The prehearing staff report in the final phase of these investigations will be placed in the nonpublic record on March 9, 2017, and a public version will be issued thereafter, pursuant to section 207.22 of the Commission's rules.

Hearing.—The Commission will hold a hearing in connection with the final phase of these investigations beginning at 9:30 a.m. on Thursday, March 23, 2017, at the U.S. International Trade Commission Building. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission on or before March 17, 2017. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the hearing. All parties and nonparties desiring to appear at the hearing and make oral presentations should participate in a prehearing conference to be held on March 21, 2017, at the U.S. International Trade Commission Building, if deemed necessary. Oral testimony and written materials to be submitted at the public hearing are governed by sections 201.6(b)(2), 201.13(f), and 207.24 of the Commission's rules. Parties must submit any request to present a portion of their hearing testimony *in camera* no later than 7 business days prior to the date of the hearing.

Written submissions.—Each party who is an interested party shall submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of section 207.23 of the Commission's rules; the deadline for filing is March 16, 2017. Parties may also file written testimony in connection with their presentation at the hearing, as provided in section 207.24 of the Commission's rules, and posthearing briefs, which must conform with the provisions of section 207.25 of the Commission's rules. The deadline for filing posthearing briefs is March 30, 2017. In addition, any person who has not entered an appearance as a party to the investigations may submit a written statement of information pertinent to the subject of the investigations, including statements of support or opposition to the petition, on or before March 30, 2017. On April 14, 2017, the Commission will make available to parties all information on which they have not had an opportunity to comment. Parties may submit final comments on this information on or before April 18, 2017, but such final comments must not contain new factual information and must otherwise comply with section 207.30 of the Commission's rules. All written submissions must conform with the provisions of section 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of sections 201.6, 207.3, and 207.7 of the Commission's rules. The Commission's *Handbook on E-Filing,* available on the Commission's Web site at *https://edis.usitc.gov,* elaborates upon the Commission's rules with respect to electronic filing.

Additional written submissions to the Commission, including requests pursuant to section 201.12 of the Commission's rules, shall not be accepted unless good cause is shown for accepting such submissions, or unless the submission is pursuant to a specific request by a Commissioner or Commission staff.

In accordance with sections 201.16(c) and 207.3 of the Commission's rules, each document filed by a party to the investigations must be served on all other parties to the investigations (as identified by either the public or BPI service list), and a certificate of service must be timely filed. The Secretary will not accept a document for filing without a certificate of service.

Authority: These investigations are being conducted under authority of title VII of the

[1] For purposes of these investigations, the Department of Commerce has defined the subject merchandise as ''all grades of aqueous, acidic (non–neutralized) concentrations of 1-hydroxyethylidene-1,1-diphosphonic acid, also referred to as hydroxethlylidenendiphosphonic acid, hydroxyethanediphosphonic acid, acetodiphosphonic acid, and etidronic acid. The Chemical Abstract Service (CAS) registry number for HEDP is 2809–21–4.''

Tariff Act of 1930; this notice is published pursuant to section 207.21 of the Commission's rules.

By order of the Commission.

Issued: November 14, 2016.

Lisa R. Barton,

Secretary to the Commission.

[FR Doc. 2016–27703 Filed 11–17–16; 8:45 am]

BILLING CODE 7020–02–P

INTERNATIONAL TRADE COMMISSION

[USITC SE–16–038]

Government in the Sunshine Act Meeting Notice

AGENCY HOLDING THE MEETING: United States International Trade Commission.

TIME AND DATE: November 29, 2016 at 11:00 a.m.

PLACE: Room 101, 500 E Street SW., Washington, DC 20436, Telephone: (202) 205–2000.

STATUS: Open to the public.

MATTERS TO BE CONSIDERED:

1. Agendas for future meetings: None.
2. Minutes.
3. Ratification List.
4. Vote in Inv. Nos. 731–TA–457–A–D (Fourth Review) (Heavy Forged Hand Tools from China). The Commission is currently scheduled to complete and file its determinations and views of the Commission on December 15, 2016.
5. Outstanding action jackets: None.

In accordance with Commission policy, subject matter listed above, not disposed of at the scheduled meeting, may be carried over to the agenda of the following meeting.

By order of the Commission.

Issued: November 15, 2016.

William R. Bishop,

Supervisory Hearings and Information Officer.

[FR Doc. 2016–27913 Filed 11–16–16; 11:15 am]

BILLING CODE 7020–02–P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 337–TA–1029]

Certain Mobile Electronic Devices; Institution of Investigation

AGENCY: U.S. International Trade Commission

ACTION: Notice

SUMMARY: Notice is hereby given that a complaint was filed with the U.S. International Trade Commission on October 14, 2016, under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, on behalf of Qualcomm Incorporated of San Diego, California. The complaint alleges violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain mobile electronic devices by reason of infringement of certain claims of U.S. Patent No. 8,095,082 (''the '082 patent''); U.S. Patent No. 7,999,384 (''the '384 patent''); U.S. Patent No. 7,548,407 (''the '407 patent''); U.S. Patent No. 8,497,928 (''the '928 patent'') and U.S. Patent No. 7,949,367 (''the '367 patent''). The complaint further alleges that an industry in the United States exists as required by subsection (a)(2) of section 337.

The complainant requests that the Commission institute an investigation and, after the investigation, issue a limited exclusion order and cease and desist orders.

ADDRESSES: The complaint, except for any confidential information contained therein, is available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street SW., Room 112, Washington, DC 20436, telephone (202) 205–2000. Hearing impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205–1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at (202) 205–2000. General information concerning the Commission may also be obtained by accessing its internet server at *https://www.usitc.gov.* The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *https://edis.usitc.gov.*

FOR FURTHER INFORMATION CONTACT: The Office of the Secretary, U.S. International Trade Commission, telephone (202) 205–2000.

AUTHORITY: The authority for institution of this investigation is contained in section 337 of the Tariff Act of 1930, as amended, and in section 210.10 of the Commission's Rules of Practice and Procedure, 19 CFR 210.10 (2016).

SCOPE OF INVESTIGATION: Having considered the complaint, the U.S. International Trade Commission, on November 14, 2016, ORDERED THAT –

(1) Pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, an investigation be instituted to determine whether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain mobile electronic devices by reason of infringement of one or more of claims 1–4, 7, 8, and 11 of the '082 patent; claims 44, 45, 50, and 53 of the '384 patent; claims 1–13 of the '407 patent; claims 1, 2, 4, and 6 of the '928 patent; and claims 6 and 7 of the '367 patent, and whether an industry in the United States exists as required by subsection (a)(2) of section 337;

(2) For the purpose of the investigation so instituted, the following are hereby named as parties upon which this notice of investigation shall be served:

(a) The complainant is: Qualcomm Incorporated, 5775 Morehouse Drive, San Diego, CA 92121.

(b) The respondents are the following entities alleged to be in violation of section 337, and are the parties upon which the complaint is to be served:

Zhuhai Meizu Technology Co., Ltd., Meizu Science & Technology Building, Technology Innovation Coast, Zhuhai, Guangdong, China 519085.

Zhuhai Meizu Telecom Equipment Co., Ltd., Meizu Science & Technology Building, Technology Innovation Coast, Zhuhai, Guangdong, China 519085.

Dest Technology Limited, Huang Pu 1506, Nan Xian Commercial Plaza A, MeiLong Road, LongHua Town, Bao An District, Shenzhen, China.

LGYD Limited, 3/F, New Factory Building, Guanghui Tech Park, Minqing District, 518028, Shenzhen, China.

Overseas Electronics, Inc., 309 W. Washington Street, Suite 1250, Chicago, IL 60606.

(3) For the investigation so instituted, the Chief Administrative Law Judge, U.S. International Trade Commission, shall designate the presiding Administrative Law Judge.

The Office of Unfair Import Investigations will not be named as a party to this investigation.

Responses to the complaint and the notice of investigation must be submitted by the named respondents in accordance with section 210.13 of the Commission's Rules of Practice and Procedure, 19 CFR 210.13. Pursuant to 19 CFR 201.16(e) and 210.13(a), such responses will be considered by the Commission if received not later than 20 days after the date of service by the Commission of the complaint and the notice of investigation. Extensions of time for submitting responses to the complaint and the notice of investigation will not be granted unless good cause therefor is shown.

Failure of a respondent to file a timely response to each allegation in the complaint and in this notice may be deemed to constitute a waiver of the right to appear and contest the allegations of the complaint and this notice, and to authorize the administrative law judge and the Commission, without further notice to the respondent, to find the facts to be as alleged in the complaint and this notice and to enter an initial determination and a final determination containing such findings, and may result in the issuance of an exclusion order or a cease and desist order or both directed against the respondent.

By order of the Commission.

Issued: November 15, 2016.

Lisa R. Barton,

Secretary to the Commission.

[FR Doc. 2016–27832 Filed 11–17–16; 8:45 am]

BILLING CODE 7020–02–P

DEPARTMENT OF JUSTICE

[OMB Number 1110–0052]

Agency Information Collection Activities; Proposed eCollection eComments Requested; Applicant Information Form (1–783)

AGENCY: Federal Bureau of Investigation, Department of Justice.

ACTION: 30-day notice.

SUMMARY: The Department of Justice (DOJ), Federal Bureau of Investigation (FBI), Criminal Justice Information Services (CJIS) Division, will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. The proposed information collection was published in the **Federal Register** at 81 FR 62535, on September 9, 2016, allowing for a 60 day comment period.

DATES: Comments are encouraged and will be accepted for an additional 30 days until December 19, 2016.

FOR FURTHER INFORMATION CONTACT: If you have additional comments especially on the estimated public burden or associated response time, suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, please contact Gerry Lynn Brovey, Supervisory Information Liaison Specialist, FBI, CJIS, Resources Management Section, Administrative Unit, Module C–2, 1000 Custer Hollow Road, Clarksburg, West Virginia 26306 (facsimile: 304–625–5093). Written comments and/or suggestions can also be directed to the Office of Management and Budget, Office of Information and Regulatory Affairs, Attention Department of Justice Desk Officer, Washington, DC 20530 or sent to *OIRA_submissions@omb.eop.gov.*

SUPPLEMENTARY INFORMATION: Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

—Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;
—Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
—Enhance the quality, utility, and clarity of the information to be collected; and/or
—Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension of a currently approved collection.

(2) *The Title of the Form/Collection:* Applicant Information Form.

3 *The agency form number, if any, and the applicable component of the Department sponsoring the collection:* 1–783.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* Primary: Individuals. This collection is necessary for individuals to request a copy of their personal identification record to review it or to obtain a change, correction, or an update to the record.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* Annually, the FBI receives 275,000 identification requests, therefore there are 275,000 respondents. The form requires 3 minutes to complete.

(6) *An estimate of the total public burden (in hours) associated with the collection:* There are an estimated 13,750 total annual burden hours associated with this collection.

If additional information is required contact: Jerri Murray, Department Clearance Officer, United States Department of Justice, Justice Management Division, Policy and Planning Staff, Two Constitution Square, 145 N Street NE., 3E.405B, Washington, DC 20530.

Dated: November 15, 2016.

Jerri Murray,

Department Clearance Officer for PRA, U.S. Department of Justice.

[FR Doc. 2016–27779 Filed 11–17–16; 8:45 am]

BILLING CODE 4410–02–P

DEPARTMENT OF JUSTICE

[OMB Number 1117–0042]

Agency Information Collection Activities; Proposed eCollection eComments Requested; Extension of a Currently Approved Collection: National Clandestine Laboratory Seizure Report

AGENCY: Drug Enforcement Administration, Department of Justice.

ACTION: 30-Day notice.

SUMMARY: The Department of Justice (DOJ), Drug Enforcement Administration, will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. This collection was previously published in the **Federal Register** at 81 FR 63224, on September, 14, 2016, allowing for a 60 day comment period.

DATES: Comments are encouraged and will be accepted for 30 days until December 19, 2016.

FOR FURTHER INFORMATION CONTACT: If you have additional comments especially on the estimated public burden or associated response time, suggestions, or need a copy of the proposed information collection instrument with instructions or additional information, please contact Catherine J. Cmiel-Acevido, Lead IT Specialist, or Jesus Oswaldo ''Waldo'' Contreras, IT Specialist, El Paso Intelligence Center, Drug Enforcement Administration, 11339 SSG Sims Blvd., El Paso, TX 79918. Written comments and/or suggestions can also be directed to the Office pf Management and Budget, Office of Information and Regulatory Affairs, Attention Department of Justice Desk Officer, Washington, DC 20530 or sent to *OIRA_submissions@OMB.eop.gov.*

SUPPLEMENTARY INFORMATION: Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address one or more of the following four points:

—Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the Bureau of Justice Statistics, including whether the information will have practical utility;
—Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;
—Evaluate whether and if so how the quality, utility, and clarity of the information to be collected can be enhanced; and
—Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submission of responses.

Overview of This Information Collection

(1) *Type of Information Collection:* Extension of a currently approved collection.

(2) *The Title of the Form/Collection:* National Clandestine Laboratory Seizure Report.

(3) *The agency form number, if any, and the applicable component of the Department sponsoring the collection:* EPIC–143.

(4) *Affected public who will be asked or required to respond, as well as a brief abstract:* State, Local or Tribal government law enforcement agencies. Records reported in the National Seizure System include clandestine laboratory seizure information managed by the El Paso Intelligence Center, Drug Enforcement Administration, and available to other law enforcement agencies in the discharge of their law enforcement duties and responsibilities.

(5) *An estimate of the total number of respondents and the amount of time estimated for an average respondent to respond:* It is estimated that approximately 7930 respondents will complete the survey within approximately one hour.

(6) *An estimate of the total public burden (in hours) associated with the collection:* The estimated public burden associated with this collection is 7930 hours. It is estimated that respondents will take one hour to complete the survey. In order to calculate the public burden for the survey, EPIC multiplied one hour by 7930 which equals 7930 total annual burden hours.

If additional information is required contact: Jerri Murray, Department Clearance Officer, United States Department of Justice, Justice Management Division, Policy and Planning Staff, Two Constitution Square, 145 N Street NE., 3E.405B, Washington, DC 20530.

Dated: November 15, 2016.

Jerri Murray,

Department Clearance Officer for PRA, U.S. Department of Justice.

[FR Doc. 2016–27778 Filed 11–17–16; 8:45 am]

BILLING CODE 4410–09–P

DEPARTMENT OF JUSTICE

Federal Bureau of Prisons

Notice of Intent To Prepare a Supplemental Revised Final Environmental Impact Statement for the Proposed United States Penitentiary and Federal Prison Camp in Letcher County, Kentucky

AGENCY: Federal Bureau of Prisons, U.S. Department of Justice.

ACTION: Notice of Intent.

SUMMARY: Pursuant to the National Environmental Policy Act (NEPA) of 1969, as implemented by the Council on Environmental Quality regulations, the Federal Bureau of Prisons (Bureau) announces its intent to prepare a Supplement to the March 2016 Revised Final Environmental Impact Statement (RFEIS) for ''Proposed United States Penitentiary and Federal Prison Camp Letcher County, Kentucky.''

FOR FURTHER INFORMATION CONTACT: Issac Gaston, Site Selection Specialist; U.S. Department of Justice, Federal Bureau of Prisons, 320 First Street NW., Washington, DC 20534; email: *igaston@bop.gov.*

SUPPLEMENTARY INFORMATION: The Supplemental RFEIS is being prepared to address substantial changes to the proposed action that are relevant to environmental concerns, as required under NEPA [40 CFR 1502.9(c)], and will assess any new circumstances or information relevant to potential environmental impacts.

In March 2016, the Bureau completed the Revised Final EIS for the Proposed United States Penitentiary and Federal Prison Camp, Letcher County, Kentucky, which evaluated the potential environmental impacts from the acquisition of property and construction and operation of a new United States Penitentiary, Federal Prison Camp, ancillary facilities, and access roads in Letcher County. The RFEIS analyzed two potential locations: An approximately 753-acre site in eastern Letcher County (Alternative 1-Payne Gap), and an approximately 700-acre site in western Letcher County (Alternative 2-Roxana). The RFEIS identified Alternative 2-Roxana as the preferred alternative because it best meets the project needs and, on balance, would have fewer impacts to the natural and built environment.

The Bureau was originally considering acquiring approximately 700 acres at the Roxana site for this project. In an effort to reduce potentially impacted property, the Bureau is removing two parcels of land at the Roxana site from acquisition consideration, resulting in a proposed site of approximately 570 acres. This reduction in site size has necessitated modifying the facilities layout evaluated for Alternative 2-Roxana in the RFEIS. The environmental impacts of the modified Alternative 2-Roxana will be analyzed in the Supplemental RFEIS. The alternatives to be evaluated in the Supplemental RFEIS include the No Action Alternative and Alternative 2-Roxana.

The Supplemental RFEIS will analyze potential environmental impacts that may result from the modified alternative, including, but not limited to, land use and zoning; topography, geology, and soils; air quality; noise; cultural resources; water resources; and biological resources. The Supplemental RFEIS analysis will evaluate direct, indirect, and cumulative impacts. Relevant and reasonable measures that could avoid or mitigate environmental impacts will also be analyzed. Additionally, the Bureau will undertake any consultations required by applicable laws or regulations.

The Bureau will issue a Draft Supplemental RFEIS for a 45-day public comment period, during which a public meeting will be held in the community of Whitesburg. A notice of availability of the Draft Supplemental RFEIS and a notice of public meeting will be published in the **Federal Register** and in area newspapers in advance of the release of the Draft Supplemental RFEIS and the public meeting. Those notices will identify further details about the public meeting and the specific opportunities and methods for the public to provide comments on the Draft Supplemental RFEIS.

The mailing list for the Draft Supplemental RFEIS will be based on the mailing list in the 2016 RFEIS. Those on this list will receive a copy of the Draft Supplemental RFEIS. This list includes local, state, and federal agencies with jurisdiction, elected officials and community leaders, businesses and organizations, and other interested parties and individuals. Anyone wishing to be added to the mailing list to receive a copy of the Draft Supplemental RFEIS may request to be added by contacting the Bureau's Site Selection Specialist at the address below.

Following issuance of the Draft Supplemental RFEIS and completion of the 45-day public comment period on the Draft Supplemental RFEIS, the Bureau will issue a Final Supplemental RFEIS that will include comments received during the public comment period on the Draft Supplemental RFEIS. The Final Supplemental RFEIS will also include the Bureau's response to substantive comments received on the Draft Supplemental RFEIS. Following publication of the Final Supplemental RFEIS, a 30-day review period will be provided. No action will be taken to implement any of the proposed alternatives until completion of the 30-day review period on the Final Supplemental RFEIS and issuance of a Record of Decision on behalf of the Bureau by its Director or Acting Director.

Dated: November 4, 2016.

Issac Gaston,

Site Selection Specialist, Capacity, Planning and Construction, U.S. Department of Justice, Federal Bureau of Prisons.

[FR Doc. 2016–27148 Filed 11–17–16; 8:45 am]

BILLING CODE P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petitions for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and Title 30 of the Code of Federal Regulations Part 44 govern the application, processing, and disposition of petitions for modification. This notice is a summary of petitions for modification submitted to the Mine Safety and Health Administration (MSHA) by the parties listed below.

DATES: All comments on the petitions must be received by MSHA's Office of Standards, Regulations, and Variances on or before December 19, 2016.

ADDRESSES: You may submit your comments, identified by ''docket number'' on the subject line, by any of the following methods:

1. *Electronic Mail: zzMSHA-comments@dol.gov.* Include the docket number of the petition in the subject line of the message.
2. *Facsimile:* 202–693–9441.
3. *Regular Mail or Hand Delivery:* MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202–5452, Attention: Sheila McConnell, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk in Suite 4E401. Individuals may inspect copies of the petitions and comments during normal business hours at the address listed above.

MSHA will consider only comments postmarked by the U.S. Postal Service or proof of delivery from another delivery service such as UPS or Federal Express on or before the deadline for comments.

FOR FURTHER INFORMATION CONTACT: Barbara Barron, Office of Standards, Regulations, and Variances at 202–693–9447 (Voice), *barron.barbara@dol.gov* (Email), or 202–693–9441 (Facsimile). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION:

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or
2. That the application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, the regulations at 30 CFR 44.10 and 44.11 establish the requirements and procedures for filing petitions for modification.

II. Petitions for Modification

Docket Number: M–2016–031–C.

Petitioner: S & J Coal Mine, 15 Motter Drive, Pine Grove, Pennsylvania 17963–8854.

Mine: Slope #2 Mine, MSHA I.D. No. 36–09963, located in Schuylkill County, Pennsylvania.

Regulation Affected: 30 CFR 75.1002(a) (Installation of electric equipment and conductors; permissibility).

Modification Request: The petitioner requests a modification of the existing standard to permit use of nonpermissible electric equipment within 150 feet of the pillar line to include drags and battery locomotives. The request is due in part to the method of mining used in pitching anthracite mines and the alternative evaluation of the mine air quality for methane on an hourly basis during operation, with one of the gas test results to be recorded in the on-shift examination record. The petitioner also proposes to suspend equipment operation any time methane concentration at the equipment reaches 0.5 percent methane either during operation or when found during a preshift examination. The petitioner states that:

(1) The equipment will be operated in the working section's only intake entry (gangway), which is regularly traveled and examined.

(2) The use of drags on less than moderate pitching veins (less than 20 degrees pitch) is the only practical system of mining in use.

(3) Permissible drags are not commercially available, and due in part to their small size, permissible locomotives are not commercially available either.

(4) As a result of low daily production rates and full timbering support, in-rushes of methane due to massive pillar falls are unlikely to occur.

(5) Recovery of the pillars above the first miner heading is usually accomplished on the advance within 150 feet of the section intake (gangway) and the remaining mineable pillars recovered from the deepest point of penetration outby.

(6) The 5,000 cubic feet per minute of required intake airflow is measured just outby the nonpermissible equipment with the ventilating air passing over the equipment to ventilate the pillar being mined.

(7) The electrical equipment is attended during operation and either power to the unit deenergized at the intersection of the working gangway and intake slope or equipment moved to that area when production ceases, minimizing any ignition potential from the pillar recovery area.

(8) Where more than one active line of pillar breasts recovery exists, the locomotive may travel to a point just outby the deepest active chute/breast (room) workings or last open crosscut in a developing set of entries.

The petitioner asserts that the proposed alternative method will at all times guarantee no less than the same measure of protection to the miners as would be provided by the existing standard.

Docket Number: M–2016–032–C.

Petitioner: S & J Coal Mine, 15 Motter Drive, Pine Grove, Pennsylvania 17963–8854.

Mine: Slope #2 Mine, MSHA I.D. No. 36–09963, located in Schuylkill County, Pennsylvania.

Regulation Affected: 30 CFR 75.1400 (Hoisting equipment; general).

Modification Request: The petitioner seeks to permit the use of a gunboat to transport persons without safety catches or other no less effective devices because to date, no such safety catch or device is available for steeply pitching and undulating slopes with numerous curves and knuckles present in the main haulage slopes of anthracite mines. The mines range in length from 30 to 4,200 feet and vary in pitch from 12 degrees and 75 degrees. The petitioner states that:

(1) A functional safety catch has not been developed. Makeshift devices, if installed, would be activated on knuckles and curves when no emergency exists causing a tumbling effect on the conveyance, which would increase rather than decrease the hazard to miners.

(2) As an alternative, the petitioner proposes to operate the man-cage or steel gunboat with secondary safety connections securely fastened around the gunboat and to the hoisting rope above the main connecting device, and use hoisting ropes having a factor of safety in excess of the 4 to 8 to 1 as suggested in the American Standards Specifications for Use of Wire Ropes for Mines.

The petitioner asserts that the proposed alternative method will provide no less than the same measure of protection afforded the miners under the existing standard.

Docket Number: M–2016–033–C.

Petitioner: Mach Mining, LLC, P.O. Box 300, Johnston City, Illinois 62951.

Mine: Mach No. 1 Mine, MSHA I.D. No. 11–03141, located in Williamson County, Illinois.

Regulation Affected: 30 CFR 75.503 (Permissible electric face equipment; maintenance) and 30 CFR 18.35 (Portable trailing cables and cords).

Modification Request: The petitioner requests a modification of the existing standard to allow the use of trailing cables longer than permitted under the existing standard. The petitioner states that:

(1) The maximum lengths of the 995-volt trailing cables will be 1,000 feet and not smaller than No. 2 American Wire Gauge (AWG).

(2) All circuit breakers used to protect No. 2 AWG trailing cables exceeding 700 feet in length will have instantaneous trip units calibrated to trip at 800 amperes. The trip setting of these circuit breakers will be sealed or locked so that the setting cannot be changed and these circuit breakers will have permanent, legible labels. Each label will identify the circuit breaker as being suitable for protecting No. 2 AWG cables. The labels will be maintained legible.

(3) Replacement instantaneous trip units used to protect No. 2 AWG trailing cables will be calibrated to trip at 800 amperes, and this setting will be sealed and locked.

(4) All components that provide short-circuit protection will have a sufficient interruption rating in accordance with the maximum calculated fault currents available.

(5) Short-circuit settings must not exceed the setting specified in the approval documentation or 70 percent of the maximum available current, whichever is less.

(6) Any trailing cable that is not in safe operating condition will be removed from service immediately and repaired or replaced.

(7) Each splice or repair in the trailing cable will be made in a workmanlike manner and in accordance with the instructions of the manufacturer of the splice or repair kit. The outer jacket of each splice or repair will be vulcanized with flame-resistant material or made with material that has been accepted by MSHA as flame resistant.

(8) In the event the mining methods or operating procedures cause or contribute to the damage of any trailing cable, the trailing cable will be removed from service immediately and repaired or replaced, and additional precautions will be taken to ensure that in the future, the cable is protected and maintained in safe operating condition.

(9) During each production day, persons designated by the mine operator will visually examine the trailing cables to ensure that the cables are in safe operating condition. The instantaneous settings of the specially calibrated circuit breakers will be visually examined to ensure that the seals or locks have not been removed and do not exceed the settings stipulated in items (2) and (3).

(10) Permanent warning labels will be installed and maintained on the cover of the power center identifying the location of each sealed short-circuit protective device. These labels will warn miners not to change or alter these sealed short-circuit settings.

(11) The alternative method will not be implemented until all miners who have been designated to examine the integrity of seals or locks, verify the short-circuit settings, and examine trailing cables for defects have received their training.

(12) Within 60 days after the proposed decision and order becomes final, the petitioner will submit proposed revisions for their approved 30 CFR part 48 training plans to the District Manager for the area in which the mine is located. The training will include the following elements:

(a) Mining methods and operating procedures that will protect the trailing cables against damage;

(b) Proper procedures for examining the trailing cables to ensure that the cables are in safe operating condition;

(c) The hazards of setting the short circuit interrupting device too high to adequately protect the trailing cables; and

(d) How to verify that the circuit interrupting device(s) protecting the trailing cable(s) are properly set and maintained.

The procedures as specified in 30 CFR 48.3 for approval of proposed revisions to already approved training plans will apply.

The petitioner asserts that the proposed alternative method will at all times guarantee no less than the same measure of protection to the miners as would be provided by the existing standard.

Docket Number: M–2016–034–C.

Petitioner: Warrior Coal, LLC, 57 J.E. Ellis Rd., Madisonville, Kentucky 42431.

Mine: Warrior's Cardinal Mine, MSHA I.D. No. 15–14335, located in Hopkins County, Kentucky.

Regulation Affected: 30 CFR 75.500(d) (Permissible electric equipment).

Modification Request: The petitioner requests a modification of the existing standard to permit the use of nonpermissible electronic testing or diagnostic equipment inby the last open crosscut. The petitioner states that:

(1) Nonpermissible electronic testing and diagnostic equipment to be used includes: Laptop/tablet computers, oscilloscopes, vibration analysis machines, cable fault detectors, point temperature probes, infrared temperature devices, insulation testers (meggers), voltage, current, resistance meters and power testers, and electronic tachometers. Other testing and diagnostic equipment may be used if approved in advance by the MSHA District Manager.

(2) All nonpermissible testing and diagnostic equipment used in or inby

the last open crosscut will be examined by a qualified person (as defined in 30 CFR 75.153) prior to use to ensure the equipment is being maintained in a safe operating condition. The examination results will be recorded weekly in the examination book and will be made available to MSHA and the miners at the mine.

(3) A qualified person as defined in existing 30 CFR 75.151 will continuously monitor for methane immediately before and during the use of nonpermissible electronic testing and diagnostic equipment in or inby the last open crosscut.

(4) Nonpermissible electronic testing and diagnostic equipment will not be used if methane is detected in concentrations at or above 1.0 percent. When 1.0 percent or more methane is detected while the nonpermissible electronic equipment is being used, the equipment will be deenergized immediately and withdrawn outby the last open crosscut.

(5) All hand-held methane detectors will be MSHA-approved and maintained in permissible and proper operating condition as defined in 30 CFR 75.320.

(6) Except for time necessary to troubleshoot under actual mining conditions, coal production on MMU will cease. However, coal may remain in or on the equipment to test and diagnose the equipment under ''load.''

(7) All electronic testing and diagnostic equipment will be used in accordance with the manufacturer's recommendations.

(8) Qualified personnel who use electronic testing and diagnostic equipment will be properly trained to recognize the hazards and limitations associated with use of the equipment.

The petitioner asserts that under the terms and conditions of the petition for modification, the use of nonpermissible electronic testing and diagnostic equipment will at all times guarantee no less than the same measure of protection afforded by the existing standard.

Docket Number: M–2016–035–C.

Petitioner: Warrior Coal, LLC, 57 J.E. Ellis Rd., Madisonville, Kentucky 42431.

Mine: Warrior's Cardinal Mine, MSHA I.D. No. 15–14335, located in Hopkins County, Kentucky.

Regulation Affected: 30 CFR 75.507–1(a) (Electric equipment other than power-connection points; outby the last open crosscut; return air; permissibility requirements).

Modification Request: The petitioner requests a modification of the existing standard to permit the use of nonpermissible electronic testing or diagnostic equipment in return air outby the last open crosscut. The petitioner states that:

(1) Nonpermissible electronic testing and diagnostic equipment to be used includes: Laptop/tablet computers, oscilloscopes, vibration analysis machines, cable fault detectors, point temperature probes, infrared temperature devices, insulation testers (meggers), voltage, current, resistance meters and power testers, and electronic tachometers. Other testing and diagnostic equipment may be used if approved in advance by the MSHA District Manager.

(2) All nonpermissible testing and diagnostic equipment used in return air outby the last open crosscut will be examined by a qualified person (as defined in 30 CFR 75.153) prior to use to ensure the equipment is being maintained in a safe operating condition. The examination results will be recorded weekly in the examination book and will be made available to MSHA and the miners at the mine.

(3) A qualified person as defined in existing 30 CFR 75.151 will continuously monitor for methane immediately before and during the use of nonpermissible electronic testing and diagnostic equipment in return air outby the last open crosscut.

(4) Nonpermissible electronic testing and diagnostic equipment will not be used if methane is detected in concentrations at or above 1.0 percent. When 1.0 percent or more methane is detected while the nonpermissible electronic equipment is being used, the equipment will be deenergized immediately and withdrawn from the return air outby the last open crosscut.

(5) All hand-held methane detectors will be MSHA-approved and maintained in permissible and proper operating condition as defined in 30 CFR 75.320.

(6) All electronic testing and diagnostic equipment will be used in accordance with the manufacturer's recommendations.

(7) Qualified personnel who use electronic testing and diagnostic equipment will be properly trained to recognize the hazards and limitations associated with use of the equipment.

The petitioner asserts that under the terms and conditions of the petition for modification, the use of nonpermissible electronic testing and diagnostic equipment will at all times guarantee no less than the same measure of protection afforded by the existing standard.

Sheila McConnell,

Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2016–27713 Filed 11–17–16; 8:45 am]

BILLING CODE 4520–43–P

DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petitions for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and Title 30 of the Code of Federal Regulations Part 44 govern the application, processing, and disposition of petitions for modification. This notice is a summary of petitions for modification submitted to the Mine Safety and Health Administration (MSHA) by the parties listed below.

DATES: All comments on the petitions must be received by MSHA's Office of Standards, Regulations, and Variances on or before December 19, 2016.

ADDRESSES: You may submit your comments, identified by ''docket number'' on the subject line, by any of the following methods:

1. *Electronic Mail: zzMSHA-comments@dol.gov.* Include the docket number of the petition in the subject line of the message.

2. *Facsimile:* 202–693–9441.

3. *Regular Mail or Hand Delivery:* MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202–5452, Attention: Sheila McConnell, Director, Office of Standards, Regulations, and Variances. Persons delivering documents are required to check in at the receptionist's desk in Suite 4E401. Individuals may inspect copies of the petitions and comments during normal business hours at the address listed above.

MSHA will consider only comments postmarked by the U.S. Postal Service or proof of delivery from another delivery service such as UPS or Federal Express on or before the deadline for comments.

FOR FURTHER INFORMATION CONTACT: Barbara Barron, Office of Standards, Regulations, and Variances at 202–693–9447 (Voice), *barron.barbara@dol.gov* (Email), or 202–693–9441 (Facsimile). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION:

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or

2. That the application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, the regulations at 30 CFR 44.10 and 44.11 establish the requirements and procedures for filing petitions for modification.

II. Petitions for Modification

Docket Number: M–2016–007–M.

Petitioner: Vulcan Construction Materials, LLC, 11020 David Taylor Drive, Suite 105, Charlotte, NC 28262.

Mines: Enka Quarry, MSHA I.D. No. 31–00084, located in Buncombe County, North Carolina; Rockingham Quarry, MSHA I.D. No. 31–00198, located in Richmond County, North Carolina; Lenoir Quarry, MSHA I.D. No. 31–01094, located in Caldwell County, North Carolina; Penrose Quarry, MSHA I.D. No. 31–00111, located in Transylvania County, North Carolina; East Forsyth Quarry, MSHA I.D. No. 31–01919, located in Forsyth County, North Carolina; Cabarrus Quarry, MSHA I.D. No. 31–01357, located in Cabarrus County, North Carolina; and Clear Creek Quarry, MSHA I.D. No. 31–02087, located in Mecklenburg County, North Carolina.

Regulation Affected: 30 CFR 56.13010 (Reciprocating-type air compressors).

Modification Request: The petitioner requests a modification of the existing standard to allow the designated compressors outlined in this petition to be considered in compliance with the existing standard. The petitioner states that:

(1) The compressor industry guidance has shown that the high temperature shutoff switch is not offered as a standard safety feature on an electrically motor-driven reciprocating-type air compressor between 2 horsepower and 30 horsepower. The only time a high temperature shutoff switch is used on a reciprocating-type compressor is when very large compressors (100 horsepower and up) are housed in buildings or containers that could allow intake air to be heated by other environmental influences. However, a high temperature shutoff switch has always been standard for a rotary or screw type compressor that is working off of a combustion engine. When discussing this standard with compressor manufacturers, the first statement that is often made is ''are you sure we are referring to a rotary compressor not a reciprocating compressor''.

(2) The petitioner states the following facts related to electric motor-driven reciprocating air compressors:

(a) The electric motor does not affect the temperature of the air in the compressor. The compressor and motor are only connected to sheaves on both sides.

(b) Existing 30 CFR 56.13010 states that the temperature switch must be adjusted to shut down the compressor when the normal operating temperature is exceeded by more than 25 percent. This would be virtually impossible because the normal operating temperature is affected by the intake air temperature which can fluctuate by 30 percent or more depending on the geographic location of the air compressor and the time of the year. According to manufacturers, the temperatures of supplied air can typically range from 32 degrees Fahrenheit to 115 degrees Fahrenheit. Due to the fluctuation in temperature ranges, the system could almost never be set to the actual 25 percent above normal temperature. In addition, the temperature of the intake air affects the density of the air which changes the amount of air being compressed during the process. The phenomenon directly affects the output temperature of the air.

(c) High temperature shutoff switches are considered unreliable in many applications because there is no true way to test whether the switch is actually working. To test a high temperature shutoff switch, the temperature would have to be altered to determine if the switch is working properly, which raises safety concerns.

(d) High temperature switches are also very costly and in cases where it was not provided as standard equipment by the manufacturer, installing a switch could void warranty and UL listing of a compressor if not installed by a certified manufacturer's representative. Not all States have compressor inspection programs, which could potentially allow an unqualified person to install a switch to meet the MSHA standard resulting in potential hazards to persons from a possible faulty installation.

(e) The units included in this petition currently are equipped with multiple safety features that include most of the following:

—Magnetic starter—prevents motor from electrical overload.
— Low oil level switch—prevents unit from operating in low oil conditions.
— Aftercoolers—cools discharge air that allows moisture to condense in the tank.
—Automatic condensate drain—ensures removal of water from tank.
—Unloader valve—relieves pressure on compressor head when unit shuts off. This prevents unit starting underload.
—Safety relief valves—relieves tank pressure at a set PSI to prevent over pressurization of tank. Line pressure relief valves are also utilized at aftercoolers.
—Tank pressure switch—cuts off pressure at a set normal PSI range.
—High amp fuse—cuts off motor if high amps are achieved.

The petitioner further asserts that industry data suggests that the current safety devices as equipped on the compressors offer equal protection to the standard even if they are not equipped with the automatic temperature actuated shutoff mechanism.

Sheila McConnell,
Director, Office of Standards, Regulations, and Variances.

[FR Doc. 2016–27714 Filed 11–17–16; 8:45 am]

BILLING CODE 4520–43–P

LEGAL SERVICES CORPORATION

Sunshine Act Meeting: Board of Directors and Operations & Regulations Committee Telephonic Meetings

AGENCY: Legal Services Corporation

ACTION: Change Notice

SUMMARY: On November 6, 2016, the Legal Services Corporation (LSC) published a notice in the **Federal Register** (81 FR 80686) titled ''Board of Directors will meet telephonically on November 22, 2016. The meeting will commence at 2:00 Eastern Standard Time (EST). Immediately following the Board of Directors telephonic meeting, the Operations and Regulations Committee will hold a telephonic meeting.'' A correction to change item #2 on the Board of Directors Agenda to read; Consider and act on the Board of Directors' transmittal to accompany the Inspector General's Semiannual Report to Congress for the period of April 1, 2016 through September 30, 2016, all other items remain consecutively the same. This document changes the notice by revising the Board of Directors Agenda by changing item #2 of the agenda to read; Consider and act on the Board of Directors' transmittal to accompany the Inspector General's Semiannual Report to Congress for the period of April 1, 2016 through September 30, 2016

CHANGES IN THE MEETING: Item #2 of the Board of Directors Agenda.

DATES: This change is effective November 16, 2016.

FOR FURTHER INFORMATION CONTACT: Katherine Ward, Executive Assistant to the Vice President for Legal Affairs and General Counsel, Legal Services Corporation, 3333 K Street NW., Washington, DC 20007; (202) 295–1500; *kward@lsc.gov.*

Dated: November 16, 2016.

Katherine Ward,

Executive Assistant to the Vice President for Legal Affairs and General Counsel.

[FR Doc. 2016–27918 Filed 11–16–16; 11:15 am]

BILLING CODE 7050–01–P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (16–082)]

Applied Sciences Advisory Committee; Meeting

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of meeting.

SUMMARY: In accordance with the Federal Advisory Committee Act, Public Law 92–463, as amended, the National Aeronautics and Space Administration (NASA) announces a meeting of the Applied Sciences Advisory Committee (ASAC). This Committee functions in an advisory capacity to the Director, Earth Science Division, in the NASA Science Mission Directorate. The meeting will be held for the purpose of soliciting, from the applied sciences community and other persons, scientific and technical information relevant to program planning.

DATES: Wednesday, December 7, 2016, 9:00 a.m. to 5:00 p.m., and Thursday, December 8, 2016, 9:00 a.m. to 5:00 p.m., Local Time.

ADDRESSES: NASA Headquarters, Room 7Q46, 300 E Street SW., Washington, DC 20546.

FOR FURTHER INFORMATION CONTACT: Ms. KarShelia Henderson, Science Mission Directorate, NASA Headquarters, Washington, DC 20546, (202) 358–2355, fax (202) 358–2779, or *khenderson@nasa.gov.*

SUPPLEMENTARY INFORMATION: The meeting will be open to the public up to the capacity of the room. This meeting will also be available telephonically and via WebEx. You must use a touch-tone phone to participate in this meeting. Any interested person may dial the USA toll free conference call number 1–888–324–7118, passcode 7154341, followed by the # sign, to participate in this meeting by telephone, for both days. The WebEx link is *https://nasa.webex.com;* the meeting number on December 7 is 997 590 459 and the password is @December7 (case sensitive); the meeting number on December 8 is 992 751 297 and the password is @December8 (case sensitive).

The agenda for the meeting includes the following topics:

- Earth Science and Applied Sciences Program Activities
- Continuity Study
- Earth Science Decadal Survey
- Flight Projects and Applications

Attendees will be requested to sign a register and to comply with NASA Headquarters security requirements, including the presentation of a valid picture ID to Security before access to NASA Headquarters. Due to the Real ID Act, Public Law 109–13, any attendees with drivers licenses issued from non-compliant states/territories must present a second form of ID. [Federal employee badge; passport; active military identification card; enhanced driver's license; U.S. Coast Guard Merchant Mariner card; Native American tribal document; school identification accompanied by an item from LIST C (documents that establish employment authorization) from the ''List of the Acceptable Documents'' on Form I–9]. Non-compliant states/territories are: Kentucky, Maine, Minnesota, Missouri, Oklahoma, Pennsylvania, South Carolina, and Washington. Foreign nationals attending this meeting will be required to provide a copy of their passport and visa in addition to providing the following information no less than 10 days prior to the meeting: Full name; gender; date/place of birth; citizenship; passport information (number, country, telephone); visa information (number, type, expiration date); employer/affiliation information (name of institution, address, country, telephone); title/position of attendee. To expedite admittance, attendees with U.S. citizens and Permanent Residents (green card holders) can provide full name and citizenship status 3 working days in advance by contacting KarShelia Henderson via email at *khenderson@nasa.gov* or by fax at (202) 358–2779.

It is imperative that the meeting be held on these dates to accommodate the scheduling priorities of the key participants.

Patricia D. Rausch,

Advisory Committee Management Officer, National Aeronautics and Space Administration.

[FR Doc. 2016–27817 Filed 11–17–16; 8:45 am]

BILLING CODE 7510–13–P

NATIONAL SCIENCE FOUNDATION

Notice of Permit Applications Received Under the Antarctic Conservation Act of 1978

AGENCY: National Science Foundation.

ACTION: Notice of permit applications received under the Antarctic Conservation Act of 1978, Public Law 95–541.

SUMMARY: The National Science Foundation (NSF) is required to publish a notice of permit applications received to conduct activities regulated under the Antarctic Conservation Act of 1978. NSF has published regulations under the Antarctic Conservation Act at Title 45 Part 671 of the Code of Federal Regulations. This is the required notice of permit applications received.

DATES: Interested parties are invited to submit written data, comments, or views with respect to this permit application by December 19, 2016. This application may be inspected by interested parties at the Permit Office, address below.

ADDRESSES: Comments should be addressed to Permit Office, Room 755, Division of Polar Programs, National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230.

FOR FURTHER INFORMATION CONTACT: Nature McGinn, ACA Permit Officer, at the above address or *ACApermits@nsf.gov.*

SUPPLEMENTARY INFORMATION: The National Science Foundation, as directed by the Antarctic Conservation Act of 1978 (Pub. L. 95–541), as amended by the Antarctic Science, Tourism and Conservation Act of 1996, has developed regulations for the establishment of a permit system for various activities in Antarctica and designation of certain animals and certain geographic areas a requiring special protection. The regulations establish such a permit system to designate Antarctic Specially Protected Areas.

Application Details

Permit Application: 2017–027

1. *Applicant:* Prash Karnik, Director Maritime Operations, Seabourn Quest, Seabourn Cruise Line Ltd., 300 Elliot Avenue West, WA 98119 U.S.A.

Activity for Which Permit is Requested: Waste management. The applicant wishes to fly small, battery operated, remotely controlled copters equipped with a cameras to take scenic photos and film of the Antarctic. The UAVs would not be flown over concentrations of birds or mammals or over Antarctic Specially Protected Areas. The UAVs would only be flown by operators with extensive experience (≤20 hours), who are pre-approved by the Expedition Leader. Several measures would be taken to prevent against loss of the UAV including painting the them a highly visible color; only flying when the wind is less than 25 knots; flying for only 15 minutes at a time to preserve battery life; having prop guards on propeller tips, a flotation device if operated over water, and a ''go home'' feature in case of loss of control link or low battery; having an observer on the lookout for wildlife, people, and other hazards; and ensuring that the separation between the operator and UAV does not exceed an operational range of 500 meters. The applicant is seeking a Waste Permit to cover any accidental releases that may result from flying a UAV.

Location: Antarctic Peninsula region.

Dates: November 1, 2016–March 31, 2017.

Permit Application: 2017–028

2. *Applicant:* James Drony, Vice President, Itinerary and Destination Planning, The World of Residensea II, Ltd., 1551 Sawgrass Corporate Parkway, Suite 200, Fort Lauderdale, FL 33323.

Activity for Which Permit is Requested: Waste management. The applicant wishes to fly small, battery operated, remotely controlled copters equipped with a cameras to take scenic photos and film of the Antarctic. The UAVs would not be flown over concentrations of birds or mammals or over Antarctic Specially Protected Areas. The UAVs would only be flown by operators with extensive experience (>20 hours), who are pre-approved by the Expedition Leader. Several measures would be taken to prevent against loss of the UAV including painting the them a highly visible color; only flying when the wind is less than 25 knots; flying for only 15 minutes at a time to preserve battery life; having prop guards on propeller tips, a flotation device if operated over water, and a ''go home'' feature in case of loss of control link or low battery; having an observer on the lookout for wildlife, people, and other hazards; and ensuring that the separation between the operator and UAV does not exceed an operational range of 500 meters. The applicant is seeking a Waste Permit to cover any accidental releases that may result from flying a UAV.

Location: Balleny Islands; Cape Adare; Cape Hallett; Terra Nova Bay; Ross Sea; Bay of Whales; Possession Islands.

Dates: January 15, 2017—March 31, 2017.

Permit Application: 2017–030

3. *Applicant:* John Durban, Marine Mammal and Turtle Division, NOAA, NMFS, Southwest Fisheries Science Center, 8901 La Jolla Shores Dr., La Jolla CA USA 92037.

Activity for Which Permit is Requested: Waste management. Short <20 minute flights will be conducted with a small (32'' across) unmanned hexacopter (APH–22) to collect photogrammetry images and blow samples from whales. Flights will only be conducted over open water off the coast of the Antarctic Peninsula, and all flights will be within line-of-site (<1600’, 500m) of the pilot who will operate the hexacopter using radio control from a Zodiac boat. The hexacopter will be hand deployed and caught by a ground station operator on the same boat. All flights will be in daylight hours, and only during good weather (winds and seas calm and visibility >1nm). The hexacopter is powered by a 4-cell Lithium Polumner (LiPo) battery, so there will be no exhaust discharges. Additional measures to mitigate loss of the aircraft include: Firmware modifcations, ''come home'' feature, and high-visibility buoyancy devices.

Location: Antarctic Peninsula region.

Dates: January 1, 2017–May 31, 2021.

Permit Application: 2017–031

4. *Applicant:* Ashley Perrin, Antarctic Ice Pilot, PO Box 623, Mill Valley, CA 94942.

Activity for Which Permit is Requested: Waste management. Applicant requests that the yacht M/Y CaryAli be allowed to operate in the Antarctic Treaty area, to cruise along the Antarctic Peninsula for tourism and sightseeing purposes. Applicant proposes to make select stops at non-protected area landings, for day-time sightseeing. Applicant intends to follow Appendix 2 for all food waste and garbage, and the boat has an onboard sewage treatment plant that meets MARPOL 6 standards. Contingency plans are in place in case of accidental releases to the environment.

Location: South Shetland Islands; Antarctic Peninsula region.

Dates: February 4–March 4, 2017.

Permit Application: 2017–035

5. *Applicant:*

Bob Simpson, Vice President, Expedition Cruising, Abercrombie & Kent USA LLC, 1411 Opus Place, Executive Towers West II, Suite #300, Downers Grove, Illinois 60515–1182.

Activity for Which Permit is Requested: Waste management. The applicant wishes to fly small, battery operated, remotely controlled copters equipped with a cameras to take scenic photos and film of the Antarctic. The UAVs would not be flown over concentrations of birds or mammals or over Antarctic Specially Protected Areas. The UAVs would only be flown by operators with extensive experience (≤20 hours), who are pre-approved by the Expedition Leader. Several measures would be taken to prevent against loss of the UAV including painting the them a highly visible color; only flying when the wind is less than 25 knots; flying for only 15 minutes at a time to preserve battery life; having prop guards on propeller tips, a flotation device if operated over water, and a ''go home'' feature in case of loss of control link or low battery; having an observer on the lookout for wildlife, people, and other hazards; and ensuring that the separation between the operator and UAV does not exceed an operational range of 500 meters. The applicant is seeking a Waste Permit to cover any accidental releases that may result from flying a UAV.

Location: Antarctic Peninsula region.

Dates: December 23–30, 2016.

Nadene G. Kennedy,

Polar Coordination Specialist, Division of Polar Programs.

[FR Doc. 2016–27789 Filed 11–17–16; 8:45 am]

BILLING CODE 7555–01–P

NATIONAL SCIENCE FOUNDATION

Notice of Permit Modification Received Under the Antarctic Conservation Act of 1978

AGENCY: National Science Foundation.

ACTION: Notice of permit modification request received and permit issued under the Antarctic Conservation Act of 1978, P.L. 95–541.

SUMMARY: The National Science Foundation (NSF) is required to publish a notice of requests to modify permits issued to conduct activities regulated and permits issued under the Antarctic Conservation Act of 1978. NSF has published regulations under the Antarctic Conservation Act at Title 45 Part 671 of the Code of Federal Regulations. This is the required notice of a requested permit modification and permit issued.

FOR FURTHER INFORMATION CONTACT: Nature McGinn, ACA Permit Officer, Division of Polar Programs, Rm. 755, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230. Or by email: *ACApermits@nsf.gov*.

SUPPLEMENTARY INFORMATION: The Foundation issued a permit (ACA 2016–020) to Laura K.O. Smith, Owner & Operator of Quixote Expeditions, LLC (Quixote), on December 23, 2015. The issued permit allows the applicant to operate the ''Ocean Tramp,'' a reinforced ketch rigged sailing yacht in the Antarctic Peninsula region. Activities to be conducted by Quixote include: Passenger landings, hiking, photography, wildlife viewing, and possible station visits.

Now the applicant proposes a permit modification to continue permitted activities, including minimization, mitigation, and monitoring of waste, for the 2016–2017 Antarctic season. The Environmental Officer has reviewed the modification request and has determined that the amendment is not a material change to the permit, and it will have a less than a minor or transitory impact.

December 23, 2015 to February 6, 2021

The permit modification was issued on November 9, 2016.

Nadene G. Kennedy,

Polar Coordination Specialist, Division of Polar Programs.

[FR Doc. 2016–27788 Filed 11–17–16; 8:45 am]

BILLING CODE 7555–01–P

NATIONAL SCIENCE FOUNDATION

Notice of Permit Modification Received Under the Antarctic Conservation Act of 1978

AGENCY: National Science Foundation.

ACTION: Notice of Permit Modification Request Received and Permit Issued under the Antarctic Conservation Act of 1978, Public Law 95–541.

SUMMARY: The National Science Foundation (NSF) is required to publish a notice of requests to modify permits issued to conduct activities regulated and permits issued under the Antarctic Conservation Act of 1978. NSF has published regulations under the Antarctic Conservation Act at Title 45 Part 671 of the Code of Federal Regulations. This is the required notice of a requested permit modification and permit issued.

FOR FURTHER INFORMATION CONTACT: Nature McGinn, ACA Permit Officer, Division of Polar Programs, Rm. 755, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230. Or by email: *ACApermits@nsf.gov*

SUPPLEMENTARY INFORMATION:

1. The Foundation issued a permit (ACA 2016–014) to Dwayne Stevens, Marine Operations Manager, Lindblad Expeditions on November 1, 2015. The issued permit allows the applicant to operate small, battery-operated, remotely controlled unmanned aerial vehicles (UAVs) equipped with cameras for educational, outreach, and commercial purposes.

Now the applicant proposes a permit modification to update the guidelines regarding the hiring and experience of UAV pilots and to include two additional pilot profiles. The Environmental Officer has reviewed the modification request and has determined that the amendment is not a material change to the permit, and it will have a less than a minor or transitory impact.

The permit modification was issued on November 10, 2016.

2. The Foundation issued a permit (ACA 2014–006) to Eric Strangeland, VP Operations, Quark Expeditions Inc. on September 18, 2013. The issued permit allows the applicant to conduct waste management activities associated with tourism activities including shore excursions, kayaking, camping, cross country skiing, ice climbing and mountaineering in the Antarctic Peninsula region.

A recent modification to this permit, dated November 7, 2014, permitted the applicant to allow for the conduct of waste management activities associated with downhill skiing, polar plunging, and stand-up paddleboarding.

Now the applicant proposes a permit modification to update their schedule of activities for 2016–17, clarify their kayaking and camping procedures, and change the named permit holder to Bill Davis, VP Operations, Quark Expeditions Inc. The Environmental Officer has reviewed the modification request and has determined that the amendment is not a material change to the permit, and it will have a less than a minor or transitory impact.

DATES: November 1, 2013 to March 31, 2017.

The permit modification was issued on November 10, 2016.

Nadene G. Kennedy,

Polar Coordination Specialist, Division of Polar Programs.

[FR Doc. 2016–27790 Filed 11–17–16; 8:45 am]

BILLING CODE 7555–01–P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards (ACRS) Meeting of the ACRS Subcommittee on Planning and Procedures; Notice of Meeting

The ACRS Subcommittee on Planning and Procedures will hold a meeting on November 30, 2016, Room T–2B3, 11545 Rockville Pike, Rockville, Maryland.

The meeting will be open to public attendance with the exception of a portion that may be closed pursuant to 5 U.S.C. 552b(c)(2) and (6) to discuss organizational and personnel matters that relate solely to the internal personnel rules and practices of the ACRS, and information the release of which would constitute a clearly unwarranted invasion of personal privacy.

The agenda for the subject meeting shall be as follows:

Wednesday, November 30, 2016—12:00 p.m. until 1:00 p.m.

The Subcommittee will discuss proposed ACRS activities and related matters. The Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the Full Committee.

Members of the public desiring to provide oral statements and/or written comments should notify the Designated Federal Official (DFO), Quynh Nguyen (Telephone 301–415–5844 or Email: *Quynh.Nguyen@nrc.gov*) five days prior to the meeting, if possible, so that arrangements can be made. Thirty-five hard copies of each presentation or handout should be provided to the DFO thirty minutes before the meeting. In addition, one electronic copy of each presentation should be emailed to the DFO one day before the meeting. If an electronic copy cannot be provided within this timeframe, presenters should provide the DFO with a CDcontaining each presentation at least thirty minutes before the meeting. Electronic recordings will be permitted only during those portions of the meeting that are open to the public.

Detailed procedures for the conduct of and participation in ACRS meetings were published in the **Federal Register** on October 21, 2015 (80 FR 63846).

Information regarding changes to the agenda, whether the meeting has been canceled or rescheduled, and the time allotted to present oral statements can be obtained by contacting the identified DFO. Moreover, in view of the possibility that the schedule for ACRS meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with the DFO if such rescheduling would result in a major inconvenience.

If attending this meeting, please enter through the One White Flint North building, 11555 Rockville Pike, Rockville, MD. After registering with security, please contact Mr. Theron Brown (240–888–9835) to be escorted to the meeting room.

Dated: November 8, 2016.

Mark L. Banks,

Chief, Technical Support Branch, Advisory Committee on Reactor Safeguards.

[FR Doc. 2016–27792 Filed 11–17–16; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards (ACRS), Meeting of the ACRS Subcommittee on Fukushima; Notice of Meeting

The ACRS Subcommittee on Fukushima will hold a meeting on November 30, 2016, Room T–2B1, 11545 Rockville Pike, Rockville, Maryland 20852.

The meeting will be open to public attendance.

The agenda for the subject meeting shall be as follows:

Wednesday, November 30, 2016–8:30 a.m. until 12:00 p.m.

The Subcommittee will receive information briefings on the National Academy of Sciences (NAS) Phase 2 study on lessons learned from the Fukushima nuclear accident for improving safety and security of U.S. Nuclear Plants. The Subcommittee will hear presentations by and hold discussions with the NAS Phase 2 study Chair and the NRC staff regarding this matter. The Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the Full Committee.

Members of the public desiring to provide oral statements and/or written comments should notify the Designated Federal Official (DFO), Christiana Lui (Telephone: 301–415–2492 or Email: *Christiana.Lui@nrc.gov*) five days prior to the meeting, if possible, so that appropriate arrangements can be made. Thirty-five hard copies of each presentation or handout should be provided to the DFO thirty minutes before the meeting. In addition, one electronic copy of each presentation should be emailed to the DFO one day before the meeting. If an electronic copy cannot be provided within this timeframe, presenters should provide the DFO with a CD containing each presentation at least thirty minutes before the meeting. Electronic recordings will be permitted only during those portions of the meeting that are open to the public. Detailed procedures for the conduct of and participation in ACRS meetings were published in the **Federal Register** on October 17, 2016 (81 FR 71543).

Detailed meeting agendas and meeting transcripts are available on the NRC Web site at *http://www.nrc.gov/reading-rm/doc-collections/acrs.* Information regarding topics to be discussed, changes to the agenda, whether the meeting has been canceled or rescheduled, and the time allotted to present oral statements can be obtained from the Web site cited above or by contacting the identified DFO. Moreover, in view of the possibility that the schedule for ACRS meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with these references if such rescheduling would result in a major inconvenience.

If attending this meeting, please enter through the One White Flint North building, 11555 Rockville Pike, Rockville, Maryland 20852. After registering with Security, please contact Mr. Theron Brown (Telephone: 240–888–9835) to be escorted to the meeting room.

Dated: November 8, 2016.

Mark Banks,

Chief, Technical Support Branch, Advisory Committee on Reactor Safeguards.

[FR Doc. 2016–27800 Filed 11–17–16; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards (ACRS) Meeting of the ACRS Subcommittee on APR 1400; Notice of Meeting

The ACRS Subcommittee on APR 1400 will hold a meeting on November 29, 2016, Room T–2B1, 11545 Rockville Pike, Rockville, Maryland.

The meeting will be open to public attendance with the exception of portions that may be closed to protect information that is proprietary pursuant to 5 U.S.C. 552b(c)(4). The agenda for the subject meeting shall be as follows:

Tuesday, November 29, 2016, 1:00 p.m. until 5:00 p.m.

The Subcommittee will review the APR 1400 Safety Evaluation Reports with open items—Chapter 8 (electrical power). The Subcommittee will hear presentations by and hold discussions with the NRC staff and Korea Hydro & Nuclear Power Company regarding this matter. The Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the Full Committee.

Members of the public desiring to provide oral statements and/or written comments should notify the Designated Federal Official (DFO), Christopher Brown (Telephone 301–415–7111 or Email: *Christopher.Brown@nrc.gov*) five days prior to the meeting, if possible, so that appropriate arrangements can be made. Thirty-five hard copies of each presentation or handout should be provided to the DFO thirty minutes before the meeting. In addition, oneelectronic copy of each presentation should be emailed to the DFO one day before the meeting. If an electronic copy cannot be provided within this timeframe, presenters should provide the DFO with a CD containing each presentation at least thirty minutes before the meeting. Electronic recordings will be permitted only during those portions of the meeting that are open to the public. Detailed procedures for the conduct of and participation in ACRS meetings were published in the **Federal Register** on October 17, 2016, (81 FR 71543).

Detailed meeting agendas and meeting transcripts are available on the NRC Web site at *http://www.nrc.gov/reading-rm/doc-collections/acrs.* Information regarding topics to be discussed, changes to the agenda, whether the meeting has been canceled or rescheduled, and the time allotted to present oral statements can be obtained from the Web site cited above or by contacting the identified DFO. Moreover, in view of the possibility that the schedule for ACRS meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with these references if such rescheduling would result in a major inconvenience.

If attending this meeting, please enter through the One White Flint North building, 11555 Rockville Pike, Rockville, MD. After registering with security, please contact Mr. Theron Brown (Telephone 240–888–9835) to be escorted to the meeting room.

Dated: November 8, 2016.

Mark L. Banks,

Chief, Technical Support Branch, Advisory Committee on Reactor Safeguards.

[FR Doc. 2016–27798 Filed 11–17–16; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

[NRC–2016–0001]

Sunshine Act Meeting Notice

DATES: November 21, 28, December 5, 12, 19, 26, 2016.

PLACE: Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

STATUS: Public and closed.

Week of November 21, 2016

There are no meetings scheduled for the week of November 21, 2016.

Week of November 28, 2016—Tentative

Tuesday, November 29, 2016

9:00 a.m. Briefing on Uranium Recovery (Public Meeting) (Contact: Samantha Crane: 301–415–6380).

This meeting will be webcast live at the Web address—*http://www.nrc.gov/.*

Week of December 5, 2016—Tentative

There are no meetings scheduled for the week of December 5, 2016.

Week of December 12, 2016—Tentative

Thursday, December 15, 2016

9:30 a.m. Briefing on Equal Employment Opportunity, Affirmative Employment, and Small Business (Public Meeting) (Contact: Larniece McKoy Moore: 301–415–1942).

This meeting will be webcast live at the Web address—*http://www.nrc.gov/.*

Week of December 19, 2016—Tentative

There are no meetings scheduled for the week of December 19, 2016.

Week of December 26, 2016—Tentative

There are no meetings scheduled for the week of December 26, 2016.

* * * * *

The schedule for Commission meetings is subject to change on short notice. For more information or to verify the status of meetings, contact Denise McGovern at 301–415–0981 or via email at *Denise.McGovern@nrc.gov.*

* * * * *

The NRC Commission Meeting Schedule can be found on the Internet at:*http://www.nrc.gov/public-involve/public-meetings/schedule.html.*

* * * * *

The NRC provides reasonable accommodation to individuals with disabilities where appropriate. If you need a reasonable accommodation to participate in these public meetings, or need this meeting notice or the transcript or other information from the public meetings in another format (*e.g.* braille, large print), please notify Kimberly Meyer, NRC Disability Program Manager, at 301–287–0739, by videophone at 240–428–3217, or by email at *Kimberly.Meyer-Chambers@nrc.gov.* Determinations on requests for reasonable accommodation will be made on a case-by-case basis.

* * * * *

Members of the public may request to receive this information electronically. If you would like to be added to the distribution, please contact the Nuclear Regulatory Commission, Office of the Secretary, Washington, DC 20555 (301–415–1969), or email *Brenda.Akstulewicz@nrc.gov* or *Patricia.Jimenez@nrc.gov.*

Dated: November 16, 2016.

Denise McGovern,

Policy Coordinator, Office of the Secretary.

[FR Doc. 2016–27999 Filed 11–16–16; 4:30 pm]

BILLING CODE 7590–01–P

PEACE CORPS

Information Collection Request; Submission for OMB Review

AGENCY: Peace Corps.

ACTION: 60-day notice and request for comments.

SUMMARY: The Peace Corps will be submitting the following information collection request to the Office of Management and Budget (OMB) for review and approval. The purpose of this notice is to allow 60 days for public comment in the **Federal Register** preceding submission to OMB. We are conducting this process in accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35).

DATES: Submit comments on or before January 17, 2017.

ADDRESSES: Comments should be addressed to Denora Miller, FOIA/Privacy Act Officer. Denora Miller can be contacted by telephone at 202–692–1236 or email at *pcfr@peacecorps.gov.* Email comments must be made in text and not in attachments.

FOR FURTHER INFORMATION CONTACT: Denora Miller at Peace Corps address above.

SUPPLEMENTARY INFORMATION:

Title: Peace Corps Report of Physical Examination (PC 1790S).

OMB Control Number: 0420–0549.

Type of Request: Revision.

Affected Public: Individuals/Physicians.

Respondents Obligation to Reply: Voluntary.

Respondents: Potential and current volunteers.

Burden to the Public:

a. Estimated number of respondents.	5,600/5,600.
b. Estimated average burden per response.	45 min/90 min.
c. Frequency of response	One time.
d. Annual reporting burden ..	4,200 hours/ 8,400 hours.

General description of collection: The information in this form will be used by the Peace Corps Office of Medical Services to determine whether an Applicant will, with reasonable accommodation, be able to perform the essential functions of a Peace Corps Volunteer assignment and complete a tour of service without unreasonable disruption due to health problems and, if so, to establish the level of medical and other support, if any, that may be required to reasonably accommodate the Applicant. The information in this form is also used as a baseline assessment for the Peace Corps Medical Officers overseas who are responsible for the Volunteer's medical care. Finally, the Peace Corps may use the information in this form as a point of reference in the event that, after completion of the Applicant's service as a Volunteer, he or she makes a worker's compensation claim under the Federal Employee Compensation Act (FECA).

Request for comment: Peace Corps invites comments on whether the proposed collections of information are necessary for proper performance of the functions of the Peace Corps, including whether the information will have practical use; the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the information to be collected; and, ways to minimize the burden of the collection of information on those who are to respond, including through the use of automated collection techniques, when appropriate, and other forms of information technology.

This notice is issued in Washington, DC on November 15, 2016.

Monique Harris,

FOIA/Privacy Act Officer, Management.

[FR Doc. 2016–27818 Filed 11–17–16; 8:45 am]

BILLING CODE 6051–01–P

POSTAL REGULATORY COMMISSION

[Docket Nos. MC2017–17 and CP2017–36; MC2017–18 and CP2017–37; MC2017–19 and CP2017–38; MC2017–20 and CP2017–39]

New Postal Products

AGENCY: Postal Regulatory Commission.

ACTION: Notice.

SUMMARY: The Commission is noticing recent Postal Service filings for the Commission's consideration concerning negotiated service agreements. This notice informs the public of the filing, invites public comment, and takes other administrative steps.

DATES: *Comments are due:* November 22, 2016 (Comment due date applies to all Docket Nos. listed above)

ADDRESSES: Submit comments electronically via the Commission's Filing Online system at *http://www.prc.gov.* Those who cannot submit comments electronically should contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section by telephone for advice on filing alternatives.

FOR FURTHER INFORMATION CONTACT: David A. Trissell, General Counsel, at 202–789–6820.

SUPPLEMENTARY INFORMATION:

Table of Contents

I. Introduction

The Commission gives notice that the Postal Service filed request(s) for the Commission to consider matters related to negotiated service agreement(s). The request(s) may propose the addition or removal of a negotiated service agreement from the market dominant or the competitive product list, or the modification of an existing product currently appearing on the market dominant or the competitive product list.

Section II identifies the docket number(s) associated with each Postal Service request, the title of each Postal Service request, the request's acceptance date, and the authority cited by the Postal Service for each request. For each request, the Commission appoints an officer of the Commission to represent the interests of the general public in the proceeding, pursuant to 39 U.S.C. 505 (Public Representative). Section II also establishes comment deadline(s) pertaining to each request.

The public portions of the Postal Service's request(s) can be accessed via the Commission's Web site (*http://www.prc.gov*). Non-public portions of the Postal Service's request(s), if any, can be accessed through compliance with the requirements of 39 CFR 3007.40.

The Commission invites comments on whether the Postal Service's request(s) in the captioned docket(s) are consistent with the policies of title 39. For request(s) that the Postal Service states concern market dominant product(s), applicable statutory and regulatory requirements include 39 U.S.C. 3622, 39 U.S.C. 3642, 39 CFR part 3010, and 39 CFR part 3020, subpart B. For request(s) that the Postal Service states concern competitive product(s), applicable statutory and regulatory requirements include 39 U.S.C. 3632, 39 U.S.C. 3633, 39 U.S.C. 3642, 39 CFR part 3015, and 39 CFR part 3020, subpart B. Comment deadline(s) for each request appear in section II.

II. Docketed Proceeding(s)

1. *Docket No(s).:* MC2017–17 and CP2017–36; *Filing Title:* Request of the United States Postal Service to Add Priority Mail Contract 256 to Competitive Product List and Notice of Filing (Under Seal) of Unredacted Governors' Decision, Contract, and Supporting Data; *Filing Acceptance Date:* November 14, 2016; *Filing Authority:* 39 U.S.C. 3642 and 39 CFR 3020.30 *et seq.; Public Representative:* Kenneth R. Moeller; *Comments Due:* November 22, 2016.

2. *Docket No(s).:* MC2017–18 and CP2017–37; *Filing Title:* Request of the United States Postal Service to Add Priority Mail Contract 257 to Competitive Product List and Notice of Filing (Under Seal) of Unredacted Governors' Decision, Contract, and Supporting Data; *Filing Acceptance Date:* November 14, 2016; *Filing Authority:* 39 U.S.C. 3642 and 39 CFR 3020.30 *et seq.; Public Representative:* Kenneth R. Moeller; *Comments Due:* November 22, 2016.

3. *Docket No(s).:* MC2017–19 and CP2017–38; *Filing Title:* Request of the United States Postal Service to Add Priority Mail Contract 258 to Competitive Product List and Notice of Filing (Under Seal) of Unredacted Governors' Decision, Contract, and Supporting Data; *Filing Acceptance Date:* November 14, 2016; *Filing Authority:* 39 U.S.C. 3642 and 39 CFR 3020.30 *et seq.; Public Representative:* Katalin K. Clendenin; *Comments Due:* November 22, 2016.

4. *Docket No(s).:* MC2017–20 and CP2017–39; *Filing Title:* Request of the United States Postal Service to Add First-Class Package Service Contract 66 to Competitive Product List and Notice of Filing (Under Seal) of Unredacted Governors' Decision, Contract, and Supporting Data; *Filing Acceptance Date:* November 14, 2016; *Filing Authority:* 39 U.S.C. 3642 and 39 CFR 3020.30 *et seq.; Public Representative:* Katalin K. Clendenin; *Comments Due:* November 22, 2016.

This notice will be published in the **Federal Register**.

Stacy L. Ruble,

Secretary.

[FR Doc. 2016–27797 Filed 11–17–16; 8:45 am]

BILLING CODE 7710–FW–P

POSTAL REGULATORY COMMISSION

[Docket No. CP2017–35]

New Postal Product

AGENCY: Postal Regulatory Commission.

ACTION: Notice.

SUMMARY: The Commission is noticing a recent Postal Service filing for the Commission's consideration concerning a negotiated service agreement. This notice informs the public of the filing, invites public comment, and takes other administrative steps.

DATES: *Comments are due:* November 21, 2016

ADDRESSES: Submit comments electronically via the Commission's Filing Online system at *http://www.prc.gov.* Those who cannot submit comments electronically should contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section by telephone for advice on filing alternatives.

FOR FURTHER INFORMATION CONTACT: David A. Trissell, General Counsel, at 202–789–6820.

SUPPLEMENTARY INFORMATION:

Table of Contents

II. Docketed Proceeding(s)

I. Introduction

The Commission gives notice that the Postal Service filed request(s) for the Commission to consider matters related to negotiated service agreement(s). The request(s) may propose the addition or removal of a negotiated service agreement from the market dominant or the competitive product list, or the modification of an existing product currently appearing on the market dominant or the competitive product list.

Section II identifies the docket number(s) associated with each Postal Service request, the title of each Postal Service request, the request's acceptance date, and the authority cited by the Postal Service for each request. For each request, the Commission appoints an officer of the Commission to represent the interests of the general public in the proceeding, pursuant to 39 U.S.C. 505 (Public Representative). Section II also establishes comment deadline(s) pertaining to each request.

The public portions of the Postal Service's request(s) can be accessed via the Commission's Web site (*http://www.prc.gov*). Non-public portions of the Postal Service's request(s), if any, can be accessed through compliance with the requirements of 39 CFR 3007.40.

The Commission invites comments on whether the Postal Service's request(s) in the captioned docket(s) are consistent with the policies of title 39. For request(s) that the Postal Service states concern market dominant product(s), applicable statutory and regulatory requirements include 39 U.S.C. 3622, 39 U.S.C. 3642, 39 CFR part 3010, and 39 CFR part 3020, subpart B. For request(s) that the Postal Service states concern competitive product(s), applicable statutory and regulatory requirements include 39 U.S.C. 3632, 39 U.S.C. 3633, 39 U.S.C. 3642, 39 CFR part 3015, and 39 CFR part 3020, subpart B. Comment deadline(s) for each request appear in section II.

II. Docketed Proceeding(s)

1. *Docket No(s).:* CP2017–35; *Filing Title:* Notice of United States Postal Service of Filing a Functionally Equivalent Global Expedited Package Services 7 Negotiated Service Agreement and Application for Non-Public Treatment of Materials Filed Under Seal; *Filing Acceptance Date:* November 10, 2016; *Filing Authority:* 39 CFR 3015.5; *Public Representative:* Curtis E. Kidd; *Comments Due:* November 21, 2016.

This notice will be published in the **Federal Register**.

Stacy L. Ruble,

Secretary.

[FR Doc. 2016–27709 Filed 11–17–16; 8:45 am]

BILLING CODE 7710–FW–P

SECURITIES AND EXCHANGE COMMISSION

Order Approving Public Company Accounting Oversight Board Supplemental Budget for Calendar Year 2016

Securities Act of 1933, Release No. 10255/November 14, 2016
Securities Exchange Act of 1934, Release No. 79303/November 14, 2016

The Sarbanes-Oxley Act of 2002, as amended (the ''Sarbanes-Oxley Act''),[1] established the Public Company Accounting Oversight Board (''PCAOB'') to oversee the audits of companies that are subject to the securities laws, and related matters, in order to protect the interests of investors and further the public interest in the preparation of informative, accurate and independent audit reports. Section 982 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the ''Dodd-Frank Act'') [2] amended the Sarbanes-Oxley Act to provide the PCAOB with explicit authority to oversee auditors of broker-dealers registered with the Commission. The PCAOB is to accomplish these goals through registration of public accounting firms and standard setting, inspection, and disciplinary programs. The PCAOB is subject to the comprehensive oversight of the Securities and Exchange Commission (the ''Commission'').

Section 109(b) of the Sarbanes-Oxley Act directs the PCAOB to establish a budget for each fiscal year in accordance with the PCAOB's internal procedures, subject to approval by the Commission. Rule 190 of Regulation P facilitates the Commission's review and approval of PCAOB budgets and annual accounting support fees.[3] This budget rule provides, among other things, limits on the PCAOB's ability to incur expenses and obligations except as provided in the approved budget as well as the procedures for the submission of supplemental budgets when it is forecasted that the limits to incur expenses and obligations will be exceeded in a given year. The Commission previously determined that the PCAOB's 2016 budget of $257.7 million was consistent with Section 109 of the Sarbanes-Oxley Act and accordingly, it approved the PCAOB's 2016 Budget on March 14, 2016.[4]

During 2016, the PCAOB determined that it had under budgeted for inspections related travel for the year, and, on October 14, 2016 it submitted a supplemental budget request to the Commission. The PCAOB's 2016 supplemental budget requests Commission approval to transfer $1 million of FY 2016 funding from certain program areas where the PCAOB has a 2016 underspend to the Inspections program area to cover the projected overspend in inspections related travel costs. The supplemental budget does not request an increase to the PCAOB's previously approved 2016 Budget of $257.7 million.

The Commission has determined that the PCAOB's 2016 supplemental budget is consistent with Section 109 of the Sarbanes-Oxley Act. Accordingly,

It is ordered, pursuant to Section 109 of the Sarbanes-Oxley Act, that the PCAOB supplemental budget for calendar year 2016 is approved.

By the Commission.

Brent J. Fields,

Secretary.

[FR Doc. 2016–27708 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

[1] 15 U.S.C. 7201 *et seq.*

[2] Public Law 111–203, 124 Stat. 1376 (2010).

[3] 17 CFR 202.190.

[4] Release No. 33–10054 (March 14, 2016).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79310; File No. SR–NYSEArca–2016–142]

Self-Regulatory Organizations; NYSE Arca, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Amending the Fees for NYSE Arca BBO and NYSE Arca Trades To Lower the Enterprise Fee

November 14, 2016.

Pursuant to Section 19(b)(1) [1] of the Securities Exchange Act of 1934 (the ''Act'') [2] and Rule 19b–4 thereunder,[3] notice is hereby given that, on November 1, 2016, NYSE Arca, Inc. (the ''Exchange'' or ''NYSE Arca'') filed with the Securities and Exchange Commission (the ''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to

[1] 15 U.S.C. 78s(b)(1).

[2] 15 U.S.C. 78a.

[3] 17 CFR 240.19b–4.

solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of the Substance of the Proposed Rule Change

The Exchange proposes to amend the fees for NYSE Arca BBO and NYSE Arca Trades to lower the Enterprise Fee. The proposed rule change is available on the Exchange's Web site at *www.nyse.com,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of those statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend the fees for NYSE Arca BBO and NYSE Arca Trades market data products,[4] as set forth on the NYSE Arca Equities Proprietary Market Data Fee Schedule (''Fee Schedule''). Specifically, the Exchange proposes to lower the Enterprise Fee. The Exchange proposes to make the fee change effective November 1, 2016.

The Exchange currently charges an enterprise fee of $170,000 per month for an unlimited number of professional and non-professional users for each of NYSE Arca BBO and NYSE Arca Trades.[5] A single Enterprise Fee applies for clients receiving both NYSE Arca BBO and NYSE Arca Trades.[6] The Exchange proposes to lower the enterprise fee to $34,500 per month.

As an example, under the current fee structure for per user fees, if a firm had 40,000 professional users who each received NYSE Arca Trades at $4 per month and NYSE Arca BBO at $4 per month, without the Enterprise Fee, the firm would be subject to $320,000 per month in professional user fees. Under the current pricing structure, the charge would be capped at $170,000 and effective November 1, 2016 it would be capped at $34,500.

Under the proposed enterprise fee, the firm would pay a flat fee of $34,500 for an unlimited number of professional and non-professional users for both products. As is the case currently, a data recipient that pays the enterprise fee would not have to report the number of such users on a monthly basis.[7] However, every six months, a data recipient must provide the Exchange with a count of the total number of natural person users of each product, including both professional and non-professional users.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the provisions of Section 6 of the Act,[8] in general, and Sections 6(b)(4) and 6(b)(5) of the Act,[9] in particular, in that it provides an equitable allocation of reasonable fees among users and recipients of the data and is not designed to permit unfair discrimination among customers, issuers, and brokers.

The proposed fee change is also equitable and not unfairly discriminatory because it would apply to all data recipients that choose to subscribe to NYSE Arca BBO and NYSE Arca Trades.

The proposed enterprise fees for NYSE Arca BBO and NYSE Arca Trades are reasonable because they could result in a fee reduction for data recipients with a large number of professional and non-professional users, as described in the example above. If a data recipient has a smaller number of professional users of NYSE Arca BBO and/or NYSE Arca Trades, then it may continue to use the per user fee structure. By reducing prices for data recipient with a large number of professional and non-professional users, the Exchange believes that more data recipients may choose to offer NYSE Arca BBO and NYSE Arca Trades, thereby expanding the distribution of this market data for the benefit of investors. The Exchange also believes that offering an enterprise fee expands the range of options for offering NYSE Arca BBO and NYSE Arca Trades and allows data recipients greater choice in selecting the most appropriate level of data and fees for the professional and non-professional users they are servicing.

The Exchange notes that NYSE Arca BBO and NYSE Arca Trades are entirely optional. The Exchange is not required to make NYSE Arca BBO and NYSE Arca Trades available or to offer any specific pricing alternatives to any customers, nor is any firm required to purchase NYSE Arca BBO and NYSE Arca Trades. Firms that do purchase NYSE Arca BBO and NYSE Arca Trades do so for the primary goals of using them to increase revenues, reduce expenses, and in some instances compete directly with the Exchange (including for order flow); those firms are able to determine for themselves whether NYSE Arca BBO and NYSE Arca Trades or any other similar products are attractively priced or not.[10]

Firms that do not wish to purchase NYSE Arca BBO and NYSE Arca Trades have a variety of alternative market data products from which to choose,[11] or if NYSE Arca BBO and NYSE Arca Trades do not provide sufficient value to firms as offered based on the uses those firms have or planned to make of it, such firms may simply choose to conduct their business operations in ways that do not use NYSE Arca BBO and NYSE Arca Trades or use them at different levels or in different configurations. The Exchange notes that broker-dealers are not required to purchase proprietary market data to comply with their best execution obligations.[12]

The decision of the United States Court of Appeals for the District of Columbia Circuit in *NetCoalition* v. *SEC,* 615 F.3d 525 (D.C. Cir. 2010), upheld reliance by the Securities and Exchange Commission (''Commission'') upon the existence of competitive

[4] *See* Securities Exchange Act Release Nos. 59308 (January 28, 2009), 74 FR 5955 (February 3, 2009) (SR–NYSEArca–2009–05) (notice—NYSE Arca Trades); 59598 (March 18, 2009), 74 FR 12919 (March 25, 2009) (SR–NYSEArca–2009–05) (approval order—NYSE Arca Trades); 61937 (April 16, 2010), 78 [sic] FR 21378 (April 23, 2010) (SR–NYSEArca–2010–23) (notice—NYSE Arca BBO); and 62188 (May 27, 2010), 75 FR 31484 (June 3, 2010) (SR–NYSEArca–2010–23) (approval order—NYSE Arca BBO).

[5] *See* Securities Exchange Act Release No. 76937 (January 20, 2016), 81 FR 4353 (January 26, 2016) (SR–NYSEArca–2016–09).

[6] *See* Securities Exchange Act Release No. 70213 (August 15, 2013), 78 FR 51796 (August 21, 2013) (SR–NYSEArca–2013–81).

[7] Professional users currently are subject to a per display device count. *See* Securities Act [sic] Release No. 73998 (January 6, 2015), 80 FR 1549 (January 12, 2015) (SR–NYSEArca–2014–148).

[8] 15 U.S.C. 78f(b).

[9] 15 U.S.C. 78f(b)(4), (5).

[10] *See, e.g.,* Proposing Release on Regulation of NMS Stock Alternative Trading Systems, Securities Exchange Act Release No. 76474 (Nov. 18, 2015) (File No. S7–23–15). *See also,* ''Brokers Warned Not to Steer Clients' Stock Trades Into Slow Lane,'' Bloomberg Business, December 14, 2015 (Sigma X dark pool to use direct exchange feeds as the primary source of price data).

[11] *See* NASDAQ Rule 7047 (Nasdaq Basic) and Bats Rule 11.22 (Bats TOP and Last Sale).

[12] *See* FINRA Regulatory Notice 15–46, ''Best Execution,'' November 2015.

market mechanisms to set reasonable and equitably allocated fees for proprietary market data:

> In fact, the legislative history indicates that the Congress intended that the market system 'evolve through the interplay of competitive forces as unnecessary regulatory restrictions are removed' and that the SEC wield its regulatory power 'in those situations where competition may not be sufficient,' such as in the creation of a 'consolidated transactional reporting system.'

Id. at 535 (quoting H.R. Rep. No. 94–229 at 92 (1975), *as reprinted in* 1975 U.S.C.C.A.N. 323). The court agreed with the Commission's conclusion that ''Congress intended that 'competitive forces should dictate the services and practices that constitute the U.S. national market system for trading equity securities.' '' [13]

As explained below in the Exchange's Statement on Burden on Competition, the Exchange believes that there is substantial evidence of competition in the marketplace for proprietary market data and that the Commission can rely upon such evidence in concluding that the fees established in this filing are the product of competition and therefore satisfy the relevant statutory standards. In addition, the existence of alternatives to these data products, such as consolidated data and proprietary data from other sources, as described below, further ensures that the Exchange cannot set unreasonable fees, or fees that are unreasonably discriminatory, when vendors and subscribers can select such alternatives.

As the *NetCoalition* decision noted, the Commission is not required to undertake a cost-of-service or ratemaking approach. The Exchange believes that, even if it were possible as a matter of economic theory, cost-based pricing for proprietary market data would be so complicated that it could not be done practically or offer any significant benefits.[14]

In addition, the Exchange believes that the proposed fees are reasonable when compared to fees for comparable products offered by at least one other exchange. For example, Bats BZX Exchange (''BZX'') charges an enterprise fee of $15,000 per month for each of BZX Top and BZX Last Sale, which includes best bid and offer and last sale data, respectively.[15] While the Exchange is proposing enterprise fees that would be higher than the fees currently charged by BZX, the Exchange believes the proposed fees, which would be lower than current fees, are appropriate and would be beneficial to firms with a large number of users.

For these reasons, the Exchange believes that the proposed fees are reasonable, equitable, and not unfairly discriminatory.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. An exchange's ability to price its proprietary market data feed products is constrained by actual competition for the sale of proprietary market data products, the joint product nature of exchange platforms, and the existence of alternatives to the Exchange's proprietary data.

The Existence of Actual Competition

The market for proprietary data products is currently competitive and inherently contestable because there is fierce competition for the inputs necessary for the creation of proprietary data and strict pricing discipline for the proprietary products themselves. Numerous exchanges compete with one another for listings and order flow and sales of market data itself, providing ample opportunities for entrepreneurs who wish to compete in any or all of those areas, including producing and distributing their own market data. Proprietary data products are produced and distributed by each individual exchange, as well as other entities, in a vigorously competitive market. Indeed, the U.S. Department of Justice (''DOJ'') (the primary antitrust regulator) has expressly acknowledged the aggressive actual competition among exchanges, including for the sale of proprietary market data. In 2011, the DOJ stated that exchanges ''compete head to head to offer real-time equity data products. These data products include the best bid and offer of every exchange and information on each equity trade, including the last sale.'' [16]

Moreover, competitive markets for listings, order flow, executions, and transaction reports provide pricing discipline for the inputs of proprietary data products and therefore constrain markets from overpricing proprietary market data. Broker-dealers send their order flow and transaction reports to multiple venues, rather than providing them all to a single venue, which in turn reinforces this competitive constraint. As a 2010 Commission Concept Release noted, the ''current market structure can be described as dispersed and complex'' with ''trading volume . . . dispersed among many highly automated trading centers that compete for order flow in the same stocks'' and ''trading centers offer[ing] a wide range of services that are designed to attract different types of market participants with varying trading needs.'' [17] More recently, SEC Chair Mary Jo White has noted that competition for order flow in exchange-listed equities is ''intense'' and divided among many trading venues, including exchanges, more than 40 alternative trading systems, and more than 250 broker-dealers.[18]

---

[13] *NetCoalition,* 615 F.3d at 535.

[14] The Exchange believes that cost-based pricing would be impractical because it would create enormous administrative burdens for all parties and the Commission to cost-regulate a large number of participants and standardize and analyze extraordinary amounts of information, accounts, and reports. In addition, and as described below, it is impossible to regulate market data prices in isolation from prices charged by markets for other services that are joint products. Cost-based rate regulation would also lead to litigation and may distort incentives, including those to minimize costs and to innovate, leading to further waste. Under cost-based pricing, the Commission would be burdened with determining a fair rate of return, and the industry could experience frequent rate increases based on escalating expense levels. Even in industries historically subject to utility regulation, cost-based ratemaking has been discredited. As such, the Exchange believes that cost-based ratemaking would be inappropriate for proprietary market data and inconsistent with Congress's direction that the Commission use its authority to foster the development of the national market system, and that market forces will continue to provide appropriate pricing discipline. *See* Appendix C to NYSE's comments to the Commission's 2000 Concept Release on the Regulation of Market Information Fees and Revenues, which can be found on the Commission's Web site at *http://www.sec.gov/rules/concept/s72899/buck1.htm.*

[15] *See* Market Data Fees at *https://batstrading.com/support/fee_schedule/bzx/.*

[16] Press Release, U.S. Department of Justice, Assistant Attorney General Christine Varney Holds Conference Call Regarding NASDAQ OMX Group Inc. and IntercontinentalExchange Inc. Abandoning Their Bid for NYSE Euronext (May 16, 2011), *available at http://www.justice.gov/iso/opa/atr/speeches/2011/at-speech-110516.html; see also* Complaint in U.S. v. Deutsche Borse AG and NYSE Euronext, Case No. 11–cv–2280 (DC Dist.) ¶ 24 (''NYSE and Direct Edge compete head-to-head . . . in the provision of real-time proprietary equity data products.'').

[17] Concept Release on Equity Market Structure, Securities Exchange Act Release No. 61358 (Jan. 14, 2010), 75 FR 3594 (Jan. 21, 2010) (File No. S7–02–10). This Concept Release included data from the third quarter of 2009 showing that no market center traded more than 20% of the volume of listed stocks, further evidencing the dispersal of and competition for trading activity. *Id.* at 3598. Data available on ArcaVision show that from June 30, 2013 to June 30, 2014, no exchange traded more than 12% of the volume of listed stocks by either trade or dollar volume, further evidencing the continued dispersal of and fierce competition for trading activity. *See https://www.arcavision.com/Arcavision/arcalogin.jsp.*

[18] Mary Jo White, Enhancing Our Equity Market Structure, Sandler O'Neill & Partners, L.P. Global Exchange and Brokerage Conference (June 5, 2014) (available on the Commission Web site), citing Tuttle, Laura, 2014, ''OTC Trading: Description of

If an exchange succeeds in competing for quotations, order flow, and trade executions, then it earns trading revenues and increases the value of its proprietary market data products because they will contain greater quote and trade information. Conversely, if an exchange is less successful in attracting quotes, order flow, and trade executions, then its market data products may be less desirable to customers in light of the diminished content and data products offered by competing venues may become more attractive. Thus, competition for quotations, order flow, and trade executions puts significant pressure on an exchange to maintain both execution and data fees at reasonable levels.

In addition, in the case of products that are also redistributed through market data vendors, such as Bloomberg and Thompson Reuters, the vendors themselves provide additional price discipline for proprietary data products because they control the primary means of access to certain end users. These vendors impose price discipline based upon their business models. For example, vendors that assess a surcharge on data they sell are able to refuse to offer proprietary products that their end users do not or will not purchase in sufficient numbers. Vendors will not elect to make available NYSE Arca BBO or NYSE Arca Trades unless their customers request it, and customers will not elect to pay the proposed fees unless NYSE Arca BBO and NYSE Arca Trades can provide value by sufficiently increasing revenues or reducing costs in the customer's business in a manner that will offset the fees. All of these factors operate as constraints on pricing proprietary data products.

Joint Product Nature of Exchange Platform

Transaction execution and proprietary data products are complementary in that market data is both an input and a byproduct of the execution service. In fact, proprietary market data and trade executions are a paradigmatic example of joint products with joint costs. The decision of whether and on which platform to post an order will depend on the attributes of the platforms where the order can be posted, including the execution fees, data availability and quality, and price and distribution of data products. Without a platform to post quotations, receive orders, and execute trades, exchange data products would not exist.

Non-ATS OTC Trading in National Market System Stocks,'' at 7–8.

The costs of producing market data include not only the costs of the data distribution infrastructure, but also the costs of designing, maintaining, and operating the exchange's platform for posting quotes, accepting orders, and executing transactions and the cost of regulating the exchange to ensure its fair operation and maintain investor confidence. The total return that a trading platform earns reflects the revenues it receives from both products and the joint costs it incurs.

Moreover, an exchange's broker-dealer customers generally view the costs of transaction executions and market data as a unified cost of doing business with the exchange. A broker-dealer will only choose to direct orders to an exchange if the revenue from the transaction exceeds its cost, including the cost of any market data that the broker-dealer chooses to buy in support of its order routing and trading decisions. If the costs of the transaction are not offset by its value, then the broker-dealer may choose instead not to purchase the product and trade away from that exchange.

Other market participants have noted that proprietary market data and trade executions are joint products of a joint platform and have common costs.[19] The Exchange agrees with and adopts those discussions and the arguments therein. The Exchange also notes that the economics literature confirms that there is no way to allocate common costs between joint products that would shed any light on competitive or efficient pricing.[20]

[19] *See* Securities Exchange Act Release No. 72153 (May 12, 2014), 79 FR 28575, 28578 n.15 (May 16, 2014) (SR–NASDAQ–2014–045) (''[A]ll of the exchange's costs are incurred for the unified purposes of attracting order flow, executing and/or routing orders, and generating and selling data about market activity. The total return that an exchange earns reflects the revenues it receives from the joint products and the total costs of the joint products.''). *See also* Securities Exchange Act Release No. 62907 (Sept. 14, 2010), 75 FR 57314, 57317 (Sept. 20, 2010) (SR–NASDAQ–2010–110), and Securities Exchange Act Release No. 62908 (Sept. 14, 2010), 75 FR 57321, 57324 (Sept. 20, 2010) (SR–NASDAQ–2010–111).

[20] *See generally* Mark Hirschey, Fundamentals of Managerial Economics, at 600 (2009) (''It is important to note, however, that although it is possible to determine the separate marginal costs of goods produced in variable proportions, it is impossible to determine their individual average costs. This is because common costs are expenses necessary for manufacture of a joint product. Common costs of production—raw material and equipment costs, management expenses, and other overhead—cannot be allocated to each individual by-product on any economically sound basis.. . . Any allocation of common costs is wrong and arbitrary.''). This is not new economic theory. *See, e.g.,* F. W. Taussig, ''A Contribution to the Theory of Railway Rates,'' *Quarterly Journal of Economics* V(4) 438, 465 (July 1891) (''Yet, surely, the division is purely arbitrary. These items of cost, in fact, are jointly incurred for both sorts of traffic; and I cannot share the hope entertained by the statistician of the Commission, Professor Henry C. Adams, that we shall ever reach a mode of apportionment that will lead to trustworthy results.'').

Analyzing the cost of market data product production and distribution in isolation from the cost of all of the inputs supporting the creation of market data and market data products will inevitably underestimate the cost of the data and data products because it is impossible to obtain the data inputs to create market data products without a fast, technologically robust, and well-regulated execution system, and system and regulatory costs affect the price of both obtaining the market data itself and creating and distributing market data products. It would be equally misleading, however, to attribute all of an exchange's costs to the market data portion of an exchange's joint products. Rather, all of an exchange's costs are incurred for the unified purposes of attracting order flow, executing and/or routing orders, and generating and selling data about market activity. The total return that an exchange earns reflects the revenues it receives from the joint products and the total costs of the joint products.

As noted above, the level of competition and contestability in the market is evident in the numerous alternative venues that compete for order flow, including 13 equities self-regulatory organization (''SRO'') markets, as well as various forms of alternative trading systems (''ATSs''), including dark pools and electronic communication networks (''ECNs''), and internalizing broker-dealers. SRO markets compete to attract order flow and produce transaction reports via trade executions, and two FINRA-regulated Trade Reporting Facilities compete to attract transaction reports from the non-SRO venues.

Competition among trading platforms can be expected to constrain the aggregate return that each platform earns from the sale of its joint products, but different trading platforms may choose from a range of possible, and equally reasonable, pricing strategies as the means of recovering total costs. For example, some platforms may choose to pay rebates to attract orders, charge relatively low prices for market data products (or provide market data products free of charge), and charge relatively high prices for accessing posted liquidity. Other platforms may choose a strategy of paying lower rebates (or no rebates) to attract orders, setting relatively high prices for market data products, and setting relatively low prices for accessing posted liquidity. For example, Bats Global Markets (''Bats'') and Direct Edge, which previously operated as ATSs and obtained exchange status in 2008 and 2010, respectively, provided certain market data at no charge on their Web sites in order to attract more order flow, and used revenue rebates from resulting additional executions to maintain low execution charges for their users.[21] In this environment, there is no economic basis for regulating maximum prices for one of the joint products in an industry in which suppliers face competitive constraints with regard to the joint offering.

Existence of Alternatives

The large number of SROs, ATSs, and internalizing broker-dealers that currently produce proprietary data or are currently capable of producing it provides further pricing discipline for proprietary data products. Each SRO, ATS, and broker-dealer is currently permitted to produce and sell proprietary data products, and many currently do, including but not limited to the Exchange, New York Stock Exchange LLC, NYSE MKT LLC, NASDAQ, Bats, and Direct Edge.

The fact that proprietary data from ATSs, internalizing broker-dealers, and vendors can bypass SROs is significant in two respects. First, non-SROs can compete directly with SROs for the production and sale of proprietary data products. By way of example, Bats and NYSE Arca both published proprietary data on the Internet before registering as exchanges. Second, because a single order or transaction report can appear in an SRO proprietary product, a non-SRO proprietary product, or both, the amount of data available via proprietary products is greater in size than the actual number of orders and transaction reports that exist in the marketplace. Indeed, in the case of NYSE Arca BBO and NYSE Arca Trades, the data provided through these products appears both in (i) real-time core data products offered by the Securities Information Processors (SIPs) for a fee, and (ii) free SIP data products with a 15-minute time delay, and finds a close substitute in similar products of competing venues.[22] Because market data users can find suitable substitutes for most proprietary market data products, a market that overprices its market data products stands a high risk that users may substitute another source of market data information for its own.

Those competitive pressures imposed by available alternatives are evident in the Exchange's proposed pricing.

In addition to the competition and price discipline described above, the market for proprietary data products is also highly contestable because market entry is rapid and inexpensive. The history of electronic trading is replete with examples of entrants that swiftly grew into some of the largest electronic trading platforms and proprietary data producers: Archipelago, Bloomberg Tradebook, Island, RediBook, Attain, TrackECN, BATS Trading and Direct Edge. A proliferation of dark pools and other ATSs operate profitably with fragmentary share of consolidated market volume.

In determining the proposed changes to the fees for the NYSE Arca BBO and NYSE Arca Trades, the Exchange considered the competitiveness of the market for proprietary data and all of the implications of that competition. The Exchange believes that it has considered all relevant factors and has not considered irrelevant factors in order to establish fair, reasonable, and not unreasonably discriminatory fees and an equitable allocation of fees among all users. The existence of numerous alternatives to the Exchange's products, including proprietary data from other sources, ensures that the Exchange cannot set unreasonable fees, or fees that are unreasonably discriminatory, when vendors and subscribers can elect these alternatives or choose not to purchase a specific proprietary data product if the attendant fees are not justified by the returns that any particular vendor or data recipient would achieve through the purchase.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change is effective upon filing pursuant to Section 19(b)(3)(A)[23] of the Act and subparagraph (f)(2) of Rule 19b–4[24] thereunder, because it establishes a due, fee, or other charge imposed by the Exchange.

At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under Section 19(b)(2)(B)[25] of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–NYSEArca–2016–142 on the subject line.

Paper Comments

- Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–NYSEArca–2016–142. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549 on official business days between the hours of

[21] This is simply a securities market-specific example of the well-established principle that in certain circumstances more sales at lower margins can be more profitable than fewer sales at higher margins; this example is additional evidence that market data is an inherent part of a market's joint platform.

[22] *See supra* note 15.

[23] 15 U.S.C. 78s(b)(3)(A).

[24] 17 CFR 240.19b–4(f)(2).

[25] 15 U.S.C. 78s(b)(2)(B).

10:00 a.m. and 3:00 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NYSEArca–2016–142, and should be submitted on or before December 9, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[26]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27748 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

[26] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

Proposed Collection; Comment Request

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of Investor Education and Advocacy, Washington, DC 20549–0213.

Extension:

Rule 12d3–1, SEC File No. 270–504, OMB Control No. 3235–0561

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the Securities and Exchange Commission (the ''Commission'') is soliciting comments on the collections of information summarized below. The Commission plans to submit these existing collections of information to the Office of Management and Budget (''OMB'') for extension and approval.

Section 12(d)(3) of the Investment Company Act of 1940 (15 U.S.C. 80a) generally prohibits registered investment companies (''funds''), and companies controlled by funds, from purchasing securities issued by a registered investment adviser, broker, dealer, or underwriter (''securities-related businesses''). Rule 12d3–1 (''Exemption of acquisitions of securities issued by persons engaged in securities related businesses'' (17 CFR 270.12d3–1)) permits a fund to invest up to five percent of its assets in securities of an issuer deriving more than fifteen percent of its gross revenues from securities-related businesses, but a fund may not rely on rule 12d3–1 to acquire securities of its own investment adviser or any affiliated person of its own investment adviser.

A fund may, however, rely on an exemption in rule 12d3–1 to acquire securities issued by its subadvisers in circumstances in which the subadviser would have little ability to take advantage of the fund, because it is not in a position to direct the fund's securities purchases. The exemption in rule 12d3–1(c)(3) is available if (i) the subadviser is not, and is not an affiliated person of, an investment adviser that provides advice with respect to the portion of the fund that is acquiring the securities, and (ii) the advisory contracts of the subadviser, and any subadviser that is advising the purchasing portion of the fund, prohibit them from consulting with each other concerning securities transactions of the fund, and limit their responsibility in providing advice to providing advice with respect to discrete portions of the fund's portfolio.

Based on an analysis of third-party information, the staff estimates that approximately 319 fund portfolios enter into subadvisory agreements each year.[1] Based on discussions with industry representatives, the staff estimates that it will require approximately 3 attorney hours to draft and execute additional clauses in new subadvisory contracts in order for funds and subadvisers to be able to rely on the exemptions in rule 12d3–1. Because these additional clauses are identical to the clauses that a fund would need to insert in their subadvisory contracts to rely on rules 10f–3, 17a–10, and 17e–1 and because we believe that funds that use one such rule generally use all of these rules, we apportion this 3 hour time burden equally to all four rules. Therefore, we estimate that the burden allocated to rule 12d3–1 for this contract change would be 0.75 hours.[2] Assuming that all 319 funds that enter into new subadvisory contracts each year make the modification to their contract required by the rule, we estimate that the rule's contract modification requirement will result in 239.25 burden hours annually.[3]

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number.

[1] Based on information available from Morningstar and the ICI Fact Book, we estimate that 37 percent of funds are advised by subadvisers.

[2] This estimate is based on the following calculation (3 hours ÷ 4 rules = .75 hours).

[3] This estimate is based on the following calculation: (0.75 hours × 319 portfolios = 239.25 burden hours).

Written comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency's estimate of the burden of the collection of information; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted in writing within 60 days of this publication.

Please direct your written comments to Pamela Dyson, Director/Chief Information Officer, Securities and Exchange Commission, C/O Remi Pavlik-Simon, 100 F Street NE., Washington, DC 20549; or send an email to: *PRA_Mailbox@sec.gov.*

Dated: November 14, 2016.

Brent J. Fields,

Secretary.

[FR Doc. 2016–27749 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79304; File No. SR–DTC–2016–013]

Self-Regulatory Organizations; The Depository Trust Company; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Modify the DTC Settlement Service Guide and Distributions Guide Relating to the Anticipated U.S. Market Transition to a Shortened Settlement Cycle

November 14, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1] and Rule 19b–4, thereunder[2] notice is hereby given that on November 7, 2016, The Depository Trust Company (''DTC'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I, II and III below, which Items have been prepared by the clearing agency. DTC filed the proposed rule change pursuant to Section 19(b)(3)(A)[3] of the Act and Rule 19b–4(f)(4)[4] thereunder. The proposed rule change was effective upon filing with the Commission. The Commission is

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 78s(b)(3)(A).

[4] 17 CFR 240.19b–4(f)(4).

publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Clearing Agency's Statement of the Terms of Substance of the Proposed Rule Change

The proposed rule change would amend the Settlement Service Guide (''Settlement Guide'') [5] and the Distributions Guide (''Distributions Guide'') [6] (collectively, ''Guides'') of The Depository Trust Company (''DTC'') to make technical revisions to the Guides in anticipation of the U.S. market transition to ''T+2'' settlement and other revisions, as described below.[7] The proposed rule changes to the Guides would not become effective until DTC has submitted a subsequent proposed rule change under Rule 19b–4.[8] Therefore, DTC would not implement versions of the Guides reflecting the proposed rule change until an effective date is established by the subsequent proposed rule change.[9]

II. Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the clearing agency included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The clearing agency has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

(A) Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The standard settlement cycle for certain securities has not changed since 1993, when the Commission adopted the current version of Rule 15c6–1(a) under the Act,[10] which (subject to certain exceptions) prohibits any broker-dealer from entering into a contract for the purchase or sale of a security that provides for payment and delivery later than three business days after the trade date, unless otherwise expressly agreed to by the parties at the time of the transaction.

In an effort to reduce counterparty risk, decrease clearing capital requirements, reduce liquidity demands and harmonize the settlement cycle globally, the financial services industry, in coordination with its regulators, has been working on shortening the standard settlement cycle from T+3 to T+2. In connection therewith, the Commission has proposed a rule change to shorten the standard settlement cycle from T+3 to T+2.[11]

Effect on DTC

DTC provides depository and book-entry services pursuant to its Rules and Procedures, including its service guides and operational arrangements.[12] DTC services include custody of securities certificates and other instruments, and settlement and asset services for types of eligible securities including, among others, equities, warrants, rights, corporate debt and notes, municipal bonds, government securities, asset-backed securities, depositary receipts and money market instruments. As the holder of securities *vis a vis* issuers, DTC receives distributions, dividends, and corporate actions and passes them to its Participants.

DTC processes transactions for settlement, subject to its risk controls, on the same day it receives them. Distributions on securities held at DTC on behalf of its Participants pass through DTC and are credited to the accounts of Participants on the same day that they are paid to DTC. As a result, DTC's Rules and Procedures are not generally affected by the industry's move to T+2.

However, certain provisions in the Settlement Guide and Distributions Guide, respectively, relating to the DTC ID Net Service (''ID Net'') [13] and distributions on securities held at DTC include a presumption that transactions settle on a three-day settlement cycle (*i.e.,* T+3). This is expected to change as the securities industry switches to a standard T+2 settlement cycle in 2017. Pursuant to the proposed rule change, DTC would revise the texts of Guides to make conforming and technical changes as described below.

Settlement Guide Changes

DTC would modify the Settlement Guide relating to ID Net to accommodate the eventual move to T+2.

First, the deadline for submission of affirmed ID Net trades by a Matching Utility would be changed to 11:30 a.m. eastern time on settlement date minus one (''SD–1'') rather than specifically stating the deadline at 9 p.m. on T+2. The move to T+2 necessitates this change since ID transactions must enter the ID Net processing on the date prior to settlement date to realize processing efficiencies in relation to related CNS transactions settling on settlement date, as set forth in the Settlement Guide.[14]

Second, the Settlement Guide would be revised to state that ID Net Firms may exempt a receive obligation from ID Net before the night of SD–1 rather than before the night of T+2 as is currently stated. The move to T+2 necessitates this change because transactions are staged for ID Net on the night before settlement date.

DTC would also delete a reference in the Settlement Guide that states that ID Net trades must settle in the ''regular way'' and defines ''regular way'' as T+3. This provision is obsolete as DTC does not include scheduled settlement date as a criteria for ID Net processing.

Distributions Guide Changes

DTC would modify the Distributions Guide text relating to the DTC interim accounting process to account for the Shortened Settlement Cycle.

Interim accounting is an important part of the entitlement and allocation process relating to distributions. During the interim accounting period, DTC facilitates the entitlements and allocation process systematically for both the buyer and seller of a transaction conducted in the marketplace and submitted to CNS.[15] The interim accounting period is defined as the time period during which a trade settling has income or a due bill attached to it.[16] The due bill period is

[5] *Available at http://www.dtcc.com/~/media/Files/Downloads/legal/service-guides/Settlement.pdf.*

[6] *Available at http://www.dtcc.com/~/media/Files/Downloads/legal/service-guides/Distributions%20Service%20Guide%20FINAL%20November%202014.pdf.*

[7] Capitalized terms not otherwise defined herein have the respective meanings set forth in the DTC Rules, By-laws and Organization Certificate (''Rules''), *available at http://www.dtcc.com/legal/rules-and-procedures.aspx,* the Settlement Guide and the Distributions Guide.

[8] 17 CFR 240.19b–4.

[9] DTC will post versions of the relevant sections of the respective Guides reflecting the changes as they would appear upon the effectiveness of the subsequent proposed rule change mentioned above and will include a note on the cover page of the Guides to advise Participants of these changes.

[10] 17 CFR 240.15c6–1.

[11] Amendment to Securities Transaction Settlement Cycle. *See* Securities Exchange Act Release No. 78962 (September 28, 2016), 81 FR 69240 (October 5, 2016) (S7–22–16).

[12] *Available at www.dtcc.com.*

[13] ID Net allows DTC Participants that are also members of National Securities Clearing Corporation (''NSCC'') to realize certain processing efficiencies with respect to institutional transactions processed at DTC for which related broker transactions are processed through NSCC's Continuous Net Settlement System (''CNS''). *See* Settlement Guide, *supra* note 5, at 35–43.

[14] *Id.*

[15] Securities movements for transactions processed through CNS occur free of payment at DTC. *See* Settlement Guide, *supra* note 5, at 15.

[16] In the absence of DTC's interim accounting process, trades scheduled to settle after the record date ''with distribution'' (those that entitle the

determined in accordance with market rules[17] and currently extends for the time from the record date[18] plus one day up to the ex-date plus two days.[19]

In order to prepare for the migration to T+2 settlement, DTC would modify the interim accounting process to account for the shortened period. In this regard, DTC would revise the Distributions Guide to reflect that the interim accounting period would reflect the anticipated due bill period that would be recognized by the industry, such that the interim accounting period would extend from the record date plus one day up to the ex-date plus one day. The proposed change to the interim accounting period would be reflected in the text of the subsections of the Interim Accounting section of the Distributions Guide.

DTC would also adjust the table in the Distributions Guide which describes the date on which certain stock distributions, the timing for which are tied to the settlement cycle, are allocated. Specifically, the table would be revised for affected distribution types, as follows to account for the shortening of the settlement cycle:

For this type of distribution[20]	Allocation normally occurs[21]
Stock dividends with a late ex-date	On the payable date or ex-date +*32,* whichever comes later.
Stock splits, with ex-distribution beginning on the business day following the payable date.	For the split shares on ex-date +*32.*
Stock spinoffs to a DTC-eligible security	On the payable date, or ex-date +*32,* whichever comes later.

DTC would also revise the text of the Distributions Guide to make a grammatical correction.

Implementation Date

The proposed rule changes to the Guides would not become effective until DTC has submitted a subsequent proposed rule change under Rule 19b–4.[22] Therefore DTC would not implement the proposed changes until an effective date is established by the subsequent proposed rule change. DTC anticipates that the implementation date would correspond with the industry's transition to a T+2 settlement cycle, which is currently anticipated to be in September 2017. It is anticipated by DTC that the proposed rule changes to the Guides would become effective immediately unless further regulatory action is required.

2. Statutory Basis

Section 17A(b)(3)(F) of the Act[23] requires that the rules of the clearing agency be designed, *inter alia,* to promote the prompt and accurate clearance and settlement of securities transactions. DTC believes that the proposed rule change is consistent with this provision because it would allow ID Net transactions and distributions to continue to be processed when the U.S. market standard settlement cycle is shortened. Thus, by allowing processing of transactions through ID Net and the Distributions Service in accordance with standard U.S. settlement timeframes (including when the standard settlement cycle is shortened), the proposed rule changes would promote the prompt and accurate clearance and settlement of securities transactions.

(B) Clearing Agency's Statement on Burden on Competition

DTC does not believe that the proposed rule change have any impact on competition because the proposed rule change consists of conforming and technical changes to the texts of the Guides that would correspond with the industry's transition to a T+2 settlement cycle.

(C) Clearing Agency's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

DTC has not solicited and does not intend to solicit comments regarding the proposed rule change. DTC has not received any unsolicited written comments from interested parties. To the extent DTC receives written comments on the proposed rule change, DTC will forward such comments to the Commission.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)[24] of the Act and paragraph (f) of Rule 19b–4[25] thereunder. At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–DTC–2016–013 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549.

All submissions should refer to File Number SR–DTC–2016–013. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will

receiver to the distribution) would have a due bill or income payment that attached to document the entitlement and associated obligations between the seller and buyer relating to the distribution. The distribution entitlement would then need to be handled between the seller and the buyer of the security outside of DTC's Distributions Service.

[17] *E.g.,* New York Stock Exchange (''NYSE'') Rules 255–259, *available at http://nyserules.nyse.com/nyse/rules/nyse-rules/chp_1_3/chp_1_3_16/default.asp.*

[18] The record date is the date when an investor must be on the issuer's books as a shareholder to receive a distribution.

[19] The ex-date is determined in accordance with the applicable market procedures. *E.g.,* NYSE Listed Company Manual, Section 703.03 (part 2) (Stock Split/Stock Rights/Stock Dividend Listing Process, *available at http://nysemanual.nyse.com/lcm/Help/mapContent.asp?sec=lcm-sections&title=sx-ruling-nyse-policymanual_703.02(part2)&id=chp_1_8_3_4.*

[20] Stock distribution types unaffected by the proposed rule change are not shown.

[21] Bold, strike-through text indicates a deletion. Bold, underlined text indicates an addition.

[22] 17 CFR 240.19b–4.

[23] 15 U.S.C. 78q–1(b)(3)(F).

[24] 15 U.S.C. 78s(b)(3)(A).

[25] 17 CFR 240.19b–4(f).

post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of DTC and on DTCC's Web site (*http://dtcc.com/legal/sec-rule-filings.aspx*). All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–DTC–2016–013 and should be submitted on or before December 9, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[26]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27742 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

[26] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79306; File No. SR–BatsEDGX–2016–63]

Self-Regulatory Organizations; Bats EDGX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change to Fees for Use of Bats EDGX Exchange, Inc.

November 14, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act"),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 1, 2016, Bats EDGX Exchange, Inc. (the "Exchange" or "EDGX") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II and III below, which Items have been prepared by the Exchange. The Exchange has designated the proposed rule change as one establishing or changing a member due, fee, or other charge imposed by the Exchange under Section 19(b)(3)(A)(ii) of the Act[3] and Rule 19b–4(f)(2) thereunder,[4] which renders the proposed rule change effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange filed a proposal to amend the fee schedule applicable to Members[5] and non-members of the Exchange pursuant to EDGA Rules 15.1(a) and (c).

The text of the proposed rule change is available at the Exchange's Web site at *www.batstrading.com,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in Sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

Fee Code Z

The Exchange proposes to increase the fee for orders yielding fee code Z, which is yielded on orders routed to a non-exchange destination using ROUZ[6] routing strategy, from $0.00100 to $0.00120 per share for securities priced at or above $1.00. The Exchange does not propose to amend the rate for orders yielding fee code Z in securities priced below $1.00.

Fee Code O

The Exchange also proposes to amend footnote 5 of its Fee Schedule to increase the fee cap for orders yielding fee code O from $20,000 to $35,000 per month per Member. Fee code O is appended to orders that are touted to participate in the listing market's opening or re-opening cross and are charged a fee of $0.00100 per share for orders in securities priced at or above $1.00 and 0.30% of the transaction dollar value for securities priced below $1.00. When the Exchange routes to a listing exchange's opening cross, such as the Nasdaq Stock Market LLC ("Nasdaq"), the Exchange passes through the tier saving that Bats Trading, Inc. ("Bats Trading"), the Exchange's routing broker-dealer, achieves on an away exchange to its Members. This tier savings takes the form of a cap of Member's fees at $20,000 per month for using fee code O. The proposed increase in the fee cap under footnote 5 is in response to the September 2016 fee cap change by Nasdaq for orders that participate in their opening cross processes.[7] Nasdaq's September 2016 fee cap increase requires that members add, at a minimum, one million shares of liquidity to Nasdaq, on average per day, during the month to be eligible for its existing fee cap of $35,000 for orders that participate in the opening cross. When Bats Trading routes to Nasdaq's opening cross, it will now be subject to the increase fee cap and new tier requirement. The proposed increase to the fee cap under footnote 5 would enable the Exchange to equitably allocate its costs among all Members utilizing fee code O. Therefore, the Exchange proposes to amend footnote 5 to increase the fee cap for orders yielding fee code O from $20,000 to $35,000 per month per Member in response to Nasdaq's September 2016 increased fee cap and related requirements.

Implementation Date

The Exchange proposes to implement this amendment to its Fee Schedule November 1, 2016.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 78s(b)(3)(A)(ii).

[4] 17 CFR 240.19b–4(f)(2).

[5] The term "Member" is defined as "any registered broker or dealer that has been admitted to membership in the Exchange." *See* Exchange Rule 1.5(n).

[6] *See* Exchange Rule 11.11(g)(3).

[7] *See* Securities Exchange Act Release No. 78977 (September 29, 2016), 81 FR 691140 [sic] (October 5, 2016) (SR–Nasdaq–2016–132) (increasing the fee cap for orders executed in its opening cross from $30,000 to $35,000).

the objectives of Section 6 of the Act,[8] in general, and furthers the objectives of Section 6(b)(4),[9] in particular, as it is designed to provide for the equitable allocation of reasonable dues, fees and other charges among its Members and other persons using its facilities.

Fee Code Z

The Exchange believes that its proposal to increase the fee for orders routed to a non-exchange destination that yield fee code Z represents an equitable allocation of reasonable dues, fees, and other charges among Members and other person using its facilities in that they are designed in part to cover the costs of routing. While Members that route to a non-exchange destination using ROUZ routing strategy will be paying higher fees due to the proposal, the increased revenue received by the Exchange will be used to fund the Exchange generally, including the cost of maintaining and improving the technology used to handle and route orders from the Exchange as well as programs that the Exchange believes help to attract additional liquidity and thus improve the depth of liquidity available on the Exchange. Accordingly, although the cost of routing is increasing, the Exchange believes that the increase is a modest increase and that higher routing fees will benefit Members in other ways. Furthermore, the Exchange notes that routing through the Exchange is voluntary. Lastly the Exchange also believes that the proposed amendment is non-discriminatory because it applies uniformly to all Members.

Fee Code O

The Exchange believes that its proposal to amend footnote 5 to increase the fee cap for orders yielding fee code O from $20,000 to $35,000 per month per Member represents an equitable allocation of reasonable dues, fees, and other charges among Members and other persons using its facilities. The proposed increase in the fee cap under footnote 5 is in response to September 2016 fee cap increase by Nasdaq for orders that participate in their opening cross process. Prior to Nasdaq's September 2016 fee cap increase, Nasdaq capped Bats Trading monthly fees for participating in it's opening cross at $30,000. Nasdaq capped Bats Trading monthly fees for participating in its opining cross at $30,000. Nasdaq has now increased that cap to $35,000.[10] The proposed increase to the fee cap under footnote 5 would enable the Exchange to equitably allocate its costs among all Member who utilize fee code O. Therefore, the Exchange believes that the proposed change to footnote 5 is equitable and reasonable because it accounts for the increased Nasdaq fee cap, which enables the Exchange to apply to its Member similar fee caps. The Exchange notes that routing though Bats Trading is voluntary and believes that the proposed change is non-discriminatory because it applies uniformly to all Members.

B. Self-Regulatory Organization's Statement on Burden on Competition

This proposed rule change does not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange does not believe that this change represents a significant departure from previous pricing offered by the Exchange or from pricing offered by the Exchange's competitors. Additionally, Members may opt to disfavor the Exchange's pricing if they believe that alternatives offer them better value. Accordingly, the Exchange does not believe that the proposed changes will impair the ability of Members or competing venues to maintain their competitive standing in the financial markets. The Exchange believes that its proposal would not burden intramarket competition because the proposed rates would apply uniformly to all Members.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has not solicited, and does not intend to solicit, comments on this proposed rule change. The Exchange has not received any written comments from members or other interested parties.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A) of the Act[11] and paragraph (f) of Rule 19b–4 thereunder.[12] At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–BatsEDGX–2016–63 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–BatsEDGX–2016–63. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–BatsEDGX–2016–63, and should be submitted on or before December 9, 2016.

[8] 15 U.S.C. 78f.

[9] 15 U.S.C. 78f(b)(4).

[10] *See supra* note 7.

[11] 15 U.S.C. 78s(b)(3)(A).

[12] 17 CFR 240.19b–4(f).

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[13]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27744 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79297; File No. SR–DTC–2016–012]

Self-Regulatory Organizations; The Depository Trust Company; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Modify the DTC Settlement Service Guide With Respect to Settlement Instructions Provided to DTC by Matching Utilities

November 14, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'') [1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 3, 2016, The Depository Trust Company (''DTC'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I, II and III below, which Items have been prepared by the clearing agency. DTC filed the proposed rule change pursuant to Section 19(b)(3)(A) [3] of the Act and Rule 19b–4(f)(4) [4] thereunder. The proposed rule change was effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Clearing Agency's Statement of the Terms of Substance of the Proposed Rule Change

The proposed rule change by DTC would make technical and clarifying changes to text in the DTC Settlement Service Guide (''Guide'') [5] with respect to settlement instructions provided to DTC by Matching Utilities (as defined below) on behalf of Participants.[6]

II. Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the clearing agency included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The clearing agency has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

(A) Clearing Agency's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

DTC may accept eligible affirmed institutional transactions (''Institutional Transactions'') [7] from an entity providing a matching service [8] (''Matching Utility'') that is (i) a clearing agency registered pursuant to Section 17A of the Act, (ii) an entity that has obtained an exemption from such registration from the Commission, or (iii) a ''qualified vendor'' for trade confirmation/affirmation services as defined by the rules of a self-regulatory organization.[9] In addition, a Matching Utility must establish a connection to DTC in accordance with DTC's reasonable requirements in order to be able to submit Affirmed Transactions.

Currently, Omgeo Global Joint Venture Matching Services—US, LLC (hereinafter ''Omgeo'') [10] is the only Matching Utility that has established a connection with DTC. This is reflected in the text of the Guide which contains specific references to Omgeo with respect to DTC functions that are accessible to any Matching Utility that satisfies the connection requirements.

The Commission recently approved two applications by two separate entities, for exemption from registration as a Clearing Agency to provide post-trade matching services for fixed income and equity trades (''Approved Exemptions'').[11] According to the Commission's notice of the Approved Exemptions, these entities each indicated an intention to offer matching services that connect to DTC for settlement.[12]

DTC proposes to revise the Guide to generalize references to Matching Utilities and make other changes, as set forth below.

First, DTC would replace specific references to Omgeo in sections describing procedures for the ID Net Service (''ID Net'') and Shareholder Tracking Service to refer to a ''Matching Utility'' and delete provisions referencing to Omgeo by name.[13]

Second, text in the ID Net section of the Guide regarding DTC's acceptance of affirmed institutional transactions from Matching Utilities would be moved to a new section describing Affirmed Transactions more generally. The proposed new section would incorporate the definition of Affirmed Transactions, and expressly state DTC's current requirement that in order for a Matching Utility to establish and maintain a connection with DTC the Matching Utility must be able to balance with DTC in an automated way [14] and

[13] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 78s(b)(3)(A).

[4] 17 CFR 240.19b–4(f)(4).

[5] *Available at http://www.dtcc.com/~/media/Files/Downloads/legal/service-guides/Settlement.pdf.*

[6] Capitalized Terms not otherwise defined herein have the meaning set forth in the DTC Rules, By-laws and Organization Certificate (''DTC Rules''), *available at http://www.dtcc.com/legal/rules-and-procedures.aspx*, and the Guide, *supra* note 5.

[7] An Institutional Transaction is a securities transaction between a broker-dealer and its institutional customer (*e.g.,* sell-side firms, buy-side institutions, and custodians).

[8] A matching service is an electronic service by which an intermediary matches (*i.e.,* reconciles) trade information from the counterparties to an Institutional Transaction, to generate an affirmed transaction (''Affirmed Transaction'') which is then used to provide settlement instructions for the Affirmed Transactions to the central securities depository, such as DTC, at which the Affirmed Transaction settles.

[9] *See* Securities Exchange Act Release No. 39829 (April 6, 1998), 63 FR 17943 (April 13, 1998) at 17946 (providing interpretive guidance on types of entities that may provide a matching service).

[10] See [sic] Securities Exchange Act Release No. 44188 (April 17, 2001), 66 FR 20494 (April 23, 2001) (600–31) for the order of the Commission granting Omgeo an exemption from registration as a clearing agency. Omgeo is a global provider of post-trade, pre-settlement processing services for the institutional market.

[11] Securities Exchange Act Release No. 76514 (November 24, 2015), 80 FR 75387 (December 1, 2015) (600–33, 600–34) (Bloomberg STP LLC; SS&C Technologies, Inc.; Order of the Commission Approving Applications for an Exemption from Registration as a Clearing Agency; Notice).

[12] *Id.*

[13] In this regard, the term Matching Utility would be defined in the Guide reflecting the definition provided above in this Form 19b–4. The Commission notes that Form 19b–4 is attached to the filing, not to this Notice. The definition of Affirming Agency which appears in the ID Net section of the Guide and is the functional equivalent of the definition of Matching Utility as it relates to ID Net would be removed. Consistent with this change, references in the Guide to the term Affirming Agency would be replaced to use the term Matching Utility.

[14] For each Matching Utility interfacing with DTC, DTC would require the Matching Utility to deliver a daily message on each business day shortly after noon from the Matching Utility with their accepted item counts of institutional delivery and ID Net (defined below) transaction totals for Settlement Date minus one transactions. DTC's system would compare the totals from the Matching Utility to its accepted item counts. If the totals match, an ''acknowledged balance'' balance file would be sent to the Matching Utility. If the totals do not match, DTC would respond with the list of Settlement Date minus one control numbers received from the Matching Utility, along with their respective transaction types for the originating Matching Utility to compare.

communicate transactions to and from DTC with the necessary mandated fields, *i.e.,* transaction control number, DTC receiver and deliverer account number, CUSIP, message type, share quantity, market type, buy-sell indicator, broker ID, ID agent internal account number, broker internal account number, agent bank ID, settlement amount, origination entity, recipient of message, institution, and settlement date.[15]

Third, the Guide would clarify that (i) a Participant that is a counterparty to an Affirmed Transaction, as submitted to DTC by a Matching Utility, is deemed to have authorized the Matching Utility to provide an instruction to DTC, on the Participant's behalf, to process the Affirmed Transaction in accordance with DTC's Rules and Procedures[16] and (ii) the submission of an Affirmed Transaction to DTC by the Matching Utility, on behalf of the Participant, constitutes the duly authorized instruction of the Participant to DTC to process the Affirmed Transaction in accordance with the Rules and Procedures.[17]

Fourth, the Guide would state that a Matching Utility that elects to enter into an arrangement to interoperate with another Matching Utility (''Interoperability Arrangement'') maintains the sole responsibility to ensure that its customers, including but not limited to DTC Participants that are customers of the Matching Utility, are operationally prepared to process Affirmed Transactions relating to the Interoperability Arrangement prior to the submission of such Affirmed Transactions to DTC.

Finally, the proposed rule change would make technical and clarifying changes to the Guide to:

(1) Clarify and streamline the text to improve readability;

(2) Add background information regarding the Affirmed Transactions accepted by DTC;

(3) Correct spelling, grammatical and typographical errors throughout and update tenses from future to present with respect to functions of ID Net and the Shareholder Tracking Service; and

(4) Add a title page to the Guide.

Implementation Date

The proposed rule change would become effective as of November 3, 2016.

2. Statutory Basis

Section 17A(b)(3)(F)[18] of the Act requires that the rules of the clearing agency be designed, *inter alia,* to promote the prompt and accurate clearance and settlement of securities transactions. DTC believes that the proposed rule change is consistent with this provision because it would (i) clarify the text of the Guide with respect to fair access to DTC for those Matching Utilities that satisfy DTC's reasonable requirements so that DTC may accept Affirmed Transactions from them, (ii) clarify the responsibilities of Matching Utilities that intend to interoperate and submit related Affirmed Transactions to DTC, and (iii) clarify the terms pursuant to which a Participant's duly authorized instructions to process Affirmed Transactions are provided to DTC by a Matching Utility. Thus, by facilitating transparency in the Guide with respect to DTC's requirements for acceptance of Affirmed Transactions from Matching Utilities and clarifying the responsibilities of interoperating Matching Utilities in this regard, as well as by clarifying the terms pursuant to which a Participant's duly authorized instructions to process Affirmed Transactions are provided to DTC by a Matching Utility, the proposed rule change would promote the prompt and accurate clearance and settlement of securities transactions.

(B) Clearing Agency's Statement on Burden on Competition

DTC does not believe that the proposed rule change would have any impact or impose any burden on competition because it would merely update the Guide to make technical and clarifying changes and updates with respect to DTC's acceptance of Affirmed Transactions from Matching Utilities.

(C) Clearing Agency's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

DTC has not solicited and does not intend to solicit comments regarding the proposed rule change. DTC has not received any unsolicited written comments from interested parties. To the extent DTC receives written comments on the proposed rule change, DTC will forward such comments to the Commission. DTC has discussed the proposed rule change with Matching Utilities that have contacted DTC specifically with respect to establishing a connection with DTC.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)[19] of the Act and paragraph (f) of Rule 19b–4[20] thereunder. At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

• Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or

• Send an email to *rule-comments@sec.gov.* Please include File Number SR–DTC–2016–012 on the subject line.

Paper Comments

• Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549.

All submissions should refer to File Number SR–DTC–2016–012. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/*

[15] A Matching Utility that intends to establish a new connection with DTC must promptly contact DTC in order to establish a plan to establish a connection and allow adequate time to develop and adequately test the interface prior to the date it expects to implement its connection to DTC.

[16] Pursuant to the Rules, the term ''Procedures'' means the Procedures, service guides, and regulations of the Corporation adopted pursuant to Rule 27, as amended from time to time. Rule 1, Section 1, supra [sic] note 6, at 13.

[17] DTC will attempt to process an eligible transaction in accordance with a duly authorized instruction of the Delivering Participant provided to DTC in this regard. *See* Rule 6, *supra* note 6. Processing by DTC of the Delivery of the Securities subject of the transaction is subject to satisfaction of risk controls by the Participants to the transaction. Rule 9(B), Section 1, *supra* note 6. A Delivery is also subject to approval by the Receiver in the Receiver Authorized Delivery system before DTC will process the Delivery. Guide, *supra* note 5, at 57.

[18] 15 U.S.C. 78q–1(b)(3)(F).

[19] 15 U.S.C. 78s(b)(3)(A).

[20] 17 CFR 240.19b–4(f).

rules/sro.shtml). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of DTC and on DTCC's Web site (*http://dtcc.com/legal/sec-rule-filings.aspx*). All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–DTC–2016–012 and should be submitted on or before December 9, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[21]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27740 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

[21] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79305; File No. SR–BatsEDGA–2016–26]

Self-Regulatory Organizations; Bats EDGA Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Related to Fees for Use of Bats EDGA Exchange, Inc.

November 14, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 1, 2016, Bats EDGA Exchange, Inc. (the ''Exchange'' or ''EDGA'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I, II and III below, which Items have been prepared by the Exchange. The Exchange has designated the proposed rule change as one establishing or changing a member due, fee, or other charge imposed by the Exchange under Section 19(b)(3)(A)(ii) of the Act[3] and Rule 19b–4(f)(2) thereunder,[4] which renders the proposed rule change effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange filed a proposal to amend the fee schedule applicable to Members[5] and non-members of the Exchange pursuant to EDGA Rules 15.1(a) and (c).

The text of the proposed rule change is available at the Exchange's Web site at *www.batstrading.com,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in Sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend its Fee Schedule to: (i) Delete references to the ROOC routing strategy, which was previously, removed from the Exchange's rulebook;[6] and (ii) increase the fees associate for orders in securities priced at or above $1.00 that yield fee codes RT, RX, or Z.

Deletion of References to the ROOC Routing Strategy

The Exchange previously submitted a proposed rule change for immediate effectiveness to discontinue the ROOC routing strategy and to remove references to the ROOC routing strategy from its rulebook.[7] The Exchange now proposes to delete three references to the ROOC routing strategy from its Fee Schedule, as those associated rates and references have not been applicable since the Exchange discontinued the ROOC routing strategy. These changes are to delete:

- Fee code RN and its associate rates, which is appended to orders routed to the Nasdaq Stock Market LLC using the ROOC routing strategy and add liquidity.
- a reference to ROOC in fee code RT, which is appended to orders routed using the ROUT or ROOC routing strategy; and
- a reference to the ROOC routing strategy in footnote 12, which lists the routing strategies eligible for fee code CR.

Fee Codes RT, RX, and Z

The Exchange also proposes to increase the fees associated with orders in securities priced at or above $1.00 that yield fee codes RT, RX, or Z.[8] First the Exchange proposes to increase the fee for orders yielding fee code RT, which are routed using a ROUT[9] or ROOC[10] routing strategy, from $0.00250 to $0.00260 per share. Second, the Exchange proposes to increase the fee for orders yielding fee code RX, which are routed using a ROUX[11] routing strategy, from $0.00270 to $0.00280 per share. Lastly, the Exchange proposes to increase the fee for orders yielding fee code Z, which are routed to a non-exchange destination using ROCO[12] or ROUZ[13] routing strategy, from $0.00100 to $0.00120 per share.

Implementation Date

The Exchange proposes to implement these amendments to its Fee Schedule November 1, 2016.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 78s(b)(3)(A)(ii).

[4] 17 CFR 240.19b–4(f)(2).

[5] The term ''Member'' is defined as ''any registered broker or dealer that has been admitted to membership in the Exchange.'' *See* Exchange Rule 1.5(n).

[6] *See* Securities Exchange Act Release N. 75550 (July 29, 2015), 80 FR 46363 (August 4, 2015) (SR–EDGA–2015–28). *See also* BATS EDGA Exchange and BYX Exchange Decommissioning ROOC Effective August 10, 2015, *available at http://cdn.batstrading.com/resources/release_notes/2015/BATS-EDGA-Exchange-and-BYX-Exchange-Decommissioning-ROOC-Effective-August-10-2015.pdf.*

[7] *Id. See also* Securities Exchange Act Release No. 75550 (July 29, 2015), 80 FR 4636 (August 4, 2015) (SR–EDGA–2015–28).

[8] The Exchange does not propose to amend the fees for orders yielding fee codes RT, RX, or Z in securities priced below $1.00.

[9] *See* Exchange Rule 11.11(g)(3).

[10] The Exchange notes that it is deleting reference to the ROOC routing strategy in this filing. *See also supra* note 6.

[11] *See* Exchange Rule 11.11(g)(3).

[12] *Id.*

[13] *Id.*

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the objectives of Section 6 of the Act,[14] in general, and furthers the objectives of Section 6(b)(4),[15] in particular, as it is designed to provide for the equitable allocation of reasonable dues, fees and other charges among its Members and other persons using its facilities.

Deletion of References to the ROOC Routing Strategy

The Exchange believes it is equitable, reasonable, and not unfairly discriminatory to delete references to the ROOC routing strategy from its Fee Schedule because it is removing reference and rates for a product that the Exchange no longer provides.[16] The Exchange believes that the proposed changes will make the Fee Schedule clearer and eliminate potential investor confusion, thereby removing impediments to and perfecting the mechanism of a free and open market and a national market system, and, in general, protecting investors and the public interest.

Fee Codes RT, RX, and Z

The Exchange believes that its proposal to increase the fee for orders that yield fee codes RT, RX, or Z represents an equitable allocation of reasonable dues, fees, and other charges among Members and other persons using its facilities in that they are designed in part to cover the costs of routing. While the affected Members' orders will be charged higher fees due to the proposal, the increased revenue received by the Exchange will be used to fund the Exchange generally, including the cost of maintaining and improving the technology used to handle and route orders from the Exchange as well as programs that the Exchange believes help to attract additional liquidity and thus improve the depth of liquidity available on the Exchange. Accordingly, although the cost of routing is increasing, the Exchange believes that he increase is modest and that higher routing fees will benefit Members in other ways. Furthermore, the Exchange notes that routing through the Exchange is voluntary. Lastly, the Exchange also believes that the proposed amendment is non-discriminatory because it applies uniformly to all Members.

[14] 15 U.S.C. 78f.

[15] 15 U.S.C. 78f(b)(4).

[16] *See supra* note 4.

B. Self-Regulatory Organization's Statement on Burden on Competition

This proposed rule change does not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange does not believe that the changes to fee codes RT, RX, and Z represent a significant departure from previous pricing offered by the Exchange or from pricing offered by the Exchange's competitors. Additionally, Members may opt to disfavor the Exchange's pricing if they believe that alternatives offer them better value. Accordingly, the Exchange does not believe that the proposed changes will impair the ability of Members or competing venues to maintain their competitive standing in the financial markets. The Exchange believes that its proposal would not burden intramarket competition because the proposed rates would apply uniformly to all Members.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has not solicited, and does not intend to solicit, comments on this proposed rule change. The Exchange has not received any written comments from members or other interested parties.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A) of the Act [17] and paragraph (f) of Rule 19b–4 thereunder.[18] At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or

[17] 15 U.S.C. 78s(b)(3)(A).

[18] 17 CFR 240.19b–4(f).

- Send an email to *rule-comments@sec.gov.* Please include File Number SR–BatsEDGA–2016–26 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–BatsEDGA–2016–26. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–BatsEDGA–2016–26, and should be submitted on or before December 9, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[19]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27743 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

[19] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79308; File No. SR–BOX–2016–52]

Self-Regulatory Organizations; BOX Options Exchange LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend the Fee Schedule on the BOX Market LLC (“BOX”) Options Facility

November 14, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ‘‘Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 8, 2016, BOX Options Exchange LLC (the ‘‘Exchange'') filed with the Securities and Exchange Commission (‘‘Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Exchange filed the proposed rule change pursuant to Section 19(b)(3)(A)(ii) of the Act,[3] and Rule 19b–4(f)(2) thereunder,[4] which renders the proposal effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of the Substance of the Proposed Rule Change

The Exchange is filing with the Securities and Exchange Commission (‘‘Commission'') a proposed rule change to amend the Fee Schedule on the BOX Market LLC (‘‘BOX'') options facility. The text of the proposed rule change is available from the principal office of the Exchange, at the Commission's Public Reference Room and also on the Exchange's Internet Web site at *http://boxexchange.com.*

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 78s(b)(3)(A)(ii).

[4] 17 CFR 240.19b–4(f)(2).

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend the Fee Schedule for trading on BOX. Specifically, the Exchange proposes to revise certain qualification thresholds in Sections I.B.1 of the BOX Fee Schedule, Primary Improvement Order and I.B.2 of the BOX Fee Schedule, the BOX Volume Rebate (‘‘BVR'').

Primary Improvement Order

Under the tiered fee schedule for Primary Improvement Orders, the Exchange assesses a per contract execution fee to all Primary Improvement Order executions where the corresponding PIP or COPIP Order is from the account of a Public Customer. Percentage thresholds are calculated on a monthly basis by totaling the Initiating Participant's Primary Improvement Order volume submitted to BOX, relative to the total national Customer volume in multiply-listed options classes. The Exchange proposes to adjust the percentage thresholds in Tiers 4 and 5. Specifically, the Exchange proposes to change Tier 4 from ‘‘0.500% to 0.999%'' to ‘‘0.500% to 0.949%'' and Tier 5 from ‘‘1.000% and Above'' to ‘‘0.950% and Above.'' The Exchange notes that it is not proposing any changes to the fees within the Primary Improvement Order fee structure and the quantity submitted will continue to be calculated on a monthly basis by totaling the Initiating Participant's Primary Improvement Order volume submitted to BOX, relative to the total national Customer volume in multiply-listed options classes.

BVR

Next, the Exchange proposes to adjust certain percentage thresholds within the BVR. Under the BVR, the Exchange offers a tiered per contract rebate for all Public Customer PIP Orders and COPIP Orders of 100 and under contracts that do not trade solely with their contra order. Percentage thresholds are calculated on a monthly basis by totaling the Participant's PIP and COPIP volume submitted to BOX, relative to the total national Customer volume in multiply-listed options classes. The Exchange proposes to adjust the percentage thresholds in Tiers 3 and 4. Specifically, the Exchange proposes to change Tier 3 from ‘‘0.340% to 0.999%'' to ‘‘0.340% to 0.949%'' and Tier 4 from ‘‘1.000% and Above'' to ‘‘0.950% and Above.'' The Exchange notes that is it not proposing any changes to the fees within the BVR. The quantity submitted will continue to be calculated on a monthly basis by totaling the Participant's PIP and COPIP volume submitted to BOX, relative to the total national Customer volume in multiply-listed options classes.

2. Statutory Basis

The Exchange believes that the proposal is consistent with the requirements of Section 6(b) of the Act, in general, and Section 6(b)(4) and 6(b)(5)of the Act,[5] in particular, in that it provides for the equitable allocation of reasonable dues, fees, and other charges among BOX Participants and other persons using its facilities and does not unfairly discriminate between customers, issuers, brokers or dealers.

BOX believes it is reasonable, equitable and not unfairly discriminatory to adjust the monthly Percentage Thresholds of National Customer Volume in Multiply-Listed Options Classes. The volume thresholds with their tiered fees and rebates are meant to incentivize Participants to direct order flow to the Exchange to obtain the benefit of the lower fee or higher rebate, which in turn benefits all market participants by increasing liquidity on the Exchange.

The Exchange believes the proposed amendments to the Primary Improvement Order percentage thresholds are reasonable, equitable and not unfairly discriminatory. The proposed changes to the thresholds are equitable and not unfairly discriminatory as they are available to all BOX Participants that initiate Auction Transactions, and Participants may choose whether or not to take advantage of the percentage thresholds and their applicable discounted fees. Further, the Exchange believes that the proposed changes are reasonable and competitive as they will further incentivize Participants to direct order flow to the Exchange, benefiting all market participants.

The Exchange also believes the proposed amendments to the BVR in Section I.B.2 of the BOX Fee Schedule are reasonable, equitable and not unfairly discriminatory. The BVR was adopted to attract Public Customer order flow to the Exchange by offering these Participants incentives to submit their PIP and COPIP Orders to the Exchange and the Exchange believes it is appropriate to now amend the BVR. The Exchange believes it is equitable and not unfairly discriminatory to amend the BVR, as all Participants have the ability

[5] 15 U.S.C. 78f(b)(4) and (5).

to qualify for a rebate, and rebates are provided equally to qualifying Participants. Other exchanges employ similar incentive programs; [6] and the Exchange believes that the proposed changes to the volume thresholds are reasonable and competitive when compared to incentive structures at other exchanges. Finally, the Exchange believes it is reasonable and appropriate to continue to provide incentives for Public Customers, which will result in greater liquidity and ultimately benefit all Participants trading on the Exchange.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. The Exchange is simply proposing to amend certain percentage thresholds for Auction Transaction fees and rebates in the BOX Fee Schedule. The Exchange believes that the volume based rebates and fees increase intermarket and intramarket competition by incenting Participants to direct their order flow to the exchange, which benefits all participants by providing more trading opportunities and improves competition on the Exchange.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Exchange Act [7] and Rule 19b–4(f)(2) thereunder,[8] because it establishes or changes a due, or fee.

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend the rule change if it appears to the Commission that the action is necessary or appropriate in the public interest, for the protection of investors, or would otherwise further the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–BOX–2016–52 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–BOX–2016–52. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–BOX–2016–52, and should be submitted on or before December 9, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[9]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27746 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

[6] *See* Section B of the PHLX Pricing Schedule entitled ''Customer Rebate Program;'' ISE Gemini's Qualifying Tier Thresholds (page 6 of the ISE Gemini Fee Schedule); and CBOE's Volume Incentive Program (VIP).

[7] 15 U.S.C. 78s(b)(3)(A)(ii).

[8] 17 CFR 240.19b–4(f)(2).

[9] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79309; File No. SR–BatsBZX–2016–76]

Self-Regulatory Organizations; Bats BZX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Related to Fees for Use of Bats BZX Exchange, Inc.

November 14, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 7, 2016, Bats BZX Exchange, Inc. (the ''Exchange'' or ''BZX'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Exchange has designated the proposed rule change as one establishing or changing a member due, fee, or other charge imposed by the Exchange under Section 19(b)(3)(A)(ii) of the Act [3] and Rule 19b–4(f)(2) thereunder,[4] which renders the proposed rule change effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange filed a proposal to amend the fee schedule applicable to Members [5] and non-members of the Exchange pursuant to BZX Rules 15.1(a) and (c).

The text of the proposed rule change is available at the Exchange's Web site at *www.batstrading.com,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 78s(b)(3)(A)(ii).

[4] 17 CFR 240.19b–4(f)(2).

[5] The term ''Member'' is defined as ''any registered broker or dealer that has been admitted to membership in the Exchange.'' *See* Exchange Rule 1.5(n).

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in Sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to increase the fee for orders yielding fee code Z, which results from an order routed to a dark liquidity venue (except through the SLIM [6] routing strategy), from $0.00250 to $0.00280 per share for securities priced at or above $1.00 and for securities priced below $1.00. The Exchange proposes to implement this amendment to its Fee Schedule immediately.[7]

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the objectives of Section 6 of the Act,[8] in general, and furthers the objectives of Section 6(b)(4),[9] in particular, as it is designed to provide for the equitable allocation of reasonable dues, fees and other charges among its Members and other persons using its facilities. The Exchange believes that its proposal to increase the fee for orders routed to a dark liquidity venue that yield fee code Z represents an equitable allocation of reasonable dues, fees, and other charges among Members and other person using its facilities in that they are designed in part to cover the costs of routing. While Members that route orders to a dark liquidity venue will be paying higher fees due to the proposal, the increased revenue received by the Exchange will be used to fund the Exchange generally, including the cost of maintaining and improving the technology used to handle and route orders from the Exchange as well as programs that the Exchange believes help to attract additional liquidity and thus improve the depth of liquidity available on the Exchange. Accordingly, although the cost of routing is increasing, the Exchange believes that the increase is a modest increase and that higher routing fees will benefit Members in other ways. Furthermore, the Exchange notes that routing through the Exchange is voluntary. Lastly the Exchange also believes that the proposed amendment is non-discriminatory because it applies uniformly to all Members.

[6] *See* Exchange Rule 11.13(b)(3).

[7] The Exchange initially submitted the proposed rule change on October 28, 2016. (SR–BatsBZX–2016–70). On November 3, 2016, the Exchange withdrew SR–BatsBZX–2016–70 and submitted SR–BatsBZX–2016–72. On November 7, 2016, the Exchange withdrew SR–BatsBZX–2016–72 and submitted this filing.

[8] 15 U.S.C. 78f.

[9] 15 U.S.C. 78f(b)(4).

B. Self-Regulatory Organization's Statement on Burden on Competition

This proposed rule change does not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange does not believe that this change represents a significant departure from previous pricing offered by the Exchange or from pricing offered by the Exchange's competitors. Additionally, Members may opt to disfavor the Exchange's pricing if they believe that alternatives offer them better value. Accordingly, the Exchange does not believe that the proposed changes will impair the ability of Members or competing venues to maintain their competitive standing in the financial markets. The Exchange believes that its proposal would not burden intramarket competition because the proposed rate would apply uniformly to all Members.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has not solicited, and does not intend to solicit, comments on this proposed rule change. The Exchange has not received any written comments from members or other interested parties.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A) of the Act [10] and paragraph (f) of Rule 19b–4 thereunder.[11] At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

[10] 15 U.S.C. 78s(b)(3)(A).

[11] 17 CFR 240.19b–4(f).

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

• Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or

• Send an email to *rule-comments@sec.gov.* Please include File Number SR–BatsBZX–2016–76 on the subject line.

Paper Comments

• Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–BatsBZX–2016–76. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–BatsBZX–2016–76, and should be submitted on or before December 9, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[12]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27747 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79295; File No. SR–MSRB–2016–15]

Self-Regulatory Organizations; Municipal Securities Rulemaking Board; Notice of Filing of a Proposed Rule Change To Extend the MSRB's Customer Complaint and Related Recordkeeping Rules to Municipal Advisors and To Modernize Those Rules

November 14, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Exchange Act'' or ''Act'') [1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 1, 2016, the Municipal Securities Rulemaking Board (the ''MSRB'' or ''Board'') filed with the Securities and Exchange Commission (the ''SEC'' or ''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the MSRB. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The MSRB filed with the Commission a proposed rule change consisting of (i) proposed amendments to Rule G–10, on delivery of investor brochure, Rule G–8, on books and records to be made by brokers, dealers, and municipal securities dealers and municipal advisors, and Rule G–9, on preservation of records, and (ii) a proposed Board notice regarding electronic delivery and receipt of information by municipal advisors under Rule G–32, on disclosures in connection with primary offerings (collectively, the ''proposed rule change''). The MSRB requests that the proposed rule change be approved with an implementation date of six months after the Commission approval date for all changes.

The text of the proposed rule change is available on the MSRB's Web site at *www.msrb.org/Rules-and-Interpretations/SEC-Filings/2016-Filings.aspx,* at the MSRB's principal office, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the MSRB included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The MSRB has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

Background

Following the financial crisis of 2008, Congress enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act (the ''Dodd-Frank Act'').[3] The Dodd-Frank Act amended Section 15B of the Exchange Act to establish a new federal regulatory regime requiring municipal advisors to register with the Commission, deeming them to owe a fiduciary duty to their municipal entity clients and granting the MSRB rulemaking authority over them. The MSRB, in the exercise of that rulemaking authority, has been developing a comprehensive regulatory framework for municipal advisors and their associated persons.[4]

Further, and concurrent with its efforts to develop a comprehensive regulatory framework for municipal advisors and their associated persons, the MSRB initiated a review of its rules and related interpretive guidance for brokers, dealers and municipal securities dealers (collectively, ''dealers'') and municipal advisors (municipal advisors, together with dealers, ''regulated entities''). The MSRB initiated that review in the context of the Board's obligation to protect investors, municipal entities, obligated persons, and the public interest. As part of that review, the MSRB solicited comments from market participants.[5] In response, market participants recommended that the Board update Rule G–10.[6] The proposed rule change, consisting of amendments to Rule G–10 and its related recordkeeping rules, Rules G–8 and G–9, and guidance under Rule G–32, is an important element of both MSRB regulatory initiatives.

Proposed Rule Change

To extend its customer complaint and recordkeeping rules to municipal advisors and to modernize those rules, the Board is filing this proposed rule change with the Commission. Specifically, the proposed rule change would (i) extend the Board's customer complaint recordkeeping requirements to all municipal advisors (*i.e.,* non-solicitor and solicitor municipal advisors) as well as align those recordkeeping requirements more closely with the customer complaint recordkeeping requirements of other financial regulators, (ii) require that all regulated entities retain their customer or municipal advisory client [7] complaint records for six years, (iii) overhaul Rule G–10 so that the rule would more closely focus on customer and municipal advisory client education and protection as well as align that rule with customer education and protection rules of other financial regulators, and (iv)

[12] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(i).

[2] 17 CFR 240.19b–4.

[3] Public Law 111–203, 124 Stat. 1376 (2010).

[4] MSRB Rule D–11 defines ''associated persons'' as follows:

Unless the context otherwise requires or a rule of the Board otherwise specifically provides, the terms ''broker,'' ''dealer,'' ''municipal securities broker,'' ''municipal securities dealer,'' ''bank dealer,'' and ''municipal advisor'' shall refer to and include their respective associated persons. Unless otherwise specified, persons whose functions are solely clerical or ministerial shall not be considered associated persons for purposes of the Board's rules.

[5] MSRB Notice 2012–63, Request for Comment on MSRB Rules and Interpretive Guidance (Dec. 18, 2012).

[6] *See, e.g.,* Letter from David L. Cohen, Managing Director and Associate General Counsel, Securities Industry and Financial Markets Association, dated February 19, 2013, to Ronald W. Smith, Corporate Secretary, Municipal Securities Rulemaking Board (commenting that (i) the requirement to deliver an investor brochure under Rule G–10 should be eliminated, (ii) the investor brochure is of limited value, if any, to institutional investors as well as investors in municipal fund securities, and (iii) alternatively, the MSRB could accomplish the objective of Rule G–10 by posting the investor brochure on its Web site); Letter from Gerald K. Mayfield, Senior Counsel, Wells Fargo & Company Law Department, dated February 19, 2013, to Ronald W. Smith, Corporate Secretary, Municipal Securities Rulemaking Board (commenting that (i) the requirement to deliver an investor brochure under Rule G–10 should be eliminated, (ii) the investor brochure is of limited value, if any, to institutional investors as well as investors in municipal fund securities, and (iii) alternatively, the MSRB could accomplish the objective of Rule G–10 by posting the investor brochure on its Web site).

[7] The proposed rule change, in Rule G–8(e)(ii), would define a municipal advisory client as a municipal entity or an obligated person for whom the municipal advisor engages in activities that would cause the municipal advisor to be a municipal advisor, as defined in Section 15B(e)(4) of the Exchange Act, 15 U.S.C. 78*o*–4(e)(4).

extend the Board's guidance under Rule G–32, Notice Regarding Electronic Delivery and Receipt of Information by Brokers, Dealers and Municipal Securities Dealers (Nov. 20, 1998) (the ''1998 Notice''), to municipal advisors.

In summary, by regulated entity, the proposed rule change would:

Municipal Advisors

- Amend Rule G–8 to exclude municipal advisors from the definition of ''customers;''
- amend Rule G–8 to include the definition of ''municipal advisory client;''
- amend Rule G–8 to extend the requirements that are similar to the rule's customer complaint recordkeeping requirements to municipal advisory client complaint recordkeeping;
- amend Rule G–8 to provide guidance in supplementary material that would define electronic recordkeeping;
- amend Rule G–8 to provide guidance in supplementary material that would remind a municipal advisor that it may be required to promptly report certain municipal advisory client complaints to other regulatory authorities;
- amend Rule G–9 to require that the records of municipal advisory client complaints be kept for at least six years;
- amend Rule G–10 to extend requirements that are similar to the rule's dealer customer protection and education requirements to municipal advisory client protection and education; and
- extend to municipal advisors, under Rule G–32, the guidance provided by the 1998 Notice, as relevant.

Dealers

- Amend Rule G–8 to require that dealers keep a standardized complaint log electronically, using product and problem codes tailored for municipal securities, to document the written complaints of customers;
- amend Rule G–8 to define written customer complaints to include complaints received electronically by the dealer;
- amend Rule G–8 to provide guidance in supplementary material that would define electronic recordkeeping;
- amend Rule G–8 to provide guidance in supplementary material that would remind a dealer that it may be required to promptly report certain written customer complaints to other regulatory authorities; and
- amend Rule G–10 in its entirety so that the rule would more clearly focus on customer protection and education.

A detailed rule discussion of the proposed rule change's recordkeeping requirements, customer and municipal advisory client education and protection requirements, and electronic delivery guidance to municipal advisors follows.

A. Recordkeeping Requirements

Rule G–8 currently requires that a dealer keep a record of all written complaints from customers and what action, if any, has been taken by the dealer in connection with those complaints. Under the proposed rule change, the Board would amend Rule G–8 to enhance its current recordkeeping requirements and then would extend those enhanced recordkeeping requirements to municipal advisors. More specifically, the proposed rule change would require regulated entities to retain additional detailed information about complaints electronically using a standard set of complaint product and problem codes. Supplementary Material would define electronic recordkeeping, and would remind regulated entities of their complaint reporting obligations to other regulatory authorities.

The three major components of the proposed rule change relating to complaint recordkeeping enhancements—namely, the application of those requirements to municipal advisors, the electronic complaint log, and supplementary material—are discussed below.

(i) Application of Customer Complaint Recordkeeping Requirements to Municipal Advisors

Under the proposed rule change, the Board would amend Rule G–8 to extend its complaint recordkeeping requirements to all municipal advisors. To accomplish this, the Board would (i) define municipal advisory client and (ii) require that a municipal advisor keep a record of written municipal advisory client complaints similar to the record that would be required for dealers to keep of customer complaints (*see* discussion under ''Electronic Complaint Log'' below).[8] The Board also would extend the record retention period applicable to customer complaints under Rule G–9(a)(v) to municipal advisory client complaints under the proposed amendment to Rule G–9(h)(iii).

A municipal advisory client, as previously noted, would include a municipal entity or obligated person for whom the municipal advisor engages in activities that cause the municipal advisor to be within the definition of a municipal advisor set forth in Section 15B(e)(4) of the Exchange Act.[9] Consistent with the Board's mandate under the Dodd-Frank Act to protect investors, municipal entities, and obligated persons,[10] the proposed rule change's definition of municipal advisory client would include clients of non-solicitor and solicitor municipal advisors.

The definition of a municipal advisor set forth in Section 15B(e)(4)(A) [11] is broad and includes non-solicitor and solicitor municipal advisors. Section 15B(e)(4)(A)(ii),[12] in turn, references the definition of ''solicitation of a municipal entity or obligated person'' set forth in Section 15B(e)(9) of the Exchange Act.[13] Section 15B(e)(9),[14] in part, defines a solicitation of a municipal entity or obligated person to mean ''a direct or indirect communication with a municipal entity or obligated person made by a person, for direct or indirect compensation, on behalf of a broker, dealer, municipal securities dealer, municipal advisor, or investment adviser . . . that does not control . . . the person undertaking such solicitation . . . .'' As such, the potential pool of written complaints could, for example, include a written complaint made by a municipal advisory client relating to an advertisement of the solicitor municipal advisor. Nonetheless, to protect municipal entity clients and obligated persons, the Board believes that it is important to capture the written complaints made by the full spectrum of municipal advisory clients of a solicitor municipal advisor.

Further, under the proposed rule change, the Board would amend Rule G–9 to extend the record retention period for municipal advisory client complaints to six years. Without such an extension, records of customer complaints would be kept for six years, while records of municipal advisory

[8] ''Written'' would include electronic correspondence. ''Complaint'' would mean any written statement alleging a grievance involving the activities of the dealer or municipal advisor or any of their associated persons with respect to any matter involving a customer's or the municipal entity client's account. *See* the proposed amendments to Rule G–8(a)(x)(ii) and (h).

[9] 15 U.S.C. 78*o*(e)(4).

[10] *See supra* note 3.

[11] Section 15B(e)(4), 15 U.S.C. 78*o*–4(e), provides, in part, that the term municipal advisor:

(A) Means a person (who is not a municipal entity or an employee of a municipal entity) that—

(i) provides advice to or on behalf of a municipal entity or obligated person with respect to municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, and other similar matters concerning such financial products or issues; or

(ii) undertakes a solicitation of a municipal entity . . .

[12] 15 U.S.C. 78*o*(e)(4)(A)(ii).

[13] 15 U.S.C. 78*o*(e)(9).

[14] *Id.*

client complaints would be kept for five years. Because of the potential importance of municipal advisory client complaints to informing other regulators on inspections of regulated entities and on the potential enforcement of MSRB rules (*see* discussion under ''Electronic Complaint Log'' below), the MSRB believes that the retention period for such municipal advisory client complaint records should correspond to that of customer complaint records.[15]

(ii) Electronic Complaint Log

Under the proposed rule change, the Board would amend Rule G–8 to require that all regulated entities keep an electronic complaint log of all written complaints of customers or municipal advisory clients and persons acting on behalf of such customers or municipal advisory clients. There would be no option to keep the complaint log in a paper format. The electronic complaint log would include identifying information about the customer or municipal advisory client (*i.e.,* his, her or its name, address, and account number), the date the complaint was received, the date of the activity that gave rise to the complaint, and the person whom the customer or municipal advisory client names in his or her complaint. The record also would include a description of the nature of complaint, and the action, if any, the dealer or municipal advisor has taken concerning the complaint. The log would require that the regulated entity code the complaint using a standard set of product and problem codes.

By enhancing the information about customer and municipal advisory client complaints that a regulated entity would be required to keep, as well as by requiring that the regulated entity keep those records electronically using standard codes, the Board would align Rule G–8 with the recordkeeping requirements of other financial regulators. For example, Rule 17a–3(18) under the Exchange Act[16] and FINRA Rule 4513[17] each require information about customer complaints similar to what would be required under the proposed rule change. Those rules require identifying information about the customer, the date the complaint was received, the name of any associated person named in the complaint, a description of the nature of the complaint and the disposition of the complaint.[18] Further, FINRA Rule 4530 requires that dealers use product and problem codes to code their electronic logs of customer complaints.[19]

In addition, by requiring that customer and municipal advisory client complaint records be kept electronically using standard codes, the Board believes that the proposed rule change would enhance the ability of other financial regulators to conduct more cost-effective and efficient inspections and surveillance of regulated entities. The Board understands that other financial regulators conduct certain portions of their inspections and monitoring of dealers electronically. Under the proposed rule change, the Board would ensure that inspections of certain dealers and municipal advisors that are not members of FINRA also could be accomplished in a more cost-effective and efficient manner.

As noted above, under the proposed rule change, the Board would develop codes for the electronic complaint log that would be based on the product and problem codes required by FINRA Rule 4530, but would be tailored to address municipal securities and municipal advisory activities.[20] The Board would make such codes available in a manual that would be posted on its Web site. A regulated entity, similar to FINRA Rule 4530, would be required to select the most prominent product and the most egregious problem discussed in the complaint. In the future, however, the Board may require that all products and problems be coded in the electronic customer or municipal advisory client complaint log.

While the electronic complaint log requirement would impose a burden on dealers and municipal advisors, the Board anticipates that the electronic complaint log requirement would impose little additional burden on dealers that are FINRA members. The proposed rule change's complaint log recordkeeping requirements are similar to the requirements relating to customer complaints set forth in Rule 17a–3 under the Exchange Act.[21] Under Rule G–8(f), dealers in compliance with Rule 17a–3 will be deemed to be in compliance with Rule G–8 as long as certain information is maintained, including information relating to customer complaints.[22] In addition, dealers that are FINRA members currently must comply with FINRA Rule 4530, the rule, in part, with which the Board is seeking to align the proposed rule change. Further, as discussed under ''Self-Regulatory Organization's Statement on Burden on Competition'' below, the recordkeeping burden imposed on dealers and municipal advisors would be necessary to help protect customers and municipal advisory clients.

(iii) Supplementary Material

The proposed rule change would include supplementary material under Rule G–8 that would (i) provide guidance as to the term ''electronic format'' used in the proposed amendments to Rules G–8(a) and (h) and (ii) remind regulated entities of their reporting obligations to other regulatory authorities. The supplementary material, in .01, would make clear that a regulated entity could use any electronic format, *i.e.,* computer software that allows for the storing, organization and manipulation of data, as long as the software would allow for the electronic complaint log to be

[15] The Board notes, however, that there are instances where the record retention requirements between dealers and municipal advisors differ. For example, dealers are required to retain records of gifts and gratuities under Rule G–20 for six years, while municipal advisors only are required to retain such records for five years.

[16] Rule 17a–3(a)(18), 17 CFR 240.17a–3(a)(18), provides, in part, that every member of a national securities exchange who transacts a business in securities directly with others than members of a national securities exchange, and every broker or dealer who transacts a business in securities through the medium of any such member, and every broker or dealer registered pursuant to section 15 of the Securities Exchange Act of 1934, as amended, shall make and keep current the following books and records relating to its business:

A record:

(i) As to each associated person of each written customer complaint received by the member, broker or dealer concerning that associated person. The record shall include the complainant's name, address, and account number; the date the complaint was received; the name of any other associated person identified in the complaint; a description of the nature of the complaint; and the disposition of the complaint . . .

(ii) Indicating that each customer of the member, broker or dealer has been provided with a notice containing the address and telephone number of the department of the member, broker or dealer to which any complaints as to the account may be directed.

[17] FINRA Rule 4513(a) provides, in part, that:

[e]ach member shall keep and preserve in each office of supervisory jurisdiction either a separate file of all written customer complaints that relate to that office (including complaints that relate to activities supervised from that office) and action taken by the member, if any, or a separate record of such complaints and a clear reference to the files in that office containing the correspondence connected with such complaints.

[18] *See supra* notes 16 and 17.

[19] *See* FINRA Rule 4530(d). The product and problem codes used under Rule 4530 as of August 29, 2016 are available at *http://www.finra.org/sites/default/files/Web%20-%20Complaints%20%20Problem%20and%20Product%20Codes_0.pdf.*

[20] *Id.*

[21] *See supra* note 16.

[22] Specifically, Rule G–8(f) provides that:

Brokers, dealers and municipal securities dealers other than bank dealers which are in compliance with rule 17a–3 of the Commission will be deemed to be in compliance with the requirements of this rule, provided that the information required by subparagraph (a)(iv)(D) of this rule as it relates to uncompleted transactions involving customers; paragraph (a)(viii); and paragraphs (a)(xi) through (a)(xxvi) shall in any event be maintained.

provided promptly upon request to a financial regulatory authority. The supplementary material, in .02, also would remind a regulated entity that it may have the duty to report certain complaints, such as complaints involving theft, to other regulatory authorities, such as to FINRA or to the SEC.

B. Customer and Municipal Advisory Client Education and Protection

Under the proposed rule change, the Board would amend and overhaul Rule G–10 to replace the current Rule G–10 with a more modern customer and municipal advisory client education and protection rule. The proposed rule change's amendments to Rule G–10 would apply to dealers and municipal advisors.

At its core, the Board designed Rule G–10 to protect investors by providing investors with the information necessary through the investor brochure to file a complaint about their dealers with the appropriate regulatory authority. That information also includes an overview of the investor protections provided by MSRB rules. However, investors currently do not receive this information until after they have made a complaint to or about the dealer; at that point, the information in the investor brochure may arrive at a point in time that would impede the investor from making the best use of the information provided in the investor brochure. The proposed rule change solves that problem through modernization of the rule.

Under the proposed rule change, Rule G–10 would remain a rule that is focused on investor education and protection. However, instead of an investor receiving the educational material and information about filing a complaint only after he or she has made a complaint, the customer or municipal advisory client would receive more regular notifications from its regulated entity about the availability of such materials. Specifically, a dealer would be required to notify a customer about its registration status and the availability of the educational material annually, and a municipal advisor would be required to notify a municipal advisory client [23] about its registration and the availability of educational material promptly but no less than once each calendar year during the course of a municipal advisory relationship. The notifications would require that the regulated entity disclose (i) that the regulated entity is registered with the MSRB and the SEC, (ii) the MSRB's Web site address, and (iii) that there is a brochure available on the MSRB Web site that describes the protections available under MSRB rules and how to file a complaint with financial regulatory authorities.

By requiring these notifications, the Board believes that a customer or municipal advisory client would be able to receive detailed and relevant information about its regulated entity, the protections provided by MSRB rules, and how to make a complaint in a more timely and consistent fashion.[24] Further, by reminding the customer or municipal advisory client about the regulated entity's registration with the SEC, the Board believes that a customer or municipal advisory client might be more likely to access the information and educational materials that are available from the SEC, the regulatory authority that may examine the regulated entity and/or enforce the MSRB's rules. The notifications would address concerns raised by market participants that the investor brochure may be of limited, if any, use to certain investors, such as institutional investors and investors in municipal fund securities, by directing investors to the most complete range of relevant information about the regulated entity, including the regulation of that regulated entity.[25]

Under the proposed rule change, the Board would not specify, other than in writing, how the customer or municipal advisory client would receive the notifications. The proposed rule change assumes that the regulated entity could include the notifications with other materials. Further, as suggested by commenters to Regulatory Notice 2012–63, unlike with the current Rule G–10, a regulated entity would not be required to deliver an investor brochure to the customer. The notifications would replace that requirement.[26]

The proposed amendments to Rule G–10 would align Rule G–10 with FINRA Rule 2267, Investor Education and Protection. That rule contains similar notification requirements, but the notifications under FINRA Rule 2267 refer the investor to the BrokerCheck Hotline Number and to FINRA's Web site address.[27] Because dealers that are FINRA members are required to provide annual notifications to investors, the Board anticipates that it would not be a significant burden for most dealers to provide the annual notifications that would be required under the proposed amendments to Rule G–10. In addition, the Board believes that it would be a reasonable requirement for a municipal advisor to provide such notifications promptly but no less than once each calendar year during the course of a municipal advisory relationship.

C. Electronic Delivery Guidance for Municipal Advisors

In 1998, the Board published guidance under Rule G–32 regarding the electronic delivery and receipt of information by dealers. The Board, in part, based that guidance on guidance that the SEC had provided about electronic delivery of information. However, since that time, the Dodd-Frank Act has granted the Board with rulemaking authority over municipal advisors.[28] To ensure that municipal advisors could take full advantage of the

[23] The term ''municipal advisory client'' under the proposed amendments to Rule G–10 would be more narrow than how the term would be defined under the proposed amendments to Rule G–8. Under the proposed rule change, the Board would define solicitation of a municipal entity or obligated person under Rule G–10 by reference to Rule 15Ba1–1(n), 17 CFR 240.15Ba1–1(n), under the Exchange Act. For purposes of that rule, solicitation does not include:

(1) Advertising by a broker, dealer, municipal securities dealer, municipal advisor, or investment adviser; or

(2) Solicitation of an obligated person, if such person is not acting in the capacity of an obligated person or the solicitation of the obligated person is not in connection with the issuance of municipal securities or with respect to municipal financial products.

By using the narrower definition of solicitation of a municipal entity or obligated person, the Board would be able to better ensure that the notifications are sent to actual solicitor municipal advisory clients and not just to an entity that reviewed an advertisement. For purposes of the proposed amendments to Rule G–10, the set of non-solicitor municipal advisory clients would remain the same as it is for the proposed amendments to Rule G–8.

[24] The Board would increase the visibility of the brochure, and other relevant information, on the MSRB's Web site.

[25] *See supra* note 6.

[26] The Board believes that by no longer requiring that the investor brochure be sent after the investor has made a complaint, the investor may have an improved ''complaint'' experience. The Board understands that investors may have been frustrated by the timing of their receipt of the investor brochure. Some investors may have believed that the brochure was not germane and helpful to the complaint, particularly when they would have preferred information about resolving the issue and/or the actual resolution of the issue. Those investors, in turn, may have complained to their dealers about the investor brochure, and their dealers, in response, may have sent yet another investor brochure to be in compliance with Rule G–10. *See id.*

[27] FINRA Rule 2267(a) provides, in part, that:

Except as otherwise provided in this Rule, each member shall once every calendar year provide in writing (which may be electronic) to each customer the following items of information:

(1) FINRA BrokerCheck Hotline Number;

(2) FINRA Web site address; and

(3) A statement as to the availability to the customer of an investor brochure that includes information describing FINRA BrokerCheck.

[28] *See supra* note 3.

Board's electronic delivery guidance, as well as to ensure that the proposed amendments to Rule G–10 would work as intended, the proposed rule change would extend the Board's guidance provided by the 1998 Notice to municipal advisors.

2. Statutory Basis

Section 15B(b)(2) of the Exchange Act [29] provides that:

[t]he Board shall propose and adopt rules to effect the purposes of this title with respect to transactions in municipal securities effected by brokers, dealers, and municipal securities dealers and advice provided to or on behalf of municipal entities or obligated persons by brokers, dealers, municipal securities dealers, and municipal advisors with respect to municipal financial products, the issuance of municipal securities, and solicitations of municipal entities or obligated persons undertaken by brokers, dealers, municipal securities dealers, and municipal advisors.

Section 15B(b)(2)(C) of the Exchange Act [30] provides that the MSRB's rules shall:

be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in municipal securities and municipal financial products, to remove impediments to and perfect the mechanism of a free and open market in municipal securities and municipal financial products, and, in general, to protect investors, municipal entities, obligated persons, and the public interest.

The MSRB believes that the proposed rule change is consistent with Sections 15B(b)(2) [31] and 15B(b)(2)(C) [32] of the Exchange Act. The proposed rule change would help prevent fraudulent and manipulative practices, promote just and equitable principles of trade, foster cooperation and coordination with persons engaged in regulating transactions in municipal securities and municipal financial products, and protect investors, municipal entities, obligated persons and the public interest by developing more comprehensive and modern customer and municipal advisory client complaint and recordkeeping rules. The proposed rule change would overhaul Rule G–10 so that the rule would more clearly focus on customer and municipal advisory client education and protection. Further, the proposed rule change would enhance the Board's related recordkeeping requirements under Rule G–8 about written customer and municipal advisory client complaints to require that regulated entities keep more detailed information about written customer or municipal advisory client complaints in an electronic format.

The proposed rule change would align the Board's customer and municipal advisory client complaint rules and related recordkeeping requirements with those of other financial regulators. By so doing, the proposed rule change will likely promote compliance with Board rules by providing regulated entities with the opportunity to streamline their compliance procedures, and thus promote compliance with MSRB rules and reduce their compliance costs.

In addition, the proposed amendments to Rules G–8 and G–9 would enhance the ability of other financial regulators to conduct more cost-effective and efficient inspections and surveillance of regulated entities by requiring that all regulated entities keep and maintain their electronic records of written customer or municipal advisory client complaints for six years. The Board believes that the ability to more cost-effectively and efficiently monitor written customer and municipal advisory client complaints will promote compliance with Board rules. Increased compliance with Board rules will likely reduce the frequency and magnitude of compliance issues that could potentially result in harm to investors, municipal entities, or obligated persons, or undermine the public's confidence in the municipal securities market.

Section 15B(b)(2)(L)(iv) of the Exchange Act [33] requires that rules adopted by the Board:

not impose a regulatory burden on small municipal advisors that is not necessary or appropriate in the public interest and for the protection of investors, municipal entities, and obligated persons, provided that there is robust protection of investors against fraud.

The proposed rule change's extension of Rule G–10's customer education and protection requirements and the related Rules G–8 and G–9 recordkeeping requirements to municipal advisors does represent an additional burden on municipal advisors, including small municipal advisors. However, the Board believes that the regulatory burden will be relatively limited and is necessary to protect municipal entity and obligated person clients, and the integrity of the municipal securities and municipal advisory marketplaces.

The MSRB also believes that the proposed rule change is consistent with Section 15B(b)(2)(G) of the Exchange Act,[34] which provides that the MSRB's rules shall

prescribe records to be made and kept by municipal securities brokers, municipal securities dealers, and municipal advisors and the periods for which such records shall be preserved.

The proposed rule change would enhance the current customer complaint recordkeeping requirements under Rule G–8 by requiring that dealers keep more detailed information about written customer complaints in an electronic format and then would extend those recordkeeping requirements to municipal advisors. Further, the proposed rule change would extend the six-year record retention period applicable to customer complaints to municipal advisory client complaints. As noted above, the MSRB believes that the proposed amendments to Rule G–8 related to books and records, and Rule G–9 related to the retention of those records, will promote compliance with and facilitate enforcement of MSRB rules, including Rule G–10 and other applicable securities laws and regulations.

B. Self-Regulatory Organization's Statement on Burden on Competition

Section 15B(b)(2)(C) of the Exchange Act [35] requires that MSRB rules not be designed to impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Exchange Act. In addition, Section 15B(b)(2)(L)(iv) of the Exchange Act [36] provides that MSRB rules may not impose a regulatory burden on small municipal advisors that is not necessary or appropriate in the public interest and for the protection of investors, municipal entities, and obligated persons, provided that there is robust protection of investors against fraud.

In determining whether these standards have been met, the MSRB was guided by the Board's Policy on the Use of Economic Analysis in MSRB Rulemaking.[37] In accordance with this policy, the Board has evaluated the potential impacts on competition of the proposed rule change, including in comparison to reasonable alternative regulatory approaches, relative to the

[29] 15 U.S.C. 78*o*–4(b)(2).

[30] 15 U.S.C. 78*o*–4(b)(2)(C).

[31] 15 U.S.C. 78*o*–4(b)(2).

[32] 15 U.S.C. 78*o*–4(b)(2)(C).

[33] 15 U.S.C. 78*o*–4(b)(2)(L)(iv).

[34] 15 U.S.C. 78*o*–4(b)(2)(G).

[35] 15 U.S.C. 78*o*–4(b)(2)(C).

[36] 15 U.S.C. 78*o*–4(b)(2)(L)(iv).

[37] Policy on the Use of Economic Analysis in MSRB Rulemaking, available at, *http://msrb.org/Rules-and-Interpretations/Economic-Analysis-Policy.aspx*.

baseline. The MSRB also considered other economic impacts of the proposed rule change and has addressed any comments relevant to these impacts in other sections of this document.

The MSRB does not believe that the proposed rule change will impose any additional burdens on competition, relative to the baseline, that are not necessary or appropriate in furtherance of the purposes of the Exchange Act.

While the MSRB believes that the proposed rule changes represent a reduction in burden compared to the existing Rule G–10, the MSRB recognizes that the recordkeeping requirements associated with the proposed rule change may impose some initial costs on dealers that currently comply with FINRA Rule 4530 but need to adopt a new set of complaint codes. The MSRB also recognizes that dealers that are not currently FINRA members may experience a greater burden as the proposed recordkeeping requirements may constitute a new activity that they have not previously performed. The MSRB does not believe, however, that the potentially greater burden on dealers that are not FINRA members is significant enough to constitute a burden on competition.

The MSRB recognizes that the proposal represents a new requirement on municipal advisors and that the recordkeeping requirements in particular may disproportionately impact small municipal advisors. However, the MSRB does not believe that the overall burden of the proposed rule change is significant or that the impact on small municipal advisors will materially alter the competitive landscape. To the extent the proposed rule changes do lead some firms to exit the market or consolidate, based on the SEC's analysis in its order adopting the municipal advisor rules, the MSRB believes that the market for municipal advisory activities is likely to remain competitive.[38]

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments were neither solicited nor received on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period of up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove such proposed rule change, or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov*. Please include File Number SR–MSRB–2016–15 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549.

All submissions should refer to File Number SR–MSRB–2016–15. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the MSRB. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–MSRB–2016–15 and should be submitted on or before December 9, 2016.

For the Commission, pursuant to delegated authority.[39]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27738 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79307; File No. SR–BatsBYX–2016–34]

Self-Regulatory Organizations; Bats BYX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Related to Fees for Use of Bats BYX Exchange, Inc.

November 14, 2016.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on November 7, 2016, Bats BYX Exchange, Inc. (the ''Exchange'' or ''BYX'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Exchange has designated the proposed rule change as one establishing or changing a member due, fee, or other charge imposed by the Exchange under Section 19(b)(3)(A)(ii) of the Act[3] and Rule 19b–4(f)(2) thereunder,[4] which renders the proposed rule change effective upon filing with the Commission. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange filed a proposal to amend the fee schedule applicable to Members[5] and non-members of the Exchange pursuant to BYX Rules 15.1(a) and (c).

The text of the proposed rule change is available at the Exchange's Web site at *www.batstrading.com,* at the

---

[38] Securities Exchange Act Release No. 70462 (Sept. 20, 2013), 78 FR 67468, 67608 (Nov. 12, 2013).

[39] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] 15 U.S.C. 78s(b)(3)(A)(ii).

[4] 17 CFR 240.19b–4(f)(2).

[5] The term ''Member'' is defined as ''any registered broker or dealer that has been admitted to membership in the Exchange.'' *See* Exchange Rule 1.5(n).

principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in Sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to increase the fee for orders yielding fee code Z, which results from an order routed to a dark liquidity venue (except through the SLIM [6] routing strategy), from $0.00200 to $0.00220 per share for securities priced at or above $1.00 and for securities priced below $1.00. The Exchange proposes to implement this amendment to its Fee Schedule immediately.[7]

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the objectives of Section 6 of the Act,[8] in general, and furthers the objectives of Section 6(b)(4),[9] in particular, as it is designed to provide for the equitable allocation of reasonable dues, fees and other charges among its Members and other persons using its facilities. The Exchange believes that its proposal to increase the fee for orders routed to a dark liquidity venue that yield fee code Z represents an equitable allocation of reasonable dues, fees, and other charges among Members and other person using its facilities in that they are designed in part to cover the costs of routing. While Members that route orders to a dark liquidity venue will be paying higher fees due to the proposal, the increased revenue received by the Exchange will be used to fund the Exchange generally, including the cost of maintaining and improving the technology used to handle and route orders from the Exchange as well as programs that the Exchange believes help to attract additional liquidity and thus improve the depth of liquidity available on the Exchange. Accordingly, although the cost of routing is increasing, the Exchange believes that the increase is a modest increase and that higher routing fees will benefit Members in other ways. Furthermore, the Exchange notes that routing through the Exchange is voluntary. Lastly the Exchange also believes that the proposed amendment is non-discriminatory because it applies uniformly to all Members.

B. Self-Regulatory Organization's Statement on Burden on Competition

This proposed rule change does not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange does not believe that this change represents a significant departure from previous pricing offered by the Exchange or from pricing offered by the Exchange's competitors. Additionally, Members may opt to disfavor the Exchange's pricing if they believe that alternatives offer them better value. Accordingly, the Exchange does not believe that the proposed changes will impair the ability of Members or competing venues to maintain their competitive standing in the financial markets. The Exchange believes that its proposal would not burden intramarket competition because the proposed rate would apply uniformly to all Members.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has not solicited, and does not intend to solicit, comments on this proposed rule change. The Exchange has not received any written comments from members or other interested parties.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A) of the Act [10] and paragraph (f) of Rule 19b–4 thereunder.[11] At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov*. Please include File Number SR–BatsBYX–2016–34 on the subject line.

Paper Comments

- Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–BatsBYX–2016–34. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–BatsBYX–2016–34, and should be submitted on or before December 9, 2016.

---

[6] *See* Exchange Rule 11.13(b)(3).

[7] The Exchange initially submitted the proposed rule change on October 28, 2016. (SR–BatsBYX–2016–30). On November 3, 2016, the Exchange withdrew SR–BatsBYX–2016–30 and submitted SR–BatsBYX–2016–31. On November 7, 2016, the Exchange withdrew SR–BatsBYX–2016–31 and submitted this filing.

[8] 15 U.S.C. 78f.

[9] 15 U.S.C. 78f(b)(4).

[10] 15 U.S.C. 78s(b)(3)(A).

[11] 17 CFR 240.19b–4(f).

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[12]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27745 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79296; File No. SR–FINRA–2016–029]

Self-Regulatory Organizations; Financial Industry Regulatory Authority, Inc.; Order Approving Rule Change Amending the Code of Arbitration Procedure for Customer Disputes and the Code of Arbitration Procedure for Industry Disputes To Require All Parties Other Than Pro Se Customers To File and Serve Pleadings and Documents Through the FINRA Office of Dispute Resolution's Party Portal and To Permit Mediation Parties To Use the Portal

November 14, 2016.

I. Introduction

On July 27, 2016, Financial Industry Regulatory Authority, Inc. (''FINRA'') filed with the Securities and Exchange Commission (''Commission''), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Exchange Act'')[1] and Rule 19b–4 thereunder,[2] a proposed rule change to amend the Code of Arbitration Procedure for Customer Disputes (''Customer Code'') and the Code of Arbitration Procedure for Industry Disputes (''Industry Code'' and, together with the Customer Code, ''Codes''), to require all parties, except customers who are not represented by an attorney or other person (''*pro se* customers''), to use the FINRA Office of Dispute Resolution's Party Portal (''Party Portal'') to file initial statements of claim and to file and serve pleadings and other documents on FINRA or any other party. Under the proposed rule change, FINRA would require parties to use the Party Portal to file and serve correspondence relating to discovery requests, but would not permit parties to file documents produced in response to discovery requests through the Party Portal. FINRA is also proposing to amend the Code of Mediation Procedure (''Mediation Code'') to permit mediation parties to agree to use the Party Portal to submit and retrieve all documents and other communications. In addition, FINRA is revising other provisions in the Codes to conform to existing practice.

The proposed rule change was published for comment in the **Federal Register** on August 17, 2016.[3] The public comment period closed on September 7, 2016. On September 26, 2016, FINRA extended the time period in which the Commission must approve the proposed rule change, disapprove the proposed rule change, or institute proceedings to determine whether to approve or disapprove the proposed rule change to November 15, 2016.[4] The Commission received five comment letters in response to the Notice.[5] On October 28, 2016, FINRA responded to the comment letters received in response to the Notice.[6] This order grants approval of the proposed rule change.

II. Description of the Proposed Rule Change [7]

Background

In 2004, FINRA implemented an online, web-based arbitration claim notification and filing system that allowed a claimant [8] or claimant's counsel to file voluntarily an arbitration claim through that system (''online claim filing system'').[9] Currently, the Codes allow a claimant to file a claim [10] either in hard copy or by using the online claim filing system.[11] The online claim filing system allows a claimant to complete forms, submit documents, and pay filing fees online.

In June 2013, FINRA introduced a separate secure, online service called the Dispute Resolution Portal (''DR Portal'') to facilitate interactions among parties, arbitrators, mediators, and FINRA staff on arbitration case-related matters. As further discussed below, the DR Portal includes both a Party Portal and an Arbitrator and Mediator Portal. The Party Portal uses an invitation/registration process that provides a way to send and receive arbitration and mediation case documents. For example, once a party notifies FINRA of the name of the person who should be given access to the arbitration or mediation case file (typically the party's representative), FINRA sends an email to the named person with an invitation to register on the Party Portal via a personalized web address link that provides complete access to the specified case. Once registered, the representative can provide other individuals (such as legal assistants and co-counsel) with access to appropriate cases on the Party Portal.

FINRA initially opened the Party Portal to a small number of firms to gain experience with the technology and to incorporate user feedback. Over time, FINRA expanded access to the Party Portal, and as of July 20, 2015, FINRA allowed all parties to use the Party Portal voluntarily in all arbitration and mediation cases filed as of that date. Through the Party Portal, parties can, among other things, receive documents from and send documents to FINRA, receive service [12] of a claim, submit an answer to a claim, submit additional case documents, view the status of a case, and select arbitrators.

FINRA has periodically upgraded the Party Portal to allow parties to, among other things, schedule hearings, receive automated messages when new documents are posted, see an indication of received documents not yet viewed, and send documents to other Party Portal case participants. FINRA believes that using the online claim filing system improves the forum by hastening the

---

[12] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] *See* Exchange Act Release No. 78549 (Aug. 11, 2016), 81 FR 54858 (Aug. 17, 2016) (File No. SR–FINRA–2016–029) (''Notice'').

[4] *See* Letter from Margo A. Hassan, Associate Chief Counsel, FINRA, to Lourdes Gonzalez, Assistant Chief Counsel—Sales Practices, Division of Trading and Markets, Securities and Exchange Commission, dated September 26, 2016.

[5] *See* Letters from Steven B. Caruso, Maddox Hargett & Caruso, P.C., dated August 12, 2016 (''Caruso Letter''); David Lagziel, CEO, Conflicteam, dated August 30, 2016 (''Conflicteam Letter''); David T. Bellaire, Executive Vice President and General Counsel, Financial Services Institute (''FSI''), dated September 7, 2016 (''FSI Letter''); Nicole Iannarone, Assistant Clinical Professor, and Michael F. Williford, Student Intern, Investor Advocacy Clinic (''IAC''), Georgia State University College of Law, dated September 7, 2016 (''IAC Letter''); and Hugh Berkson, President, Public Investors Arbitration Bar Association (''PIABA''), dated September 7, 2016 (''PIABA Letter''). The comment letters are available on FINRA's Web site at *http://www.finra.org,* at the principal office of FINRA, at the Commission's Web site at *https://www.sec.gov/comments/sr-finra-2016-029/finra2016029.shtml,* and at the Commission's Public Reference Room.

[6] *See* Letter from Margo A. Hassan, Associate Chief Counsel, FINRA, to Brent J. Fields, Secretary, Securities and Exchange Commission, dated October 28, 2016 (''FINRA Letter''). The FINRA Letter is available on FINRA's Web site at *http://www.finra.org,* at the principal office of FINRA, at the Commission's Web site at *https://www.sec.gov/comments/sr-finra-2016-029/finra2016029.shtml,* and at the Commission's Public Reference Room.

[7] The subsequent description of the proposed rule change is substantially excerpted from FINRA's description in the Notice. *See* Notice, 81 FR 54858–66.

[8] *See* Rules 12100(e) and 13100(e). The term ''claimant'' means a party that files the statement of claim that initiates an arbitration proceeding.

[9] *See Notice to Members* 04–56.

[10] *See* Rules 12302(a) and 13302(a).

[11] *See* FINRA, Arbitration Online Claim Filing, available at *http://www.finra.org/arbitration-and-mediation/online-claim-filing.*

[12] Service is the process of delivering a pleading (*e.g.,* the statement of claim or answer) or other documents to the opposing party.

processing of claims, and reducing the burden of using hard-copy documents by parties and FINRA staff. Accordingly, FINRA believes that it would be appropriate to require parties, with limited exceptions, to use the Party Portal on a mandatory basis.

The Arbitrator and Mediator Portal is open to all FINRA arbitrators and mediators to use on a voluntary basis. In this portal, arbitrators and mediators can view and update their profile and disclosure information, access information about their assigned cases, schedule hearing dates, and view case documents. FINRA believes that use of the Arbitrator and Mediator Portal has enhanced efficiencies at the forum.

Proposed Rule Change

FINRA is proposing to require parties to use the Party Portal to submit documents and view their arbitration case information and documents in most instances. There would be an exception for *pro se* customers.[13] FINRA would invite *pro se* customers to use the Party Portal, but would not require them to do so. However, if a *pro se* customer files a claim using the Party Portal, then FINRA would require the customer to use the Party Portal for the duration of the arbitration process.

FINRA would require parties to use the Party Portal to file and serve correspondence relating to discovery requests, but would not permit parties to file documents produced in response to discovery requests through the Party Portal. FINRA believes that maintaining the correspondence in the Party Portal makes sense because it is part of the case record. However, depending on the subject of a case, discovery production can be voluminous, and FINRA does not believe it would be efficient for the Party Portal to be used as the receptacle for parties' exchanged discovery. FINRA states that this approach is consistent with its current practice.

Finally, under the proposed rule change, because mediation is voluntary in all instances, FINRA would permit parties to a mediation proceeding to use the Party Portal on a voluntary basis to submit and view their mediation case information and documents.

FINRA is proposing to amend each of the rules in the Codes affected by required use of the Party Portal. The changes would update the rule language to reflect how parties comply with the Codes through use of the Party Portal. FINRA Rules 12300 and 13300 describe how parties file pleadings[14] and documents with FINRA and serve pleadings and documents on other parties through the Party Portal. The terms ''file'' and ''serve''—terms associated with use of the Party Portal—are used throughout the Codes. Under the proposed rule change, when a party submits pleadings or documents through the Party Portal, the party would accomplish both filing with the Director[15] and, in most instances, service on all other parties and the arbitrators.[16] Therefore, in most of the proposed rule amendments, FINRA would delete references to parties filing pleadings and documents with the Director at the same time as on other parties, and providing copies for arbitrators.

For reader convenience, the discussion below only details the proposed changes to the FINRA rules in the Customer Code. However, FINRA is proposing to make substantively similar amendments to the Industry Code. The primary difference between the proposed amendments to the Customer Code and the Industry Code is that the Customer Code provides an exemption from required use of the Party Portal for *pro se* customers. The Industry Code would not provide an exemption for any party.

As a result of the proposed rule change, FINRA would need to update several cross-references in the Codes. The proposed updates are noted as applicable. In addition, FINRA states that its forum users have indicated that for ease of citation, they would prefer that FINRA use numbers and letters instead of bullets. Therefore, FINRA is proposing to replace bullets with numbers or letters in each of the rules affected by the proposed rule change. The proposed replacements are noted where applicable.

In addition to changes in the Codes, FINRA is proposing to amend the Mediation Code to permit parties to agree to use the Party Portal to submit and retrieve all documents and other communications and to view mediation case information. The proposed amendments are discussed below.

Customer Code

FINRA Rule 12100—Definitions

FINRA is proposing to amend FINRA Rule 12100 to add new definitions and to amend several definitions in the Customer Code relating to the required use of the Party Portal.

Arbitrator and Mediator Portal—FINRA is proposing to add a new definition to the rule to define ''Arbitrator and Mediator Portal'' as the web-based system that allows invited arbitrators and mediators to access a secure section of FINRA's Web site to submit documents and information and to view their arbitration and mediation case information and documents.[17]

Claim Notification Letter—FINRA is proposing to add a new definition to the rule to define ''Claim Notification Letter'' as the notice that FINRA would send respondents indicating that they have been named as a party in a statement of claim.[18] The new definition would specify that the Claim Notification Letter will provide information about accessing the Party Portal to obtain a copy of the statement of claim filed by the claimants and information about the arbitration, including the hearing location selected by the Director and the deadline for filing a statement of answer.

Day—In the current rule, FINRA defines the term ''day'' as a calendar day.[19] The definition provides that if a deadline specified in the Code falls on a Saturday, Sunday or any FINRA holiday, the deadline is extended until the next business day. Under the proposed rule change, other than the statement of claim, which FINRA serves upon all respondents, parties will be able to serve documents on each other through the Party Portal on any day and at any time. Service would occur immediately after FINRA receives a document, regardless of the day or time of receipt. If, for example, a party submits a document on a Saturday, the Party Portal will immediately transmit the documents to the appropriate parties on that day. Certain deadlines in the Code are triggered by a party's receipt of

[13] FINRA would define *pro se* in the Customer Code as a party that is not represented by an attorney or others during an arbitration or mediation. FINRA would not define *pro se* in the Industry Code. Under the proposed rule change, FINRA would not exempt *pro se* parties from the requirement under the Industry Code to submit documents through the Party Portal.

[14] FINRA Rule 12100 defines a pleading as ''a statement describing a party's causes of action or defense. Documents that are considered pleadings are: A statement of claim, an answer, a counterclaim, a cross claim, a third party claim, and any replies.''

[15] The Director refers to the FINRA Office of Dispute Resolution Director as described in FINRA Rule 12103 (Director of Dispute Resolution).

[16] For example, FINRA Rule 12304 (Answering Counterclaims) currently provides that a claimant must directly serve any answer to a counterclaim on each other party and at the same time must file the answer to the counterclaim with the Director with additional copies for the arbitrator. Under the proposed rule change, as described further in the discussion, once the claimant submits the answer through the Party Portal, the claimant has also filed the answer with the Director.

[17] *See* proposed FINRA Rule 12100(a).

[18] *See* proposed FINRA Rule 12100(f).

[19] *See* FINRA Rule 12100(j).

a pleading.[20] FINRA does not believe it would be appropriate to trigger a deadline based on an opposing party's weekend use of the Party Portal. Therefore, FINRA is proposing to amend the definition of ''day'' to clarify that if a party receives pleadings or other documents on a Saturday, Sunday or any FINRA holiday, the date of receipt shall be the next business day.

Non-Public Arbitrator—FINRA is proposing to amend the definition of non-public arbitrator [21] to update cross-references in the rule.

Party Portal—FINRA is proposing to add a new definition to the rule to define ''Party Portal'' as the Web-based system that is accessible by arbitration and mediation parties and their representatives. The Party Portal allows invited participants to access a secure section of FINRA's Web site to submit documents and view their arbitration and mediation case information and documents.[22]

Pro Se—FINRA is proposing to add a new definition to the rule to define ''*Pro Se*'' to mean a party that is not represented by an attorney or others during an arbitration or mediation.[23]

Public Arbitrator—FINRA is proposing to amend the definition of Public Arbitrator [24] to update cross-references in the rule.

In addition, FINRA would reletter the definitions to reflect the addition of the new terms.

FINRA Rule 12211—Direct Communication Between Parties and Arbitrators

Subject to specified limitations, FINRA allows parties that are represented by counsel to communicate directly with arbitrators during an arbitration proceeding. FINRA Rule 12211, which outlines the procedures that parties and arbitrators must follow when they agree to direct communication, currently indicates that parties may send items by regular mail, overnight courier, facsimile, or email. Under the proposed rule change, because parties would be required to use the Party Portal for transmitting documents to each other, and would continue to use other methods to send items to the arbitrators, FINRA is proposing to: (1) Amend FINRA Rule 12211(e) to specify that parties are allowed to send items to the arbitrators by first-class mail, overnight mail service, overnight delivery service, hand delivery, email, or facsimile as specified in an order issued by the arbitrators; (2) amend Rule 12211(f) to delete the requirement that the parties send copies of the materials they sent to the arbitrators to each other and the Director at the same time and in the same manner, requiring instead that they serve the materials on each other and filed with the Director through the Party Portal; and (3) amend Rule 12211(g) to clarify that parties must file copies of arbitrator orders and decisions with the Director through the Party Portal.

Rule 12211(b) provides that if at some point during an arbitration a party chooses to appear *pro se,* which the rule defines in a parenthetical as meaning ''without counsel,'' then the rule no longer applies. As stated above, FINRA is proposing to amend Rule 12100 to define *pro se* to mean a party that is not represented by an attorney *or others* during an arbitration or mediation. FINRA believes that the new definition of *pro se* in Rule 12100 is inconsistent with the current definition in Rule 12211. Therefore, FINRA is proposing to amend Rule 12211(b) to delete the reference to ''*pro se.*'' Instead, the rule would provide that if a party chooses to appear without counsel, then the rule would no longer apply.[25]

FINRA Rule 12300—Filing and Serving Documents

FINRA is proposing to delete the content in FINRA Rule 12300 (Filing and Serving Documents) in its entirety and replace it with new language which describes how filing and service, among other things, would operate when FINRA requires parties to use the Party Portal.

Party Portal—New Rule 12300(a)(1) would provide that parties must use the Party Portal to file initial statements of claim and to file and serve pleadings and any other documents on the Director or any other party. The rule would also provide that the Director may exercise authority to permit the use of other means of filing or service in the case of an extended Party Portal outage or in other extraordinary circumstances.[26]

Rule 12300(a)(2) would provide an exemption for *pro se* customers and would outline the procedures for *pro se* customers who do not wish to use the Party Portal. While a *pro se* customer would not be required to take any affirmative steps to opt out of using the Party Portal, if a *pro se* customer files a claim using the Party Portal, then the *pro se* customer must use the Party Portal for the duration of the arbitration process. The Party Portal would include a warning to *pro se* customers that if they file their claim using the online filing facility, they will be required to use the Party Portal for the remainder of the arbitration proceeding.

Concerning *pro se* customers who opt out of using the Party Portal, Rule 12300(a) would provide that they: (1) May file claims and serve documents by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile; (2) must comply with the provisions relating to filing an initial statement of claim outlined in FINRA Rule 12302 (Filing an Initial Statement of Claim); and (3) must provide proof of service for any documents served outside of the Party Portal (except for the initial statement of claim because the Director will serve the Claim Notification Letter or initial statement of claim on the respondents).

FINRA stated that it does not want parties to use the Party Portal to submit documents they produce during discovery because FINRA does not believe that it would be efficient, particularly in cases where discovery production is voluminous. Therefore, FINRA is proposing to provide in Rule 12300(a)(3) that parties shall not file with FINRA or serve on any other party, through the Party Portal, documents produced during discovery pursuant to the Rule 12500 Series. Available service methods for such documents are first-class mail, overnight mail service, overnight delivery service, hand delivery, email, or facsimile. FINRA states that this approach is consistent with its current practice.

Filing—New Rule 12300(b) would provide that with the exception of *pro se* customers who opt out of using the Party Portal, parties must file initial statements of claim and all pleadings and other documents with the Director through the Party Portal. This includes pleadings and documents served on *pro se* customers and other parties by other means. The rule would provide that parties must file with the Director any written responses relating to discovery requests under Rules 12506 and 12507, but must not file any of the documents produced in response to discovery

[20] *See* FINRA Rules 12304 and 12305 for examples of deadlines triggered by receipt of a pleading.

[21] *See* proposed FINRA Rule 12100(r).

[22] *See* proposed FINRA Rule 12100(t).

[23] *See* proposed FINRA Rule 12100(x). FINRA does not define *pro se* in the Industry Code because there would not be an exemption for any *pro se* parties in intra-industry disputes.

[24] *See* proposed FINRA Rule 12100(y).

[25] FINRA is proposing to amend FINRA Rule 13211 to remove the reference to *pro se* in the rule. Although FINRA is not proposing to define *pro se* in the Industry Code, FINRA believes the amendment would add clarity to the rule and avoid forum user confusion because FINRA is proposing to define *pro se* in the Customer Code.

[26] As an example of an extraordinary circumstance, FINRA referenced a severe weather event causing an extended power outage.

requests as provided in Rule 12300(a)(3).

The rule would also provide that parties must file arbitrator ranking lists [27] through the Party Portal, and that filing is accomplished on the day of submission through the Party Portal. Filing by first-class mail or overnight mail is accomplished on the date of mailing, and filing by any other means is accomplished on the date of delivery as is provided in the current rules.

Service—New Rule 12300(c) would provide that the Director will serve the Claim Notification Letter or initial statement of claim on the respondents. In practice, this means that as a first step FINRA would serve only the Claim Notification Letter on respondents that are not identified as customers. If a respondent does not access the Party Portal and view the statement of claim, FINRA would contact the respondent and ask if they received the Claim Notification Letter. If the respondent indicates that they did not receive the letter, FINRA staff would offer to serve the statement of claim in another manner such as by email or regular mail to afford the respondent an additional opportunity to receive the statement of claim and instructions on how to access the Party Portal.

Concerning customers, upon receipt of an initial statement of claim, where a customer is a claimant, FINRA states that it would know if the customer is represented by counsel or another person. However, where a customer is a respondent, FINRA states that it would not know if the customer intends to be represented by counsel or any other individual. Therefore, FINRA would serve all customer respondents with the initial statement of claim along with the Claim Notification Letter explaining that parties other than *pro se* customers are required to use the Party Portal, and that *pro se* customers are invited to use the Party Portal.

The Claim Notification Letter would specify that except for *pro se* customers who opt out of using the Party Portal, parties must serve all pleadings and other documents, except as provided in Rule 12300(a)(3) relating to documents produced in discovery, through the Party Portal. It would explain that parties serve *pro se* parties who opt out of using the Party Portal by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile. Under the proposed rule, service would be accomplished on the day of submission through the Party Portal, on the date of mailing by first-class mail or overnight mail service,[28] and on the date of delivery by other means. Finally, for documents not served through the Party Portal, parties would have to provide proof of service to the Director through the Party Portal.

General Rules—FINRA is proposing to incorporate into proposed Rule 12300(d)(1)(A), the current provision in Rule 12300(g)(1) concerning the redaction of personal confidential information. The current provision in Rule 12300(g)(2) specifying that the redaction requirements do not apply to documents that parties exchange with each other and do not file with the Director, or to documents parties submit to a panel at a hearing would be renumbered as Rule 12300(d)(1)(B). The current provision in Rule 12300(g)(3) providing that the redaction requirements do not apply to Simplified Arbitrations would be renumbered as Rule 12300(d)(1)(C).

Proposed Rule 12300(d)(2) would provide that a party must serve any change of email or mailing address during an arbitration on all other parties and file this information with the Director. The former rule referred only to ''address'' changes.

FINRA Rule 12301—Service on Associated Persons

FINRA is proposing to amend FINRA Rule 12301 relating to service on associated persons to delete the reference to the Director serving the initial statement of claim on a respondent associated person. As explained above, under the proposed rule change, associated persons who are parties to an arbitration would be required to use the Party Portal. Therefore, FINRA would serve an associated person with a Claim Notification Letter instead of a statement of claim.

FINRA states that in practice its staff will know if an associated person did not access the Party Portal to view the statement of claim. FINRA states that in such an instance it would contact the associated person and ask if he or she received the Claim Notification Letter. If the associated person indicates that he or she did not receive the letter, FINRA states that its staff would offer to serve the statement of claim in another manner such as by email or regular mail to afford the respondent an additional opportunity to receive the statement of claim and instructions on how to access the Party Portal.

If a member and an associated person who is currently associated with the member are named as respondents in the same arbitration, and the Director cannot complete service directly on the associated person as described above, then the proposed rule would provide that the Director may serve the member with the Claim Notification Letter on behalf of the associated person.

12302—Filing and Serving an Initial Statement of Claim

FINRA is proposing to amend FINRA Rule 12302 to reflect how: (1) Parties would file an initial statement of claim; (2) parties would submit required fees; and (3) FINRA would serve the initial statement of claim through the Party Portal.

Filing—Because most parties would be required to file an initial statement of claim through the Party Portal as provided in Rule 12300(a), FINRA is proposing to amend Rule 12302(a) to delete the reference to filing documents in hard copy or electronically through the Online Arbitration Claim Filing system. FINRA is also proposing to amend Rule 12302(b) to delete the instruction to parties to file enough copies for the Director, each arbitrator and each other party. Once a party files the initial statement of claim through the Party Portal, FINRA states that its staff would handle service through the Party Portal or Arbitrator and Mediator Portal as applicable. FINRA states that if it needs to provide copies of the documents in another manner, *e.g.,* because a *pro se* customer has opted out of using the Party Portal, or an arbitrator is not using the Arbitrator and Mediator Portal, then FINRA staff would handle reproduction and distribution of the documents.

Fees—FINRA is proposing to amend Rule 12302(c) to require the claimant to pay all required filing fees by credit card or automated clearing house (''ACH'') through the Party Portal unless the party is a *pro se* customer who opts out of using the Party Portal. FINRA states that these payment options are currently available to forum users and requiring payment through the Party Portal would make case administration more efficient. FINRA states that its staff would know immediately if a filing was deficient for lack of payment and would not have to ensure that checks that parties submit separately, by U.S. mail or other method, are correctly matched up to statements of claim submitted through the Party Portal.

[27] *See* FINRA Rules 12402(d) and 12403(c).

[28] FINRA states that ''overnight mail'' service includes, for example, overnight delivery by Federal Express. FINRA also identifies common methods parties use at the forum for overnight mail delivery as Federal Express, United Parcel Service, and United States Postal Service. FINRA also states that ''other means'' includes, for example, hand delivery.

Service—Currently, Rule 12301(d) provides that unless the statement of claim is deficient, FINRA will send a copy of the Submission Agreement, the statement of claim, and any additional materials the claimant submits, to the other parties and the arbitrators. FINRA is proposing to amend the rule to specify how staff would serve each subset of participants in the arbitration case. Specifically, FINRA would:

• Send the Claim Notification Letter to all non-customer respondent(s) pursuant to Rule 12302; and

• Send the Claim Notification Letter along with a copy of the Submission Agreement, the statement of claim, and any additional materials filed by the claimant, to each customer respondent. The Director would inform the customer that if the customer is *pro se,* the customer is not required to use the Party Portal; and

• Send a copy of the Submission Agreement, the statement of claim, and any additional materials filed by the claimant to each arbitrator by first-class mail, overnight mail service, overnight delivery service, hand delivery, email, facsimile or through the Arbitrator and Mediator Portal, once the panel has been appointed.

Additional conforming changes—FINRA would amend the title of Rule 12302 to add a reference to ''Service'' because the rule addresses both filing and service of the initial statement of claim. FINRA is proposing to reletter the rule and to replace the bullets in Rule 12302(a) with numbers.

12303—Answering the Statement of Claim

FINRA is proposing to amend FINRA Rule 12303 to reflect how respondents would answer a statement of claim using the Party Portal.

Because most parties would be required to serve each other through the Party Portal, FINRA would eliminate the instruction in Rule 12303(a) for parties to ''directly'' serve each other with the executed Submission Agreement and answer. FINRA would amend Rule 12303(b) to provide that if an answer contains a third party claim,[29] a respondent must serve the third party with the answer containing the third party claim and all documents previously served by any party, or sent to the parties by the Director, by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile, and must file proof of service with the Director through the Party Portal. The respondent must file the third party claim with the Director through the Party Portal except as provided in Rule 12300(a)(2). In addition, because parties would file their Submission Agreement and answer through the Party Portal, FINRA would amend Rule 12303(c) to delete the instruction for a party to file sufficient copies for the Director and arbitrators. Finally, FINRA is proposing to replace the bullets in Rule 12303(a) with numbers.

12304—Answering Counterclaims

FINRA is proposing to amend FINRA Rule 12304(a) relating to answering counterclaims to eliminate the instruction for parties to ''directly'' serve each other with the answer to a counterclaim, as well as the requirement to file sufficient copies for the Director and arbitrators.

12305—Answering Cross Claims

As with answering counterclaims, FINRA is proposing to amend FINRA Rule 12305(a) relating to answering cross claims to eliminate the instruction for parties to ''directly'' serve each other with the answer to a cross claim, as well as the requirement to file sufficient copies for the Director and arbitrators because filing instructions would be covered by proposed Rule 12300.

12306—Answering Third Party Claims

FINRA is proposing to amend FINRA Rule 12306 to reflect how FINRA would handle a third party claim in the Party Portal.

As explained in the above discussion on Rule 12303, if a respondent's answer contains a third party claim, the respondent serves the third party with the claim and all documents previously served by the parties or filed with FINRA outside of the Party Portal. FINRA states that once it is notified of the third party claim, it can invite the third party to use the Party Portal.

Because most parties would be using the Party Portal, FINRA would eliminate the instruction in Rule 12306(a) for parties to ''directly'' serve each other with the executed Submission Agreement and answer. Similarly, FINRA would amend Rule 12306(b) to provide that if an answer to a third party claim also contains a third party claim, a respondent would be required serve the third party with the answer containing the third party claim and all documents previously served by any party, or sent to the parties by the Director, by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile, and must file proof of service with the Director through the Party Portal. In addition, because parties would file their Submission Agreement and answer through the Party Portal, FINRA would amend Rule 12306(c) to delete the instruction for a party to file sufficient copies for the Director and arbitrators. Finally, FINRA is proposing to replace the bullets in Rule 12306(a) with numbers.

12307—Deficient Claims

The Customer Code provides that the Director will not serve any claim that is deficient. Current FINRA Rule 12307(a) sets forth various reasons that a claim might be deficient. FINRA is proposing to amend Rule 12307(a) to delete a deficiency that would not be applicable in the Party Portal—that the claimant did not file the correct number of copies of the Submission Agreement, statement of claim or supporting documents for service on respondents and for the arbitrators. FINRA is also proposing to amend the rule relating to the deficiency concerning a failure to specify the customer's home address at the time of the events giving rise to the dispute. FINRA would replace home address with ''city and state,'' to conform to its stated current practice.[30]

FINRA is also proposing to replace the bullets in Rule 12307(a) with numbers and to correct cross-references in the Rule.

12309—Amending Pleadings

Current FINRA Rule 12309 specifies procedures for parties to amend pleadings. Rule 12309(a) applies to amendments made to a statement of claim or any other pleading before FINRA appoints a panel of arbitrators. Rule 12309(c) applies to amendments made to add a party to the case once the ranked arbitrator lists are due to the Director. In both sections, FINRA is proposing to amend the rule to reflect how amendments operate in the Party Portal.

As stated above, Rule 12309(a) describes how parties amend pleadings before FINRA appoints a panel. FINRA is proposing to amend Rule 12309(a) to clarify that panel appointment occurs when the Director sends notice to the parties of the names of the arbitrators on the panel.

FINRA would amend Rule 12309(a)(1) to eliminate the requirement for parties to file sufficient copies of an amended pleading for the arbitrators and other parties, and to provide that the Director

[29] *See* current FINRA Rule 12100(y), which defines ''Third Party Claim'' to mean a claim asserted against a party not already named in the statement of claim or any other previous pleading.

[30] Industry Code Rule 13307 differs from the Customer Code rule because there is no reference to a customer's home address.

will serve either the Claim Notification Letter, or the amended statement of claim, as applicable, under Rules 12300 and 12301. The rule would also provide that if an amended pleading adds a party to the arbitration, the party amending the pleading must serve the new party with the amended pleading and all documents previously served by any party, or sent to the parties by the Director, by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile, and must file proof of service with the Director through the Party Portal. The party amending the pleading must file the amended pleading with the Director through the Party Portal except as provided in Rule 12300(a)(2).

Current Rule 12309(c) explains that after ranked arbitrator lists are due to the Director, parties may not amend the pleadings to add new parties until FINRA appoints a panel and the panel grants a motion to add a new party. Motions to add a party after panel appointment must be served on all parties, including the party that is the subject of the motion. The process for serving the new party under Rule 12309(c) is the same as it is in Rule 12309(a). FINRA is proposing to amend Rule 12309(c) to provide that the party seeking to amend the pleading to add a party may serve the party to be added by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile. Service by first-class mail or overnight mail service would be accomplished on the date of mailing. Service by any other means would be accomplished on the date of delivery. FINRA would permit the party to be added to file a response with the Director and serve the response on all other parties by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile. Because the arbitrators may ultimately decline the motion to add a new party, FINRA believes it makes sense to allow service by methods other than the Party Portal while the arbitrators consider the motion.[31]

12310—Answering Amended Claims

Current FINRA Rule 12310 describes how parties answer amended claims. Rule 12310(b) provides that if a claim is amended after it has been answered, but before a panel has been appointed, the respondent has 20 days from ''the time the amended claim is served'' to serve an amended answer. Because parties would be serving each other through the Party Portal, FINRA is proposing to amend Rule 12310(b) to delete the phrase ''the time the amended claim is served'' to provide instead that the respondent has 20 days from ''receipt of the amended claim'' to serve an amended answer. FINRA uses time of receipt in the rules relating to parties' time to respond to answers, among other matters, and believes consistent language would add clarity to the rule.[32]

FINRA is also proposing to amend Rule 12310(d) relating to serving an amended answer to delete the reference to ''directly'' serving each other party, and providing copies of the pleading for the arbitrators.

Finally, FINRA is proposing to add clarity to Rule 12310(e) concerning when a new party's answer is due, by stating that the new party's ''time to'' answer is governed by Rules 12303 or Rule 12306 (which include a 45 day period for answers).

12400—Neutral List Selection System and Arbitrator Rosters

FINRA is proposing to amend FINRA Rule 12400(b) relating to its arbitrator rosters and Rule 12400(c) concerning eligibility for chairperson roster to update cross-references and replace bullets with numbers.

12402—Cases With One Arbitrator and 12403—Cases With Three Arbitrators

FINRA is proposing to amend FINRA Rules 12402(d)(3) and 12403(c)(3) concerning striking and ranking arbitrators to provide that parties must complete arbitrator ranking through the Party Portal unless a party is a *pro se* customer who opted out of using the Party Portal. The rule would list the approved methods for *pro se* customers to return ranked lists. FINRA is also proposing to amend to Rule 12402(e) to replace bullets with numbers.[33]

12404—Additional Parties

Current FINRA Rule 12404 describes procedures for newly added parties to rank and strike arbitrators. FINRA is proposing to amend Rule 12404(a) to reflect that because parties would complete the ranking and striking process in the Party Portal, they would no longer ''return'' lists to the Director. FINRA would also amend this provision to correct a typographical error by adding ''(s)'' to the term ''list'' in the paragraph's last sentence because in cases with three arbitrators, parties return three lists of arbitrators, not just one.

Current Rule 12404(b) explains that after ranked arbitrator lists are due to the Director, parties may not amend pleadings to add new parties until FINRA appoints a panel and the panel grants a motion to add a new party. Motions to add a party must be served on all parties. FINRA is proposing to amend Rule 12404(b) to provide that the party seeking to amend the pleading must serve the party to be added by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile. Service by first-class mail or overnight mail service would be accomplished on the date of mailing. Service by any other means would be accomplished on the date of delivery. FINRA would permit the party to be added to file a response with the Director and serve the response on all other parties by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile. Because the arbitrators may ultimately decline the motion to add a new party, FINRA believes it makes sense to allow service by methods other than the Party Portal while the arbitrators consider the motion.

12500—Initial Prehearing Conference

Current FINRA Rule 12500(c) describes the subject matter of the initial prehearing conference and provides that parties may forgo the conference if they provide certain information (as described in accompanying bullets) in writing to the Director. FINRA is proposing to amend the rule to delete the requirement that parties provide copies of the written submission for the arbitrators. FINRA is also proposing to replace the bullets with numbers.

12502—Recording Prehearing Conferences and 12606—Record of Proceedings

Current FINRA Rule 12502 provides that FINRA does not record prehearing conferences unless the panel orders a recording, and FINRA Rule 12606(a) specifies that FINRA records hearings. Both rules provide that the Director will provide copies of a tape, digital, or other recording to parties for a nominal fee.

[31] FINRA Rule 13309(c) in the Industry Code contains an erroneous cross-reference to Rule 13404(c). FINRA is proposing to amend Rule 13309(c) to refer to Rule 13404(d) which relates to the time frame when ranked lists are due.

[32] *See* FINRA Rules 12303 (Answering the Statement of Claim), 12304 (Answering Counterclaims), 12305 (Answering Cross Claims), and 12306 (Answering Third Party Claims).

[33] The Industry Code rules relating to arbitrator appointment, while substantially similar to the Customer Code rules, are not identical to the Customer Code and are numbered differently. FINRA is proposing to amend FINRA Rule 13404(d) concerning striking and ranking arbitrators, to provide that parties must complete arbitrator ranking through the Party Portal. FINRA is proposing to amend FINRA Rule 13406 relating to appointment of arbitrators to update a cross-reference and to replace bullets with letters. FINRA is also proposing to amend FINRA Rule 13411 concerning replacing arbitrators to update a cross-reference.

FINRA is proposing to amend the rules to delete the reference to a fee because FINRA currently provides parties with copies of recordings free of charge. Current Rule 12606(a) also provides that the panel may order parties to provide a transcription of the recording. FINRA is proposing to amend Rule 12606(a) to clarify that if the arbitrators order the parties to provide a transcript, the parties must provide copies for the arbitrators and must file the transcript with the Director and serve it on the other parties. Current Rule 12606(b) provides that parties may make stenographic records of a hearing. FINRA is proposing to amend Rule 12606(b) to clarify that if the stenographic record is the official record of the proceeding, the parties must provide copies for the arbitrators and must file the transcript with the Director and serve it on the other parties.

FINRA states that some arbitrators have indicated a preference to review long documents in hard copy. Therefore, FINRA would continue to require parties to provide copies of transcripts for the arbitrators.

12503—Motions

Current FINRA Rule 12503 specifies how parties make motions at the forum. Under the proposed rule change, parties would be required to file motions with the Director and serve other parties through the Party Portal. Therefore, FINRA is proposing to amend Rule 12503(a)(2) to delete the requirement that parties serve motions on each other directly, at the same time and in the same manner, and provide FINRA with copies for each arbitrator. FINRA would make the same deletions to Rule 12503(b) relating to responding to motions and Rule 12503(c) concerning replying to responses to motions.

FINRA is also proposing to amend Rule 12503(a)(4) to delete the text specifying how parties make motions to amend a pleading to add a party to a case, because these motions would be addressed in Rule 12309(c) (discussed above). FINRA would add a cross-reference to Rule 12309(c).

12506—Document Production Lists

Current FINRA Rule 12506(a) provides that when the Director serves respondents with the statement of claim, the Director notifies parties of the location of the FINRA Discovery Guide and Document Production Lists on FINRA's Web site. In view of the Party Portal, FINRA is proposing to amend the rule to delete the reference to ''when the Director serves the statement of claim.'' The rule would continue to state that the Director will notify parties of the location of the FINRA Discovery Guide and Document Production Lists on FINRA's Web site.

Current FINRA Rule 12506(b) specifies, among other matters, the time for parties to respond to the Document Production Lists. FINRA wants parties to file through the Party Portal their explanations about why they are not timely producing documents and why they are objecting to production. FINRA believes that having this correspondence in the Party Portal would be efficient for FINRA staff and the parties. However, as stated above, FINRA does not want the parties to file with the Director the documents and information that they produce during discovery. Therefore, FINRA is proposing to amend Rule 12506(b) to specify that parties must serve each other with documents produced pursuant to the rule by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile as provided in Rule 12300(a)(3). The proposed rule would also provide that parties are required to file any written responses relating to discovery, such as objections to producing items in the Document Production Lists, with the Director through the Party Portal.

FINRA is also proposing to amend to Rule 12506(b) to replace bullets with letters.[34]

12507—Other Discovery Requests

Current FINRA Rule 12507(a) provides that parties may request additional documents from a party by serving the party directly with a written request. The rule requires the requesting party to serve copies of the request on all other parties at the same time. Because parties would be serving each other through the Party Portal, FINRA is proposing to amend the rule to delete the requirement for direct service in Rule 12507(a)(1) and the requirement to serve all other parties at the same time in Rule 12507(a)(2).

Current FINRA Rule 12507(b) specifies how parties may respond to an additional discovery request. The parties can: (1) Produce the documents or information (Rule 12507(b)(1)(A)); (2) identify specific documents that will not be produced within the required time and state when the documents will be produced (Rule 12507(b)(1)(B)); or (3) object to the request (Rule 12507(b)(1)(C)). As explained earlier, FINRA does not want parties to file with the Director the documents and information that they produce during discovery. Therefore, FINRA is proposing to amend Rule 12507(b)(1)(A) to specify that if a party produces documents or information pursuant to a request, the party must serve all other parties with copies of the requested documents or information by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile.

However, FINRA wants to receive party explanations about why they are not timely producing documents and why they are objecting to production. Therefore, FINRA would amend Rule 12507(b)(1)(B) concerning non-production to provide that a party must file a response with the Director and serve it on all other parties (through the Party Portal). FINRA would also amend Rule 12507(b)(1)(C) concerning objections to provide that a party must file the objection with the Director and serve it on all other parties (through the Party Portal).

Finally, FINRA is proposing to replace the bullets in Rule 12507 with numbers.

12508—Objecting to Discovery; Waiver of Objection

Current FINRA Rule 12508 addresses party objections to producing documents and information during discovery. To reflect how parties will be serving each other through the Party Portal, FINRA is proposing to amend the rule to delete the requirement that parties serve their objections on each other at the same time and in the same manner. Because FINRA wants to receive party explanations through the Party Portal about why parties object to production, FINRA is proposing to amend the rule to delete the statement that objections should not be filed with the Director.

12512—Subpoenas

Current FINRA Rule 12512 specifies that a party may make a written motion requesting that an arbitrator issue subpoenas to parties and non-parties for the production of documents and evidence, and outlines how FINRA handles motions for subpoenas at the forum. To reflect how motion practice would operate through the Party Portal, FINRA is proposing to amend Rule 12512(b) to delete the requirements that parties provide copies of the subpoena to the arbitrator, and serve the motion on each other at the same time and in

[34] The FINRA Discovery Guide and related Document Production Lists apply only to customer arbitrations. Therefore, the Industry Code does not contain Document Production Lists. The discovery rules in the Industry Code that are substantially similar to Rule 12507 in the Customer Code are Rule 13506 (Discovery Requests) and Rule 13507 (Responding to Discovery Requests). The proposed amendments to Rules 13506 and 13507 are substantively identical to those in Rule 12507.

the same manner. FINRA would make the same amendment to Rule 12512(c) concerning party objections to subpoenas.

Current FINRA Rule 12512(d) addresses service of an executed subpoena. FINRA is proposing to amend the rule to delete the requirement that parties serve the subpoena on each other at the same time and in the same manner. In addition, because non-parties do not have access to the Party Portal, FINRA would amend the rule to specify that when an arbitrator issues a subpoena to a non-party, the party must serve the subpoena on the non-party by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile.

Current FINRA Rule 12512(e) provides for a non-party's objection to a subpoena. If a non-party receiving a subpoena objects to the scope or propriety of the subpoena, FINRA permits the non-party to file written objections with the Director. Under the rule, the party that requested the subpoena may respond to the objection. FINRA is proposing to amend the rule to provide that the non-party may file the objection by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile, and that the party must serve the response on the non-party and file proof of service with the Director.

Current FINRA Rule 12512(f) outlines procedures for parties to follow when they receive subpoenaed documents from non-parties. Specifically, the rule provides that any party that receives documents in response to a subpoena served on a non-party has five days to provide notice of the receipt to the other parties. Other parties to the case may request copies of the documents, and the party in receipt of the documents must provide them within ten (10) calendar days of receipt of the request. FINRA is proposing to amend the rule to specify that a party that receives documents from a non-party in response to a subpoena must serve the other parties with notice that the party received the documents. Other parties to the case may request copies of the subpoenaed documents. Because FINRA does not want the parties to submit the documents to the Director, FINRA would amend the rule to provide that the party must serve the documents on the other parties by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile. The proposed rule would also expressly prohibit parties from filing the documents with the Director.

12513—Authority To Direct Appearances of Associated Person Witnesses and Production of Documents Without Subpoenas

Current FINRA Rule 12513 authorizes arbitrators to order the appearance of firm employees and associated persons, and the production of documents from firms and their employees and associated persons without issuing a subpoena. FINRA is proposing to amend several provisions in the rule to reflect how FINRA would handle a party's motion for an arbitrator order using the Party Portal.

FINRA is proposing to amend Rule 12513(b) concerning filing the motion to delete the requirement that a party provide a copy for the arbitrator and that the party serve the motion on all other parties at the same time and in same manner as on the Director. FINRA is proposing to make the same changes to Rule 12513(c) relating to an opposing party's objection to the motion, and to Rule 12513(d) relating to party service of an order.

In addition, because FINRA will not invite a non-party to use the Party Portal, FINRA is proposing to amend Rule 12513(d) to provide that if a party obtains an arbitrator's order for a non-party's production, then the party must serve the order on the non-party. FINRA would also amend Rule 12513(e) to provide that if the non-party files an objection to the arbitrator's order, and the party requesting the order wants to file a response to the objection, then the party must serve the response on the non-party and provide the Director with proof of service. Finally, FINRA is proposing to amend Rule 12513(f) to provide that any party receiving documents from a non-party must serve notice on all other parties. If any other party requests copies of the documents, the requesting party must serve them by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile. The amendments would also specify that parties must not file with the Director the documents produced pursuant to the order.

12514—Prehearing Exchange of Documents and Witness Lists, and Explained Decision Requests

Current FINRA Rule 12514 sets forth procedures for exchanging documents and witness lists prior to the first scheduled hearing date and for making joint party requests for an explained decision. FINRA is proposing to amend Rule 12514(b) to delete the requirement that parties file their witness lists with the Director at the same time as they notify other parties and provide the Director with enough copies for the arbitrators. Instead, proposed Rule 12514(b) would require that all parties file their witness lists only with the Director. FINRA would also amend Rule 12514(d) to provide that parties must file with the Director requests for an explained decision as opposed to submitting them to the arbitrators.

12701—Settlement

Current FINRA Rule 12701 requires parties to notify the Director of settlements. FINRA is proposing to amend Rule 12701(a) to reflect use of the Party Portal by replacing ''notify'' with ''file notice with'' the Director.

12800—Simplified Arbitration

Current FINRA Rule 12800 provides special procedures for the administration of disputes involving $50,000 or less, including procedures for parties to request documents and other information from each other. FINRA is proposing to amend Rule 12800(d) to provide that parties receiving the request must produce the requested documents or information to all other parties by serving the requested documents or information by first-class mail, overnight mail service, overnight delivery service, hand delivery, email or facsimile. The proposed rule would specify that parties must not file the documents with the Director.

12801—Default Proceedings

Current FINRA Rule 12801 specifies procedures for initiating default proceedings against certain respondents (*e.g.,* terminated members). Because parties would be using the Party Portal to file notice with the Director and serve other parties with their request to initiate a default proceeding, FINRA is proposing to amend Rule 12801(b) to delete the requirements for parties to notify the Director in writing, and send a copy of the notification to other parties at the same time and in the same manner. FINRA is also proposing to amend Rule 12801(a) to replace bullets with numbers.

12901—Member Surcharge

Current FINRA Rule 12901 provides that FINRA will assess surcharges against members under specified circumstances. Rule 12901(a)(3) states that if the claim is filed by a member, the surcharge is due when the claim is filed. If the claim is filed against a member, or against an associated person employed by a member at the time of the events giving rise to the dispute, the surcharge is due when the claim is served. FINRA is proposing to amend the rule to provide that if a claim is filed against a member or associated person, the surcharge is due when the Director serves the Claim Notification Letter or the initial statement of claim. FINRA is also proposing to amend Rule 12901(a) and 12901(b) to replace bullets with letters.

12094—Awards

Current FINRA Rule 12904 concerns arbitrator awards and includes, among other matters, procedures for the Director to serve awards on parties. The rule provides that the Director serves an award using any method available and convenient to the parties and the Director, and that is reasonably expected to cause the award to be delivered to all parties, or their representative, on the same day. Under the rule, the Director may serve an award by first class, registered or certified mail, hand delivery, and facsimile or other electronic transmission. Because the Director will serve the award through the Party Portal in most instances, FINRA is proposing to amend Rule 12904(c) to provide that only the Director will serve the award on each party, or their representative through the Party Portal.

Industry Code Specific Amendments

As explained earlier, while the discussion details the proposed amendments to the FINRA rules in the Customer Code, FINRA is also proposing to make substantively similar amendments to the Industry Code. In addition to the amendments discussed, FINRA is proposing to amend rules in the Industry Code that are unique to intra-industry disputes.

13802—Statutory Employment Discrimination Claims

FINRA is proposing to amend FINRA Rule 13802(a) relating to statutory employment discrimination claims to update a cross-reference concerning the definition of statutory employment discrimination. FINRA would also amend Rule 13802(c) to replace bullets with numbers.

13804—Temporary Injunctive Orders; Requests for Permanent Injunctive Relief

The Industry Code has special procedures for handling temporary injunctions with respect to an industry or clearing dispute. FINRA is proposing to amend FINRA Rule 13804(a) to provide that parties seeking temporary injunctive relief from a court must file with the Director a statement of claim requesting permanent injunctive and all other relief with respect to the same dispute through the Party Portal, and must serve the statement of claim requesting permanent injunctive and all other relief on all other parties by overnight delivery service, hand delivery, email or facsimile. The proposed rule would require parties to serve all parties at the same time and in the same manner, unless the parties agree otherwise.

FINRA states that cases involving injunctive relief operate on an accelerated time schedule. FINRA also states, however, that it takes FINRA staff some time to review an initial submission and invite respondent parties to use the Party Portal. In view of the need to expedite these matters, FINRA believes that parties should serve each other outside of the Party Portal until FINRA establishes the identities of all relevant parties and their representatives, and invites them to access the Party Portal.

Mediation Code

Under the proposed rule change, FINRA would permit parties to a mediation proceeding to use the Party Portal on a voluntary basis. FINRA is proposing to amend the Mediation Code to reflect use of the Party Portal.

14100—Definitions

FINRA is proposing to amend FINRA Rule 14100 to define ''Arbitrator and Mediator Portal'' and ''Party Portal.'' The definitions would be identical to the definitions in the Codes. FINRA would re-letter the definitions because of the new additions.

14109—Mediation Ground Rules

FINRA also is proposing to amend FINRA Rule 14109 to provide that the parties may agree to use the Party Portal to submit all documents and other communications to each other, to retrieve all documents and other communications, and view mediation case information.

III. Comment Summary and FINRA's Response

As noted above, the Commission received five comment letters on the proposed rule change [35] and a response letter from FINRA.[36] As discussed in more detail below, two strongly support the proposal; [37] two generally support the proposal but recommend modifications; [38] and one appears to be unrelated to substance of the proposal.[39]

Two commenters strongly supported the proposal, stating that the proposal ''would facilitate interactions among parties, arbitrators, mediators, and FINRA staff on arbitration case-related matters,'' [40] ''further promote the efficiency of the participant experience in the FINRA arbitration forum,'' [41] and would result in ''more efficient and equitable arbitration proceedings.'' [42] One of those commenters noted that some of its members had been invited by FINRA to participate in a beta test of the Party Portal, and stated that those members ''reported that the system was efficient, simplified responses to communications, and allowed for easier tracking of progress in the dispute.'' [43]

Two additional commenters generally supported the proposal, with both commenters stating their belief that use of the Party Portal would improve efficiency.[44] One of those commenters noted that, in addition to enhancing efficiency, use of the Party Portal would ''allow the [arbitration] panel to be more actively engaged in the discovery process[,]'' and ''provide[] FINRA with additional enforcement capability concerning potential firm rule violations relating to discovery.'' [45] However, both commenters expressed concerns about the effect of the proposed rule change on claimants with smaller claims, specifically with respect to protection of personal confidential information and payment of forum fees.[46]

Personal confidential information. As stated in the Notice, current FINRA Rule 12800 provides special procedures for ''simplified arbitration,'' disputes where the amount at issue is $50,000 or less.[47] One commenter noted that under Rule 12800, ''simplified proceedings are exempt from the redaction of Social Security, tax id, and financial accounts numbers.'' [48] One commenter additionally noted that much of the personal confidential information ''involved in a simplified proceeding is of the type that, according to the FBI, can be used by criminals to engage in identity theft, including financial account numbers, birth dates, addresses, and Social Security numbers.'' [49] Consequently, these two commenters expressed concern that exempting

[35] *See supra* note 5.

[36] *See supra* note 6.

[37] *See* Caruso Letter and FSI Letter.

[38] *See* IAC Letter and PIABA Letter.

[39] *See* Conflicteam Letter.

[40] *See* Caruso Letter; *see also* FSI Letter.

[41] *See* Caruso Letter.

[42] *See* FSI Letter at 2.

[43] *See id.*

[44] *See* IAC Letter at 1; *see also* PIABA Letter at 1.

[45] *See* IAC Letter at 1.

[46] *See* IAC Letter; *see also* PIABA Letter.

[47] *See* Notice, 81 FR at 54865.

[48] *See* PIABA Letter at 1.

[49] *See* IAC Letter at 1 (citing FBI, *Cyber Crime*, available at *https://www.fbi.gov/investigate/cyber*).

simplified proceedings from FINRA's redaction requirements, while requiring claimants to file documents electronically through the Party Portal, puts claimants in simplified proceedings at greater risk of identity theft and/or other information security breaches.[50] For these reasons, both commenters urged FINRA to extend the redaction requirements for personal confidential information to all documents submitted through the Party Portal.[51]

In response to these comments, FINRA, although it declined to amend the proposed rule change as suggested by the two commenters, stated that it ''is concerned about identity theft'' and that it ''believes that the Party Portal provides parties with enhanced security over other methods of document transmittal.'' [52] FINRA further noted that the Party Portal is a ''secure, encrypted environment'' and that parties in simplified arbitration are not prevented from redacting their documents, but that they are simply not required to do so.[53] Finally, FINRA noted that it ''has a dedicated Web page encouraging parties to take steps to protect their [personal confidential information] regardless of any exemptions in the Codes.'' [54]

Payment of forum fees. As stated in the Notice, FINRA is proposing to amend Rule 12302(c) to require the claimant to pay all required filing fees by credit card or automated clearing house (''ACH'') through the Party Portal, unless the party is a *pro se* customer who opts out of using the Party Portal.[55] Two commenters expressed concern about this portion of the proposal.[56] One commenter urged FINRA to allow payment of fees by personal check for all parties, explaining that ''it is not uncommon for individual claimants, even when represented, to pay their filing and other forum fees by personal check,'' and noting that ''some law school securities arbitration centers do not have the ability to pay by credit card or ACH.'' [57] Another commenter urged FINRA to revise the proposal to allow parties with damages under $100,000 to pay by personal check, expressing concern that the proposal as drafted may adversely affect smaller claimants and/or claimants that are only able to proceed if they obtain fee waivers.[58] In particular, this commenter expressed concern that ''[w]ithout an exception allowing payment of fees by check for these small claims,'' the proposal will encourage parties to evade the Party Portal requirement by initiating a *pro se* claim or discourage firms from representing clients with smaller claims.[59]

In its response, FINRA stated its belief that ''requiring payment through the Party Portal would make case administration more efficient.'' [60] In particular, FINRA stated that the electronic payment system would, among other benefits, immediately alert FINRA staff if a filing was deficient for lack of payment.[61] In addition, FINRA stated that it ''designed the ACH feature in the Party Portal to be self-contained and easy to use,'' and that a ''clinic or law firm representing a party does not need any special facility to remit payment via ACH.'' [62] FINRA further explained that the ''Party Portal User Guide contains detailed instructions, including screen shots from the system, on how to pay by ACH'' and further noted that a ''party can provide the [ABA routing number and bank account number that appear on a personal check] to a representative over the phone, or a voided check with the numbers, for entry into the Party Portal.'' [63] Because of ''the efficiencies afforded by electronic payment, and that any Party Portal user can remit fees, FINRA declines to amend the proposed rule change as suggested by the commenters.'' [64]

Discovery correspondence. As stated in the Notice, FINRA is proposing to require parties to file discovery correspondence through the Party Portal.[65] One commenter, although generally supportive of this requirement, expressed concern that the ''proposal is unclear as to how matters involving *pro se* parties who chose not to utilize the Portal should be handled'' and suggested that those parties be required to file discovery correspondence with FINRA outside the Party Portal.[66] The commenter ''believes that brokerage firms could be less likely to engage in discovery abuse against *pro se* parties if they know FINRA can still keep an eye on the discovery process.'' [67]

In its response, FINRA clarified that under the proposal, *pro se* parties who opt out of the Party Portal would still be required to file discovery correspondence using one of the methods enumerated in Rule 12300(a)(2)(C).[68] FINRA stated that acceptable methods of service include first-class mail, overnight mail service, overnight service, hand delivery, email, or facsimile.[69]

Service. Although not a specific concern or suggestion about the proposal itself, one commenter noted that ''the service requirements are spread through a number of different rules,'' and suggested that FINRA consider issuing a Notice to Members ''setting forth a list of the specific filings which must be made outside of the Party Portal once the rule is implemented'' in order to ''allow practitioners an opportunity to review all the exceptions to filing via the Portal in one place.'' [70]

In its response, FINRA agreed that such a list would be helpful and stated in its response that ''[i]f the Commission approves the proposed rule change, FINRA will provide a list of such filings in a Regulatory Notice announcing approval of the proposed rule change as well as in guidance on the FINRA Web site.'' [71]

IV. Discussion and Commission Findings

The Commission has carefully considered the proposal, the comments received, and FINRA's response to the comments. Based on its review of the record, the Commission finds that the proposal is consistent with the requirements of the Exchange Act and the rules and regulations thereunder that are applicable to a national

[50] *See id.* at 1–2; *see* IAC Letter at 2–3.

[51] *See* IAC Letter at 3; *see also* PIABA Letter at 2. One commenter urged FINRA to go one step further and extend the redaction requirements to *pro se* customers not using the Party Portal, though the commenter acknowledged ''that the risk of misuse may not be as significant (though not non-existent) if the information is not sent, received, or stored electronically via the Party Portal.'' *See* IAC Letter at 3.

[52] *See* FINRA Letter at 3.

[53] *See* FINRA Letter at 3. Similarly, FINRA also notes that an ''exemption from the redaction requirements does not mean that *pro se* parties . . . cannot redact [personal confidential information] from their documents.''

[54] *See* FINRA Letter at 3.

[55] *See* Notice, 81 FR at 54861.

[56] *See* IAC Letter at 2; *see also* PIABA Letter at 2.

[57] PIABA Letter at 2; *see also* IAC Letter (stating that as a law school clinic it lacks the infrastructure to pay client filing fees via credit card or ACH transfers, and that it further understands that law firms representing claimants with smaller claims ''require that their clients directly remit payment to FINRA as these firms are unable to take on such a representation unless the client pays the fees directly to FINRA via a personal check.'').

[58] *See* IAC Letter at 2.

[59] Id.

[60] *See* FINRA Letter at 2.

[61] *Id.*

[62] *Id.*

[63] *Id.*

[64] *Id.*

[65] *See* Notice, 81 FR at 54864.

[66] *See* PIABA Letter at 2.

[67] *Id.*

[68] *See* FINRA Letter at 3.

[69] *See* FINRA Letter at 3 n.8; *see also* Notice at 81 FR 54864.

[70] PIABA Letter at 2.

[71] *See* FINRA Letter at 3–4.

securities association.[72] In particular, the Commission finds that the proposed rule change is consistent with Section 15A(b)(6) of the Exchange Act,[73] which requires, among other things, that FINRA rules be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, and, in general, to protect investors and the public interest.

The Commission notes that two commenters strongly supported the proposal, two commenters generally supported the proposal but had some recommended modifications, and one commenter did not appear to address the substance of the proposed rule change. With respect to payment of fees, the Commission recognizes the recommendations by two commenters that FINRA allow payment by personal check, either for parties for damages under $100,000 or for all parties.[74] The Commission also recognizes, however, FINRA's efforts to clarify and streamline the electronic payment process for its users, including, among other things, permitting Party Portal users to remit payment by phone if needed by providing the ABA routing number and bank account number found on the user's personal check.[75] The Commission further recognizes the ''efficiencies afforded by electronic payment,'' [76] including the ability for FINRA staff to immediately discern whether a filing is deficient for lack of payment.

With respect to the protection of personal confidential information, the Commission recognizes the concerns expressed by two commenters that, under the proposal, FINRA's exemption of the redaction requirements in current Rule 12300 for parties in Simplified Arbitrations—disputes where the amount at issue is $50,000 or less—will remain unchanged.[77] The Commission recognizes the commenters' concerns that exempting Simplified Arbitrations from FINRA's redaction requirements, while requiring claimants to file documents electronically through the Party Portal, puts claimants in Simplified Arbitrations at greater risk of identity theft and/or other information security breaches.[78] The Commission also recognizes, however, FINRA's own concerns about identity theft, and its belief that ''the Party Portal provides parties with enhanced security over other methods of document transmittal.'' [79] The Commission further recognizes, as FINRA explained in its response to comments, that parties in Simplified Arbitrations (as well as *pro se* parties not using the Party Portal) are not restricted from redacting their documents should they choose to do so.[80] Finally, the Commission recognizes that ''FINRA has a dedicated Web page encouraging parties to take steps to protect their [personal confidential information] regardless of any exemptions in the Codes.'' [81]

With respect to the proposal's requirement that parties file discovery correspondence through the Party Portal, the Commission recognizes one commenter's concern that the ''proposal is unclear as to how matters involving *pro se* parties who chose not to utilize the Portal should be handled.'' [82] The Commission further recognizes FINRA's clarification that, under the proposal, *pro se* parties would be required to file discovery correspondence by an alternate method as enumerated in Rule 12300(a)(2)(C).[83]

With respect to rules regarding service, the Commission recognizes that one commenter's suggestion that FINRA issue a Notice to Members ''setting forth a list of the specific filings which must be made outside of the Party Portal once the rule is implemented'' in order to ''allow practitioners an opportunity to review all the exceptions to filing via the Portal in one place.'' [84] The Commission further recognizes FINRA's agreement with this suggestion and its intent to ''provide a list of such filings in a Regulatory Notice announcing approval of the proposed rule change as well as in guidance on the FINRA Web site.'' [85]

Finally, the Commission recognizes FINRA's statement that of the 13,562 parties invited to use the portal as of May 11, 2016 (including customers, firms, and associated persons), ''76 percent of customers, including *pro se* customers, have been using the Party Portal voluntarily and 82 percent of firms and associated persons, which includes firm representatives, have been using the Party Portal voluntarily (78 percent in total).'' [86]

Taking into consideration the comments and FINRA's response, the Commission believes that the proposal is consistent with the Exchange Act. The Commission believes that the proposal will help protect investors and the public interest by enhancing efficiencies for FINRA arbitration forum users and expediting case administration by FINRA staff by, among other things, improving the case intake process and helping ensure better data accuracy.[87] The Commission further believes that FINRA's response, as discussed in more detail above, appropriately addressed commenters' concerns and adequately explained its reasons for declining to modify its proposal to allow for payment by personal check or to extend FINRA's current redaction requirements to simplified proceedings. The Commission believes that the approach proposed by FINRA is appropriate and designed to protect investors and the public interest, consistent with Section 15A(b)(6) of the Exchange Act. For these reasons, the Commission finds that the proposed rule change is consistent with the Exchange Act and the rules and regulations thereunder.

V. Conclusion

It is therefore ordered, pursuant to Section 19(b)(2) of the Exchange Act,[88] that the proposed rule change (SR–FINRA–2016–029) be, and hereby is, approved.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[89]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27739 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–79301; File No. SR–MIAX–2016–42]

Self-Regulatory Organizations; Miami International Securities Exchange LLC; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend Its Fee Schedule

November 14, 2016.

Pursuant to the provisions of Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'') [1] and Rule 19b–4 thereunder,[2] notice is hereby given that

[72] In approving the proposed rule change, the Commission has also considered its impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[73] 15 U.S.C. 78o–3(b)(6).

[74] *See* IAC Letter at 2; PIABA Letter at 2.

[75] *See* FINRA Letter at 2.

[76] *Id.*

[77] *See* PIABA Letter at 1; *see also* IAC Letter at 2–3.

[78] *See* PIABA Letter at 1–2; *see also* IAC Letter at 2–3.

[79] *See* FINRA Letter at 3.

[80] *Id.*

[81] *Id.*

[82] PIABA Letter at 2.

[83] *See* FINRA Letter at 3.

[84] PIABA Letter at 2.

[85] FINRA Letter at 3–4.

[86] Notice, 81 FR at 54867.

[87] Notice, 81 FR at 54866.

[88] 15 U.S.C. 78s(b)(2).

[89] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

on October 31, 2016, Miami International Securities Exchange LLC (''MIAX'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission'') a proposed rule change as described in Items I, II, and III below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange is filing a proposal to amend the MIAX Options Fee Schedule (the ''Fee Schedule'').

The text of the proposed rule change is available on the Exchange's Web site at *http://www.miaxoptions.com/filter/wotitle/rule_filing,* at MIAX's principal office, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend the MIAX Select Symbols [3] section of the Priority Customer Rebate Program (the ''Program'') [4] to delete the option class ''AA'' associated with the corporation Alcoa Inc. (''Alcoa''). Alcoa announced a corporate transaction that will result in the company's separation into two independent publicly-traded companies, Alcoa Corporation and Arconic, Inc. (''Arconic'').[5] The separation is to become effective before the opening of the market on November 1, 2016 and is structured to be effected by means of a pro rata distribution by Alcoa of 80.1% of the outstanding common stock of Alcoa Corporation. Arconic will retain 19.9% of Alcoa Corporation common stock.[6] In connection with this distribution, on November 1, 2016, Alcoa will change its name to ''Arconic Inc.'' and its ticker symbol from ''AA'' to ''ARNC'' and Alcoa Corporation will trade as an independent company under the ticker symbol ''AA''.[7] The Exchange has decided not to include the surviving entity Arconic in the list of MIAX Select Symbols. The Exchange now proposes to amend the Fee Schedule to delete the symbol ''AA'' in the list of MIAX Select Symbols to correspond with this change. The change is designed to ensure that there is no confusion amongst market participants and to clarify that Arconic will not become a MIAX Select Symbol. The proposed change is to become effective November 1, 2016.

2. Statutory Basis

The Exchange believes that its proposal to amend its Fee Schedule is consistent with Section 6(b) of the Act [8] in general, and furthers the objectives of Section 6(b)(4) of the Act [9] in particular, in that it provides for the equitable allocation of reasonable dues, fees and other charges among members and issuers and other persons using any facility or system which the Exchange operates or controls. The Exchange also believes the proposal furthers the objectives of Section 6(b)(5) of the Act [10] in that it is designed to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general to protect investors and the public interest and is not designed to permit unfair discrimination between customers, issuers, brokers and dealers.

In particular, the proposal to delete the ''AA'' symbol from the list of MIAX Select Symbols is consistent with Section 6(b)(4) of the Act because the proposed change will allow for continued benefit to investors by providing them an updated list of Select Symbols in the Fee Schedule.

The Exchange believes that the proposal to amend an option class that qualifies for the credit for transactions in MIAX Select Symbols is fair, equitable and not unreasonably discriminatory. The credit for transactions in the select symbols is reasonably designed because it will incent providers of Priority Customer order flow to send that Priority Customer order flow to the Exchange in order to receive a credit in a manner that enables the Exchange to improve its overall competitiveness and strengthen its market quality for all market participants. The Program which provides increased incentives in high volume select symbols is also reasonably designed to increase the competitiveness of the Exchange with other options exchanges that also offer increased incentives to higher volume symbols.

The Exchange also believes that its proposal is consistent with Section 6(b)(5) of the Act because it will apply equally to all Priority Customer orders in the select symbols. All similarly situated Priority Customer orders in the select symbols are subject to the same rebate schedule, and access to the Exchange is offered on terms that are not unfairly discriminatory. In addition, the Program is equitable and not unfairly discriminatory because, while only Priority Customer order flow qualifies for the Program, an increase in Priority Customer order flow will bring greater volume and liquidity, which benefit all market participants by providing more trading opportunities and tighter spreads.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The proposed rule change is a not a competitive filing but rather is designed to update the list of Select Symbols in order to avoid potential confusion on the part of market participants.

---

[3] The term ''MIAX Select Symbols'' currently means options overlying AA, AAL, AAPL, AIG, AMAT, AMD, AMZN, BA, BABA, BBRY, BIDU, BP, C, CAT, CBS, CELG, CLF, CVX, DAL, EBAY, EEM, FB, FCX, GE, GILD, GLD, GM, GOOGL, GPRO, HAL, HTZ, INTC, IWM, JCP, JNJ, JPM, KMI, KO, MO, MRK, NFLX, NOK, NQ, ORCL, PBR, PFE, PG, QCOM, QQQ, RIG, S, SPY, SUNE, T, TSLA, USO, VALE, VXX, WBA, WFC, WMB, WY, X, XHB, XLE, XLF, XLP, XOM, XOP, and YHOO.

[4] *See* Securities Exchange Act Release Nos. 74291 (February 18, 2015), 80 FR 9841 (February 24, 2015) (SR–MIAX–2015–09); 73328 (October 9, 2014), 79 FR 62230 (October 16, 2014) (SR–MIAX–2014–50); 72567 (July 8, 2014), 79 FR 40818 (July 14, 2014) (SR–MIAX–2014–34); 72356 (June 10, 2014), 79 FR 34384 (June 16, 2014) (SR–MIAX–2014–26); 71698 (March 12, 2014), 79 FR 15185 (March 18, 2014) (SR–MIAX–2014–12); 71700 (March 12, 2014), 79 FR 15188 (March 18, 2014) (SR–MIAX–2014–13); 71283 (January 10, 2014), 79 FR 2914 (January 16, 2014) (SR–MIAX–2013–63); 71009 (December 6, 2013), 78 FR 75629 (December 12, 2013) (SR–MIAX–2013–56).

[5] *See* ''Alcoa Inc. Board of Directors Approves Separation of Company, Separation Date to be November 1, 2016, Distribution Ratio of Alcoa Corporation Common Stock Set'', *www.BusinessWire.com*, September 29, 2016, 04:40 p.m. Eastern Daylight Time; *see also www.Alcoa.com* under ''Investor News Releases''.

[6] *Id.*

[7] *Id.*

[8] 15 U.S.C. 78f(b).

[9] 15 U.S.C. 78f(b)(4).

[10] 15 U.S.C. 78f(b)(5).

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A)(ii) of the Act,[11] and Rule 19b–4(f)(2)[12] thereunder. At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

• Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or

• Send an email to *rule-comments@sec.gov.* Please include File Number SR–MIAX–2016–42 on the subject line.

Paper Comments

• Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–MIAX–2016–42. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–MIAX–2016–42 and should be submitted on or before December 9, 2016.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[13]

Brent J. Fields,

Secretary.

[FR Doc. 2016–27741 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

[11] 15 U.S.C. 78s(b)(3)(A)(ii).

[12] 17 CFR 240.19b–4(f)(2).

[13] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

Proposed Collection; Comment Request

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of Investor Education and Advocacy, Washington, DC 20549–0213.

Extension:

Rule 18f–1 and Form N–18f–1, SEC File No. 270–187, OMB Control No. 3235–0211

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520), the Securities and Exchange Commission (''Commission'') is soliciting comments on the collection of information summarized below. The Commission plans to submit this existing collection of information to the Office of Management and Budget for extension and approval.

Rule 18f–1 (17 CFR 270.18f–1) enables a registered open-end management investment company (''fund'') that may redeem its securities in-kind, by making a one-time election, to commit to make cash redemptions pursuant to certain requirements without violating section 18(f) of the Investment Company Act of 1940 (15 U.S.C. 80a–18(f)). A fund relying on the rule must file Form N–18F–1 (17 CFR 274.51) to notify the Commission of this election. The Commission staff estimates that 38 funds file Form N–18F–1 annually, and that each response takes one hour. Based on these estimates, the total annual burden hours associated with the rule is estimated to be 38 hours.

The estimate of average burden hours is made solely for the purposes of the Paperwork Reduction Act, and is not derived from a comprehensive or even a representative survey or study of the costs of Commission rules. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Written comments are invited on: (a) Whether the collection of information is necessary for the proper performance of the functions of the Commission, including whether the information has practical utility; (b) the accuracy of the Commission's estimate of the burden of the collection of information; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Consideration will be given to comments and suggestions submitted in writing within 60 days of this publication.

Please direct your written comments to Pamela Dyson, Director/Chief Information Officer, Securities and Exchange Commission, C/O Remi Pavlik-Simon, 100 F Street NE., Washington, DC 20549; or send an email to: *PRA_Mailbox@sec.gov.*

Dated: November 14, 2016.

Brent J. Fields,

Secretary.

[FR Doc. 2016–27750 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #14970 and #14971]

North Carolina Disaster #NC–00086

AGENCY: U.S. Small Business Administration.

ACTION: Notice.

SUMMARY: This is a Notice of the Presidential declaration of a major disaster for Public Assistance Only for the State of North Carolina (FEMA–4285–DR), dated 11/10/2016.

Incident: Hurricane Matthew.

Incident Period: 10/04/2016 and continuing.

Effective Date: 11/10/2016.

Physical Loan Application Deadline Date: 01/09/2017.

Economic Injury (EIDL) Loan Application Deadline Date: 08/10/2017.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416.

SUPPLEMENTARY INFORMATION: Notice is hereby given that as a result of the President's major disaster declaration on 11/10/2016, Private Non-Profit organizations that provide essential services of governmental nature may file disaster loan applications at the address listed above or other locally announced locations.

The following areas have been determined to be adversely affected by the disaster:

Primary Counties: Anson Bladen Chatham Cumberland Franklin Halifax Hoke Johnston Lee Nash Richmond Scotland Wake

The Interest Rates are:

	Percent
For Physical Damage:	
Non-Profit Organizations With Credit Available Elsewhere ...	2.625
Non-Profit Organizations Without Credit Available Elsewhere ...	2.625
For Economic Injury:	
Non-Profit Organizations Without Credit Available Elsewhere ...	2.625

The number assigned to this disaster for physical damage is 149708 and for economic injury is 149718.

(Catalog of Federal Domestic Assistance Number 59008)

James E. Rivera,

Associate Administrator for Disaster Assistance.

[FR Doc. 2016–27863 Filed 11–17–16; 8:45 am]

BILLING CODE 8025–01–P

SMALL BUSINESS ADMINISTRATION

Revocation of License of Small Business Investment Company

Pursuant to the authority granted to the United States Small Business Administration by the Final Order of the United States District Court for the District of Connecticut, entered April 29, 2016, the United States Small Business Administration hereby revokes the license of First New England Capital 2, L.P., a Delaware Limited Partnership, to function as a small business investment company under the Small Business Investment Company License No. 01710374 issued to First New England Capital 2, L.P., on March 25, 1988, and said license is hereby declared null and void as of July 19, 2016.

United States Small Business Administration.

Dated: November 10, 2016.

Mark L. Walsh,

Associate Administrator for Investment.

[FR Doc. 2016–27722 Filed 11–17–16; 8:45 am]

BILLING CODE P

SMALL BUSINESS ADMINISTRATION

[Disaster Declaration #14958 and #14959]

Virginia Disaster Number VA–00065

AGENCY: U.S. Small Business Administration.

ACTION: Amendment 1.

SUMMARY: This is an amendment of the Presidential declaration of a major disaster for the Commonwealth of Virginia (FEMA–4291–DR), dated 11/02/2016.

Incident: Hurricane Matthew.

Incident Period: 10/07/2016 through 10/15/2016.

Effective Date: 11/14/2016.

Physical Loan Application Deadline Date: 01/03/2017.

EIDL Loan Application Deadline Date: 08/02/2017.

ADDRESSES: Submit completed loan applications to: U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

FOR FURTHER INFORMATION CONTACT: A. Escobar, Office of Disaster Assistance, U.S. Small Business Administration, 409 3rd Street SW., Suite 6050, Washington, DC 20416.

SUPPLEMENTARY INFORMATION: The notice of the President's major disaster declaration for the State of VIRGINIA, dated 11/02/2016 is hereby amended to establish the incident period for this disaster as beginning 10/07/2016 and continuing through 10/15/2016.

All other information in the original declaration remains unchanged.

(Catalog of Federal Domestic Assistance Numbers 59002 and 59008)

James E. Rivera,

Associate Administrator for Disaster Assistance.

[FR Doc. 2016–27864 Filed 11–17–16; 8:45 am]

BILLING CODE 8025–01–P

STATE JUSTICE INSTITUTE

SJI Board of Directors Meeting, Notice

AGENCY: State Justice Institute.

ACTION: Notice of meeting.

SUMMARY: The SJI Board of Directors will be meeting on Monday, December 5, 2016 at 11:00 a.m. The meeting will be held at the Belmond Hotel in Charleston, South Carolina. The purpose of this meeting is to consider grant applications for the 1st quarter of FY 2017, and other business. All portions of this meeting are open to the public.

ADDRESSES: Belmond Hotel, 205 Meeting Street, Charleston, South Carolina, 29401.

FOR FURTHER INFORMATION CONTACT: Jonathan Mattiello, Executive Director, State Justice Institute, 11951 Freedom Drive, Suite 1020, Reston, VA 20190, 571–313–8843, *contact@sji.gov.*

Jonathan D. Mattiello,

Executive Director.

[FR Doc. 2016–27834 Filed 11–17–16; 8:45 am]

BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Thirteenth RTCA SC–231 TAWS Plenary

AGENCY: Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT).

ACTION: Thirteenth RTCA SC–231 TAWS Plenary.

SUMMARY: The FAA is issuing this notice to advise the public of a meeting of Thirteenth RTCA SC–231 TAWS Plenary.

DATES: The meeting will be held December 08, 2016 10:00 a.m.–11:00 a.m.

ADDRESSES: The meeting will be held at: RTCA Headquarters, 1150 18th Street NW., Suite 910, Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: Rebecca Morrison at *rmorrison@rtca.org* or 202–330–0654, or The RTCA Secretariat, 1150 18th Street NW., Suite

910, Washington, DC, 20036, or by telephone at (202) 833–9339, fax at (202) 833–9434, or Web site at *http://www.rtca.org.*

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a) (2) of the Federal Advisory Committee Act (Pub. L. 92–463, 5 U.S.C., App.), notice is hereby given for a meeting of the Thirteenth RTCA SC–231 TAWS Plenary. The agenda will include the following:

Thursday, December 08, 2016, 10:00 a.m.–11:00 a.m.

1. Introductory Remarks: DFO, RTCA and Chairman
2. Review of final document for submission to Program Management Committee
3. Other Business
4. Review of meeting minutes
5. Adjourn

Attendance is open to the interested public but limited to space availability. With the approval of the chairman, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section. Members of the public may present a written statement to the committee at any time.

Issued in Washington, DC on November 15, 2016.

Mohannad Dawoud

Management & Program Analyst, Partnership Contracts Branch, ANG–A17 NextGen, Procurement Services Division, Federal Aviation Administration.

[FR Doc. 2016–27794 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Thirteenth RTCA SC–228 Focused Plenary

AGENCY: Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT).

ACTION: Thirteenth RTCA SC–228 Focused Plenary.

SUMMARY: The FAA is issuing this notice to advise the public of a meeting of Thirteenth RTCA SC–228 Focused Plenary.

DATES: The meeting will be held December 15, 2016 01:00 p.m.–03:00 p.m.

ADDRESSES: The meeting will be held at: Virtual Plenary ONLY: Join at the following link: *https://rtca.webex.com/rtca/j.php?MTID=mb1dbe3316d05f4fe854eff1b0986530b.*

FOR FURTHER INFORMATION CONTACT: Al Secen at *asecen@rtca.org* or 202–330–0647, or The RTCA Secretariat, 1150 18th Street NW., Suite 910, Washington, DC, 20036, or by telephone at (202) 833–9339, fax at (202) 833–9434, or Web site at *http://www.rtca.org.*

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92–463, 5 U.S.C., App.), notice is hereby given for a meeting of the Thirteenth RTCA SC–228 Focused Plenary. The agenda will include the following:

Thursday, December 15, 2016–1:00 p.m.–3:00 p.m.

1. Welcome/Introductions/Administrative Remarks/SC–228 Participation Guidelines
   a. Reading of the Public Announcement by the DFO
   b. Reading of the RTCA Proprietary References Policy
2. Agenda Overview
   a. Adopt Meeting Minutes from Plenary #12
3. Determine approval of WG–1 DAA MOPS
   a. DAA MOPS Document Approval
   b. Air-to-Air Radar MOPS Document Approval
4. Adjourn

Attendance is open to the interested public but limited to space availability. With the approval of the chairman, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section. Members of the public may present a written statement to the committee at any time.

Issued in Washington, DC, on November 14, 2016.

Mohannad Dawoud,

Management & Program Analyst, Partnership Contracts Branch, ANG–A17 NextGen, Procurement Services Division, Federal Aviation Administration.

[FR Doc. 2016–27730 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Ninety Seventh Plenary for RTCA SC–159 Navigation Equipment Using the Global Positioning System

AGENCY: Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT).

ACTION: Ninety Seventh Plenary for RTCA SC–159 Navigation Equipment Using the Global Positioning System.

SUMMARY: The FAA is issuing this notice to advise the public of a meeting of Ninety Seventh Plenary for RTCA SC–159 Navigation Equipment Using the Global Positioning System.

DATES: The meeting will be held December 13, 2016 10:30 a.m.–12:00 p.m.

ADDRESSES: The meeting will be held at: RTCA Headquarters, 1150 18th Street NW., Suite 910, Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: Rebecca Morrison at *rmorrison@rtca.org* or 202–330–0654, or The RTCA Secretariat, 1150 18th Street NW., Suite 910, Washington, DC, 20036, or by telephone at (202) 833–9339, fax at (202) 833–9434, or Web site at *http://www.rtca.org.*

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a) (2) of the Federal Advisory Committee Act (Pub. L. 92–463, 5 U.S.C., App.), notice is hereby given for a meeting of the Ninety Seventh RTCA SC–159 Navigation Equipment Using the Global Positioning System. The agenda will include the following:

Tuesday, December 13, 2016, 10:30 a.m.–12:00 p.m.

1. Introductory Remarks: DFO, RTCA and Chairman
2. Presentation by WG–6 of comments on the Ligado Proposal dated August 30, 2016 with discussion for review and approval by SC–159
3. Other Business
4. Adjourn

Attendance is open to the interested public but limited to space availability. With the approval of the chairman, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section. Members of the public may present a written statement to the committee at any time.

Issued in Washington, DC, on November 15, 2016.

Mohannad Dawoud,

Management & Program Analyst, Partnership Contracts Branch, ANG–A17, NextGen, Procurement Services Division, Federal Aviation Administration.

[FR Doc. 2016–27796 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Thirtieth RTCA SC–216 Aeronautical Systems Security Plenary

AGENCY: Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT).

ACTION: Thirtieth RTCA SC–216 Aeronautical Systems Security Plenary.

SUMMARY: The FAA is issuing this notice to advise the public of a meeting of Thirtieth RTCA SC–216 Aeronautical Systems Security Plenary.

DATES: The meeting will be held December 12–16, 2016 08:00 a.m.–05:00 p.m.

ADDRESSES: The meeting will be held at: The Washington Campus, 1150 18th Street NW., Suite 400, Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: Karan Hofmann at *khofmann@rtca.org* or 202–330–0680, or The RTCA Secretariat, 1150 18th Street NW., Suite 910, Washington, DC, 20036, or by telephone at (202) 833–9339, fax at (202) 833–9434, or Web site at *http://www.rtca.org.*

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a) (2) of the Federal Advisory Committee Act (Pub. L. 92–463, 5 U.S.C., App.), notice is hereby given for a meeting of the Thirtieth RTCA SC216 Aeronautical Systems Security. The agenda will include the following:

Monday, December 12, 2016—8:00 a.m.–5:00 p.m.

1. Welcome and Administrative Remarks
2. Introductions
3. Agenda Review
4. Meeting-Minutes Review
5. Jointly with WG–72:
   a. Review Joint Action List
   b. Review White Papers
   c. Status and intent of those planned and produced
   d. Gain common understanding of intent
   e. Resolve differences
6. Plan next steps in developing WG–72 and SC–216 harmonized draft document
7. Schedule Update
8. Date, Place and Time of Next Meeting
9. New Business
10. Adjourn Plenary

Tuesday, December 13, 2016—8:00 a.m.–5:00 p.m.

1. Continuation of Plenary or Working Group Sessions

Wednesday, December 14, 2016—8:00 a.m.–5:00 p.m.

1. Continuation of Plenary or Working Group Sessions

Thursday, December 15, 2016—8:00 a.m.–5:00 p.m.

1. Continuation of Plenary or Working Group Sessions

Friday, December 16, 2016—8:00 a.m.–11:00 a.m.

1. Continuation of Plenary or Working Group Sessions

Attendance is open to the interested public but limited to space availability. With the approval of the chairman, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section. Members of the public may present a written statement to the committee at any time.

Issued in Washington, DC on November 15, 2016.

Mohannad Dawoud

Management & Program Analyst, Partnership Contracts Branch, ANG–A17, NextGen, Procurement Services Division, Federal Aviation Administration.

[FR Doc. 2016–27795 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Forty Sixth RTCA SC–206 Aeronautical Information and Meteorological Data Link Services Plenary

AGENCY: Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT).

ACTION: Forty Sixth RTCA SC–206 Aeronautical Information and Meteorological Data Link Services Plenary.

SUMMARY: The FAA is issuing this notice to advise the public of a meeting of Forty Sixth RTCA SC–206 Aeronautical Information and Meteorological Data Link Services Plenary.

DATES: The meeting will be held December 12–16, 2016 from 08:30 a.m.–04:30 p.m.

ADDRESSES: The meeting will be held at: RTCA Headquarters, 1150 18th Street NW., Suite 910, Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: Karan Hofmann at *khofmann@rtca.org* or 202–330–0680, or The RTCA Secretariat, 1150 18th Street NW., Suite 910, Washington, DC 20036, or by telephone at (202) 833–9339, fax at (202) 833–9434, or Web site at *http://www.rtca.org.*

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92–463, 5 U.S.C., App.), notice is hereby given for a meeting of the Forty Sixth RTCA 206 Aeronautical Information and Meteorological Data Link Services Plenary. The agenda will include the following:

Monday, December 12, 2016—8:30 a.m.–1:30 p.m.

1. Opening remarks: DFO, RTCA, Chairman, and Host
2. Attendees' introductions
3. Review and approval of meeting agenda
4. Approval of previous meeting minutes (Kansas City)
5. Action item review
6. Sub-Groups reports
   a. SG1: ISRA Status & Inter SC Coordination Update
   b. SG4: EDR MOPS
   c. SG5: FIS–B MOPS
7. Discussion with WG–76 on combining efforts
8. Industry presentations
   a. CSS–Wx and NWP
   b. EDR Algorithm Performance Standards Recommendation Team Update—Mike Emanuel, FAA
   c. FIS–B UAT Design Presentation—Harris
9. SG7 Winds Guidance review for FRAC release

Tuesday, December 13, 2016—8:30 a.m.–5:00 p.m.

1. Sub-Groups Meetings

Wednesday, December 14, 2016—8:30 a.m.–5:00 p.m.

1. Sub-Groups Meetings

Thursday, December 15, 2016—8:30 a.m.–5:00 p.m.

1. Sub-Groups Meetings

Friday, December 16, 2016—8:30 a.m.–11:00 a.m.

1. Closing Plenary Opening
2. Sub-Groups reports
3. Decision to approve SG7 Winds Guidance document for FRAC release
4. TOR status
5. Future meetings plans and dates
6. Industry coordination
7. Action item review
8. Other business
9. Adjourn

Attendance is open to the interested public but limited to space availability. With the approval of the chairman, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section. Members of the public may present a written statement to the committee at any time.

Issued in Washington, DC, on November 14, 2016.

Mohannad Dawoud

Management & Program Analyst, Partnership Contracts Branch, ANG–A17, NextGen, Procurement Services Division, Federal Aviation Administration.

[FR Doc. 2016–27717 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Sixteenth Meeting of the RTCA Tactical Operations Committee

AGENCY: Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT).

ACTION: Sixteenth Meeting of the RTCA Tactical Operations Committee.

SUMMARY: The FAA is issuing this notice to advise the public of the Sixteenth Meeting of the RTCA Tactical Operations Committee.

DATES: The meeting will be held December 13, 2016, 01:00 p.m.–03:00 p.m.

ADDRESSES: The meeting will be held at: RTCA Headquarters, 1150 18th Street NW., Suite 910, Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: Trin Mitra at *tmitra@rtca.org* or 202–330–0655, the RTCA Secretariat, 1150 18th Street NW., Suite 910, Washington, DC 20036, or by telephone at (202) 833–9339, fax at (202) 833–9434, or Web site at *http://www.rtca.org.*

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92–463, 5 U.S.C., App.), notice is hereby given for the Fifteenth Meeting of the RTCA Tactical Operations Committee. The agenda will include the following:

Tuesday, December 13, 2016—1 p.m.–2:30 p.m.

1. Opening of Meeting/Introduction of TOC Members—Co-Chairs Dale Wright and Bryan Quigley
2. Official Statement of Designated Federal Official—Elizabeth Ray
3. Approval of October 27, 2016 Meeting Summary
4. Graphical TFR Task Group—Recommendation
5. GPS Adjacent Band Compatibility Task Group—Ligado Proposal Review Recommendation
6. Updates on Future TOC Tasks
7. Other Business
8. Adjourn

Attendance is open to the interested public but limited to space availability. Given limited space on-site, members of the public that wish to participate virtually can request dial-in and online meeting information by contacting Trin Mitra, TOC Secretary, at *tmitra@rtca.org.* With the approval of the chairman, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section. Members of the public may present a written statement to the committee at any time.

Issued in Washington, DC, on November 14, 2016.

Mohannad Dawoud,

Management & Program Analyst, Partnership Contracts Branch, ANG–A17, NextGen, Procurement Services Division, Federal Aviation Administration.

[FR Doc. 2016–27715 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Forty Fifth RTCA SC–224 Airport Security Access Control Systems Plenary

AGENCY: Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT).

ACTION: Forty Fifth RTCA SC–224 Airport Security Access Control Systems Plenary.

SUMMARY: The FAA is issuing this notice to advise the public of a meeting of Forty Fifth RTCA SC–224 Airport Security Access Control Systems Plenary.

DATES: The meeting will be held December 13, 2016 10:00 a.m.–01:00 p.m.

ADDRESSES: The meeting will be held at: RTCA Headquarters, 1150 18th Street NW., Suite 910, Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: Karan Hofmann at *khofmann@rtca.org* or 202–330–0680, or The RTCA Secretariat, 1150 18th Street NW., Suite 910, Washington, DC 20036, or by telephone at (202) 833–9339, fax at (202) 833–9434, or Web site at *http://www.rtca.org.*

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92–463, 5 U.S.C., App.), notice is hereby given for a meeting of the Forty Fifth RTCA SC224 Airport Security Access Control Systems Plenary. The agenda will include the following:

Tuesday, December 13, 2016—10:00 a.m.–1:00 p.m.

1. Welcome/Introductions/Administrative Remarks
2. Review/Approve Previous Meeting Summary
3. Report on TSA Participation
4. Report on TSA Security Construction Guidelines
5. Review of DO–230H Sections
6. Terms of Reference Revisions
7. Action Items for Next Meeting
8. Time and Place of Next Meeting
9. Any Other Business
10. Adjourn

Attendance is open to the interested public but limited to space availability. With the approval of the chairman, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section. Members of the public may present a written statement to the committee at any time.

Issued in Washington, DC, on November 14, 2016.

Mohannad Dawoud

Management & Program Analyst, Partnership Contracts Branch, ANG–A17, NextGen, Procurement Services Division, Federal Aviation Administration.

[FR Doc. 2016–27716 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Sixteenth Meeting of the RTCA Tactical Operations Committee

AGENCY: Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT).

ACTION: Sixteenth Meeting of the RTCA Tactical Operations Committee.

SUMMARY: The FAA is issuing this notice to advise the public of the Sixteenth Meeting of the RTCA Tactical Operations Committee.

DATES: The meeting will be held December 13, 2016, 01:00 p.m.–03:00 p.m.

ADDRESSES: The meeting will be held at: RTCA Headquarters, 1150 18th Street NW., Suite 910, Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: Trin Mitra at *tmitra@rtca.org* or 202–330–0655, the RTCA Secretariat, 1150 18th Street NW., Suite 910, Washington, DC, 20036, or by telephone at (202) 833–

9339, fax at (202) 833–9434, or Web site at *http://www.rtca.org.*

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92–463, 5 U.S.C., App.), notice is hereby given for the Fifteenth Meeting of the RTCA Tactical Operations Committee. The agenda will include the following:

Tuesday, December 13, 2016—1:00 p.m.–3:00 p.m.

1. Opening of Meeting/Introduction of TOC Members—Co-Chairs Dale Wright and Bryan Quigley
2. Official Statement of Designated Federal Official—Elizabeth Ray
3. Approval of October 27, 2016 Meeting Summary
4. Graphical TFR Task Group—Recommendation
5. GPS Adjacent Band Compatibility Task Group—Ligado Proposal Review Recommendation
6. Updates on Future TOC Tasks
7. Other Business
8. Adjourn

Attendance is open to the interested public but limited to space availability. Given limited space on-site, members of the public that wish to participate virtually can request dial-in and online meeting information by contacting Trin Mitra, TOC Secretary, at *tmitra@rtca.org.* With the approval of the chairman, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section. Members of the public may present a written statement to the committee at any time.

Issued in Washington, DC, on November 15, 2016.

Mohannad Dawoud,

Management & Program Analyst, Partnership Contracts Branch, ANG–A17 NextGen, Procurement Services Division, Federal Aviation Administration.

[FR Doc. 2016–27793 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Maritime Administration

Maritime Environmental and Technical Assistance (META) Program Workshop on Battery Applications in Maritime Transportation

AGENCY: Maritime Administration, DOT.

ACTION: Notice of public workshop.

SUMMARY: The Maritime Administration (MARAD), in cooperation with Det Norske Veritas-Germanischer Lloyd, American Bureau of Shipping, and The American Society for Testing and Materials, will hold a workshop to share information and gather input related to the application of high-power batteries in maritime transportation. The workshop is being held as part of the Agency's Maritime Environmental and Technical Assistance (META) Program. Information received during the workshop will be used to enhance Agency and maritime industry stakeholders' understanding of the state of technology, potential design requirements for electric powered and hybrid electric vessels, and areas for future research, development and demonstration projects.

DATES: The workshop will be held on December 15 and 16, 2016, from 8:30 a.m. to 5:00 p.m.

ADDRESSES: The event will be held at the Department of Transportation Conference Center, 1200 New Jersey Ave. SE., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Sujit Ghosh, Maritime Administration, Office of Environment at (202) 366–1839 or via email at *Sujit.Ghosh@dot.gov.*

SUPPLEMENTARY INFORMATION: As additional information becomes available, MARAD will release further details on this event, including the agenda, on its Web page at *https://www.marad.dot.gov/environment-and-safety/office-of-environment.*

Registration

The meeting will be open to the public and streamed on the web. In order to attend the workshop in-person or to access the Web streaming you must register by emailing us at *META@dot.gov.* In your email, please indicate whether you would like to attend in-person or via web streaming, provide your full name, business affiliation, business address, telephone, and email address. In addition to the aforementioned required information, Foreign National registrants that plan to attend in-person must also provide their country of citizenship, date of birth, passport number, and passport expiration date. Please complete your registration with MARAD no later than 5:00 p.m. EST, December 2, 2016.

Capacity: Seating will be limited and available on a first-come-first-serve basis.

Arrival and Admission Information

1. Attendees are encouraged to arrive at least thirty minutes prior to the meeting for processing through building security. All attendees must enter through the New Jersey Avenue entrance (West Building—at the corner of New Jersey Avenue SE. and M Street SE.). Anyone exiting the building for any reason will be required to re-enter through the security checkpoint at the New Jersey Avenue Entrance.

2. Due to security requirements, all attendees must bring a Government-issued form of identification (*e.g.,* driver's license) to ensure access to the building. Foreign National attendees must bring their passports with them. To facilitate security screening, all in-person attendees are encouraged to limit bags and other items (*e.g.,* mobile phones, laptops, cameras, etc.) they bring into the building.

3. Due to space limitations, outside videotaping will not be allowed.

4. The Department of Transportation (DOT) and MARAD are not able to offer visitor parking; we suggest that attendees consider using alternative means of transportation to the building. DOT Headquarters/MARAD is served by Metrorail (Navy Yard station), Metro bus, DC Circulator, and taxi service. There are a number of private parking lots near the DOT building, but MARAD cannot guarantee the availability of parking spaces.

5. For information on facilities or services for persons with disabilities, or to request special assistance at the meeting, please contact Tom Thompson, Office of Environment, Maritime Administration, 1200 New Jersey Avenue SE., Washington, DC 20590; (202) 366–6045 as soon as possible.

Authority: 49 CFR 1.93

* * * * *

By Order of the Maritime Administrator.

Dated: November 15, 2016.

T. Mitchell Hudson, Jr.,

Secretary, Maritime Administration.

[FR Doc. 2016–27757 Filed 11–17–16; 8:45 am]

BILLING CODE 4910–81–P

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

Agency Information Collection Activities: Information Collection Revision; Submission for OMB Review; Diversity Self-Assessment Template for OCC-Regulated Entities

AGENCY: Office of the Comptroller of the Currency (OCC), Treasury.

ACTION: Notice and request for comment.

SUMMARY: The OCC, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on a revised information

collection, as required by the Paperwork Reduction Act of 1995 (PRA). The OCC may not conduct or sponsor, and a respondent is not required to respond to, an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number. The OCC previously received OMB approval for a voluntary information collection in the Final Interagency Policy Statement Establishing Joint Standards for Assessing the Diversity Policies and Practices of Entities Regulated by the Agencies (Policy Statement). The OCC now is soliciting comment on a revised information collection which adds a ''Diversity Self-Assessment Template for OCC-Regulated Entities'' (Template) to facilitate the self-assessment described in the Policy Statement. The OCC also is giving notice that it has sent the collection to OMB for review.

DATES: Comments must be submitted on or before December 19, 2016.

ADDRESSES: Because paper mail in the Washington, DC area and at the OCC is subject to delay, commenters are encouraged to submit comments by email, if possible. Comments may be sent to: Legislative and Regulatory Activities Division, Office of the Comptroller of the Currency, Attention: 1557–0334, 400 7th Street SW., Suite 3E–218, Mail Stop 9W–11, Washington, DC 20219. In addition, comments may be sent by fax to (571) 465–4326 or by electronic mail to *prainfo@occ.treas.gov.* You may personally inspect and photocopy comments at the OCC, 400 7th Street SW., Washington, DC 20219. For security reasons, the OCC requires that visitors make an appointment to inspect comments by calling (202) 649–6700 or, for persons who are deaf or hard of hearing, TTY, (202) 649–5597. Upon arrival, visitors will be required to present valid government-issued photo identification and submit to security screening in order to inspect and photocopy comments.

All comments received, including attachments and other supporting materials, are part of the public record and subject to public disclosure. Do not include any information with your comment, attachment, or supporting materials that you consider confidential or inappropriate for public disclosure.

Additionally, please send a copy of your comments by mail to: OCC Desk Officer, 1557–0334, U.S. Office of Management and Budget, 725 17th Street NW., #10235, Washington, DC 20503 or by email to: *oira submission@omb.eop.gov.*

FOR FURTHER INFORMATION CONTACT: Shaquita Merritt, OCC Clearance Officer, (202) 649–5490 or, for persons who are deaf or hard of hearing, TTY, (202) 649–5597, Legislative and Regulatory Activities Division, Office of the Comptroller of the Currency, 400 7th Street SW., Suite 3E–218, Mail Stop 9W–11, Washington, DC 20219.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501–3520), certain Federal agencies must obtain approval from OMB for each collection of information that they conduct or sponsor. ''Collection of information'' is defined in 44 U.S.C. 3502(3) (and 5 CFR 1320.3(c) of the PRA implementing regulations) to include agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. The OCC is requesting that OMB approve its proposed revision to the collection of information.

Title: Diversity Self-Assessment Template for OCC-Regulated Entities.

OMB Control No.: 1557–0334.

Description: The OCC previously received OMB approval for a voluntary information collection with respect to the Policy Statement, pursuant to which entities regulated by the OCC voluntarily self-assess their diversity policies and practices.[1] This proposed revision to that collection would add the Template to assist with the self-assessment. The Template (1) asks for general information about a respondent; (2) includes a checklist of the standards set forth in the Policy Statement; (3) seeks additional diversity data; and (4) provides an opportunity for a respondent to provide other information regarding or comment on the self-assessment of its diversity policies and practices. A draft of this Template can be viewed at *www.occ.gov/divselfassessment.*

The OCC estimates that use of the Template would reduce the average response time for this collection per respondent from 12 hours to 8 hours. The OCC may use the information submitted by the entities it regulates to monitor progress and trends in the financial services industry with regard to diversity and inclusion in employment and contracting activities and to identify and highlight those policies and practices that have been successful. The OCC will continue to reach out to the regulated entities and other interested parties to discuss diversity and inclusion in the financial services industry and share leading practices. The OCC may also publish information disclosed by the entity, such as any identified leading practices, in any form that does not identify a particular institution or individual or disclose confidential business information.

Type of Review: Revision.

Affected Public: Businesses or other for-profit.

Burden Estimates:

Number of Respondents: 215.

Revised Annual Burden for Policy Statement and Template: 8 hours.

Total Burden: 1,720 hours.

Frequency of Response: Annual.

Comments: On August 25, 2016, the OCC issued a 60-day notice soliciting comments on the revision to the information collection. *See* 81 FR 58553. The comment period closed on October 24, 2016, and the OCC received one comment from an individual who raised several issues.

First, the commenter stated that use of the Template would not reduce a regulated entity's collection burden. We believe, however, that the structured format and layout of the Template is easy to use and thereby simplifies the information collection. We expect that this will reduce the time it takes to complete a self-assessment based on the Joint Standards. Furthermore, similar information currently provided in response to required EEOC and OFCCP annual reports, can be easily recorded on the self-assessment Template.

Second, the commenter stated that the OCC's publication of a Template creates the impression that the Policy Statement and Template set out mandatory, not voluntary, standards. The OCC does not intend to create this impression and notes that the Template itself states that ''a self-assessment by the organization is voluntary.'' The Policy Statement itself also makes the voluntary nature of a self-assessment clear. Third, the commenter asserted that the Template's yes/no structure is overly simplistic. The OCC notes, however, that while an entity's self-assessment of each standard begins with a yes/no response, the entity also is asked about the relevant successes and/or challenges associated with each standard. In addition, at the end of the Template, respondents are invited to provide any ''other important information or comments regarding the self-assessment of their diversity and inclusion policies and practices.''

Finally, the commenter asserts that by publishing the Template, the agency has effectively foreclosed the possibility of a better self-assessment framework. To the contrary, the Template invites a regulated entity to ''utilize this Template or its own assessment tool.'' In addition, the OCC specifically asked the public in its 60-day notice for ''[w]ays to enhance the quality, utility, and clarity of the information to be

[1] 80 FR 33016 (June 10, 2015).

collected'' and asks this same question again below. We welcome the public to share with us, and with other regulated entities, any framework or tool that facilitates a regulated entity's diversity self-assessment.

In addition, we continue to invite comments on the following:

(a) Whether the collection of information is necessary for the proper performance of the functions of the OCC, including whether the information has practical utility;

(b) The accuracy of the OCC's estimate of the information collection burden;

(c) Ways to enhance the quality, utility, and clarity of the information to be collected;

(d) Ways to minimize the burden of the collection on respondents, including through the use of automated collection techniques or other forms of information technology; and

(e) Estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Dated: November 10, 2016.

Karen Solomon,

Deputy Chief Counsel, office of the Comptroller of the Currency.

[FR Doc. 2016–27712 Filed 11–17–16; 8:45 am]

BILLING CODE 4810–33–P

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

Agency Information Collection Activities: Information Collection Renewal; Comment Request; Reporting, Recordkeeping, and Disclosure Requirements Associated With Proprietary Trading and Certain Interests in and Relationships With Covered Funds

AGENCY: Office of the Comptroller of the Currency (OCC), Treasury.

ACTION: Notice and request for comment.

SUMMARY: The OCC, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on a continuing information collection as required by the Paperwork Reduction Act of 1995 (PRA).

In accordance with the requirements of the PRA, the OCC may not conduct or sponsor, and the respondent is not required to respond to, an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number.

The OCC is soliciting comment concerning renewal of its information collection titled, ''Reporting, Recordkeeping, and Disclosure Requirements Associated with Proprietary Trading and Certain Interests in and Relationships with Covered Funds.''

DATES: Comments must be submitted on or before January 17, 2017.

ADDRESSES: Because paper mail in the Washington, DC area and at the OCC is subject to delay, commenters are encouraged to submit comments by email, if possible. Comments may be sent to: Legislative and Regulatory Activities Division, Office of the Comptroller of the Currency, Attention: 1557–00309, 400 7th Street SW., Suite 3E–218, Mail Stop 9W–11, Washington, DC 20219. In addition, comments may be sent by fax to (571) 465–4326 or by electronic mail to *prainfo@occ.treas.gov.* You may personally inspect and photocopy comments at the OCC, 400 7th Street SW., Washington, DC 20219. For security reasons, the OCC requires that visitors make an appointment to inspect comments. You may do so by calling (202) 649–6700 or, for persons who are deaf or hard of hearing, TTY, (202) 649–5597. Upon arrival, visitors will be required to present valid government-issued photo identification and submit to security screening in order to inspect and photocopy comments.

All comments received, including attachments and other supporting materials, are part of the public record and subject to public disclosure. Do not include any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure.

FOR FURTHER INFORMATION CONTACT: Shaquita Merritt, OCC Clearance Officer, (202) 649–5490 or, for persons who are deaf or hard of hearing, TTY, (202) 649–5597, Legislative and Regulatory Activities Division, Office of the Comptroller of the Currency, 400 7th Street SW., Suite 3E–218, Mail Stop 9W–11, Washington, DC 20219.

SUPPLEMENTARY INFORMATION: Under the PRA (44 U.S.C. 3501–3520), Federal agencies must obtain approval from the OMB for each collection of information that they conduct or sponsor. ''Collection of information'' is defined in 44 U.S.C. 3502(3) and 5 CFR 1320.3(c) to include agency requests or requirements that members of the public submit reports, keep records, or provide information to a third party. Section 3506(c)(2)(A) of title 44 requires Federal agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each proposed extension of an existing collection of information, before submitting the collection to OMB for approval. To comply with this requirement, the OCC is publishing notice of the proposed collection of information set forth in this document.

Title: Reporting, Recordkeeping, and Disclosure Requirements Associated with Proprietary Trading and Certain Interests in and Relationships with Covered Funds.

OMB Control No.: 1557–0309.

Type of Review: Regular.

Description: This collection of information is established pursuant to a 2014 final rule [1] required by the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), which was enacted on July 21, 2010.[2] Section 619 of the Dodd-Frank Act contains certain prohibitions and restrictions on the ability of a banking entity and nonbank financial company supervised by the Board of Governors of the Federal Reserve System (Board) to engage in proprietary trading and have certain interests in, or relationships with, a hedge fund or private equity fund.

Section 619 of the Dodd-Frank Act added a new section 13 to the Bank Holding Company Act (BHC Act) (codified at 12 U.S.C. 1851) that generally prohibits any banking entity from engaging in proprietary trading or from acquiring or retaining an ownership interest in, sponsoring, or having certain relationships with a hedge fund or private equity fund, subject to certain exemptions.

Section 44.12(e) states that, upon application by a banking entity, the Board may extend the period of time to meet the requirements on ownership limitations under § 44.12(a)(2)(i) for up to 2 additional years, if the Board finds that an extension would be consistent with safety and soundness and not detrimental to the public interest. An application for extension must: (1) Be submitted to the Board at least 90 days prior to the expiration of the applicable time period; (2) provide the reasons for application including information that addresses the factors in paragraph (e)(2) of § 44.12; and (3) explain the banking entity's plan for reducing the permitted investment in a covered fund through redemption, sale, dilution, or other methods as required in § 44.12(a)(2).

Section 44.20(d) provides that a banking entity engaged in proprietary trading activity permitted under subpart

[1] 79 FR 5536 (January 31, 2014).

[2] Dodd-Frank Wall Street Reform and Consumer Protection Act, Public Law 111–203, 124 Stat. 1376 (2010).

B of part 44 must comply with the reporting requirements described in Appendix A if (1) the banking entity (other than a foreign banking entity as provided in § 44.20(d)(1)(ii)) has, together with its affiliates and subsidiaries, trading assets and liabilities (excluding trading assets and liabilities involving obligations of or guaranteed by the United States or any agency of the United States) the average gross sum of which (on a worldwide consolidated basis) over the previous consecutive four quarters, as measured as of the last day of each of the four prior calendar quarters, equals or exceeds the threshold established in § 44.20(d)(2); (2) in the case of a foreign banking entity, the average gross sum of the trading assets and liabilities of the combined U.S. operations of the foreign banking entity (including all subsidiaries, affiliates, branches, and agencies of the foreign banking entity operating, located, or organized in the United States and excluding trading assets and liabilities involving obligations of or guaranteed by the United States or any agency of the United States) over the previous consecutive four quarters, as measured as of the last day of each of the four prior calendar quarters, equals or exceeds the threshold established in § 44.20(d)(2); or (3) the OCC notifies the banking entity in writing that it must satisfy the reporting requirements contained in Appendix A of part 44. The threshold for reporting is $50 billion beginning on June 30, 2014; $25 billion beginning on April 30, 2016; and $10 billion beginning on December 31, 2016. Under the 2014 final rule, a banking entity with $50 billion or more in trading assets and liabilities must report the information required by Appendix A for each calendar month within 30 days of the end of the relevant calendar month. Beginning with information for the month of January 2015, such information must be reported within 10 days of the end of that calendar month. The OCC may notify a banking entity in writing that it must report on a different basis. Any other banking entity subject to Appendix A shall report the information required by Appendix A for each calendar quarter within 30 days of the end of that calendar quarter unless the OCC notifies the banking entity in writing that it must report on a different basis. Appendix A requires banking entities to furnish the following quantitative measurements for each trading desk of the banking entity: (1) Risk and Position Limits and Usage; (2) Risk Factor Sensitivities; (3) Value-at-Risk (VaR) and stress VaR; (4) Comprehensive Profit and loss Attribution; (5) Inventory Turnover; (6) Inventory Aging; and (7) Customer-Facing Trade Ratio.

Section 44.3(d)(3) specifies that proprietary trading does not include any purchase or sale of a security by a banking entity for the purpose of liquidity management in accordance with a documented liquidity management plan of the banking entity that: (1) Specifically contemplates and authorizes the particular securities to be used for liquidity management purposes, the amount, types, and risks of these securities that are consistent with liquidity management, and the liquidity circumstances in which the particular securities may or must be used; (2) requires that any purchase or sale of securities contemplated and authorized by the plan be principally for the purpose of managing the liquidity of the banking entity, and not for the purpose of short-term resale, benefitting from actual or expected short-term price movements, realizing short-term arbitrage profits, or hedging a position taken for such short-term purposes; (3) requires that any securities purchased or sold for liquidity management purposes be highly liquid and limited to securities the market, credit, and other risks of which the banking entity does not reasonably expect to give rise to appreciable profits or losses as a result of short-term price movements; (4) limits any securities purchased or sold for liquidity management purposes, together with any other instruments purchased or sold for such purposes, to an amount that is consistent with the banking entity's near-term funding needs, including deviations from normal operations of the banking entity or any affiliate thereof, as estimated and documented pursuant to methods specified in the plan; (5) includes written policies and procedures, internal controls, analysis, and independent testing to ensure that the purchase and sale of securities that are not permitted under § 44.6(a) or § 44.6(b) are for the purpose of liquidity management and in accordance with the liquidity management plan described in this paragraph; and (6) is consistent with the OCC's supervisory requirements, guidance, and expectations regarding liquidity management.

Section 44.4(b)(3)(i)(A) provides that a trading desk or other organizational unit of another entity with $50 billion or more in trading assets and liabilities is not a client, customer, or counterparty unless the trading desk documents how and why a particular trading desk or other organizational unit of the entity should be treated as a client, customer, or counterparty of the trading desk for purposes of § 44.4(b)(2).

Section 44.5(c) requires documentation for any purchase or sale of financial instruments for risk-mitigating hedging purposes that is: (1) Not established by the specific trading desk establishing or responsible for the underlying positions, contracts, or other holdings the risks of which the hedging activity is designed to reduce; (2) established by the specific trading desk establishing or responsible for the underlying positions, contracts, or other holdings the risks of which the purchases or sales are designed to reduce, but that is effected through a financial instrument, exposure, technique, or strategy that is not specifically identified in the trading desk's written policies and procedures established under § 44.5(b)(1) or § 44.4(b)(2)(iii)(B) as a product, instrument, exposure, technique, or strategy such desk may use for hedging; or (3) established to hedge aggregated positions across two or more trading desks. In connection with any purchase or sale that meets these specified circumstances, a banking entity must, at a minimum and contemporaneously with the purchase or sale, document: (1) The specific, identifiable risk(s) of the identified positions, contracts, or other holdings of the banking entity that the purchase or sale is designed to reduce; (2) the specific risk-mitigating strategy that the purchase or sale is designed to fulfill; and (3) the trading desk or other business unit that is establishing and responsible for the hedge. The banking entity must also create and retain records sufficient to demonstrate compliance with § 44.5(c) for at least 5 years in a form that allows the banking entity to promptly produce such records to the OCC on request or such longer period as required under other law or part 44.

Section 44.11(a)(2) requires that covered funds generally must be organized and offered only in connection with the provision of *bona fide* trust, fiduciary, investment advisory, or commodity trading advisory services and only to persons that are customers of such services of the banking entity (or an affiliate thereof), pursuant to a written plan or similar documentation outlining how the banking entity or such affiliate intends to provide advisory or similar services to its customers through organizing and offering the covered fund.

Section 44.20(b) specifies the contents of the compliance program for a banking entity with total consolidated assets of $10 billion or more. It includes: (1) Written policies and procedures reasonably designed to document, describe, monitor, and limit trading activities (including those permitted under §§ 44.3 to 44.6), including setting, monitoring, and managing required limits set out in § 44.4 and § 44.5 and activities and investments with respect to a covered fund (including those permitted under §§ 44.11 through 44.14) conducted by the banking entity to ensure that all activities and investments conducted by the banking entity that are subject to section 13 of the BHC Act and part 44 comply with section 13 of the BHC Act and part 44; (2) a system of internal controls reasonably designed to monitor compliance with section 13 of the BHC Act and part 44 and to prevent the occurrence of activities or investments that are prohibited by section 13 of the BHC Act and part 44; (3) a management framework that clearly delineates responsibility and accountability for compliance with section 13 of the BHC Act and part 44 and includes appropriate management review of trading limits, strategies, hedging activities, investments, incentive compensation, and other matters identified in part 44 or by management as requiring attention; (4) independent testing and audit of the effectiveness of the compliance program conducted periodically by qualified personnel of the banking entity or by a qualified outside party; (5) training for trading personnel and managers, as well as other appropriate personnel, to effectively implement and enforce the compliance program; and (6) records sufficient to demonstrate compliance with section 13 of the BHC Act and part 44, which a banking entity must promptly provide to the OCC upon request and retain for a period of no less than 5 years or such longer period as required by the OCC.

Section 44.20(c) specifies that the compliance program of a banking entity must satisfy the requirements and other standards contained in Appendix B, if: (1) The banking entity engages in proprietary trading permitted under subpart B of part 44 and is required to comply with the reporting requirements of § 44.20(d); (2) the banking entity has reported total consolidated assets as of the previous calendar year end of $50 billion or more or, in the case of a foreign banking entity, has total U.S. assets as of the previous calendar year end of $50 billion or more (including all subsidiaries, affiliates, branches and agencies of the foreign banking entity operating, located or organized in the United States); or (3) the OCC notifies the banking entity in writing that it must satisfy the requirements and other standards contained in Appendix B. Appendix B provides enhanced minimum standards for compliance programs for banking entities that meet any of the thresholds in § 44.20(c) as described above. Appendix B sets forth standards with respect to the establishment, oversight, maintenance, and enforcement by banking entities of the enhanced compliance program for ensuring and monitoring compliance with the prohibitions and restrictions on proprietary trading and covered fund activities and investments set forth in section 13 of the BHC Act and part 44. The program must: (1) Be reasonably designed to identify, document, monitor, and report the permitted trading and covered fund activities and investments; identify, monitor, and promptly address the risk of these covered activities and investments and potential areas of noncompliance; and prevent activities or investments prohibited by, or that do not comply with, section 13 of the BHC Act and part 44; (2) establish and enforce appropriate limits on covered activities and investments, including limits on size, scope, complexity, and risks of individual activities or investments consistent with the requirements of section 13 of the BHC Act and part 44; (3) subject the effectiveness of the compliance program to periodic independent review and testing, and ensure that the entity's internal audit, corporate compliance, and internal control functions involved in review and testing are effective and independent; (4) make senior management and others accountable for effective implementation of compliance program and ensure that the board of directors and chief executive officer (or equivalent) of the banking entity review effectiveness of the compliance program; and (5) facilitate supervision and examination by the OCC of permitted trading and covered fund activities and investments.

Section 44.20(d) provides that a banking entity engaged in certain proprietary trading activity must comply with the reporting requirements described in Appendix A if the banking entity's trading activity meets or exceeds the thresholds set forth in § 44.20(d). A banking entity must also, for any quantitative measurement furnished to the OCC pursuant to § 44.20(d) and Appendix A, create and maintain records documenting the preparation and content of these reports, as well as such information as is necessary to permit the OCC to verify the accuracy of such reports, for a period of 5 years from the end of the calendar year for which the measurement was taken.

Section 44.20(e) specifies additional documentation required for covered funds. Any banking entity that has more than $10 billion in total consolidated assets as reported on December 31 of the previous two calendar years shall maintain records that include: (1) Documentation of the exclusions or exemptions other than sections 3(c)(1) and 3(c)(7) of the Investment Company Act of 1940 relied on by each fund sponsored by the banking entity (including all subsidiaries and affiliates) in determining that such fund is not a covered fund; (2) for each fund sponsored by the banking entity (including all subsidiaries and affiliates) for which the banking entity relies on one or more of the exclusions from the definition of covered fund provided by §§ 44.10(c)(1), 44.10(c)(5), 44.10(c)(8), 44.10(c)(9), or 44.10(c)(10), documentation supporting the banking entity's determination that the fund is not a covered fund pursuant to one or more of those exclusions; (3) for each seeding vehicle described in §§ 44.10(c)(12)(i) or 44.10(c)(12)(iii) that will become a registered investment company or SEC-regulated business development company, a written plan documenting the banking entity's determination that the seeding vehicle will become a registered investment company or SEC-regulated business development company; the period of time during which the vehicle will operate as a seeding vehicle; and the banking entity's plan to market the vehicle to third-party investors and convert it into a registered investment company or SEC-regulated business development company within the time period specified in § 44.12(a)(2)(i)(B); and (4) for any banking entity that is, or is controlled directly or indirectly by a banking entity that is, located in or organized under the laws of the United States or of any State, if the aggregate amount of ownership interests in foreign public funds that are described in § 44.10(c)(1) owned by such banking entity (including ownership interests owned by any affiliate that is controlled directly or indirectly by a banking entity that is located in or organized under the laws of the United States or of any State) exceeds $50 million at the end of two or more consecutive calendar quarters, beginning with the next succeeding calendar quarter, documentation of the value of the ownership interests owned by the banking entity (and such affiliates) in each foreign public fund and each jurisdiction in which any such foreign public fund is organized, calculated as of the end of each calendar quarter, which documentation must continue until the banking entity's aggregate amount of ownership interests in foreign public funds is below $50 million for two consecutive calendar quarters.

Section 44.20(f)(1) applies to banking entities with no covered activities. A banking entity that does not engage in activities or investments pursuant to subpart B or subpart C of part 44 (other than trading activities permitted pursuant to § 44.6(a)) may satisfy the requirements of § 44.20 by establishing the required compliance program prior to becoming engaged in such activities or making such investments (other than trading activities permitted pursuant to § 44.6(a)).

Section 44.20(f)(2) applies to banking entities with modest activities. A banking entity with total consolidated assets of $10 billion or less as reported on December 31 of the previous two calendar years that engages in activities or investments pursuant to subpart B or subpart C of part 44 (other than trading activities permitted under § 44.6(a)) may satisfy the requirements of § 44.20 by including in its existing compliance policies and procedures appropriate references to the requirements of section 13 of the BHC Act and part 44 and adjustments as appropriate given the activities, size, scope and complexity of the banking entity.

Section 44.11(a)(8)(i) requires that a banking entity clearly and conspicuously disclose, in writing, to any prospective and actual investor in the covered fund (such as through disclosure in the covered fund's offering documents): (1) That any losses in such covered fund will be borne solely by investors in the covered fund and not by the banking entity or its affiliates; therefore, the banking entity's losses in such covered fund will be limited to losses attributable to the ownership interests in the covered fund held by the banking entity and any affiliate in its capacity as investor in the covered fund or as beneficiary of a restricted profit interest held by the banking entity or any affiliate; (2) that such investor should read the fund offering documents before investing in the covered fund; (3) that the ownership interests in the covered fund are not insured by the FDIC, and are not deposits, obligations of, or endorsed or guaranteed in any way, by any banking entity (unless that happens to be the case); and (4) the role of the banking entity and its affiliates and employees in sponsoring or providing any services to the covered fund.

Affected Public: Businesses or other for-profit.

Burden Estimates:

Number of respondents: 381.

Total estimated annual burden: 28,016 hours (14,386 hours for initial setup and 13,630 hours for ongoing compliance).

Frequency of Response: On occasion.

Comments: Comments submitted in response to this notice will be summarized and included in the request for OMB approval. All comments will become a matter of public record. Comments are invited on:

(a) Whether the collection of information is necessary for the proper performance of the functions of the OCC, including whether the information has practical utility;

(b) The accuracy of the OCC's estimate of the information collection burden;

(c) Ways to enhance the quality, utility, and clarity of the information to be collected;

(d) Ways to minimize the burden of the collection on respondents, including through the use of automated collection techniques or other forms of information technology; and

(e) Estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Dated: November 10, 2016.

Karen Solomon,

Deputy Chief Counsel, Office of the Comptroller of the Currency.

[FR Doc. 2016–27711 Filed 11–17–16; 8:45 am]

BILLING CODE 4810–33–P

DEPARTMENT OF THE TREASURY

Office of Foreign Assets Control

Sanctions Actions Pursuant to Executive Order 13660

AGENCY: Office of Foreign Assets Control, Treasury.

ACTION: Notice.

SUMMARY: The Treasury Department's Office of Foreign Assets Control (OFAC) is publishing the names of six persons whose property and interests in property are blocked pursuant to Executive Order (E.O.) 13660.

DATES: OFAC's actions described in this notice were effective on November 14, 2016, as further specified below.

FOR FURTHER INFORMATION CONTACT: The Department of the Treasury's Office of Foreign Assets Control: Assistant Director for Licensing, tel.: 202–622–2480, Assistant Director for Regulatory Affairs, tel.: 202–622–4855, Assistant Director for Sanctions Compliance & Evaluation, tel.: 202–622–2490; or the Department of the Treasury's Office of the Chief Counsel (Foreign Assets Control), Office of the General Counsel, tel.: 202–622–2410.

SUPPLEMENTARY INFORMATION:

Electronic Availability

The Specially Designated Nationals and Blocked Persons List and additional information concerning OFAC sanctions programs are available on OFAC's Web site (*www.treas.gov/ofac*).

Notice of OFAC Actions

On November 14, 2016, OFAC blocked the property and interests in property of the following persons pursuant to E.O. 13660, ''Blocking Property of Certain Persons Contributing to the Situation in Ukraine'':

Individuals

1. BAKHAREV, Konstantin Mikhailovich; DOB 20 Oct 1972; POB Ukraine; Gender Male (individual) [UKRAINE–EO13660].
2. BALBEK, Ruslan Ismailovich; DOB 28 Aug 1977; POB Uzbekistan; Gender Male (individual) [UKRAINE–EO13660].
3. BELIK, Dmitry Anatolievich; DOB 17 Oct 1969; POB Russia; Gender Male (individual) [UKRAINE–EO13660].
4. KOZENKO, Andrey Dmitrievich; DOB 03 Aug 1981; POB Ukraine Gender Male (individual) [UKRAINE–EO13660].
5. SAVCHENKO, Svetlana Borisovna; DOB 24 Jun 1965; POB Ukraine Gender Female (individual) [UKRAINE–EO13660].
6. SHPEROV, Pavel Valentinovich; DOB 04 Jul 1971; POB Ukraine; Gender Male (individual) [UKRAINE–EO13660].

Dated: November 14, 2016.

John E. Smith,

Acting Director, Office of Foreign Assets Control.

[FR Doc. 2016–27736 Filed 11–17–16; 8:45 am]

BILLING CODE 4810–AL–P

DEPARTMENT OF THE TREASURY

Submission for OMB Review; Comment Request

November 15, 2016.

The Department of the Treasury will submit the following information collection request(s) to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995, Public Law 104–13, on or after the date of publication of this notice.

DATES: Comments should be received on or before December 19, 2016 to be assured of consideration.

ADDRESSES: Send comments regarding the burden estimates, or any other aspect of the information collection(s), including suggestions for reducing the burden, to (1) Office of Information and Regulatory Affairs, Office of Management and Budget, Attention: Desk Officer for Treasury, New Executive Office Building, Room 10235, Washington, DC 20503, or email at *OIRA_Submission@OMB.EOP.gov* and (2) Treasury PRA Clearance Officer, 1750 Pennsylvania Ave. NW., Suite 8142, Washington, DC 20220, or email at *PRA@treasury.gov.*

FOR FURTHER INFORMATION CONTACT: Copies of the submissions may be obtained by emailing *PRA@treasury.gov,* calling (202) 622–0934, or viewing the entire information collection request at *www.reginfo.gov.*

Departmental Offices (DO)

OMB Control Number: 1505–0146.

Type of Review: Revision of a currently approved collection.

Title: Survey of U.S. Ownership of Foreign Securities.

Forms: TIC–SHC, TIC–SHCA.

Abstract: The survey will collect information on U.S. holdings of foreign securities. The information will be used in the computation of the U.S. balance of payments accounts and international investments position, as well as in the formulation of U.S. financial and monetary policies. This survey is also part of an international effort coordinated by the IMF to improve worldwide balance of payments statistics. Respondents are primarily the largest custodians of securities, banks, securities dealers, and investors.

Affected Public: Businesses or other for-profits.

Estimated Total Annual Burden Hours: 53,260.

Bob Faber,

Acting Treasury PRA Clearance Officer.

[FR Doc. 2016–27837 Filed 11–17–16; 8:45 am]

BILLING CODE 4810–25–P

DEPARTMENT OF VETERANS AFFAIRS

National Research Advisory Council; Notice of Meeting

The Department of Veterans Affairs (VA) gives notice under the Federal Advisory Committee Act, 5 U.S.C., App. 2, that the National Research Advisory Council will hold a meeting on Wednesday, December 7, 2016, in Conference Room 730 at 810 Vermont Ave NW., Washington, DC. The meeting will convene at 9:00 a.m. and end at 3:00 p.m. This meeting is open to the public.

The agenda will include reviews of the recommendations of the sub-committees on the Air Force Health Study and the Technology Transfer Program. Additionally, a briefing on the Office of Research and Development Communications Strategy will be given.

No time will be allocated at this meeting for receiving oral presentations from the public. Members of the public wanting to attend may contact Pauline Cilladi-Rehrer, Designated Federal Officer, ORD (10P9), Department of Veterans Affairs, 810 Vermont Avenue NW., Washington, DC 20420, at (202) 443–5607, or by email at *pauline.cilladi-rehrer@va.gov.* no later than close of business on November 30, 2016. Because the meeting is being held in a government building, a photo I.D. must be presented at the Guard's Desk as a part of the clearance process. Due to security protocols, and in order to prevent delays in clearance processing, you should allow an additional 30 minutes before the meeting begins. Any member of the public seeking additional information should contact Pauline Ciladi-Rehrer at the phone number or email address noted above.

Dated: November 14, 2016.

LaTonya L. Small,

Advisory Committee Management Officer.

[FR Doc. 2016–27706 Filed 11–17–16; 8:45 am]

BILLING CODE P

FEDERAL REGISTER

Vol. 81 Friday,
No. 223 November 18, 2016

Part II

Securities and Exchange Commission

17 CFR Parts 200, 210, 232, et al.
Investment Company Reporting Modernization; Final Rule

SECURITIES AND EXCHANGE COMMISSION

17 CFR Parts 200, 210, 232, 239, 240, 249, 270, 274

[Release Nos. 33–10231; 34–79095; IC–32314; File No. S7–08–15]

RIN 3235–AL42

Investment Company Reporting Modernization

AGENCY: Securities and Exchange Commission.

ACTION: Final rule.

SUMMARY: The Securities and Exchange Commission is adopting new rules and forms as well as amendments to its rules and forms to modernize the reporting and disclosure of information by registered investment companies. The Commission is adopting new Form N–PORT, which will require certain registered investment companies to report information about their monthly portfolio holdings to the Commission in a structured data format. In addition, the Commission is adopting amendments to Regulation S–X, which will require standardized, enhanced disclosure about derivatives in investment company financial statements, as well as other amendments. The Commission is adopting new Form N–CEN, which will require registered investment companies, other than face-amount certificate companies, to annually report certain census-type information to the Commission in a structured data format. The Commission is adopting amendments to Forms N–1A, N–3, and N–CSR to require certain disclosures regarding securities lending activities. Finally, the Commission is rescinding current Forms N–Q and N–SAR and amending certain other rules and forms. Collectively, these amendments will, among other things, improve the information that the Commission receives from investment companies and assist the Commission, in its role as primary regulator of investment companies, to better fulfill its mission of protecting investors, maintaining fair, orderly and efficient markets, and facilitating capital formation. Investors and other potential users can also utilize this information to help investors make more informed investment decisions.

DATES: *Effective Dates:* This rule is effective January 17, 2017, except for the following:

- The amendments to 17 CFR 200.800, 232.105, 232.301, 240.10A–1, 240.12b–25, 240.13a–10, 240.13a–11, 240.13a–13, 240.13a–16, 240.15d–10, 240.15d–11, 240.15d–13, 240.15d–16, 249.322, 249.330, 270.8b–16, 270.10f–3, 270.30a–1, 270.30a–4, 270.30b1–1, 270.30b1–2, 270.30b1–3, 274.101, and 274.218, and in Instruction 55 amending § 270.30d–1 are effective June 1, 2018; and
- The amendments to 17 CFR 232.401, 249.332, 270.8b–33, 270.30a–2, 270.30a–3, 270.30b1–5, and 274.130, and in Instruction 54 amending § 270.30d–1, Instruction 57 amending Form N–1A (referenced in §§ 239.15A and 274.11A), Instruction 59 amending Form N–2 (referenced in §§ 239.14 and 274.11a–1), and Instruction 61 amending Form N–3 (referenced in §§ 239.17a and 274.11b) are effective August 1, 2019.

Compliance Dates: The applicable compliance dates are discussed in section II.H. of this final rule.

FOR FURTHER INFORMATION CONTACT: Daniel K. Chang, Senior Counsel, J. Matthew DeLesDernier, Senior Counsel, Jacob D. Krawitz, Senior Counsel, Andrea Ottomanelli Magovern, Senior Counsel, Naseem Nixon, Senior Counsel, Michael C. Pawluk, Senior Special Counsel, or Sara Cortes, Assistant Director, at (202) 551–6792, Investment Company Rulemaking Office, Matt Giordano, Chief Accountant, or Kristy Von Ohlen, Assistant Chief Accountant, Chief Accountant's Office, at (202) 551–6918, Division of Investment Management, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–8549.

SUPPLEMENTARY INFORMATION: The Securities and Exchange Commission (the ''Commission'') is adopting new Form N–PORT [referenced in 17 CFR 274.150] and new Form N–CEN [referenced in 17 CFR 274.101] under the Investment Company Act of 1940 [15 U.S.C. 80a–1 *et seq.*] (''Investment Company Act''); new rules 30a–4 [17 CFR 270.30a–4] and 30b1–9 [17 CFR 270.30b1–9] under the Investment Company Act; rescinding rules 30b1–1 [17 CFR 270.30b1–1], 30b1–2 [17 CFR 270.30b1–2], 30b1–3 [17 CFR 270.30b1–3], and 30b1–5 [17 CFR 270.30b1–5] under the Investment Company Act; adopting amendments to rules 8b–16 [17 CFR 270.8b–16], 8b–33 [17 CFR 270.8b–33], 10f–3 [17 CFR 270.10f–3], 30a–1 [17 CFR 270.30a–1], 30a–2 [17 CFR 270.30a–2], 30a–3 [17 CFR 270.30a–3], and 30d–1 [17 CFR 270.30d–1], and Form N–8F [referenced in 17 CFR 274.218] under the Investment Company Act; adopting amendments to Forms N–1A [referenced in 17 CFR 274.11A], N–2 [referenced in 274.11a–1], N–3 [referenced in 274.11b], N–4 [referenced in 17 CFR 274.11c], and N–6 [referenced in 17 CFR 274.11d] under the Investment Company Act and the Securities Act of 1933 [15 U.S.C. 77a *et seq.*] (''Securities Act''); adopting amendments to Form N–14 [referenced in 17 CFR 239.23] under the Securities Act; rescinding Form N–SAR [referenced in 17 CFR 274.101 and Form N–Q [referenced in 17 CFR 274.130] and adopting amendments to Form N–CSR [referenced in 17 CFR 274.128] under the Investment Company Act and Securities Exchange Act of 1934 [15 U.S.C. 78a *et seq.*] (''Exchange Act''); adopting amendments to rules 10A–1 [17 CFR 240.10A–1], 12b–25 [17 CFR 240.12b–25], 13a–10 [17 CFR 240.13a–10], 13a–11 [17 CFR 240.13a–11], 13a–13 [17 CFR 240.13a–13], 13a–16 [17 CFR 240.13a–16], 15d–10 [17 CFR 240.15d–10], 15d–11 [17 CFR 240.15d–11], 15d–13 [17 CFR 240.15d–13], and 15d–16 [17 CFR 240.15d–16] under the Exchange Act; rescinding section 332 [17 CFR 249.332] and adopting amendments to sections 322 [17 CFR 249.322] and 330 [17 CFR 249.330] of 17 CFR part 249; adopting amendments to Article 6 [17 CFR 210.6–01 *et seq.*] and Article 12 [17 CFR 210.12–01 *et seq.*] of Regulation S–X [17 CFR 210]; adopting amendments to section 800 of 17 CFR part 200 [17 CFR 200.800]; and adopting amendments to rules 105 [17 CFR 232.105], 301 [17 CFR 232.301], and 401 [17 CFR 232.401] of Regulation S–T [17 CFR 232].

Table of Contents

I. Background

A. Changes in the Industry and Technology

As the primary regulator of the asset management industry, the Commission relies on information included in reports filed by registered investment companies (''funds'') [1] and investment advisers for a number of purposes, including monitoring industry trends, informing policy and rulemaking, identifying risks, and assisting Commission staff in examination and enforcement efforts. Over the years, however, as assets under management and complexity in the industry have grown, so too has the volume and complexity of information that the Commission must analyze to carry out its regulatory duties.

Commission staff estimates that there were approximately 17,052 funds registered with the Commission, as of December 2015.[2] Commission staff further estimates that there were nearly 12,000 investment advisers registered with the Commission, along with another 3,138 advisers that file reports with the Commission as exempt reporting advisers, as of January 2016.[3] At year-end 2015, assets of registered investment companies exceeded $18 trillion, having grown from about $5.8 trillion at the end of 1998.[4] At the same time, the industry has developed new product structures, such as ETFs,[5] new fund types, such as target date funds with asset allocation strategies,[6] and increased its use of derivatives and other alternative strategies.[7] These products and strategies can offer greater opportunities for investors to achieve their investment goals, but they can also add complexity to funds' investment strategies, amplify investment risk, or have other risks, such as counterparty credit risk.

While these changes have been taking place in the fund industry, there have also been significant advances in the technology that can be used to report and analyze information. We have started to use structured data formats to collect, aggregate, and analyze data reported by registrants and other filers.[8]

[1] For purposes of the preamble of this release, we use ''funds'' to mean registered investment companies other than face-amount certificate companies and any separate series thereof—*i.e.,* management companies and unit investment trusts. In addition, we use the term ''management companies'' or ''management investment companies'' to refer to registered management investment companies and any separate series thereof. We note that ''fund'' may be separately and differently defined in each of the new or amended forms or rules.

[2] Based on data obtained from the Investment Company Institute (''ICI'') and reports filed by registrants on Form N–SAR. The 17,052 funds include mutual funds (including funds of funds and money market funds), closed-end funds, exchange-traded funds (''ETFs''), and unit investment trusts (''UITs''). *See* ICI, 2016 Investment Company Fact Book (56th ed., 2016) (''2016 ICI Fact Book'') at 22, *available at https://www.ici.org/pdf/2016_factbook.pdf; see also infra* footnote 1259 and accompanying and following text.

[3] Based on Investment Adviser Registration Depository (''IARD'') system data. In 2010 Congress charged the Commission with implementing new reporting and registration requirements for certain investment advisers to private funds (known as ''exempt reporting advisers''). *See* Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. 111–203, 124 Stat. 1376, 1570–80 (2010).

Form ADV is used by registered investment advisers to register with the Commission and with the states and by exempt reporting advisers to report information to the Commission. Information on Form ADV is available to the public through the Investment Adviser Public Disclosure System, which allows the public to access the most recent Form ADV filing made by an investment adviser and is available at *http://www.adviserinfo.sec.gov.* The Commission recently adopted amendments to Form ADV. *See* Form ADV and Investment Adviser Act Rules, Investment Advisers Act Release No. 4509 (August 25, 2016) [81 FR 60417 (September 1, 2016)] (''Form ADV Release'').

[4] *See* 2016 ICI Fact Book, *supra* footnote 2, at 9.

[5] *See generally* Exchange-Traded Funds, Securities Act Release No. 8901 (Mar. 11, 2008) [73 FR 14618 (Mar. 18, 2008)] (''ETF Proposing Release'') at 14619; Request for Comment on Exchange-Traded Products, Securities Exchange Act Rel. No. 34–75165 (June 12, 2015); *see also* ICI, Exchange-Traded Funds April 2016 (May 27, 2016), *available at https://www.ici.org/research/stats/etf/etfs_04_16* (discussing April 2016 statistics on ETFs). As of April 2016, there were 1,630 ETFs with over $2 trillion in assets. Over the twelve-month period ending April 2016, assets of ETFs increased $89.63 billion. *See id.*

[6] *See generally* Investment Company Advertising: Target Date Retirement Fund Names and Marketing, Securities Act Release No. 9126 (June 16, 2010) [75 FR 35920 (June 23, 2010)] (''Investment Company Advertising Release'').

[7] *See* Use of Derivatives by Registered Investment Companies and Business Development Companies, Investment Company Act Release No. 31933 (Dec. 11, 2015) [80 FR 80884 (Dec. 28, 2015)] (''Derivatives Proposing Release'') (noting ''dramatic growth in the volume and complexity of the derivatives markets over the past two decades, and the increased use of derivatives by certain funds''); *see also* Investment Company Reporting Modernization, Investment Company Act Release No. 31610 (May 20, 2015) [80 FR 33590 (June 12, 2015)] (''Proposing Release'') at n. 7.

[8] *See* Proposing Release, *supra* footnote 7, at nn. 12–16 and accompanying text (discussing the use

Continued

These data formats for information collection have enabled us and other data users, including investors and other industry participants, to better collect and analyze reported information and have improved our ability to carry out our regulatory functions.

As we noted in the Proposing Release, we have historically acted to modernize our forms and the manner in which information is filed with the Commission and disclosed to the public in order to keep up with changes in the industry and technology.[9] In May 2015, we again acted to modernize our forms and the manner in which information is filed and disclosed by proposing a number of reforms for investment company reporting.[10] Our proposal included four sets of reforms: (1) The creation of a new portfolio holdings reporting form, Form N–PORT, and the rescission of Form N–Q; (2) the creation of a new census reporting form, Form N–CEN, and the rescission of Form N–SAR; (3) amendments to Regulation S–X, largely designed to improve derivatives disclosure; and (4) a proposed new rule, rule 30e–3, which would provide funds with an optional method to satisfy shareholder report transmission requirements by posting their reports online if they met certain conditions.

The proposed reforms were designed to help the Commission, investors, and other market participants better assess different fund products and to assist us in carrying out our mission to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation. These reforms also sought to (1) increase the transparency of fund portfolios and investment practices both to the Commission and to investors, (2) take advantage of technological advances both in terms of the manner in which information is reported to the Commission and how it is provided to investors and other potential users, and (3) where appropriate, reduce duplicative or otherwise unnecessary reporting burdens on the industry.

B. Summary of Changes to Current Reporting Regime

We received 1,003 comments [11] on our proposed reforms from a variety of interested parties, including investment companies, industry groups, investors, academics and others. As discussed in greater detail below in the relevant sections of this release, commenters generally supported our efforts to modernize the investment company reporting regime, but had varying comments on a number of specific items in each of the respective sets of reforms. Commenters were generally supportive of proposed new Form N–PORT;[12] however, we received many comments relating to the data to be collected by the form, the frequency of filing reports on the form, and whether reports on the form or certain information in the reports should be made public. Commenters were also generally supportive of proposed new Form N–CEN,[13] agreeing that Form N–CEN will provide both the Commission and the public with enhanced and updated census-type information. Similar to Form N–PORT, however, commenters also provided many comments on the data to be collected by the form and whether certain information in reports on the form should be made public. In addition, commenters were largely supportive of our efforts to improve the information that funds report to shareholders and the Commission through the proposed amendments to Regulation S–X,[14] but had specific comments on certain disclosures. Comments on proposed rule 30e–3, which would allow funds to transmit reports to shareholders via the internet subject to a number of conditions, were mixed, with some commenters supporting the rule and others opposing it.[15]

Today, after consideration of the comments we received, we are adopting new Forms N–PORT and N–CEN, as well as amendments to Regulation S–X. We continue to believe that with the industry changes and technological advances that have occurred over the years, we need to improve the type and format of the information that funds provide to us and to investors, and the information that the Commission receives from funds in order to improve the Commission's monitoring of the fund industry in its role as the primary regulator of funds and investment advisers. We are not adopting proposed rule 30e–3 at this time as we believe, in light of the comments received, that additional consideration regarding the rule is appropriate. We are adopting amendments to Forms N–1A, N–3, and N–CSR to require certain disclosures regarding securities lending activities.[16]

1. Form N–PORT and Amendments to Regulation S–X

We are adopting Form N–PORT, largely as proposed, with certain modifications in response to commenters. We are also rescinding, as proposed, Form N–Q. Form N–PORT is a new portfolio holdings reporting form that will be filed by all registered management investment companies, other than money market funds and small business investment companies (''SBICs''),[17] and by UITs that operate as

of eXtensible Business Reporting Language (''XBRL'') with open-end fund risk/return summaries and the use of Extensible Markup Language (''XML'') with Forms N–MFP, PF and 13F, as well as in other contexts).

[9] *See supra* footnote 8 and accompanying text; *see also* Proposing Release, *supra* footnote 7, at nn. 8–9 and accompanying text (discussing the adoption of Form N–SAR and the adoption of rules requiring the use of the IARD for investment adviser filings); *see also* Derivatives Proposing Release, *supra* footnote 7 (proposing, among other things, reporting requirements in Forms N–PORT and N–CEN related to derivatives); Investment Company Liquidity Risk Management Programs; Investment Company Act Release No [x] (October 13, 2016) (''Liquidity Adopting Release''); Investment Company Swing Pricing; Investment Company Release No. [x] (October 13, 2016) (''Swing Pricing Adopting Release'').

We also note that in December 2014, the Financial Stability Oversight Council (''FSOC'') issued a notice requesting comment on aspects of the asset management industry, including on additional data or information that would be helpful to regulators and market participants. *See* FSOC, Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Dec. 24, 2014) (''FSOC Notice''), *available at http://www.treasury.gov/initiatives/fsoc/rulemaking/Documents/Notice%20Seeking%20Comment%20on%20Asset%20Management%20Products%20and%20Activities.pdf.* Although our proposal was independent of FSOC, several commenters responding to the notice discussed issues concerning data that were relevant to our proposal and those comments were discussed in the Proposing Release, as relevant. *See* Proposing Release, *supra* footnote 7, at nn. 17–18 and accompanying text.

[10] *See* Proposing Release, *supra* footnote 7.

[11] Of these, about 574 were individualized letters, and the rest were one of a number of types of form letters. *See* Comments on Investment Company Reporting Modernization, File No. S7–08–15, *available at http://www.sec.gov/comments/s7-08-15/s70815.shtml.* The comment period for the proposal closed on August 11, 2015, but was re-opened until January 13, 2016 when the Commission proposed liquidity risk management programs for open-end funds. *See* Open-End Fund Liquidity Risk Management Programs; Swing Pricing; Re-Opening of Comment Period for Investment Company Reporting Modernization Release, Investment Company Act Release No. 31835 (Sept. 22, 2015) [80 FR 62274 (Oct. 15, 2015)] (''Liquidity Proposing Release'').

[12] *See infra* footnotes 46, 64, 100, 115, 123, 145, 193, 197, 198, 245, 275, 283, 293, 330, 350, 379, 423, 432, 443, 455 and 475.

[13] *See infra* footnotes 745, 759, 769, 779, 819, 832, 857, 870, 883, 907, 940, 989, 1008, 1045, 1061, 1070, 1080, 1101 and 1107.

[14] *See infra* footnotes 527, 537, 556, 558, 566, 648, 665, 701 and 711.

[15] *See infra* footnotes 1178–1179.

[16] If any provision of these rules, or the application thereof to any person or circumstance, is held to be invalid, such invalidity shall not affect other provisions or application of such provisions to other persons or circumstances that can be given effect without the invalid provision or application.

[17] *See infra* footnote 49 (discussing why money market funds and SBICs will not be required to file reports on Form N–PORT).

ETFs.[18] Currently, management investment companies (other than SBICs) are required to report their complete portfolio holdings to the Commission on a quarterly basis on Forms N–Q [19] and N–CSR.[20]

Form N–PORT requires reporting of a fund's complete portfolio holdings. The form also requires additional information concerning fund portfolio holdings that is not currently required by Forms N–Q and N–CSR, and that will facilitate risk analyses and other Commission oversight. For example, Form N–PORT requires reporting of additional information relating to derivative investments. The form also includes certain risk metric calculations that measure a fund's exposure and sensitivity to changing market conditions, such as changes in asset prices, interest rates, or credit spreads. As was proposed, reports on Form N–PORT will be filed in a structured data format with the Commission on a monthly basis, with every third month available to the public 60 days after the end of the fund's fiscal quarter.

We continue to believe that more timely and frequent reporting of portfolio holdings information to the Commission, as well as the additional information Form N–PORT requires, will enable us to further our mission to protect investors by assisting the Commission and its staff in carrying out its regulatory responsibilities related to the asset management industry. These responsibilities include its examination, enforcement, and monitoring of funds, its formulation of policy, and the staff's review of fund registration statements and disclosures.

While Form N–PORT is primarily designed to assist the Commission and its staff, we also continue to believe that information in Form N–PORT will be beneficial to investors and other potential users. In particular, we believe that both sophisticated institutional investors and third-party users that provide services to investors may find the information required on Form N–PORT useful. For example, Form N–PORT's structured format will allow the Commission, investors, and other potential users to better collect and analyze portfolio holdings information.[21] While we do not anticipate that many individual investors will analyze data using Form N–PORT, although some may, we believe that individual investors will benefit indirectly from the information collected on reports on Form N–PORT, through enhanced Commission monitoring and oversight of the fund industry and through analyses prepared by third-party service providers and other parties, such as industry observers and academics.

In addition, we are adopting, largely as proposed, amendments to Regulation S–X with certain modifications in response to comments. These amendments in large part require standardized enhanced derivatives disclosures in fund financial statements. Currently, Regulation S–X does not prescribe specific information for most types of derivatives, including swaps, futures, and forwards. While many fund groups provide disclosures regarding the terms of their derivatives contracts, the lack of standard disclosure requirements has resulted in inconsistent disclosures in fund financial statements.

We continue to believe that the amendments to Regulation S–X to enhance and standardize derivatives disclosures in financial statements will allow comparability among funds and help all investors better assess funds' use of derivatives. Reports on Form N–PORT will contain similar derivatives disclosures to facilitate analysis of derivatives investments across funds. Because Form N–PORT is not primarily designed for individual investors, the amendments to Regulation S–X require disclosures concerning the fund's investments in derivatives in the financial statements that are provided to investors. We also have endeavored to mitigate burdens on the industry by conforming the derivatives disclosures that are required by both Regulation S–X and Form N–PORT.

2. Form N–CEN

We are adopting, substantially as proposed and with certain modifications in response to comments, Form N–CEN, a new form on which funds will report census-type information to the Commission. We are also rescinding, as proposed, Form N–SAR, the current form on which the Commission collects census-type information on management investment companies and UITs.[22] As we discussed in the Proposing Release, Form N–SAR was adopted in 1985 and, while Commission staff has indicated that the census-type information reported on Form N–SAR is useful in its support of the Commission's regulatory functions, staff has also indicated that in the thirty plus years since Form N–SAR's adoption, changes in the industry have reduced the utility of some of the currently required data elements.[23] Commission staff believes that obtaining certain additional census-type information not currently collected by Form N–SAR will improve the staff's ability to carry out regulatory functions, including risk monitoring and analysis of the industry.

Form N–CEN includes many of the same data elements as Form N–SAR, but, in order to improve the quality and utility of information reported, replaces those items that are outdated or of limited usefulness with items that we believe to be of greater relevance today. Where possible, we are also eliminating items that are reported on other Commission forms, or are available elsewhere. In addition, reports on Form N–CEN will be filed in a structured XML format, which, we believe, will reduce reporting burdens for current Form N–SAR filers and yield data that can be used more effectively by the Commission and other potential users.[24] Finally, reports on new Form N–CEN will be filed annually, rather than semi-annually as is required for reports on Form N–SAR by management companies, which will further reduce current burdens on funds.

II. Discussion

A. Form N–PORT

As discussed above, we are adopting a new monthly portfolio reporting form, Form N–PORT. Form N–PORT requires registered management investment companies and ETFs organized as UITs, other than money market funds and SBICs, to electronically file with the

[18] ETFs will be required to file reports on Form N–PORT, regardless of whether they are organized as management companies or UITs. UITs are a type of investment company which (a) are organized under a trust indenture contract of custodianship or agency or similar instrument, (b) do not have a board of directors, and (c) issue only redeemable securities. *See* section 4(2) of the Investment Company Act.

[19] Rule 30b1–5 under the Investment Company Act [17 CFR 270.30b1–5]. While SBICs file reports on Form N–CSR, SBICs are not required to file reports on Form N–Q.

[20] *See* rule 30b2–1 under the Investment Company Act [17 CFR 270.30b2–1].

[21] As we noted in the Proposing Release, portfolio holdings information currently filed on Form N–Q is filed in a plain text or hypertext format, which often requires labor-intensive manual reformatting by Commission staff and other potential users in order to prepare the reported data for analysis. *See* Proposing Release, *supra* footnote 7.

[22] *See* rules 30a–1 and 30b1–1 under the Investment Company Act [17 CFR 270.30a–1 and 17 CFR 270.30b1–1].

[23] *See* Proposing Release, *supra* footnote 7 (noting that when adopted, Form N–SAR was intended to reduce reporting burdens and better align the information that was required to be reported with the characteristics of the fund industry). Also as noted in the Proposing Release, the filing format that is required for reports on Form N–SAR limits our ability to use the reported information for analysis.

[24] *See infra* footnotes 750–752 and accompanying text.

Commission monthly portfolio investments information on reports in an XML format no later than 30 days after the close of each month.[25] Except as discussed below in section II.A.4, only information reported for the third month of each fund's fiscal quarter on Form N–PORT will be publicly available, and that information will not be made public until 60 days after the end of the fiscal quarter.[26]

As the primary regulator of the asset management industry, the Commission relies on information that funds file with us, including their registration statements, shareholder reports, and various reporting forms such as Form N–CSR. The Commission and its staff use this information to understand trends in the fund industry and carry out regulatory responsibilities, including formulating policy and guidance, reviewing fund registration statements, and assessing and examining a fund's regulatory compliance with the federal securities laws and Commission rules thereunder.

Information on fund portfolios is currently filed with the Commission quarterly with up to a 70-day delay.[27] Moreover, the reports are currently filed in a format that does not allow for efficient searches or analyses across portfolios, and even limits the ability to search or analyze a single portfolio. Based on staff experience with data analysis of funds, including staff experience using Form N–MFP, we believe, and commenters generally agreed, that more frequent and timely information concerning fund portfolios than we currently receive, will assist the Commission in its role as the primary regulator of funds, as discussed further below.[28]

The information we will collect on Form N–PORT will be important to the Commission and its staff in analyzing and understanding the various risks in a particular fund, as well as risks across specific types of funds and the fund industry as a whole. These risks can include the investment risk that the fund is undertaking as part of its investment strategy, such as interest rate risk, credit risk, volatility risk, other market risks, or risks associated with specific types of investments, such as emerging market debt or commodities. Additionally, as we discuss in the Liquidity Adopting Release that we are adopting concurrently Form N–PORT will help the Commission better understand liquidity risks through additional Form N–PORT disclosure requirements discussed in that release.[29] The information collected on Form N–PORT will also assist with understanding whether and to what extent a fund's exposure to price movements is leveraged, either through borrowings or the use of derivatives.

Many commenters generally agreed with us that the information required on Form N–PORT will assist the Commission in better understanding each of these risks in the fund industry.[30] These commenters also generally agreed with us that the ability to understand the risks that funds face will help Commission staff better understand and monitor risks and trends in the fund industry as a whole, facilitating the Commission's informed regulation of the fund industry.[31] We also believe, and some commenters agreed, that information obtained from Form N–PORT filings will facilitate the Commission's oversight of funds and assist Commission staff in examination, enforcement, and monitoring, as well as in formulating policy and in its review of fund registration statements and disclosures.[32] In this regard, we expect that Commission staff will use the data reported on Form N–PORT for many of the same purposes as Commission staff has used data reported on Form N–MFP by money market funds. The data received on Form N–MFP has been used extensively by Commission staff, including for purposes of assessing regulatory compliance, identifying funds for examination, and risk monitoring. Form N–MFP data has also informed Commission policy; for example, staff used Form N–MFP data in analyses that informed the Commission's considerations when it proposed and adopted money market fund reform rules in 2013 and 2014.[33]

In addition to assisting the Commission in its regulatory functions, we believe, and some commenters agreed, that investors and other potential users will benefit from the

[25] *See* new rule 30b1–9.

[26] As used throughout this section, the term ''fund'' generally refers to investment companies that will file reports on Form N–PORT.

As discussed further in section II.A.4, the Commission does not intend to make public the information reported on Form N–PORT for the first and second months of each fund's fiscal quarter that is identifiable to any particular fund or adviser or any information reported with regard to country of risk and economic exposure, delta, or miscellaneous securities, or explanatory notes related to any of those topics that is identifiable to any particular fund or adviser. However, the Commission may use such information in its regulatory programs, including examinations, investigations, and enforcement actions. *See infra* footnote 500; *see also* General Instruction F of Form N–PORT.

[27] Funds currently file with the Commission portfolio schedules for the fund's first and third fiscal quarters on Form N–Q, and shareholder reports, including portfolio schedules for the fund's second and fourth fiscal quarters, on Form N–CSR. These reports are available to the public and the Commission with either a 60- or 70-day delay. *See* rule 30b1–5 (requiring management companies, other than SBICs, to file reports on Form N–Q no more than 60 days after the close of the first and third quarters of each fiscal year); rule 30b2–1 (requiring management companies to file reports on Form N–CSR no later than 10 days after the transmission to stockholders of any report required to be transmitted to stockholders under rule 30e–1). *See also* rules 30e–1 and 30e–2 under the Investment Company Act [17 CFR 270.30e–1 and 17 CFR 270.30e–2] (requiring management companies and certain UITs to transmit to stockholders semi-annual reports containing, among other things, the fund's portfolio schedules, no more than 60 days after the close of the second and fourth quarters of each fiscal year). These reports include portfolio holdings information as required by Regulation S–X. *See* rule 12–12 of Regulation S–X [17 CFR 210.12–12], *et seq.*

[28] *See, e.g.,* Comment Letter of Morningstar, Inc. (Aug. 21, 2015) (''Morningstar Comment Letter'') (expressing belief that timelier information to investors through monthly public disclosures of portfolios would assist the Commission in monitoring the financial system, while also providing suggested revisions to enhance the proposal.); Comment Letter of Vanguard (Aug. 11, 2015) (''Vanguard Comment Letter'') (stating that the proposal strikes the appropriate balance between disclosures to the Commission and protecting funds and their investors from front-running, and providing suggested modifications to the proposal).

[29] *See generally* Liquidity Adopting Release, *supra* footnote 9.

[30] *See, e.g.,* Comment Letter of BlackRock (Aug. 11, 2015) (''BlackRock Comment Letter'') (''Importantly, the greater depth and frequency of information requested by the Commission will help the Commission better identify and monitor emerging risks associated with specific RICs or categories of RICs as well as asset management activities.''); Comment Letter of Wells Fargo Funds Management, LLC (Aug. 11, 2015) (''Wells Fargo Comment Letter'') (''we believe that the enhanced disclosure requirements of the Proposals represent appropriate valuable information for the Commission to have in order to assess trends in risks, for example, across the mutual fund industry.''); *but see, e.g.,* Comment Letter of Federated Investors, Inc. (January 13, 2016) (''Federated Comment Letter) (''A majority of the Commission's proposed amendments to Form N–1A, N–PORT, and N–CEN would require a large effort from funds while offering data that is, at best, of little utility, and, at worst, misleading. Many of these deficiencies relate to flaws inherent in a security-level disclosure scheme.''). We disagree with the commenter that a security-level disclosure scheme is of little utility. *See infra* footnote 1283 and accompanying and following text (discussing the utility of the security-level information that will be reported on Form N–PORT).

[31] *Id.*

[32] *Id.*

[33] *See, e.g.,* Money Market Fund Reform; Amendments to Form PF, Investment Company Act Release No. 30551 (June 5, 2013) [78 FR 36834 (June 19, 2013)]; Money Market Fund Reform; Amendments to Form PF, Investment Company Act Release No. 31166 (July, 23 2014) [79 FR 44076 (July 29, 2014)] (''Money Market Fund Reform 2014 Release'') at n. 502 and accompanying text (citing use of Form N–MFP data in discussing the Commission's decision to require basis point rounding) and at n. 651 and accompanying text (citing use of Form N–MFP data in discussing the Commission's decision regarding the size of the non-government securities basket for government money market funds).

periodic public disclosure of the information reported on Form N–PORT.[34] Form N–PORT is primarily designed for use by the Commission and its staff, and not for disclosing information directly to individual investors. The information we are requiring on Form N–PORT is more voluminous than on a schedule of investments. We believe, and some commenters agreed, however, that some investors, particularly institutional investors, could directly use the data from the information on Form N–PORT for their own quantitative analysis of funds, including to better understand the funds' investment strategies and risks, and to better compare funds with similar strategies.[35] Additionally, we believe, and some commenters agreed, that entities providing services to investors, such as investment advisers, broker-dealers, and entities that provide information and analysis for fund investors, will also utilize and analyze the information that will be required by Form N–PORT to help all investors make more informed investment decisions.[36] Accordingly, whether directly or through third parties, we believe, and some commenters agree, that the periodic public disclosure of the information on Form N–PORT will benefit all fund investors.[37] As discussed further below, in order to mitigate the risk that the information on Form N–PORT will be used in ways that might ultimately result in investor harm, we are limiting the public availability of Form N–PORT to reports filed as of quarter-end, as well as delaying public availability of those reports by 60 days and keep certain discrete information items nonpublic.

We intend to increase transparency of fund investments through Form N–PORT in several ways. First, Form N–PORT will improve reporting of fund derivative usage. As the Commission has previously noted, we have observed a dramatic growth in the volume and complexity of the derivatives markets over the past two decades.[38] Additionally, funds that are considered ''alternative'' funds, which often use derivatives for implementing their investment strategy, are becoming increasingly popular among investors.[39] Although Regulation S–X establishes general disclosure requirements for financial statements in fund registration statements and shareholder reports, based on staff review of fund filings, the lack of standardized requirements as to the terms of derivatives that must be reported has sometimes led to inconsistent approaches to reporting derivatives information and, in some cases, insufficient information concerning the terms and underlying reference assets of derivatives to allow the Commission or investors to better understand the investment.[40] This hinders both an analysis of a particular fund's investments, as well as comparability among funds.[41]

The information and reporting format required by Form N–PORT will create a more detailed, uniform, and structured reporting regime. We believe and several commenters agreed that this will allow the Commission and investors to better analyze and compare funds' derivatives investments and the exposures they create, which can be important to understanding funds' investment strategies, use of leverage, and potential for risk of loss.[42]

Furthermore, as discussed further below, Form N–PORT requires funds to report certain risk metrics that would provide measurements of a fund's exposure to changes in interest rates, credit spreads and asset prices, whether through investments in debt securities or in derivatives. Financial statement information provides historical information over a particular time period (*e.g.,* a statement of operations), or information about values of assets at a particular point in time (*e.g.,* a balance sheet including, for funds, a schedule of investments). Risk metrics, on the other hand, measure the change in value of an investment in response to small changes in the underlying reference asset of an investment, whether the underlying reference asset is a security (or index of securities), commodity, interest rate, or credit spread over an interest rate. Based on staff experience, as well as staff outreach to asset managers and entities that provide risk management services to asset managers (prior to the Commission issuing the Proposing Release), discussed further below, we believe that fund portfolio managers and risk managers commonly calculate risk metrics to analyze the exposures in their portfolios.[43] The Commission believes that staff can use these risk measures to better understand the exposures in the fund industry, thereby facilitating better monitoring of risks and trends in the fund industry as a whole.

Form N–PORT will also require information about certain fund transactions and activities such as securities lending, repurchase agreements, and reverse repurchase agreements, including information regarding the counterparties to which the fund is exposed in those transactions, as well as in over-the-counter derivatives transactions. We believe and several commenters agreed that such information will increase transparency concerning these transactions and activities and will

[34] *See, e.g.,* Comment Letter of Joseph A. Franco (Aug. 11, 2015) (''Franco Comment Letter''); Morningstar Comment Letter; *but see, e.g.,* Comment Letter of the Investment Company Institute (Aug. 11, 2015) (''ICI Comment Letter'').

[35] *Id.*

[36] *See id.*

[37] *See id.*

[38] *See* Derivatives Proposing Release, *supra* footnote 7, at n. 6 and accompanying text; *see also* Use of Derivatives by Investment Companies under the Investment Company Act of 1940, Investment Company Act Release No. 29776 (Aug. 31, 2011) [76 FR 55237 (Sept. 7, 2011)] (''Derivatives Concept Release'') at n. 7 and accompanying text.

[39] While there is no clear definition of ''alternative'' in the fund industry, an alternative fund is generally understood to be a fund whose primary investment strategy falls into one or more of the three following categories: (1) Non-traditional asset classes (for example, currencies); (2) non-traditional strategies (such as long/short equity positions); and/or (3) less liquid assets (such as private debt).

At the end of December 2015, alternative mutual funds and exchange-traded funds had more than $200 billion in assets. Although alternative mutual funds only accounted for 1.23% of the mutual fund market as of December 2015, the almost $17.3 billion of inflows into these funds in 2015 represented 7% of the inflows for the entire mutual fund industry in that year. These statistics were obtained from staff analysis of Morningstar Direct data, and are based on fund categories as defined by Morningstar.

[40] For example, we understand that some funds provide a description of all of the holdings in an index or custom basket underlying a swap contract, while others only provide a short description. *See also* Proposing Release, *supra* footnote 7, at n. 31 and accompanying text.

[41] *See, e.g.,* current rule 12–13 of Regulation S–X [17 CFR 210.12–13] (requiring funds to disclose ''other'' investments, which includes derivatives); rule 6–03 of Regulation S–X [17 CFR 210.6–03] (applying articles 1–4 of Regulation S–X to investment companies, but not specifying where derivative disclosures should be made for funds); FASB ASC 815, Disclosures about Derivative Instruments and Hedging Activities (''ASC 815'') (discussing general derivative disclosure); FASB ASC 820, Fair Value Measurements (''ASC 820'') (requiring disclosure of valuation information for major categories of investments). *See also infra* section II.C.

[42] *See, e.g.,* Comment Letter of Fidelity Investments (Aug. 10, 2015) (''Fidelity Comment Letter'') (generally supporting Commission's focus on modernizing the way data is collected from funds and reported to shareholders and providing suggestions for modifications to the final rule); Comment Letter of Capital Research and Management Company (Aug. 11, 2015) (''CRMC Comment Letter'') (supporting Commission's efforts to take advantage of technology in order to assist the staff, investors, and other market participants to better assess different fund products and assist the Commission in carrying out its mission; and providing suggestions for modifications to the final rule).

[43] *See generally* John C. Hull, Options, Futures, and Other Derivatives (9th ed., 2015) (discussing, for example, the function of duration, convexity, delta, and other calculations used for measuring changes in the value of bonds or derivatives as a result of changes in underlying asset prices or interest rates); Sheldon Natenberg, Option Volatility and Pricing (1994) (same).

provide better information regarding counterparties, which will be useful in assessing both individual and multiple fund exposures to a single counterparty.[44] This will allow the Commission to better assess and monitor counterparty risk for individual funds, as well as across the industry.

As discussed further below, Form N–PORT will be filed electronically in a structured, XML format. This format will enhance the ability of the Commission, as well as investors and other potential users, to analyze portfolio data both on a fund-by-fund basis and also across funds.[45] As a result, although we will collect certain information on Form N–PORT that may be similarly disclosed or reported elsewhere (*e.g.,* portfolio investments would continue to be included as part of the schedules of investments contained in shareholder reports, and filed on a semi-annual basis with the Commission on Form N–CSR), we believe that it is appropriate to also collect this information in a structured format for analysis by our staff as well as investors and other potential users.

Many commenters were generally supportive of our proposal.[46] However, we received many comments relating to the structure of the proposed form, data to be collected, frequency of filings, and whether reports on the form should be made public. We address these comments below and discuss modifications we made from the proposal in response to comments.

1. Who Must File Reports on Form N–PORT

We are adopting, as proposed, the requirement that each registered management investment company and each ETF organized as a UIT file a report on Form N–PORT.[47] Registrants offering multiple series will be required to file a report for each series separately, even if some information is the same for two or more series.[48] Money market funds and SBICs will not be required to file reports on Form N–PORT.[49]

We are adopting, as proposed, the requirement that all ETFs file reports on Form N–PORT, regardless of their form of organization. Although most ETFs today are structured as open-end management investment companies, there are several ETFs that are organized as UITs.[50] ETFs organized as UITs have significant numbers of investors who we believe can benefit from the disclosures required in Form N–PORT.[51] We received no comments on this aspect of the proposal.

One commenter suggested that reports on Form N–PORT should be filed by all registered investment companies, including UITs, in order to have comparable filing information across registered investment products, although the commenter did suggest that less frequent filing requirements might be appropriate based on the structure of the investment company.[52] We note that UITs have fixed portfolios that do not change over time, and thus, unlike most other investment companies which are required to file quarterly reports with their current portfolio holdings, UITs are not currently required to file periodic reports other than on an annual basis.[53] Based on these differences, as reflected in the current reporting regime, we have determined not to extend Form N–PORT filing requirements to UITs that are not ETFs at this time.

The same commenter also recommended that reports on Form N–PORT be filed by business development companies (''BDCs'').[54] BDCs are a category of closed-end funds that are operated for the purpose of investing in, and providing managerial assistance to, small and developing businesses, and financially troubled businesses. BDCs are not required to register as investment companies under the Investment Company Act although they do elect to be subject to certain specialized provisions, and they are subject to a different reporting regime than registered investment companies.[55] Based on these differences, and as reflected in the current reporting and registration regime, we have determined not to extend Form N–PORT filing requirements to BDCs at this time.[56]

Another commenter suggested that the Commission and the CFTC should agree on and implement a substituted

[44] *See, e.g.,* Morningstar Comment Letter (''By collecting and making available additional information about counterparty risk and other important factors, the SEC will make it easier for investors and financial advisors to monitor portfolio risks.'').

[45] *See, e.g.,* Fidelity Comment Letter (''Collecting data in a structured format should allow the Commission to use information from market participants in rigorous empirical examinations of the industry in furtherance of the SEC's goals.''); ICI Comment Letter (''Obtaining that information in a structured data format will help the SEC to better analyze information and improve its ability to carry out its regulatory mission.'').

[46] *See, e.g.,* Comment Letter of Charles Schwab Investment Management, Inc. (Aug. 11, 2015) (''Schwab Comment Letter'') (''Form N-Port [sic] will provide substantial additional information to the Commission and strengthen its ability to oversee and carry out its regulatory responsibilities for the asset management industry.''); Vanguard Comment Letter (''Vanguard generally supports the proposed reporting initiatives because we believe these reporting obligations will provide the Commission with the tools necessary to monitor portfolio composition and risk exposure among funds, without exposing fund investors to potentially harmful front-running activities.''); Comment Letter of Pioneer Investments (Aug. 11, 2015) (''Pioneer Comment Letter'') (''Pioneer supports the Commission's effort to modernize the regime whereby funds report information about their portfolio holdings to the Commission.''); Comment Letter of the Securities Industry and Financial Markets Association Asset Management Group (Aug. 11, 2015) (''SIFMA Comment Letter I'') (''We support the Commission's initiative in proposing monthly reports on Form N–PORT in order to strengthen its regulatory oversight of the asset management industry and protect investors by obtaining more frequent and substantially expanded information about funds, in a structured format.''); ICI Comment Letter (''ICI broadly supports the Commission's efforts to update fund reporting.'').

[47] *See* new rule 30b1–9.

[48] As further discussed below, in part to harmonize definitions between Forms N–PORT and N–CEN, and in part to parallel identical changes to the definition of ''exchange-traded fund'' in Form N–CEN, we have revised Form N–PORT's proposed definition of ''exchange-traded product'' to refer instead to ''exchange-traded fund,'' which as revised includes each series of a UIT that meets that definition. *See* General Instruction E of Form N–PORT; *infra* footnote 896 (discussing changes to definitions in Form N–CEN).

[49] Money market funds already file their monthly portfolio investments with the Commission. *See* Form N–MFP. SBICs are unique investment companies that operate differently and are subject to a different regulatory regime than other management investment companies. They are ''privately owned and managed investment funds, licensed and regulated by [the Small Business Administration (''SBA'')], that use their own capital plus funds borrowed with an SBA guarantee to make equity and debt investments in qualifying small businesses.'' *See* SBA, SBIC Program Overview, *available at https://www.sba.gov/content/sbic-program-overview.* As a result of these differences, SBICs are not required to file reports on Form N–Q. As of December 31, 2015, only one SBIC had publicly offered securities outstanding.

[50] There are currently eight ETFs organized as UITs that have registered with the Commission.

[51] Commission staff estimates that as of December 2015, ETFs organized as UITs represented 12% of all assets invested in registered ETFs. This analysis is based on data from Morningstar Direct.

[52] *See* Morningstar Comment Letter.

[53] UITs currently file annual reports on Form N–SAR. In contrast, management investment companies currently file reports for their first and third fiscal quarters on Forms N–Q and reports for their second and fourth fiscal quarters on Form N–CSR, as well as semi-annual reports on Form N–SAR. *See supra* footnotes 19–20 and accompanying text.

[54] *See* Morningstar Comment Letter (recommending that ''business development companies . . . and other [registered investment companies]'' should be required to file reports on Form N–PORT).

[55] *See* Adoption of Permanent Notification Forms for Business Development Companies; Statement of Staff Position, Investment Company Act Release No. 12274 (Mar. 5, 1982) [47 FR 10518–02 (Mar. 11, 1982)]; and Interim Notification Forms for Business Development Companies, Investment Company Act Release No. 11703 (Mar. 26, 1981) [46 FR 19459 (Mar. 31, 1981)] for a discussion of the regulatory system applicable to BDCs.

[56] Although BDCs will not be subject to Form N–PORT filing requirements, the amendments being adopted to Regulation S–X will apply to both registered investment companies and BDCs. *See infra* footnote 700.

compliance regime.[57] Although we recognize that there are various alternative reporting requirements imposed in other contexts and by other regulators, the reporting requirements imposed by Form N–PORT have been designed specifically to meet the Commission's regulatory needs with regards to monitoring and oversight of registered funds.

Finally, one commenter stated that we should not require funds to directly report information on their own behalf, but instead require other entities such as transfer agents and custodians to report information on behalf of funds.[58] Given our expertise and experience in regulating, examining, and overseeing funds, including fund reporting, recordkeeping, and compliance, we continue to believe that obtaining such information directly from funds is appropriate.

2. Information Required on Form N–PORT

We are adopting, substantially as proposed, the requirements in Form N–PORT to report certain information about the fund and the fund's portfolio investments as of the close of the preceding month, including: (a) General information about the fund; (b) assets and liabilities; (c) certain portfolio-level metrics, including certain risk metrics; (d) information regarding securities lending counterparties; (e) information regarding monthly returns; (f) flow information; (g) certain information regarding each investment in the portfolio; (h) miscellaneous securities (if any); (i) explanatory notes (if any), and (j) exhibits. We are adopting these information requirements substantially as proposed, although we are making some modifications from the proposal in response to comments. Each of these is discussed in more detail below.

a. General Information and Instructions

Part A of Form N–PORT requires, as proposed, general identifying information about the fund. This information includes the name of the registrant, name of the series, and relevant file numbers.[59] Funds will also report the date of their fiscal year end, the date as of which information is reported on the form, and indicate if they anticipate that this will be their final filing on Form N–PORT.[60] This information will be used to identify the registrant and series filing the report, track the reporting period, and identify final filings. No comments were received on this aspect of our proposal. We are adopting these elements as proposed.

As proposed, funds will also provide the Legal Entity Identifier (''LEI'') number of the registrant and series.[61] The LEI is a unique identifier generally associated with a single corporate entity and is intended to provide a uniform international standard for identifying counterparties to a transaction.[62] Fees are not imposed for the usage of or access to LEIs, and all of the associated reference data needed to understand, process, and utilize the LEIs is widely and freely available and not subject to any usage restrictions. Funds or registrants that have not yet obtained an LEI will be required to obtain one, which currently entails a one-time fee of $219 plus $119 per year in annual maintenance costs and fees.[63]

Commenters were generally supportive of this aspect of our proposal, with most endorsing the use of LEI for identification of funds, as well as for fund counterparties.[64] However, one commenter suggested that certain funds should be permanently exempted from such requirements as such funds would not need an LEI for any other purpose.[65] Lastly, another commenter suggested that, to better assist academic researchers with identification of entities, every filing by a mutual fund should require an exhaustive list of the tickers and CUSIPs associated with that mutual fund.[66]

We are adopting the requirement that funds report LEI information for the registrant and for each series, as proposed. We acknowledge that funds will incur some costs to obtain and maintain an LEI, although we believe the cost to obtain and maintain an LEI identifier is modest.[67] Uniform reporting of LEIs by funds, however, will help provide a consistent means of identification that will facilitate the linkage of data reported on Form N–PORT with data from other filings and sources that is or will be reported elsewhere as LEIs become more widely used by regulators and the financial industry.[68] Using alternate means of identification or providing exemptions to this requirement could hinder the ability of Commission staff as well as investors and other potential users of this information to use the data on Form N–PORT as discussed above. For these

[57] *See* SIFMA Comment Letter I (''Under our suggested approach, funds required to report on new Form N–PORT would be excused from reporting on Form CPO–PQR.'').

[58] *See* Federated Comment Letter (''It would also reduce the reporting burden on funds for the Commission to acquire information directly from custodians and transfer agents, which are proficient in maintaining and reporting portfolio holdings and other information.'').

[59] *See* Item A.1 and Item A.2 of Form N–PORT. Funds will provide the name of the registrant, the Investment Company Act and CIK file numbers for the registrant, and the address and telephone number of the registrant. Funds will also provide the name of and EDGAR identifier (if any) for the series.

[60] *See* Item A.3 and Item A.4 of Form N–PORT.

[61] *See* Item A.1.d and Item A.2.c of Form N–PORT. The Commission has begun to require disclosure of the LEI in other contexts. *See, e.g.,* Form PF, Reporting Form for Investment Advisers to Private Funds and Certain Commodity Pool Operators and Commodity Trading Advisors, *available at http://www.sec.gov/rules/final/2011/ia-3308-formpf.pdf*; Regulation SBSR—Reporting and Dissemination of Security-Based Swap Information, Securities Exchange Act Release No. 74244 (Feb. 11, 2015) [80 FR 14564 (Mar. 19, 2015)] (''Regulation SBSR Adopting Release'').

[62] The global LEI system operates under an LEI Regulatory Oversight Committee (''ROC'') that currently includes members that are official bodies from over 40 jurisdictions. The Commission is a member of the ROC and currently serves on its Executive Committee. The Commission notes that it would expect to revisit the requirement to report LEIs if the operation of the LEI system were to change significantly.

[63] As of June 30, 2016, the cost of obtaining an LEI from the Global Markets Entity Identifier (''GMEI'') Utility in the United States was $200, plus a $19 surcharge for the LEI Central Operating Unit. The annual cost of maintaining an LEI from the GMEI Utility was $100, plus a $19 surcharge for the LEI Central Operating Unit. *See* GMEI Utility, Frequently Asked Questions, *available at https://www.gmeiutility.org/frequentlyAskedQuestions.jsp*.

[64] *See, e.g.,* Comment Letter of State Street Corporation (Aug. 11, 2015) (''State Street Comment Letter''); Comment Letter of Depository Trust & Clearing Corporation (Aug. 11, 2015); Comment Letter of Interactive Data Pricing and Reference Data LLC (Aug. 10, 2015) (''Interactive Data Comment Letter''); Comment Letter of Global Legal Entity Identifier Foundation (Aug. 5, 2015).

[65] *See* Comment Letter of Carol Singer (June 24, 2015) (''Carol Singer Comment Letter'') (suggesting that a small closed-end fund that is not listed on an exchange should not be required to obtain an LEI identifier).

[66] *See* Comment Letter of Russ Wermers (Aug. 4, 2015) (''Russ Wermers Comment Letter'') (arguing that this information could help with the identification of entities. The commenter did not discuss the utility of the LEI specifically).

[67] *See supra* footnote 63.

[68] *See, e.g.,* Commodities Futures Trading Commission (''CFTC''), CFTC Announces Mutual Acceptance of Approved Legal Entity Identifiers, Press Release: PR6758–13 (Oct. 30, 2013), *available at http://www.cftc.gov/PressRoom/PressReleases/pr6758-13*; Letter from Kenneth Bentsen, President & CEO of SIFMA to Jacob Lew, Chairman of FSOC, re: Adoption of the Legal Entity Identifier (Apr. 11, 2014), *available at http://www.sifma.org/comment-letters/2014/sifma-submits-comments-to-fsoc-encouraging-us-regulators-to-adopt-and-use-the-legal-entity-identifiers*; Regulation SBSR Adopting Release, *supra* footnote 61.

Commenters to the FSOC Notice expressed support for regulatory acceptance of LEI identifiers. *See, e.g.,* Joint Comment Letter of SIFMA/Investment Adviser Association to FSOC Notice (Mar. 25, 2015) (''SIFMA/IAA FSOC Notice Comment Letter'') (expressing support for the LEI initiative, and noting that the use of LEIs has already enhanced the industry's ability to identify and monitor global market participants); Comment Letter of Fidelity to FSOC Notice (Mar. 25, 2015) (expressing the need to develop analytics to make data intelligible, such as the ability to map exposures across the financial system, such as through the use of LEIs).

reasons, we anticipate that the benefits of requiring funds to report the LEI number of the registrant and series on Form N–PORT will justify the costs of obtaining and reporting this information, and thus we are adopting this requirement as proposed.

Furthermore, in response to the request that an exhaustive list of the tickers and CUSIPs associated with the fund be reported to help with the identification of entities, we note that Form N–PORT requires funds to report various identifying information, including name of the registrant, Investment Company Act file number of the registrant, CIK number of the registrant, LEI of the registrant, name of each series, EDGAR identifier (if any) for each series, and LEI for each series.[69] We believe this information is sufficient for Commission staff, as the primary user of the form, to identify funds filing reports on Form N–PORT, and could also be useful for investors and other potential users. As discussed further below, funds will also be reporting additional identifying information on Form N–CEN in a structured format that can be used to identify those funds and link information reported by them on Forms N–PORT and N–CEN with information available in other Commission filings and sources that is similarly structured.[70]

Form N–PORT also includes general filing and reporting instructions, as well as definitions of specific terms referenced in the form.[71] These instructions and definitions are intended to provide clarity to funds and to assist them in filing reports on Form N–PORT.[72]

Proposed Form N–PORT would have required funds to report information about their portfolios as of the last business day, or calendar day, of the month, but did not provide specific instructions on the appropriate basis for reporting such information, such as whether the information should be reported as of the trade date (''T+0''), which is required for financial reporting purposes, or the trade date plus one day (''T+1''), which is currently permitted under rule 2a–4 for the calculation of funds' net asset values (''NAV''). Several commenters requested clarification on this issue and specifically requested that Form N–PORT allow reporting on a T+1 basis.[73]

Many commenters noted that most funds use T+1 accounting to record their day-to-day transactions, and only convert their records to T+0 for quarterly portfolio holdings reporting purposes on Forms N–CSR and N–Q.[74] These commenters further noted that our proposal would require funds to file monthly reports 30 days after each reporting period, whereas funds currently have at least 60 days after the end of each fiscal quarter to report similar information on a T+0 basis on Forms N–CSR and N–Q. Accordingly, commenters suggested that allowing funds to file on a T+1 basis would reduce filing burdens relative to requiring reporting on a T+0 basis, while not meaningfully changing the substance of the information reported. One commenter explicitly recommended that funds be allowed to choose whether to file on a T+0 or T+1 basis, so that funds that prefer to align their Form N–PORT reporting with their reporting on Forms N–Q and/or N–CSR could do so, while other commenters that suggested this modification did not specify whether all funds should be required to report on a T+1 basis uniformly.[75]

As discussed above, the Commission did not specify the appropriate basis for reporting, and we agree with commenters that an explicit instruction on the basis on which to report is appropriate. We are persuaded by commenters that explicitly instructing funds file on the same basis for which they calculate their NAV (generally a T+1 basis) would not be as burdensome as instructing all funds to file on a T+0 basis, and would still maintain the utility of the information reported. As noted by commenters, we acknowledge that reporting monthly information on Form N–PORT on a T+1 basis may result in differences between quarterly portfolio holdings information currently reported on a T+0 basis on Forms N–CSR and N–Q. However, any such differences are unlikely to affect the utility of the information for the Commission and other potential users, because our primary purpose for using the information is to analyze and assess the various risks in a particular fund and monitoring risks and trends in the fund industry as a whole, rather than to align the information reported with the fund's financial statements.

Nonetheless, we do not agree that funds should be permitted to file either on the basis of calculating its NAV (generally T+1) or on the basis of how they prepare financial reports (T+0) at the fund's option, as having funds report their portfolio holdings on different bases would reduce the comparability of the data reported on Form N–PORT among funds and across the industry. Accordingly, we have modified the proposal to add an instruction to Form N–PORT instructing funds that they must report portfolio information on Form N–PORT on the same basis they use to calculate their NAV, which we understand is generally T+1.[76]

Commenters also requested confirmation that different internal methodologies could be applied in responding to certain items on Form N–PORT, such as those that may require subjective judgments on the part of funds.[77] Furthermore, two commenters urged the Commission to explicitly state that funds may make and rely on reasonable assumptions in providing responses to information items on Form N–PORT.[78] In response to these comments, we have modified the proposal by adding an instruction clarifying that in reporting information on Form N–PORT, the fund may

[69] *See* Item A.1 and Item A.2 of Form N–PORT.

[70] Form N–CEN requires funds to report additional information for each share class outstanding, including name of the class, class identification number, and ticker symbol. *See* Item C.2.d of Form N–CEN.

[71] *See* General Instruction A (Rule as to Use of Form N–PORT), B (Application of General Rules and Regulations), C (Filing of Reports), D (Paperwork Reduction Act Information), E (Definitions), F (Public Availability) and G (Responses to Questions) of Form N–PORT.

[72] *See id.* For example, General Instructions A, B, C and G provide specific filing and reporting instructions (including how to report entity names, percentages, and dates), General Instructions D and F provide information about the Paperwork Reduction Act and the public availability of information reported on Form N–PORT, and General Instruction E provides definitions for specific terms referenced in Form N–PORT.

[73] *See, e.g.,* ICI Comment Letter; Fidelity Comment Letter; Schwab Comment Letter; Comment Letter of OppenheimerFunds (Aug. 10, 2015) (''Oppenheimer Comment Letter'').

[74] *See, e.g.,* Pioneer Comment Letter; Comment Letter of Invesco Advisers (Aug. 11, 2015) (''Invesco Comment Letter''); Schwab Comment Letter; ICI Comment Letter; Comment Letter of the Securities Industry and Financial Markets Association Asset Management Group (Jan. 13, 2016) (''SIFMA Comment Letter II'').

[75] *See* SIFMA Comment Letter I.

[76] See General Instruction A of Form N–PORT (''Reports on Form N–PORT must disclose portfolio information as calculated by the fund for the reporting period's ending net asset value (commonly, and as permitted by rule 2a–4, the first business day following the trade date).''). We understand that funds generally calculate their NAV on a T+1 basis pursuant to rule 2a-4, although under certain circumstances funds might record particular transactions on a T+0 basis, such as when correcting a pricing error. The instructions in Form N–PORT are intended to be flexible enough to allow funds to report information on Form N–PORT on the same basis used in calculating NAV.

[77] *See, e.g.,* SIFMA Comment Letter I (requesting confirmation that funds may use classifications generated by existing methodologies or available service providers in reporting country of risk for portfolio holdings); ICI Comment Letter (asserting that funds should have the flexibility to make country of risk determinations using their own good faith judgment).

[78] *See* ICI Comment Letter; Oppenheimer Comment Letter.

respond using its own methodology and the conventions of its service provider, so long as the methodology and conventions are consistent with the way the fund reports internally and to current and prospective investors.[79] This approach, which we have modeled after a similar instruction in Form PF, is intended to strike an appropriate balance between easing the reporting burden on funds by allowing them to rely on their existing practices, while still providing useful information to the Commission, investors, and other potential users.[80] The new instruction also explains that funds may explain any of their methodologies, including related assumptions, in Part E of Form N–PORT.[81]

One commenter recommended that we include a definition of ''forward contract,'' that references the settlement time of a contract, noting that from their experience, there are several interpretations of what constitutes a forward contract and without a standard definition, funds might categorize products inconsistently.[82] We disagree that we should define forward contracts with regard to the settlement time, and believe that adopting a specific definition like the one that the commenter suggested could be overbroad or under-inclusive based on the settlement time selected. Also, based on staff experience reviewing fund disclosures, we note that funds have generally been able to classify forwards in their current disclosures even though there is not a specific definition that references the settlement date of the contract. Finally, the approach we are adopting allows flexibility as forward products evolve.

Similarly, one commenter noted that it is unclear if a credit default swap should be reported as an option or a swap on Form N–PORT since it has the characteristics of both types of investments.[83] As discussed further below, we are revising Form N–PORT to include a clarification that specifically identifies that total return swaps, credit default swaps, and interest rate swaps should all be categorized under the ''swap'' instrument type.[84]

A few commenters also asked for guidance as to what investments would fall within the category of ''other derivatives'' in Item C.11.g.[85] The commenters noted that funds already rely upon the definition of ''derivatives'' provided in U.S. Generally Accepted Accounting Principles (''GAAP'') for financial statement reporting purposes and recommended that funds be allowed to rely upon the same definition for determining what to report as ''other derivatives'' on Form N–PORT (*i.e.,* investments reported as derivatives for financial statement reporting purposes, but that do not fall within the categories of derivatives enumerated in Form N–PORT such as futures, forwards, etc.).[86] We agree that this approach will generally promote consistency in how such information is reported and will provide more certainty to funds reporting ''other derivatives'' on Form N–PORT, and we understand that funds may choose to utilize this approach. However, we are not requiring that funds do so since we anticipate most derivative investments held by funds will fall within one of the categories of derivatives previously enumerated in Form N–PORT, and thus we expect few investments to be reported within the ''other derivatives'' category. Moreover, this ''other derivatives'' category is intentionally designed to be flexible enough to allow funds to capture and categorize investments in the future that are not currently traded by funds, and for these reasons we are not requiring funds to adhere to any specific process in determining what should fall within this category, provided that none of the previously enumerated categories apply.

Several commenters also asked that the definition of ''investment grade'' be revised to follow standards generally used by the industry by replacing references to liquidity with references to credit quality.[87] In response to these comments, we are removing the definition of ''investment grade'' that we proposed to be included in Form N–PORT. Consistent with our other changes discussed herein that permit funds to rely on their existing practices and methodologies, Form N–PORT provides funds with the flexibility, in determining what constitutes ''investment grade,'' to generally use their own methodology and the conventions of their service providers, as provided in General Instruction G. Given this clarification in the adopted form, we do not believe any definition of investment grade is necessary.[88]

We have also made several changes to certain definitions and instructions related to the way in which funds will provide information on Form N–PORT, largely relating to the formatting of the information reported. Among other things, we have revised the instruction in the proposal that directed funds to respond to every item of the form.[89] As proposed, the instruction would have required funds to respond to each sub-item and item on Form N–PORT even if the item was inapplicable. The revised instruction indicates that funds are not required to respond to items that are wholly inapplicable.[90] For example, no

[79] *See* General Instruction G of Form N–PORT (''Funds may respond to this Form using their own internal methodologies and the conventions of their service providers, provided the information is consistent with information that they report internally and to current and prospective investors. However, the methodologies and conventions must be consistently applied and the Fund's responses must be consistent with any instructions or other guidance relating to this Form.'').

[80] *See* General Instruction 15 of Form PF. Periodic reports on Form PF must be filed by registered investment advisers with at least $150 million in private fund assets under management. Form PF is designed, among other things, to assist the Financial Stability Oversight Council in its assessment of systemic risk in the U.S. financial system. *See generally* Reporting by Investment Advisers to Private Funds and Certain Commodity Pool Operators and Commodity Trading Advisors on Form PF, Investment Advisers Act Release No. 3308 (Oct. 31, 2011) [76 FR 71228 (Nov. 16, 2011)] (''Form PF Adopting Release'').

[81] *See* General Instruction G of Form N–PORT (''A Fund may explain any of its methodologies, including related assumptions, in Part E.'').

[82] *See* Comment Letter of T. Rowe Price (Aug. 21, 2015) (''T. Rowe Price Comment Letter'').

[83] *See* Morningstar Comment Letter.

[84] *See infra* footnote 340 and accompanying text.

[85] *See* ICI Comment Letter; T. Rowe Price Comment Letter.

[86] *See generally* ASC 815 (Derivatives and Hedging).

We note that definitions related to derivatives have been proposed in other contexts, for example ''derivatives transaction'' in our recent proposal regarding the use of derivatives by registered investment companies and BDCs. *See* Derivatives Proposing Release, *supra* footnote 7 (defining the term ''derivatives transaction'' to mean ''any swap, security-based swap, futures contract, forward contract, option, any combination of the foregoing, or any similar instrument ('derivatives instrument') under which a fund is or may be required to make any payment or delivery of cash or other assets during the life of the instrument or at maturity or early termination.'' However, that proposed definition is limited to derivatives transactions where the fund may be required to make a payment or delivery of cash or other assets. In contrast, for purposes of Form N–PORT, we seek to obtain information about all of a fund's derivative investments, regardless of whether the fund has a payment or delivery obligation. As a result of these differences, we continue to believe that it is preferable for Form N–PORT to not incorporate a specific definition, but rather to retain the flexibility to encompass the changing types of products that may evolve and emerge.

[87] *See* ICI Comment Letter; Oppenheimer Comment Letter; Pioneer Comment Letter; Comment Letter of MFS Investment Management (Aug. 11, 2015) (''MFS Comment Letter''); Comment Letter of the Dreyfus Corporation (Aug. 11, 2015) (''Dreyfus Comment Letter'').

[88] *See supra* footnote 79 and accompanying text.

[89] *See* General Instruction G of proposed Form N–PORT (''A Fund is required to respond to every item of this form. If an item requests information that is not applicable (for example, an LEI for a counterparty that does not have an LEI), respond N/A'').

[90] *See* General Instruction G of Form N–PORT (''A Fund is not required to respond to an item that is wholly inapplicable (for example, no response would be required for Item C.11 when reporting information about an investment that is not a

Continued

response is required for Item C.11, which concerns derivatives, when reporting information about an investment that is not a derivative. We believe this revision will decrease burdens upon filers and reduce the file size of Form N–PORT submissions, while still maintaining the clarity of the data reported on Form N–PORT.

We have also eliminated certain instructions from proposed Form N–PORT relating to the formatting of information reported on the form that, upon further consideration, we believe are unnecessary in Form N–PORT. In particular, we have eliminated instructions requiring the rounding of percentages, monetary values, and other numeric values.[91] Elimination of the instructions regarding the rounding of such figures should allow funds to report such information in the same way such information is currently recorded in their books and records. We also have eliminated instructions regarding the signature and filing of reports, because we believe that the general rules and regulations applicable under the Act provide sufficient guidance with regard to those issues.[92]

We have also made clarifying revisions to certain definitions. As discussed above, we have revised the proposed definition of ''exchange-traded product'' to refer instead to ''exchange-traded fund'' to harmonize the definitions used in Forms N–PORT and N–CEN.[93] The revision also clarifies that a separate report on Form N–PORT must be filed by each series of a UIT organized as an ETF, and parallels similar revisions to the definition of ETF in Form N–CEN.[94] We have also revised the definition of ''LEI'' to reflect new terminology regarding LEIs.[95]

Finally, regarding General Instruction F, which provides information regarding the public availability of the information in Form N–PORT, the final Instruction clarifies, similar to language that is contained in current Form PF, that we do not intend to make public certain information reported on Form N–PORT ''that is identifiable to any particular fund or adviser.'' [96] This modification makes clear, for example, that the Commission or Commission staff could issue analyses and reports that are based on aggregated, non-identifying Form N–PORT data, which would otherwise be nonpublic, such as information reported on Form N–PORT for the first and second months of each fund's fiscal quarter.

b. Information Regarding Assets and Liabilities

Part B of Form N–PORT seeks certain portfolio level information about the fund. As we proposed, Part B includes questions requiring funds to report their total assets, total liabilities, and net assets.[97] Funds will also separately report certain assets and liabilities, as follows. First, as we proposed, funds will report the aggregate value of any ''miscellaneous securities'' held in their portfolios.[98] As currently permitted by Regulation S–X, and as further discussed below, Form N–PORT permits funds to report an aggregate amount not exceeding 5 percent of the total value of their portfolio investments in one amount as ''Miscellaneous securities,'' provided that securities so listed are not restricted, have been held for not more than one year prior to the date of the related balance sheet, and have not previously been reported by name to the shareholders, or set forth in any registration statement, application, or report to shareholders or otherwise made available to the public.[99] We received only one comment on this aspect of our proposal, which supported the reporting of aggregate information for miscellaneous securities.[100]

Second, as we proposed, funds will also report any assets invested in a controlled foreign corporation for the purpose of investing in certain types of investments (''controlled foreign corporation'' or ''CFC'').[101] We received no comments on this aspect of the proposal. Some funds use CFCs for making certain types of investments, particularly commodities and commodity-linked derivatives, often for tax purposes. Form N–PORT requires funds to disclose each underlying investment in a CFC, rather than just the investment in the CFC itself, which will increase transparency on fund investments through CFCs.[102] These disclosures will allow investors to look through CFCs and understand the specific underlying holdings that they are investing in, which will in turn allow investors to better analyze their fund holdings and risk, and hence enable investors to make more informed investment decisions.

In addition, as discussed further below in section II.D.4, we believe it will be beneficial for the Commission to have certain information about funds' use of CFCs. The information we will be obtaining in Form N–PORT, combined with additional information we are requiring on Form N–CEN regarding CFCs, discussed below, will help the Commission better monitor funds' compliance with the Investment Company Act and assess funds' use of CFCs, including the extent of their use by reporting of total assets in CFCs.

Third, as we proposed, we are requiring that funds report the amounts of certain liabilities, in particular: (1) Borrowings attributable to amounts payable for notes payable, bonds, and similar debt, as reported pursuant to rule 6–04(13)(a) of Regulation S–X [17 CFR 210.6–04(13)(a)]; (2) payables for investments purchased either (i) on a delayed delivery, when-delivered, or other firm commitment basis, or (ii) on a standby commitment basis; and (3) liquidation preference of outstanding

derivative). If a sub-item requests information that is not applicable, for example, an LEI for a counterparty that does not have an LEI, respond N/A'').

[91] *See* General Instruction G of proposed Form N–PORT (instructions regarding rounding of percentages, monetary values, and other numerical values).

[92] *See* General Instruction B of Form N–PORT (''The General Rules and Regulations under the Act contain certain general requirements that are applicable to reporting on any form under the Act. These general requirements shall be carefully read and observed in the preparation and filing of reports on this Form, except that any provision in the Form or in these instructions shall be controlling.'') *See also* General Instruction H of proposed Form N–PORT (instructions regarding signature and filing of reports).

[93] *See supra* footnote 48 and accompanying text. Although the definition of ''exchange-traded fund'' being adopted on Form N–PORT is narrower than the definition of ''exchange-traded product'' as proposed on Form N–PORT, the universe of filers on Form N–PORT is not changing because exchange-traded managed funds that would have been encompassed in the proposed definition of ''exchange-traded product'' will be encompassed in the adoption through references to managed investment companies. *See* rule 30b1–9 (requiring certain funds to file reports on Form N–PORT); Form N–PORT (''Form N–PORT is to be used by a registered management investment company, or an exchange-traded fund organized as a unit investment trust, or series thereof ('Fund'). . . .'').

[94] *See infra* footnote 896.

[95] Form N–PORT's revised definition of ''LEI'' refers to the legal entity identifier ''endorsed'' by the Regulatory Oversight Committee Of The Global Legal Entity Identifier System (''LEI ROC'') or ''accredited'' by the Global Legal Entity Identifier Foundation (''GLEIF''), as opposed to ''assigned or recognized'' by those two entities.

[96] *See supra* footnote 26.

[97] *See* Item B.1 of Form N–PORT.

[98] *See* Item B.1.a and Item B.2.a of Form N–PORT. As discussed further below, Form N–PORT will require funds to also report information about miscellaneous securities on an investment-by-investment basis, although such information will be nonpublic and will be used for Commission use only. *See infra* footnote 420 and accompanying text.

[99] *See* rule 12–12 of Regulation S–X; *see also* Parts C and D of Form N–PORT.

[100] *See* SIFMA Comment Letter I.

[101] *See* General Instruction E (providing that ''Controlled Foreign Corporation'' has the meaning provided in section 957 of the Internal Revenue Code [26 U.S.C. 957]) and Item B.2.b (requiring funds to report assets invested in controlled foreign corporations) of Form N–PORT.

[102] *See* Instruction to Part B of Form N–PORT (''Report the following information for the Fund and its consolidated subsidiaries.'').

preferred stock issued by the fund.[103] We received no comments on this aspect of the proposal. This information will allow Commission staff, as well as investors and other potential users, to better understand a fund's borrowing activities and payment obligations associated with these transactions. This in turn will facilitate analysis of the fund's use of financial leverage, as well as the fund's liquidity profile and ability to meet redemptions or share repurchases, which are important to understanding the risks such borrowings might create.

One commenter suggested that certain fee and expense information currently reported on Form N–SAR, and Item 75 of Form N–SAR in particular—which relates to average net assets during the current reporting period—be reported on Form N–PORT.[104] The commenter acknowledged that much of this information is already publicly reported in or can be derived from information reported in other fund documents filed with the Commission, but argued that this information should also be reported on Form N–PORT because the structured format of Form N–PORT would make information reported on Form N–PORT easier to aggregate and analyze.[105] We are not making this suggested change because similar and complementary information will be reported on Form N–PORT in a structured format going forward (*i.e.,* monthly net assets for funds more generally) and is currently available in a structured format for mutual funds in their risk/return summaries (certain fee and expense data).[106] Also, as discussed further below, we are revising Form N–CEN to require funds to report average net assets on an annual basis.[107]

For these reasons, we are adopting this aspect of Form N–PORT as proposed.

c. Portfolio Level Risk Metrics

One of the purposes of Form N–PORT is to provide the Commission with information regarding fund portfolios to help us better monitor trends in the fund industry, including investment strategies funds are pursuing, the investment risks that funds undertake, and how different funds might be affected by changes in market conditions. As discussed above, the Commission uses information from fund filings, including a fund's registration statement and reports on Form N–CSR (which includes the fund's shareholder report) and Form N–Q, to inform its understanding and regulation of the fund industry. Additionally our staff reviews fund disclosures—including registration statements, shareholder reports, and other documents—both on an ongoing basis as well as retroactively every three years.[108]

The disclosures in a fund's registration statement about its investment objective, investment strategies, and risks of investing in the fund, as well as the fund's financial statements, are fundamental to understanding a fund's implementation of its investment strategies and the risks in the fund. However, the financial statements and narrative disclosures in fund disclosure documents do not always provide a complete picture of a fund's exposure to changes in asset prices, particularly as fund strategies and fund investments become more complex.[109] The financial statements, including a fund's schedule of portfolio investments, provide data regarding investments' values as of the end of the reporting period—a ''snapshot'' of data at a particular point in time—or, in the case of the statement of operations, for example, historical data over a specified time period. By contrast, based on staff experience and the staff's outreach to funds prior to our proposal, we understand that funds commonly internally use multiple risk metrics that provide calculations that measure the change in the value of fund investments assuming a specified change in the value of underlying assets or, in the case of debt instruments and derivatives that provide exposure to interest rates and debt instruments, changes in interest rates or in credit spreads above the risk-free rate.[110]

Accordingly, we believe, and some commenters agreed, that it is appropriate to require funds to report quantitative measurements of certain risk metrics that will provide information beyond the narrative, often qualitative disclosures about investment strategies and risks in the fund's registration statement.[111] Monthly reporting on these risk measures, in particular, will help provide the Commission with more current information on how funds are implementing their investment strategies through particular exposures. Receiving this information on a monthly basis could help the Commission, for example, more efficiently analyze the potential effects of a market event on funds.[112]

Specifically, we proposed to require certain funds to report portfolio-level measures on Form N–PORT that will help Commission staff better understand and monitor funds' exposures to changes in interest rates and credit spreads across the yield curve.[113] As discussed in section II.A.2.g below, we proposed to require risk measures at the investment level for options and convertible bonds. We continue to believe that the staff can use these measures, for example, to determine whether additional guidance or policy measures are appropriate to improve disclosures in order to help investors better understand how changes in interest rate or credit spreads might affect their investment in a fund. As a result, we are adopting these risk measures substantially as proposed, subject to the modifications discussed below.[114]

While we received some comments generally supporting our proposal to require portfolio-level risk metrics,[115] some suggested alternative methods for collecting risk metrics,[116] or opposed

[103] *See* Item B.2.c–Item B.2.e of Form N–PORT.

[104] *See* Morningstar Comment Letter.

[105] *Id.*

[106] *See* SEC, Interactive Data and Mutual Fund Risk/Return Summaries, *available at https://www.sec.gov/spotlight/xbrl/mutual-funds.shtml*; Item B.6 of Form N–PORT (requiring funds to report monthly flow information).

[107] *See infra* footnotes 1016–1017 and accompanying text.

[108] *See, e.g.,* section 408 of the Sarbanes-Oxley Act of 2002, Public Law 107–204, 116 Stat. 745, 790–791 (2002) (requiring the Commission to engage in enhanced review of periodic disclosures by certain issuers every three years).

[109] *See* Morningstar Comment Letter.

[110] *See* Proposing Release, *supra* footnote 7, at 33598.

[111] *See* Morningstar Comment Letter (noting a range of fund disclosures relating to fund synthetic disclosures, with some more helpful to investors than others); Franco Comment Letter (supporting the Commission's proposal relating to disclosures of risk metrics).

[112] *See* Morningstar Comment Letter.

[113] *See* Item B.3 of proposed Form N–PORT.

[114] *See* Item B.3 of Form N–PORT.

[115] *See, e.g.,* SIFMA Comment Letter I (''We support the Commission's proposal to require funds to provide the Commission with portfolio level risk metrics, and generally would defer to the Commission as to the information the Commission would consider useful for its regulatory purposes.''); State Street Comment Letter; Wells Fargo Comment Letter (''We are in agreement with the Commission's request for risk metrics as it relates to duration and spread duration; however, we suggest that the calculation for providing such risk metrics are defined differently than proposed.'').

[116] *See, e.g.,* BlackRock Comment Letter (Commission should use the same interest rate and credit risk questions as is required in Form PF; Commission should consider implementing a reporting requirement to obtain a comprehensive measure of fund's use of leverage); Morningstar Comment Letter (but also urging the Commission to collect more position level information which will enable the Commission, investors, and service providers to independently calculate risk); *see also* Interactive Data Comment Letter (''[P]osition level reporting aligns with what is standard practice in the industry and so would not be burdensome. Position level reporting would provide the

Continued

our proposal to make certain of the risk metrics public.[117] These comments are discussed in more detail below.

We believe, and some commenters agreed, that institutional investors, as well as entities that provide services to both institutional and individual investors, could use these risk metrics to conduct their own analyses in order to help them better understand fund composition, investment strategy, and interest rate and credit spread risk the fund is undertaking. As discussed further below, however, other commenters, were mixed as to whether this information would be useful for investors and if this information should be made public.[118] These measures can complement the risk disclosures that are contained in the registration statement, thereby potentially helping investors to make more informed investment choices. Accordingly, we disagree with commenters that argued this information has no utility for investors. We also continue to believe that requiring funds to publicly disclose these measures quarterly, like other information in the schedule of investments will also help provide investors with more specific, quantitative information regarding the nature of a fund's exposure to debt than they currently have.[119] As discussed further in Section II.A.4 below, we are adopting, largely as proposed, the requirement that funds provide public disclosure of portfolio-level risk metrics on a quarterly basis.[120] For these reasons, and as discussed further below in section II.A.4, we were not persuaded by commenters that such information should be nonpublic.

In particular, for funds that invest in debt instruments, or in derivatives that provide exposure to debt or debt instruments, we believe it is important for the Commission staff, investors, and other potential users to have measures that can help them analyze how portfolio values might change in response to changes in interest rates or credit spreads.[121] To improve the ability of the Commission staff, investors, and other potential users to analyze how changes in interest rates and credit spreads might affect a fund's portfolio value, we proposed that a fund that invests in debt instruments, or derivatives that provide notional exposure to debt instruments or interest rates, representing at least 20% of the fund's net asset value as of the reporting date, provide a portfolio level calculation of duration and spread duration across the applicable maturities in the fund's portfolio.[122]

Commenters were generally supportive of our proposal to include a threshold.[123] However, several commenters requested that we increase the threshold for risk reporting from 20% and that the calculation of debt investments be made based on the fund's three-month average notional value of debt investments as a percentage of NAV.[124] Some commenters requested an increase in the threshold in order to make the risk metric threshold more consistent with the Commission's threshold for requiring funds to disclose industry concentration in their prospectus.[125] Additionally, some commenters argued that the three-month average would better reflect a fund's true investment strategy and mitigate short-term market fluctuations that could cause a fund to temporarily exceed the threshold.[126] We agree with both recommendations.

We believe that a 25% threshold, as several commenters suggested, will still allow the Commission to receive measurements of duration and spread duration from funds that make investments in debt instruments as a significant part of their investment strategy because we do not believe many, if any, funds that make investments in debt instruments as a significant part of their investment strategy have less than 25% of their NAV invested in such instruments. Commenters persuaded us that some funds that primarily invest in assets other than debt instruments, such as equities, could, at times, have more than 20% of the net asset value of the fund

Commission with greater insight into sources of risk within a portfolio.''); Comment Letter of Simpson Thacher & Bartlett LLP (Aug. 11, 2015) (''Simpson Thacher Comment Letter'') (derivatives reporting should focus on portfolio-level risk metrics, such as ''value at risk'' models)

[117] *See, e.g.,* Comment Letter of the Independent Directors Council (Aug. 11, 2015) (''IDC Comment Letter''); SIFMA Comment Letter I; Simpson Thacher Comment Letter; Invesco Comment Letter; Schwab Comment Letter; ICI Comment Letter; Comment Letter of Dechert LLP (Aug. 11, 2015) (''Dechert Comment Letter'') (or, in the alternative, include a disclaimer that risk metrics are an estimate); T. Rowe Price Comment Letter; BlackRock Comment Letter; Oppenheimer Comment Letter. Our decision to make [certain] Items in Parts C, D, and E of the Form non-public is discussed in more detail below. *See infra* section II.A.4.

[118] *See* Franco Comment Letter (Noting that the information on Form N–PORT is relevant to information intermediaries and market professionals and would assist them in assessing individual fund performance or comparing among funds); *see also* Morningstar Comment Letter (same); *but see* Invesco Comment Letter (stating that Form N–PORT's disclosures would not complement fund registration statements, nor be useful in helping investors make more informed investing decisions); SIFMA Comment Letter I (same); Federated Comment Letter.

[119] *See* Franco Comment Letter (''The rule proposal's various disclosure and reporting requirements, especially those requirements relating to portfolio disclosure, risk metrics and fund use of derivatives, serve the public interest and/or the protection of investors.'').

[120] *See* Item B.3 of Form N–PORT; *see also generally* Proposing Release, *supra* footnote 7, at n. 56 and accompanying text.

[121] As discussed further below, the Commission also believes that there would be a benefit to collecting risk measures for derivatives that provide exposure to certain assets, such as equities and commodities. Due to the nature of these instruments, however, we believe that such information should be provided on an instrument-by-instrument basis, instead of as a portfolio level calculation.

[122] Specifically, as proposed, funds would have calculated notional value as the sum of the absolute values of: (i) The value of each debt security, (ii) the notional amount of each swap, including, but not limited to, total return swaps, interest rate swaps, and credit default swaps, for which the underlying reference asset or assets are debt securities or an interest rate; and (iii) the delta-adjusted notional amount of any option for which the underlying reference asset is an asset described in clause (i) or (ii). *See* proposed Instruction to Item B.3 of Form N–PORT.

The delta-adjusted notional value of options is needed to have an accurate measurement of the exposure that the option creates to the underlying reference asset. *See, e.g.,* Comment Letter of Morningstar to Derivatives Concept Release (Nov. 7, 2011) (''Morningstar Derivatives Concept Release Comment Letter'') (submitted in response to the Derivatives Concept Release, *supra* footnote 38, which sought comment regarding the use of derivatives by management investment companies).

[123] *See, e.g.,* Interactive Data Comment Letter (supporting 20% level as reasonable and stating belief that threshold should be measured by considering notional value for derivatives and market values for bonds); State Street Comment Letter (supporting 20% threshold and recommending that the Commission provide clarity on the threshold calculation); Fidelity Comment Letter; Franco Comment Letter; Simpson Thacher Comment Letter (20% threshold and holds more than 100 debt securities); Wells Fargo Comment Letter (supporting 20% threshold).

[124] *See, e.g.,* Oppenheimer Comment Letter (25% threshold consistent with prospectus disclosure of industry concentration); ICI Comment Letter (same); MFS Comment Letter (25% threshold); Pioneer Comment Letter (same); Dreyfus Comment Letter (''we believe the Commission should consider a 25% threshold because, at least, it would define a subset of 'balanced' and 'asset allocation' funds that would, by prospectus or name test mandate, for example, have to maintain a minimum fixed income exposure.''); SIFMA Comment Letter I (recommending a 30% threshold); Invesco Comment Letter (same); *but see* Morningstar Comment Letter (supporting 20% threshold).

[125] *See, e.g.,* ICI Comment Letter; Oppenheimer Comment Letter; MFS Comment Letter; Pioneer Comment Letter; Dreyfus Comment Letter; *see also* Instruction 4 to Item 9(b)(1) of Form N–1A (''Disclose any policy to concentrate in securities of issuers in a particular industry or group of industries (*i.e.* investing more than 25% of a Fund's net assets in a particular industry or group of industries).''); Registration Form Used by Open-End Management Investment Companies, Investment Company Act Release No. 23064 (Mar. 13, 1998) [63 FR 13916 (Mar. 23, 1998)] at nn. 100–101 and accompanying text (''. . . the Commission continues to believe that 25% is an appropriate benchmark to gauge the level of investment concentration that could expose investors to additional risk.'').

[126] *See, e.g.,* ICI Comment Letter; MFS Comment Letter; Dreyfus Comment Letter.

invested in debt instruments for cash management or other purposes.[127] Thus raising the threshold from 20% to 25% will relieve more funds of having to monitor each month whether they trigger the requirement for making such calculations, while still achieving the goal the Commission stated in the Proposing Release of requiring funds that make investments in debt instruments as a significant part of their investment strategy to report such metrics.[128]

We agree with commenters that using the same thresholds we use for discussing industry concentration in current prospectuses is appropriate as it will achieve an objective that is similar to the one in Form N–1A of requiring funds to disclose only where such investments are a central part of the fund's investment objectives. We are therefore adopting a 25% threshold for reporting portfolio-level risk metrics.[129]

We are also modifying the rule from the proposal to require funds to calculate this threshold on the *three-month average* of a fund's value as percentage of NAV (rather than, as proposed, value as percentage of NAV at the *reporting date* (*i.e.* month-end)) because we agree with commenters who pointed out that this should mitigate the chance that short-term market fluctuations could cause a fund that does not typically use such instruments as part of its investment strategy to temporarily exceed the threshold and be required to report the metrics.[130]

Finally, another commenter opposed requiring risk metrics data for index funds because it believed that this requirement would be unnecessarily burdensome for those funds.[131] However, index funds incorporate a wide variety of funds—some of which are primarily invested in debt securities, including derivatives based on debt securities. It is our view that if a fund is exposed to debt instruments or interest rates in amounts that trigger the reporting of risk metrics, they have an exposure large enough to warrant reporting. Moreover, some index funds have indexes that change weekly or daily. Accordingly, because we believe it is important to monitor the risk metrics for all funds with exposures to debt instruments exceeding the threshold, we do not believe it would be appropriate to exempt index funds from Form N–PORT's requirements for risk metric reporting.

For duration, we proposed to require that a fund calculate, the change in value in the fund's portfolio from a 1 basis point change in interest rates (commonly known as DV01) for each applicable key rate along the risk-free interest rate curve, *i.e.,* 1-month, 3-month, 6-month, 1-year, 2-year, 3-year, 5-year, 7-year, 10-year, 20-year, and 30-year interest rate, for each applicable currency in the fund.[132] We realized that funds might not have exposures for every applicable key rate. For example, a short-term bond fund is unlikely to have debt exposures with longer maturities. Accordingly, we proposed that a fund only report the key rates that are applicable to the fund. We proposed that funds report zero for maturities to which they have no exposure.[133] For exposures outside of the range of listed maturities listed on Form N–PORT, we proposed that funds include those exposures in the nearest maturity.

One commenter stated that calculating DV01 along key rates of the Treasury curve is ''common and intuitive'' to analyzing shifts of the yield curve.[134] However, some commenters suggested that calculating the DV01 and SDV01 for 11 proposed key rates could be burdensome, and requested that we limit the number of applicable key rates along the risk-free curve.[135] For example, commenters recommended that the Commission limit the calculations to the key rates to those most representative of bond fund overall exposures by limiting the calculation to the 1-, 2-, 5-, 10-, 20-, and 30-year rates.[136] Another commenter recommended collapsing the 1-, 3-, and 6-month exposures into the 1-year exposure, as a detailed breakout inside 1-year is not informative for most instruments.[137] Commenters argued that reducing the number of key rates will reduce burdens for fund companies while providing the Commission with sufficient information on yield curve exposures for staff analysis.[138] Finally, one commenter suggested that we only require a single measure of duration (*i.e.,* total portfolio duration) that is the weighted average of the top 5 currencies (including the base currency) rather than providing duration calculations for key rates along the Treasury curve, arguing that a single measure would capture the majority of a fund's portfolio risk.[139]

We continue to believe that requiring funds to provide further detail about their exposures to interest rate changes along the risk-free rate curve will provide the Commission with a better understanding of the risk profiles of funds with different strategies for achieving debt exposures. For example, funds targeting an effective duration of 5 years could achieve that objective in different ways—one fund could invest predominantly in intermediate-term debt; another fund could create a long position in longer-term bonds, matched with a short position in shorter-term bonds. While both funds would have intermediate-term duration, the risk profiles of these two funds, that is, their exposures to changes in long-term and short-term interest rates, are different. Having DV01 calculations along the risk-free interest rate curve, as opposed to a single measure of duration suggested by one commenter, will clarify this difference. Moreover, as one commenter noted, ''DV01 and SD01 [spread duration] are likely the measures that will be least subject to differences based on assumptions within risk models employed by fund companies'' and therefore minimizes variation based on the disparate risk metrics models used by funds.[140] The Commission staff will use this information to better understand how funds are achieving their exposures to interest rates, and to perform analysis across funds with similar strategies to identify outliers for potential further inquiry, as appropriate.

We were, however, persuaded by commenters that reducing the number of key rates that funds must report could reduce the reporting burden, while still

[127] *See, e.g.* Pioneer Comment Letter.

[128] *See, e.g.,* State Street Comment Letter.

[129] *See supra* footnote 125.

[130] *See* Item B.3 of Form N–PORT; *see, e.g.* Pioneer Comment Letter; Oppenheimer Comment Letter. One commenter requested that the threshold be based on the fund's net asset value and not notional value. *See* MFS Comment Letter. We continue to believe that basing the threshold on notional amount, especially for derivatives, is a better measure of a fund's exposure than the just the investment's value because some derivatives may have a negligible net asset value, but represent significant exposures to the fund. We have, however, made a clarifying change to the terminology from the proposal, and instruction B.3 now refer to ''value'' rather than ''notional value.'' *See infra* footnote 165.

[131] *See* ICI Comment Letter.

[132] *See* Item B.3.aof proposed Form N–PORT.

[133] For funds with exposures that fall between any of the listed maturities in the form, we proposed in the Instructions to Item B.3 that funds use linear interpolation to approximate exposure to each maturity listed above.

[134] *See* Wells Fargo Comment Letter.

[135] *See, e.g.,* Fidelity Comment Letter; Dreyfus Comment Letter; Simpson Thacher Comment Letter.

[136] *See* Dreyfus Comment Letter; Simpson Thacher Comment Letter.

[137] *See* Fidelity Comment Letter.

[138] *See id.;* Dreyfus Comment Letter.

[139] *See, e.g.,* ICI Comment Letter (suggesting as an alternative, a single duration measurement that is the weighted average of the top 5 currencies (including the base currency)); SIFMA Comment Letter I (duration disclosure should be limited to top 5 exposures); ICI Comment Letter (report only total portfolio duration and credit spread duration—*i.e.,* single measures—rather than multiple points along the yield curve).

[140] *See* Morningstar Comment Letter.

providing the staff with sufficient information and flexibility to analyze how debt portfolios will react to different interest rates and credit spreads along the Treasury curve. We are therefore modifying this requirement from the proposal to require fewer key rates—specifically 3-month, 1-year, 5-year, 10-year, and 30-year—which will provide, as commenters suggested, the rates most representative to bond funds' overall exposures. The key rates Form N–PORT will require, as adopted, are substantially similar to the key rates suggested by commenters; [141] however, we believe that some granularity for short term debt is important, especially in the context of short and ultra-short duration funds, and therefore, unlike the commenters' suggestions for collapsing all short-term exposures to one-year, Form N–PORT will require reporting for the 3-month maturity.[142]

Form N–PORT will also require, as proposed, funds to provide the key rate duration for each applicable currency in a fund. One commenter recommended that we limit the duration to the top 5 currencies.[143] Some commenters requested that we not include currency in the reporting of duration for funds because currency risk is not relevant to duration.[144] Others supported a *de minimis* reporting threshold for exposure to different currencies that would be based on the notional value of the instruments, relative to NAV.[145] These commenters noted that including all currency exposures, regardless of size, would result in a long list of exposures that would have little impact on a fund.[146] As a result, the commenters believed that the Commission would receive data that would add little to the staff's ability to understand a fund's portfolio risk, but would add significant reporting and compliance burdens to funds.[147]

We continue to believe that funds should generally be required to provide the key rate duration for each applicable currency in the fund in order to understand interest rate risk to funds with significant currency risk. Nonetheless, we were persuaded by commenters that a *de minimis* threshold is appropriate. Based on staff experience analyzing similar data, however, we believe that a 5% *de minimis,* as suggested by some commenters, could hinder the staff's ability to measure smaller fund exposures that could have large effects across the fund industry as a whole. We agree with one comment that Form N–PORT should provide for a 1% *de minimis* threshold, calculated as the notional value of relevant investments in each currency relative to the fund's NAV.[148] We believe that setting the *de minimis* at this level will balance the need for the staff to identify and monitor not only a fund's currency risk, but also the risks of small fund positions that could aggregate into large positions across the industry, as the Commission will still be receiving information about the majority of a fund's currency exposures with this threshold.

For both duration and spread duration, we proposed to require that funds provide the change in value in the fund's portfolio from a 1 basis point change in interest rates or credit spreads, rather than a larger change, such as 5 basis points or 25 basis points. As we noted in the Proposing Release, based on staff outreach, we believed that a 1 basis point change is the methodology that many funds currently use to calculate these risk measures at the position level for internal risk monitoring and would provide sufficient information to assist the Commission in analyzing fund exposures to changes in interest rate or credit spreads.[149] We requested comment on whether we should require or permit funds to report a larger change in interest rates or credit spreads, such as 5 or 25 basis points.

Additionally, while we did not propose requiring convexity, the Commission also considered and requested comment on whether funds should be required to report convexity, which facilitates more precise measurement of the change in a bond price with larger changes in interest rates because this measure captures changes in the shape of the yield curve.[150]

Commenters suggested that we adopt risk metrics that would provide a better measure of risk over time than just DV01.[151] For example, one commenter, noting that, while DV01 and SDV01 are typically used as daily risk measures, larger shifts in the curve, such as DV25 or DV50, may be appropriate for measures with a significant lag, such as reporting on Form N–PORT.[152]

We also received several comment letters recommending that we include a measure of convexity as it is a valuable method of measuring the change of the shifting yield curve, as well as a comment to require stress tests of the portfolio of small and large changes in spreads, interest rates, and volatility.[153] We agree with commenters that a measurement that captures larger changes in the yield curve will be useful. We additionally agree with commenters that argued that a measure for changes in the shape of the yield curve such as convexity would be useful, but are sensitive to the burdens that requiring a measurement of convexity may impose on filers that do not currently calculate convexity internally.

Accordingly we believe that requiring a risk measure that shows the effect of a larger change in interest rates, coupled with DV01 as we proposed, both provides information that commenters said would be useful (*i.e.,* how the exposure changes with different changes in interest rate), while not requiring filers that do not calculate convexity internally to begin to do so. We are therefore adopting a requirement that funds provide both DV01 [154] (a one basis point change in interest rate) and DV100 (a 100 basis point change in interest rates).[155] Based on staff experience, we believe that DV100 is among the most

[141] *See* Dreyfus Comment Letter; Simpson Thacher Comment Letter; Fidelity Comment Letter.

[142] *See* Item B.3.a and Item B.3.bof Form N–PORT; *see also* Item B.3.c of Form N–PORT; *see also* Fidelity Comment Letter (collapse the 1-, 3-, and 6-month exposures into the 1-year exposure, as a detailed breakout inside 1-year is not informative for most instruments); Dreyfus Comment Letter (focus should be on portfolio level statistics; alternative six key rates 1-, 2-, 5-, 10-, 20, and 30-years).

[143] *See, e.g.,* SIFMA Comment Letter I.

[144] *See, e.g.,* Dreyfus Comment Letter.

[145] *See* CRMC Comment Letter (supporting a 5% *de minimis* threshold for currencies); MFS Comment Letter (same); SIFMA Comment Letter I (same); ICI Comment Letter (5% or top 5 currencies or those currencies representing at least 50% of the portfolio's exposure); Morningstar Comment Letter (same); Oppenheimer Comment Letter (one percent).

[146] *Id.*

[147] *Id.*

[148] SIFMA Comment Letter I.

[149] *See* Proposing Release, *supra* footnote 7, at 33600. *See also* Morningstar Comment Letter (''The use of a bottom-up approach and the limited movement of 1 basis point are likely to provide standardization.'').

[150] *See* Proposing Release, *supra* footnote 7, at 33600. More specifically, convexity measures the non-linearities in a bond's price with respect to changes in interest rates. *See* Frank J. Fabozzi, The Handbook of Fixed Income Securities (8th ed., 2012) at 149–152.

[151] *See* Morningstar Comment Letter; *see also* Interactive Data Comment Letter (noting that fund managers often consider moves greater than 1 basis point when managing interest rate risks in their portfolios, particularly for funds with exposure to bonds with call or prepayment risk.).

[152] *See* Morningstar Comment Letter (also noting that DV01 and SDV01 are less likely to be subject to model risk).

[153] Interactive Data Comment Letter (''portfolio managers consider convexity to be critical when measuring the interest rate risk of their funds''); Dreyfus Comment Letter (''Convexity is valuable as a risk measure because it captures the change in the curvature (the 'flattening' or 'steepening') of the shifting yield curve.'').

[154] *See* B.3.a of Form N–PORT.

[155] *See* B.3.b of Form N–PORT.

common measures of interest rate sensitivity and it will, in conjunction with DV01, provide more useful information about non-parallel shifts in the yield curve than smaller measures, such as DV25 and DV50. Moreover, DV100 will allow the staff to capture larger changes to interest rates (and corresponding ''shocks'' to the markets) than DV25 and DV50. Finally, based on staff experience, it is our belief that DV100 is a standard measure of interest rate sensitivity and is a common measure of duration and is therefore unlikely to require filers to change current internal measurement practices, thereby mitigating the increase in reporting costs relative to the proposal.

We also proposed to require that funds provide a measure of spread duration (commonly known as SDV01) at the portfolio level for each of the same maturities listed above, aggregated by non-investment grade and investment grade exposures.[156] This would measure the fund's sensitivity to changes in credit spreads (*i.e.,* a measure of spread above the risk-free interest rate). Again, similar to the example above regarding the potential use of the DV01 metric, SDV01 can provide more precise information regarding funds' exposures to credit spreads when they engage in a strategy investing in investment-grade or non-investment grade debt.

One commenter stated that spread duration is a more representative measure of bond fund portfolio risk than duration alone because it ''captures both interest rate risk and credit risk'' and that staff should therefore use spread duration when analyzing funds.[157] However, that commenter and others recommended that we require funds to report a single spread duration for the portfolio, as spread rates are generally calculated as a parallel shift, making calculations at key rates less useful than they are for analyzing shifts in interest rates.[158] Because credit spreads can vary based on the maturity of the bonds, we continue to believe that providing credit spread measures for the key rates along the yield curve, as with DV01, will help the Commission and its staff better analyze credit spreads of investments in funds than a single measure for the entire portfolio. For example, this data could be helpful for analyzing shifts in credit spreads for non-investment grade and investment grade debt, respectively, over the yield curve, as credit spreads for investment grade and non-investment grade debt do not always shift in parallel or in lock step, particularly during times of market stress.[159]

For the same reasons discussed above for interest rate risk, however, we are limiting the required key rates for credit spread risk to 3-month, 1-year, 5-year, 10-year, and 30-year.[160] Commenters also suggested either only requiring spread duration (as opposed to both credit and spread duration) or further refining the measure of credit spreads, for example, by breaking out government related spreads from other investment-grade spreads.[161] However, we continue to believe that our current measure of spread risk provides adequate information to the staff, investors, and other potential users to better understand industry and fund credit spreads, and the risk associated with credit spreads, while appropriately balancing the costs of calculating such measures. We are therefore adopting the credit spread risk as proposed, subject to the previously discussed key rate refinements discussed above.[162]

We also proposed to include an instruction to Item B.3 to assist funds with calculating the threshold and to allow better comparability among funds. One commenter recommended that our proposed calculation for the threshold, which the proposal defined as ''notional value,'' include the ''contract value of each futures contract for which the underlying reference asset or assets are debt securities or an interest rate.'' [163] The commenter noted that funds may use fixed income futures for similar purposes as fixed income swaps, for example, to adjust duration, and including futures in the calculation would give the Commission more accurate reporting and is consistent with how the industry typically does these types of calculations.[164] We agree and are modifying our instructions to require that funds include futures in the calculation of notional value.[165]

Another commenter noted that non-investment grade portfolios often hold ''equity-like securities,'' such as convertible bonds and preferred stocks.[166] The commenter argued that DV01 is not appropriate for these types of portfolios and requested that Form N–PORT clarify how funds should calculate interest-rates in such situations.[167] Other commenters suggested that we further refine our proposed methodology by providing more details relating to the relevant interest rate and credit spread calculations such as whether the credit spread to be shifted is the nominal or option adjusted spread (OAS).[168] In determining the proposed methodology for the measures of duration and spread duration, staff engaged in outreach to asset managers and risk service providers that provide risk management and other services to asset managers and

[156] As proposed, Form N–PORT would have included instructions stating that ''Investment Grade'' refers to an investment that is sufficiently liquid that it can be sold at or near its carrying value within a reasonably short period of time and is subject to no greater than moderate credit risk, and ''Non-Investment Grade'' refers to an investment that is not Investment Grade. *See* proposed General Instruction E of Form N–PORT. As discussed above in section H.A.2.a, we received comments relating to our proposed definition of ''Investment Grade''. For the reasons discussed above, we have determined to remove these definitions from the Form.

[157] *See* Dreyfus Comment Letter.

[158] *See supra* footnotes 134–137; *see, e.g.,* Wells Fargo Comment Letter (noting that, unlike interest rate spreads, credit spreads are not typically calculated at all key rates); Fidelity Comment Letter (''A single CR01 without reference to maturity is a standard risk metric and should be familiar to market participants.''); Dreyfus Comment Letter (recommending a single measure for spread duration); ICI Comment Letter (same).

[159] The delineation between non-investment grade and investment grade debt is similar to information regarding private fund exposures gathered on Form PF, which could be helpful for comparing and analyzing credit spreads between public and private funds. *See, e.g.,* Item 26 of Form PF.

[160] *See* B.3.c of Form N–PORT.

[161] *See, e.g.,* Fidelity Comment Letter (Suggesting breaking out government-related credit spreads from other investment-grade credit spreads because it would be more useful for monitoring fund credit risk); Dreyfus Comment Letter (''Spread duration is a more important measure of overall bond fund portfolio risk than duration alone because it captures both interest rate risk and credit risk.'').

[162] *See* Item B.3.c of Form N–PORT.

[163] *See* CRMC Comment Letter.

[164] *Id.*

[165] We have also decided to make a clarifying change by using the term ''value'' as opposed to the proposal's ''notional value.'' We believe that this could reduce confusion in the reporting of these measures. Since our proposed calculation of ''notional value'' requires the sum of ''absolute'' values, which may be different than how funds currently define ''notional value,'' we are changing the instructions from requiring notional value to requiring ''value,'' which is defined to include the notional value of certain derivatives instruments. *See* Instruction to Item B.3 of Form N–PORT. Moreover, this is consistent with Form PF which describes ''value'' in General Instruction 15. *See* General Instruction 15 of Form PF.

[166] *See* Fidelity Comment Letter.

[167] *Id.*

[168] *See, e.g.,* Interactive Data Comment Letter (Clarify whether interest rate shifts should be applied to a par yield curve or a spot yield curve and specify that the measurement procedure should include shifting rates both upward and downward. Clarify whether the curve segments should be defined based on maturity or average life, particularly for amortizing assets such as MBS and consider excluding certain issues, such as US treasuries; clarify whether the credit spread to be shifted is the nominal or option adjusted spread (OAS) and recommending OAS.); State Street Comment Letter (requesting clarity whether the Commission wants notional value versus delta adjusted or duration equivalent value, but also suggesting that the SEC should not be too prescriptive and give managers discretion within guidelines, so long as they can validate and justify their approach.).

institutional investors. The proposed methodology was based on staff experience in using duration and spread duration, as well as this outreach to better understand common fund practices for calculating such measures.

While the Commission continues to believe that the methodologies for reporting duration and spread duration will allow for better comparability across funds, as discussed above, we are adopting a new instruction to Form N–PORT, subject to the specific instruction in Item B.3 to calculate value, that funds may use their own internal methodologies and the conventions of their service providers, which should help minimize reporting burdens.[169] As in Form PF, we believe that this approach strikes an appropriate balance between easing the burdens on funds by allowing them to rely on their existing practices while still providing the Commission's staff with comparable data across the industry.[170] However, we agree with the commenter that requested that we clarify whether the shift is the nominal or option-adjusted spread. We believe that measuring credit risk by shifting option adjusted spread provides a more robust measure of credit risk for investments with embedded optionality because it captures how embedded options alter the payment obligations of counterparties.[171] Thus measuring credit risk by shifting the option adjusted spread will allow the Commission and other interested parties to more accurately monitor this effect. We are therefore adding one clarification to Item B.3.c., Credit Spread Risk, to clarify that funds should provide the change in value of the portfolio from a 1 basis point change in credit spreads where the shift is applied to the option adjusted spread.[172]

While we proposed that funds provide a calculation of each of these measures at a portfolio level, we also considered whether to require, and requested comment on the alternative that, instead, funds report these risk metrics for each debt instrument or derivative that has an interest rate or credit exposure.[173] We had asked what the benefits would be to having more precise data for analysis of various movements in interest rates and credit spreads.

Several commenters supported reporting at the portfolio-level rather than at the position-level.[174] One commenter suggested that, rather than report risk measures at the portfolio-level, funds should report risk exposures at the position-level, as this is current industry practice and would therefore not be burdensome.[175] Other commenters generally noted that providing position specific details would better enable investors and service providers to calculate risk, without relying on the reporting fund's models or assumptions.[176] Finally, another commenter recommended that the Commission, with respect to derivatives, focus on metrics based on a portfolio-level analysis, as such an analysis would more accurately reflect a fund's use of, and net exposure to, derivatives.[177]

As discussed in the Proposing Release, we believe that most funds likely calculate these risk metrics at a position-level. However, we recognize that even if such calculations are available at a position-level, reporting these metrics could cause funds to make additional systems changes to collect such position-level data for reporting, as well as potential burdens related to increased review time and quality control in submitting the reports. Therefore, on balance, we continue to believe that requiring funds to provide this information for each maturity at the portfolio level would provide a sufficient level of granularity for purposes of Commission staff analysis. We also believe that there are certain efficiencies for the Commission, its staff, investors, and other potential users to having funds report the portfolio-level calculations relative to reporting position-level calculations, as this could allow for more timely and efficient analysis of the data by not requiring users of the information to calculate the portfolio-level measures from the position-level measures.[178]

In order to allow better comparability among funds, some commenters recommended that the Commission omit risk metrics in favor of more data on the specific investments, stating that raw data would allow the staff, investors, and other potential users to perform their own risk calculations.[179] According to the commenters, providing position specific details would better enable investors and service providers to calculate risk, without relying on the reporting fund's models or assumptions.[180] While we agree that reporting raw data on specific investments would provide users of the data with more flexibility in calculating risk, we do not believe that the benefits of reporting this information sufficiently justify the burdens of requiring funds to report substantially more detailed information on Form N–PORT at this time. Moreover, as discussed above, we believe that requiring funds to report the portfolio-level risk measures required on Form N–PORT, as well as delta for options, warrants, and convertible securities, which is discussed further below in section II.A.2.g.iv, provides the Commission, investors, and other potential users with a sufficient level of granularity for purposes of analysis at this time.

Finally, commenters requested that we collect alternative risk metrics, such as the same interest rate and credit risk questions as are required by Form PF in order to improve the interoperability of the data collected for private funds and registered investment companies.[181]

[169] *See* General Instruction G of Form N–PORT.

[170] *See* Form PF Adopting Release, *supra* footnote 80, at n. 187 and accompanying text Based on staff experience, we believe that we will still find the data useful even when funds use different methodologies, despite the fact that varying methodologies could reduce the comparability of data across funds because this data will still provide information that can be compared to a fund's previous filings, as well as a baseline measurement for the industry that can be monitored for changes from one month to the next.

[171] *See also* Interactive Data Comment Letter.

[172] *See* Item B.3.c of Form N–PORT.

[173] *See* Proposing Release, *supra* footnote 7, at 33601.

[174] *See, e.g.,* SIFMA Comment Letter I (supporting the Commission's proposal to require funds to provide the Commission with portfolio level risk metrics and requesting that the information not be made public); Wells Fargo Comment letter (supporting the Commission's request for duration and spread duration, but suggesting that the calculation for providing risk metrics be defined differently).

[175] *See* Interactive Data Comment Letter (recommending that the Commission consider several alternatives, including requiring funds to report aggregate risk metrics at the asset class level and composite portfolio-level, and to require risk metric calculations to account for the ''interactions among the investments being aggregated.'').

[176] *See* Morningstar Comment Letter; Vanguard Comment Letter.

[177] *See* Simpson Thacher Comment Letter.

[178] Commenters also requested that we clarify that the fixed income exposure as calculated by a top tier in a fund-of-fund investment structure would not include the top tier fund's exposure to the underlying fund's exposure to debt. *See* ICI Comment Letter; MFS Comment Letter. Since Item B.3 requires aggregated portfolio-level risk metrics, we generally would not expect funds to look through to the underlying funds' holdings. Rather, funds only will need to look to the top level fund investments in calculating their exposure to risk measures.

[179] *See, e.g.,* Vanguard Comment Letter; Morningstar Comment Letter (''Rather than collecting model assumptions or additional standardization of the calculations, we believe providing additional detail with position information, specifically for bespoke derivatives and syndicated loans, will enable investors and service providers to independently calculate risk measures based on a model of the investor's choice.'').

[180] *Id.*

[181] *See, e.g.,* BlackRock Comment Letter (Commission should use the same interest rate and credit risk questions as is required in Item 42 of

However, while some of our Form N–PORT risk metric disclosures are based on Form PF, for the reasons stated above, the position-level information that we will receive in reports on Form N–PORT make more detailed reporting unnecessary for registered funds.[182] Another commenter suggested that we focus on alternative portfolio-level risk metrics, such as Value at Risk (''VaR'').[183] Based on staff experience, for purposes of monitoring a fund's sensitivity to changes in interest rates and credits spreads, we believe that requiring funds to calculate duration and spread duration along key rates will provide the Commission with more sensitive information than would be provided by an overall portfolio-level risk metric such as VaR. Accordingly, we are not adopting these suggested alternative risk metrics.

d. Securities Lending

To increase the rate of return on their portfolios, some funds engage in securities lending activities whereby a fund lends certain of its portfolio securities to other financial institutions such as broker-dealers. To protect the fund from the risk of borrower default (*i.e.,* the borrower failing to return the borrowed security or returning it late), the borrower posts collateral with the fund in an amount at least equal to the value of the borrowed securities, and this amount of collateral is adjusted daily as the value of the borrowed securities is marked to market.[184] Funds generally demand cash as collateral. A fund will typically invest cash collateral that it receives in short-term, highly liquid instruments, such as money market funds or similar pooled investment vehicles, or directly in money market instruments.

A fund's income from these activities may come from fees paid by the borrowers to the fund and/or from the reinvestment of collateral.[185] Many funds engage an external service provider—commonly called a ''securities lending agent''—to administer the securities lending program. The securities lending agent is typically compensated by being paid a share of the fund's securities lending revenue after the borrower has been paid any rebate owed to it.[186]

Securities lending may implicate certain provisions of the Investment Company Act, and funds that engage in securities lending do so in reliance on Commission staff no-action letters, and in some circumstances, exemptive orders.[187] Funds that rely on these letters and orders are subject to conditions on a number of aspects of their securities lending activities, including loan collateralization and termination, fees and compensation, board approval and oversight, and voting of proxies.

Currently, the information that funds are required to report about securities lending activity, whether in a structured format or otherwise, is limited. For example, funds disclose on Form N–SAR whether they are permitted under their investment policies to, and whether they did engage during the reporting period in, securities lending activities.[188] Funds generally also disclose additional information regarding their securities lending programs in their registration statements.[189] In addition, consistent with current industry practices, many funds identify particular securities that are on loan in their schedules of portfolio investments prepared pursuant to Regulation S–X. These disclosures do not address other pertinent considerations, such as the extent to which a fund lends its portfolio securities, the borrower to which the fund is exposed, the fees and revenues associated with those activities, and the significance of securities lending revenue to the investment performance of the fund.

As proposed, to address these data gaps and provide additional information to the Commission, investors, and other potential users regarding a fund's securities lending activities, we are requiring funds to report certain borrower information and position-level information monthly on Form N–PORT.[190] Also, as to other securities lending information for which annual reporting would be sufficient because it is unlikely to change on a frequent basis (*e.g.,* name and other identifying information for a fund's securities lending agent), funds will report such information annually on Form N–CEN, as proposed and as discussed below in section II.D. In addition, as discussed below in section II.C.6, we have made a modification from the proposal to require certain information about the income from and fees paid in connection with securities lending activities, and the monthly average of the value of portfolio securities on loan, be disclosed as part of the fund's Statement of Additional Information (or, for closed-end funds, reports on Form N–CSR) or in Form N–CEN, instead of a fund's financial statements as we had originally proposed.[191]

Form PF; Commission should consider implementing a reporting requirement to obtain a comprehensive measure of fund's use of leverage); Simpson Thacher Comment Letter. Item 42 of Form PF requires an adviser to report the impact on the fund's portfolio from specified changes to certain identified market factors, if regularly considered in formal testing in the fund's risk management, broken down by the long and short components of the qualifying fund's portfolio. *See* Item 42 of Form PF; *see also* Form PF Adopting Release, *supra* footnote 80, at nn. 270–272 and accompanying text.

[182] Unlike with Form PF, which does not require position-level reporting, with Form N–PORT the staff will be able to calculate alternative risk measures using the detailed position-level information provided in reports on Form N–PORT.

[183] *See* Simpson Thacher Comment Letter (derivatives reporting should focus on portfolio-level risk metrics, such as ''value-at-risk'' models).

[184] *See* SIFMA, Master Securities Loan Agreement, §§ 4 (Collateral), 9 (Mark to Market) (2000) (''Master Securities Loan Agreement''), *available at http://www.sifma.org/Services/Standard-Forms-and-Documentation/MRA,-GMRA,-MSLA-and-MSFTAs/MSLA_Master-Securities-Loan-Agreement-(2000-Version). See also* Division of Investment Management, SEC, *Securities Lending by U.S. Open-End and Closed-End Investment Companies* (2014) (''Securities Lending Summary''), *available at http://www.sec.gov/divisions/investment/securities-lending-open-closed-end-investment-companies.htm.*

[185] If a security is not in high demand, a lender typically pays the borrower a cash collateral fee, commonly called a ''rebate.'' The rebate is negotiated and can be negative (*i.e.,* a fee paid from the borrower to the lender) when demand for the loan of a particular security is especially great or its supply especially constrained. *See* Master Securities Loan Agreement, *supra* footnote 184, at § 5 (Fees for Loan).

[186] *See* Securities Lending Summary, *supra* footnote 184.

[187] For example, the transfer of a fund's portfolio securities to a borrower implicates section 17(f) of the Investment Company Act, which generally requires that a fund's portfolio securities be held by an eligible custodian. A fund's obligation to return collateral at the termination of a loan implicates section 18 of the Investment Company Act, which governs the extent to which a fund may incur indebtedness. *See id.*

[188] Item 70.N of Form N–SAR.

[189] *See, e.g.,* Item 9(c) (disclosures regarding risks), Item 16(b) (disclosures of investment strategies and risks), Item 17(f) (disclosures of proxy voting policy), and Item 28(h) (exhibits of other material contracts) of Form N–1A.

[190] *See infra* text following footnote 195 (discussing the reporting of counterparty information); section II.A.2.g (discussing the proposed requirements regarding position-level information). Commenters to the FSOC Notice also suggested that enhanced securities lending disclosures could be beneficial to investors and counterparties. *See, e.g.,* SIFMA/IAA FSOC Notice Comment Letter (''Disclosures related to securities lending practices, if appropriately tailored, could potentially assist investors and counterparties in making informed choices about where they deploy their assets and how they engage in lending practices.''); Comment Letter of the Vanguard Group, Inc. to FSOC Notice (Mar. 25, 2015) (''Vanguard FSOC Notice Comment Letter'') (asserting that securities lending as a whole suffers from a lack of readily available data, and supporting further efforts to gather data and study the practice of securities lending).

[191] *See infra* footnotes 724–725 and accompanying text (discussing new required disclosures in funds' Statement of Additional Information (or, for closed-end funds, funds' reports on Form N–CSR) that will allow investors to better understand the income generated from, as well as the expenses associated with, securities lending

Continued

The new reporting requirements we are adopting are intended, in part, to increase the transparency of information available related to the lending of securities by funds as a subset of the universe of market participants engaged in securities lending activities.[192] Commenters were generally supportive of increased reporting about securities lending activities, although they suggested modifications to certain aspects of the proposal and expressed concerns with some of the specific proposed reporting.[193] These comments, and the modifications we are making in response to comments, are discussed in more detail below.

Borrower Information.[194] One risk that funds engaging in securities lending are exposed to is counterparty risk because borrowers could fail to return the loaned securities. In this event, the lender would keep the collateral. In the U.S., cash collateral is more typical than non-cash collateral and loans are often over-collateralized. The collateral requirements thereby mitigate the extent of a fund's counterparty risk. This risk is further mitigated for the fund if the fund's securities lending agent indemnifies the fund against default by the borrower.

As we explained in the Proposing Release, while we believe there is value to having information on borrowers of fund securities to monitor risk, as well as information with which to evaluate compliance with conditions set forth in staff no-action letters and exemptive orders,[195] we proposed to require that funds report the full name and LEI (if any) of each borrower, as well as the aggregate value of all securities on loan to the particular borrower, rather than at the loan level.[196] We believe that reporting of borrower information at an aggregate portfolio level will provide the Commission, investors, and other potential users with information to better understand the level of potential counterparty risk assumed as part of the fund's securities lending program, with a lower relative burden on funds than requesting such information on a per loan level.

Commenters generally supported our proposal to increase reporting relating to securities lending borrowers, although one commenter questioned the usefulness of borrower information given that securities lending agreements are generally indemnified by securities lending agents.[197] Most commenters also specifically supported our approach of assessing the counterparty risk of securities lending transactions on an aggregate basis for each borrower, as opposed to a loan-by-loan or security-by-security basis.[198]

However, many commenters recommended limiting the collection of securities lending information to the top 5 or 10 securities lending borrowers presenting the greatest exposure.[199] These commenters argued that the top 5 securities lending borrowers generally represent the majority of a fund's securities lending exposure and that further disclosure would impose unnecessary costs on funds and shareholders to the extent it would be capturing borrowers to which the fund does not have material exposure.[200] Likewise, several commenters suggested that borrower information for securities lending transactions should only be reported by funds whose securities lending exposure exceeded a certain minimum threshold.[201]

We continue to believe that funds that engage in securities lending should be required to report information for all of its securities lending borrowers. In response to commenters' observations that many funds are indemnified for their securities lending transactions, we note that not all funds are so indemnified. Separately, we believe that information on borrowers is useful even if there is an indemnification by the agent. For example, such information is helpful in generally monitoring the degree to which funds are involved in securities lending transactions and the identities of borrowers engaged in such transactions. Allowing funds to exclude certain borrower information would limit the applicability and completeness of the information reported on Form N–PORT regarding counterparty risk, both to an individual fund and to the fund industry. We are not persuaded by commenters' arguments that reporting of all borrowers would be unduly burdensome or costly, as we believe funds would need to collect this information both to understand its own counterparty risk and for its own oversight of securities lending. For these reasons, we are requiring funds to report aggregate borrower exposure for all securities lending borrowers, as proposed.

Several commenters also suggested that borrower information for securities lending information should be nonpublic. In particular, these commenters expressed concerns that securities lending counterparties (*i.e.,* borrowers) may wish to avoid having details of their exposures being made public, including to competitors.[202] We are not persuaded by these arguments. First, we note that the new reporting requirements we are adopting today are intended, in part, to increase the transparency of information available related to the lending and borrowing of

activities) and 1224–1225 and accompanying text (discussing new required disclosures of monthly average value of portfolio securities on loan in Form N–CEN).

[192] *See, e.g.,* section 984(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act, Public Law 111–203, 124 Stat. 1376, 1933 (2010) (directing the Commission to promulgate rules designed to increase the transparency of information available to brokers, dealers, and investors, with respect to the loan or borrowing of securities).

[193] *See, e.g., infra* footnotes 199–201 and accompanying and following text (recommending that the collection of securities lending information should be limited to the top 5 or 10 securities lending borrowers with the greatest exposure) and footnotes 205–208 and accompanying and following text (suggestions regarding how to report non-cash collateral posted by securities lending borrowers).

[194] In the Proposing Release, we referred to ''securities lending counterparties,'' but have made a clarifying change to ''securities lending borrowers'' in the form. As discussed above, when funds are engaged in securities lending transactions, they are securities lenders because they lend their portfolio securities to other financial institutions, such as broker-dealers, who are securities borrowers. The change in terminology is not intended to alter the substance of reporting from what we proposed.

[195] *See generally* Securities Lending Summary, *supra* footnote 184.

[196] Item B.4 of proposed Form N–PORT.

[197] *See, e.g.,* Comment Letter of Independent Directors of the BlackRock Equity-Liquidity Funds (Oct. 2, 2015) (''Blackrock Directors Comment Letter'') (supporting this aspect of our proposal); BlackRock Comment Letter (same); Fidelity Comment Letter (same); Comment Letter of the Risk Management Association (Aug. 11, 2015) (''RMA Comment Letter'') (same); SIFMA Comment Letter I (same); Comment Letter of CFA Institute (Aug. 10, 2015) (''CFA Comment Letter'') (same). *But see* MFS Comment Letter (arguing that disclosure of borrower information may not be relevant in understanding a fund's counterparty exposure, because if the fund has been indemnified then the counterparty exposure rests with the lending agent).

[198] *See, e.g.,* BlackRock Comment Letter; Morningstar Comment Letter.

[199] *See, e.g.,* ICI Comment Letter (limit to the top 5 securities lending borrowers); RMA Comment Letter (top 5 or 10 borrowers); Fidelity Comment Letter (top 5 borrowers; broader securities lending disclosures would not provide a meaningful indicator of risk in securities lending because security loans are fully collateralized and also funds may be indemnified by lending agents); State Street Comment Letter (top 5 or ten borrowers). *But see* Morningstar Comment Letter (applauding the Commission's proposal to require counterparty information for all securities lending borrowers).

[200] *See, e.g.,* Invesco Comment Letter (the top 5 securities lending borrowers generally represent 68% of a fund's securities lending exposure); ICI Comment Letter (additional disclosures beyond the top 5 borrowers would impose unnecessary costs on funds and shareholders).

[201] *See* Wells Fargo Comment Letter (portfolio level reporting of aggregate securities lending activity should only be required for funds with a minimum threshold of 10% of assets on loan); Oppenheimer Comment Letter (funds should report only the top 5 borrowers and not disclose anything if outstanding securities loans do not exceed 1% of net assets).

[202] *See* BlackRock Comment Letter; SIFMA Comment Letter I; RMA Comment Letter.

securities.[203] Making borrower information for the securities lending information reported on Form N–PORT nonpublic would defeat this objective.

Second, based on our experience with securities lending, we are not persuaded by commenters claiming that a fund's activities in securities lending would be harmed because certain securities borrowers do not want to be identified. We note that we are not requiring identification of securities borrowers by loan, but rather on an aggregated basis. We also note that certain funds currently publicly identify securities lending borrowers twice per year in the notes to their annual and semi-annual financial statements, as permitted by GAAP.[204] We are unaware of any evidence that these disclosures have had any effects on borrowers' decisions to borrow from registered investment companies in the manner those commenters suggest, and thus we continue to believe that requiring funds to make such information publicly available is appropriate because these disclosures will improve transparency to investors and other users.

As discussed in greater detail below, we also received various suggestions regarding how to report non-cash collateral posted by securities lending borrowers.[205] One commenter pointed out that funds typically do not account for non-cash collateral as a fund asset because funds generally do not ''control'' the non-cash collateral and thus do not bear any investment risk for it.[206] For this reason, the commenter asserted that it would be inconsistent with accounting and reporting standards for funds to report non-cash collateral received for loaned securities as portfolio investments on Form N–PORT, as we proposed.[207] We agree with the commenter and are modifying Form N–PORT from the proposal to add a new Item requiring funds to report the aggregate principal amount and aggregate value of each type of non-cash collateral received for loaned securities that is not treated as a fund asset.[208]

Several commenters also requested that Form N–PORT collect additional information regarding securities lending activities. One commenter recommended that funds report average monthly aggregate dollar amounts on loan and fee split information, as well as a brief summary of the fund's securities lending program, including risk and strategy.[209] Another commenter suggested that the aggregate value of securities lent should be accompanied by the aggregate value of collateral pledged.[210] One commenter requested that funds report the average daily value of securities lending collateral over the reporting period, rather than a snapshot as of the last day of the reporting period, and asserted that securities lending collateral can be used as a proxy for the percentage of the portfolio that is on loan, which is the true quantity of interest.[211]

We are not adopting such additional reporting requirements on Form N–PORT. As discussed further below, the amendments to the Statement of Additional Information (and, for closed-end funds, Form N–CSR) that we are adopting today will require funds to make certain disclosures in connection with their securities lending activities and cash collateral management, and Form N–CEN also requires information about a fund's securities lending program, including the average monthly value of securities on loan. Although the additional information requested by commenters may be useful to certain investors or other users, we are sensitive to the burdens on funds of additional reporting requirements. Some of the information requested by commenters, such as a brief summary of the fund's securities lending program, including risk and strategy, is already disclosed in fund registration statements.[212] Certain other information requested by commenters, such as the aggregate value of securities lent and the aggregate value of collateral pledged, can be calculated by adding up the structured information reported for each individual securities lending transaction.[213] Furthermore, other information requested by commenters, such as the percentage of the portfolio securities on loan over the reporting period, can be derived from information that will be reported in a structured format as part of this rulemaking.[214] Although we understand that requiring funds to report additional information may be useful to certain users of such information, Form N–PORT is primarily designed to meet the data needs of the Commission and its staff. As such, the securities lending information we are requiring to be reported on Form N–PORT is designed to balance what we anticipate would be useful for our regulatory oversight purposes, namely obtaining more information specifically regarding counterparties, amounts on loan, and how collateral is reinvested, against the expected burdens of reporting such information. Accordingly, we decline to modify Form N–PORT to require the additional securities lending disclosures requested by commenters.

We also received several comments requesting that we revise Form N–PORT to phase in reporting of securities lending borrowers' LEIs. Commenters urged that this requirement be delayed until LEIs have been fully integrated into the global financial system and lending agents and funds have implemented the necessary systems enhancements to facilitate LEI reporting.[215] Commenters also expressed concerns that reporting LEI information for securities lending counterparties (*i.e.,* borrowers) may cause borrowers to become less likely to borrow from registered funds and more likely to borrow from lenders who are not required to make similar disclosures, in order to avoid having details of the borrowers' exposures being made public.[216]

For the same reasons discussed above regarding commenters' suggestions not to require disclosure of securities borrowers, we are not persuaded by such arguments. While the Commission is the primary user of the form, the new reporting requirements we are adopting today are intended, in part, to increase the transparency of information available related to the lending and borrowing of securities.[217] In particular, the uniform public reporting of borrowers' LEIs will facilitate the identification of such borrowers, which is part of the purpose of such reporting. As discussed above, providing exemptions or deferring implementation

[203] *See supra* footnote 192 and accompanying text.

[204] *See, e.g.,* SIFMA Comment Letter I.

[205] *See infra* footnote 413 and accompanying and following text.

[206] *See* ICI Comment Letter.

[207] *See* Item C.12.b of proposed Form N–PORT.

[208] *See* Item B.4.b of Form N–PORT. Funds will report the category of instrument that most closely represents the collateral, selected from among the following (asset-backed securities; agency collateralized mortgage obligations; agency debentures and agency strips; agency mortgage-backed securities; U.S. Treasuries (including strips); other instrument). If ''other instrument,'' funds will also include a brief description, including, if applicable, whether it is an irrevocable letter of credit.

[209] *See* Comment Letter of John C. Adams (July 8, 2015) (''John Adams Comment Letter'').

[210] *See* Morningstar Comment Letter.

[211] *See* Comment Letter of Richard B. Evans (Oct. 20, 2015).

[212] *See supra* footnote 189 and accompanying text.

[213] *See* Item C.12.a (value of the investment representing cash collateral), Item C.12.b (value of the securities representing non-cash collateral), and Item C.12.c (value of the securities on loan) of Form N–PORT.

[214] *See* Item B.1 of Form N–PORT (net assets); Item C.6.f of Form N–CEN (monthly average value of securities on loan).

[215] *See* State Street Comment Letter; BlackRock Comment Letter; RMA Comment Letter.

[216] *See* State Street Comment Letter; RMA Comment Letter.

[217] *See supra* footnote 192 and accompanying text.

of this requirement would hinder the ability of Commission staff as well as investors and other potential users of this information to use the data on Form N–PORT as discussed above.[218] Furthermore, as indicated above, Form N–PORT instructs funds to report LEIs ''if any'' for borrowers, and thus already acknowledges and makes accommodations for the fact that LEI identifiers may not be available in some contexts as LEIs are continuing to be integrated into the global financial system.

e. Return Information

As proposed, we are requiring funds to provide monthly total returns for each of the preceding three months.[219] If the fund is a multiple class fund, it will report returns for each class.[220] Funds with multiple classes will also report their class identification numbers.[221] Funds will calculate returns using the same standardized formulas required for calculation of returns as reported in the performance table contained in the risk-return summary of the fund's prospectus and in fund sales materials.[222]

We are requiring this information on Form N–PORT because we believe it will be useful to have such information in a structured format to facilitate comparisons across funds. For example, analysis of return information over time among similar funds could reveal outliers that might merit further inquiry by Commission staff, and this type of analysis can be done much more efficiently and timely when the information is reported in a structured format. Additionally, performance that appears to be inconsistent with a fund's investment strategy or other benchmarks can form a basis for further inquiry and monitoring.[223] Although mutual funds currently report certain return information in a structured format periodically as part of their risk/return summaries, we believe that having return information reported on a monthly basis by all registered funds will allow the Commission staff to more easily and effectively monitor the fund industry as a whole, as described above.[224]

Because only quarter-end reports on Form N–PORT will be made public, we are requiring, as proposed, that funds provide return information for each of the preceding three months.[225] This rolling three month requirement will provide investors and other potential users with monthly return information, so that they will have access to each month's return on a quarterly basis. Otherwise, we are concerned that investors might potentially confuse the month's disclosed return as representing the return for the full quarter.

Commenters had mixed reactions regarding the reporting of monthly total returns. Several commenters expressed concern that reporting three months of returns could cause investors to unduly focus on short-term results and recommended that returns for longer periods of time be reported instead.[226] One commenter recommended that funds should report only a single month of returns in order to lower compliance costs and because investors are likely to use other sources (such as fund or third-party Web sites) to find return information rather than Form N–PORT.[227] Another commenter agreed with our proposed approach of requiring funds to report total returns as opposed to gross returns, noted that monthly fund performance data is already generally publicly available, and concluded that the quarterly public release of monthly performance data reported on Form N–PORT would result in the release of information that had already been made available to the public.[228]

We are adopting this requirement as proposed. As acknowledged by commenters, many funds and market data providers already generally disclose monthly performance data to investors, and daily performance data is often available as well.[229] The greater granularity provided by monthly data will enhance the ability of Commission staff to use return information to reveal outliers and detect performance that appears to be inconsistent with a fund's investment strategy or other benchmarks, as discussed above. More generally, frequent disclosure of performance data over shorter time periods can better capture variations in performance that would not be apparent with returns reported over longer time periods.

Accordingly, we are not persuaded by commenters' recommendations to require funds to report return information on Form N–PORT over longer time horizons, as opposed to on a monthly basis. We are similarly not persuaded by arguments that reporting fund performance data for three months will ''[provide no] direct or indirect value to [fund] investors'' as opposed to reporting one month of fund performance information.[230] As discussed above, although Form N–PORT is primarily designed to assist the Commission and its staff, we believe that investors and other potential users may benefit from the information reported on Form N–PORT as well, either by analyzing Form N–PORT directly or through analyses prepared by third-party service providers. Because Form N–PORT will be available on a quarterly basis but will provide month-end return information, we remain

[218] *See supra* footnote 68 and accompanying and following text.

[219] *See* Item B.5.a of Form N–PORT.

[220] *See id.*

[221] *See* Item B.5.b of Form N–PORT.

[222] *See* Item 26(b)(1) of Form N–1A; Instruction 13 to Item 4 of Form N–2; Item 26(b)(i) of Form N–3. Return information reported on Form N–PORT will reflect swing pricing for funds that elect to swing price pursuant to the contemporaneous release we are adopting today regarding swing pricing for open-end funds. *See* Swing Pricing Adopting Release, *supra* footnote 9., at section II.A.3.g.

[223] Similar risk analytics were used in the Commission's Aberrational Performance Inquiry, an initiative by the Division of Enforcement's Asset Management Unit to identify hedge funds with suspicious returns. *See, e.g.,* SEC, SEC Charges Hedge Fund Adviser and Two Executives with Fraud in Continuing Probe of Suspicious Fund Performance, Press Release: 2012–209 (Oct. 17, 2012), *available at http://www.sec.gov/News/Press Release/Detail/PressRelease/1365171485332.*

[224] *See generally* Interactive Data for Mutual Fund Risk/Return Summary, Investment Company Act Release No. 28617 (Feb. 11, 2009) [74 FR 7748 (Feb. 19, 2009)] (requiring funds to submit to the Commission a structured data file for any registration statement or post-effective amendment on Form N–1A that includes or amends information in Form N–1A's risk/return summary); SEC, Interactive Data and Mutual Fund Risk/Return Summaries, *available at https://www.sec.gov/spotlight/xbrl/mutual-funds.shtml.*

[225] *See* Item B.5.a of Form N–PORT. Although generally only information reported on Form N–PORT for the third month of each fund's fiscal quarter will be publicly available, the concerns associated with more frequent public disclosure are related to the disclosure of portfolio holdings information and will not apply to the disclosure of fund return information. *See generally* footnote 1305 and accompanying and following text (discussing the risks of predatory trading practices such as front-running and the ability of non-investors to reverse engineer and copycat fund's investment strategies).

[226] *See* CRMC Comment Letter (monthly return information could cause investors to focus on short-term results and therefore should not be publicly reported or, in the alternative, should be reported together with fund level long-term results); Wells Fargo Comment Letter (funds should provide returns for a rolling 12-month period as of the end of each month); Dreyfus Comment Letter (short-term performance can mislead investors); SIFMA Comment Letter I (monthly return information should not be made public or, in the alternative, should be disclosed annually on Form N–CEN).

[227] *See* Comment Letter of Confluence Technologies, Inc. (Aug. 11, 2015) (''Confluence Comment Letter'').

[228] *See* Morningstar Comment Letter.

[229] *See, e.g.,* Morningstar Comment Letter (Morningstar's monthly performance data, as well as most of the industry's data, is generally made available on investor-facing Web sites by the third business day after month end. Daily performance data is also provided for 99.6% of open-end investment companies by 9 p.m. EST.); SIFMA Comment Letter I (certain funds make monthly returns available on their Web sites).

[230] *See* Confluence Comment Letter.

concerned that investors might potentially confuse one month's returns as representing the fund's returns for the full quarter. For each of these reasons, we are requiring funds to report monthly return information for each of the preceding three months, as proposed.

We are also requiring, substantially as proposed, that funds report, for each of the preceding three months, monthly net realized gain (or loss) and net change in unrealized appreciation (or depreciation) attributable to derivatives for certain categories. We proposed that this information would be reported by asset category (*i.e.,* commodity contracts, credit contracts, equity contracts, etc.). We are modifying the proposal to require funds to report this information by both asset category and also by type of derivative instrument (*i.e.,* forward, future, option, swap, etc.).[231] This information will help the Commission staff, investors, and other potential users better understand how a fund is using derivatives in accomplishing its investment strategy and the impact of derivatives on the fund's returns. In order to provide a point of comparison, and as proposed, we are also requiring that funds report, for each of the last three months, monthly net realized gain (or loss) and net change in unrealized appreciation (or depreciation) for investments other than derivatives.[232]

Comments on this aspect of the proposal were mixed. Some commenters opposed the reporting requirement, stating that it would not provide a valuable reference point from which to assess whether the derivatives included in a fund's portfolio have contributed to returns, especially when derivatives are used for hedging purposes.[233] One commenter expressed general support for the derivatives reporting requirements in N–PORT, including this proposed requirement, stating that this information would, among other things, allow the Commission to better assess trends, given the potential risks associated with certain uses of derivatives.[234]

Several commenters, in response to a request for comment, recommended that the Commission require funds to report the monthly net realized gain (or loss) and net change in unrealized appreciation (or depreciation) attributable to derivatives by type of derivative instrument (*i.e.,* forward, future, option, swap, etc.), rather than by asset category (*i.e.,* commodity contracts, credit contracts, equity contracts, etc.). This is because funds typically report derivatives in their financial statements by type of derivative instrument rather than asset category. As a result, according to commenters, systems are currently aligned to capture and report this information by instrument type, whereas reporting information by asset category would require large changes to the existing accounting systems, which these commenters believed would involve costs that would not be justified by the resulting benefits.[235] Finally, some commenters believed that gains (or losses) and appreciation (or depreciation) attributable to derivatives should not be made public because such information would not be meaningful to investors and could potentially convey proprietary information about the fund's trading strategies that could be used for predatory trading or to reverse engineer the fund's investment strategy.[236]

We disagree with commenters questioning the utility of reporting gains (or losses) and appreciation (or depreciation) attributable to derivatives. We continue to believe that this information will help Commission staff, investors, and other potential users better understand how a fund is using derivatives in accomplishing its investment strategy and the impact of derivatives on the fund's returns. We recognize that providing this information by asset category is not how funds currently maintain this data in their systems and therefore will involve more systems changes and costs relative to providing this information by type of derivative instrument alone; however, we disagree that such information does not have a benefit that justifies this burden. Providing this information by asset category will be helpful in understanding the relationship between derivatives—and, as discussed further below, the types of derivative instruments—that provide exposure to a particular asset category and direct investments in the same asset category. For example, information attributable to equity derivatives contracts could be compared to returns attributable to direct investments in equities. Further, reporting returns by derivative instrument alone would not provide any information about the market risk factors that had caused the gain or loss.

Although we recognize that there will be some initial burden in modifying systems to provide information by asset category, we note that funds are currently already required to compile this information by asset category twice a year, pursuant to FASB Topic ASC 815.[237] While we understand from the comments that many funds currently compile this manually, we believe, based on staff experience, that such processes could be automated over time to facilitate the more frequent reporting. In particular, we note that Form N–PORT, as proposed and adopted, will separately require funds to categorize each derivative investment by asset category, which should reduce the incremental burden of providing return information by asset category.[238]

Additionally, after consideration of the comments, we are modifying this item from the proposal to require funds to report this information by type of derivative instrument within each asset category. We believe that providing both elements—asset category and derivative instrument type—will make this information more informative than by reporting by either asset category or instrument type in isolation. For example, consider a fund that uses derivatives in two asset categories (*e.g.,* equities and commodities) and two types of derivative instruments (*e.g.,* futures and options). If the asset category or instrument type were reported alone, users of the information would be unable to discern if the fund is deriving its returns by using equity options and commodity futures or equity futures and commodity options—or in what proportion. Reporting both pieces of information together allows the Commission, investors, and other users to determine from which category-type combination the fund is drawing (or hedging) its exposure. Further, knowing the instrument type in combination with asset category can be important for understanding the risks associated with obtaining exposure to a particular asset category because different derivative instruments can have different risks associated with them, such as different counterparty risk, or a linear risk profile (*e.g.* futures) versus a non-linear risk profile (*e.g.,* options). Additionally, having such information by instrument and asset category will be useful in understanding situations ranging from a market

[231] *See* Item B.5.c of Form N–PORT.

[232] *See* Item B.5.d of Form N–PORT.

[233] *See* Wells Fargo Comment Letter; Dreyfus Comment Letter.

[234] *See* CFA Comment Letter (additionally supporting disclosure of derivatives reporting on N–PORT to investors).

[235] *See* SIFMA Comment Letter I; ICI Comment Letter; MFA Comment Letter.

[236] *See* SIFMA Comment Letter I; MFA Comment Letter.

[237] *See* ASC 815 (Derivatives and Hedging).

[238] *See* Item C.4.a of Form N–PORT (requiring reporting of asset category of each investment among enumerated categories, including derivative-commodity, derivative-credit, derivative-equity, derivative-foreign exchange, derivative-interest rate, derivatives-other).

disruption for a particular type of derivative instrument (*e.g.,* a market disruption affecting a futures market) to a price shock impacting a particular asset category (*e.g.,* commodities). Consequently, we believe that requiring such information by both derivative instrument type and asset category will provide more complete information relative to providing either type in isolation to Commission staff, investors, and other potential users seeking to better understand how a fund is using derivatives in accomplishing its investment strategy and the impact of derivatives on the fund's returns.

Moreover, based on staff review of fund financial statements, we have observed that in compliance with the requirements of FASB Topic ASC 815, upon which this reporting requirement was based, funds generally show gains (losses) and appreciation (depreciation) in tabular format by both asset category and type of derivative instrument. Because, as noted by commenters, many funds already have systems in place to classify derivatives by instrument type, we believe that requiring such information to be reported on Form N–PORT along with asset category will not add a significant incremental burden relative to providing, as proposed, such information by asset category alone.[239]

Regarding comments concerning public disclosure of the information, we disagree with the commenter that argued such disclosures could reveal information that could be used for reverse engineering or predatory trading.[240] We are not aware of this information being used for such purposes, nor did the commenter explain how the disclosure of such information could reveal information about the fund's trading strategies that would allow traders to ''front-run'' or ''copycat'' the fund. Separately, we note that the information will be delayed in terms of public disclosure and that the return information will be aggregated, which should mitigate the possibility that such information could be used by predatory traders to the detriment of the fund.

Likewise, we disagree with the commenter that asserted such information would not be meaningful to investors.[241] The Commission believes, and one commenter agreed, that this information will be useful for identifying funds in which a significant amount of gains and losses came from exposures to derivative contracts, and will allow Commission staff, investors, and other potential users to better understand the relationship between the type of derivative instrument and asset category in terms of the impact on the fund's returns. Furthermore, we are not persuaded by commenters' arguments that such information would be misleading to investors if made publicly available. As discussed above, funds will also be reporting similar information attributable to investments other than derivatives, which we believe could help investors compare returns attributable to derivatives with returns attributable to a fund's other investments. Furthermore, although gains (or losses) and appreciation (or depreciation) from derivatives may have different implications depending on whether derivatives are being used for investment purposes or as a hedge for other positions in the portfolio, disclosure of such information should help improve the ability of investors to understand and assess the use of derivatives in funds' investment strategies.

f. Flow Information

As proposed, Form N–PORT will require funds to separately report, for each of the preceding three months, the total net asset value of: (1) Shares sold (including exchanges but excluding reinvestment of dividends and distributions); (2) shares sold in connection with reinvestments of dividends and distributions; and (3) shares redeemed or repurchased (including exchanges).[242] This information is similar to what is currently reported on Form N–SAR, and is generally to be reported subject to the same instructions that currently govern reporting of flow information on that form.[243] We are requiring this information on Form N–PORT because we believe that this information will be more helpful if reported on a monthly basis rather than retrospectively on an annual basis on Form N–CEN.

We believe that having flow information reported to us monthly will help us better monitor trends in the fund industry. For example, it could help us analyze types of funds that are becoming more popular among investors and areas of high growth in the industry. It could help us better examine investor behavior in response to market events. Finally, in combination with other information that will be reported on Form N–PORT regarding liquidity of fund positions pursuant to changes to Form N–PORT set forth in the Liquidity Adopting Release, which we are adopting today, flow information could also help us identify funds that might be at risk of experiencing liquidity stress due to increased redemptions.[244]

Commenters generally supported our proposed reporting requirements for monthly flow information.[245] However, many commenters noted that funds are generally unable to look through omnibus accounts to the underlying investors, and thus requested confirmation that flow information be reported on a net basis for shares of the fund held in omnibus accounts.[246] We agree with these commenters, and in response to these comments, Form N–PORT now includes a clarifying instruction to this effect.[247]

One commenter asked the Commission to mandate that transfer agents, distributors, or some other entity (*e.g.,* a central data repository) track omnibus flow information by type of underlying investor (*i.e.,* 401(k) plans/individual retirement accounts, pension funds, insurance companies, other institutional investors, and retail investors).[248] The commenter suggested that this information be provided to fund managers, who would then report

[239] *See* SIFMA Comment Letter I; ICI Comment Letter.

[240] *See* SIFMA Comment Letter I.

[241] *Id.*

[242] *See* Item B.6 of Form N–PORT.

[243] Similar to Form N–SAR, Form N–PORT will instruct funds to report amounts after any front-end sales loads had been deducted and before any deferred or contingent deferred sales loads or charges had been deducted. Shares sold will include shares sold by the fund to a registered UIT. Funds will also include as shares sold any transaction in which the fund acquired the assets of another investment company or of a personal holding company in exchange for its own shares. Funds will include as shares redeemed any transaction in which the fund liquidated all or part of its assets. Exchanges will be defined as the redemption or repurchase of shares of one fund or series and the investment of all or part of the proceeds in shares of another fund or series in the same family of investment companies. Form N–PORT will also include a new clarifying instruction, providing that if shares of the fund are held in omnibus accounts, funds will use net sales or redemptions/repurchases from such omnibus accounts for purposes of calculating the fund's sales, redemptions, and repurchases. *Cf.* Item B.6 of Form N–PORT and Item 28 of Form N–SAR (requiring reporting of monthly sales and repurchases of the Registrant's/Series' shares for the past six months).

[244] *See* Liquidity Adopting Release, *supra* footnote 9.

[245] *See* ICI Comment Letter; SIFMA Comment Letter I; Wells Fargo Comment Letter; BlackRock Comment Letter.

[246] *See* State Street Comment Letter; MFS Comment Letter; Wells Fargo Comment Letter; SIFMA Comment Letter I; ICI Comment Letter; Morningstar Comment Letter. *But see* BlackRock Comment Letter (recommending that the Commission mandate that transfer agents, distributors, or some other entity aggregate information by investor types redeeming from and subscribing to funds so that funds could look through omnibus accounts and report more detailed flow information).

[247] *See supra* footnote 243.

[248] *See* BlackRock Comment Letter.

this information on Form N–PORT. The commenter concluded that this information would help funds and others to create predictive models to better understand potential future redemptions, which in turn would help funds with liquidity risk management.

We acknowledge the merits of helping funds better manage potential redemption risks, and further note that better transparency into intermediary omnibus accounts by each type of underlying investor would help the Commission better understand subscription and redemption activity and how it varies across distribution platforms and market environments. However, the commenter's suggestion is beyond the scope of this rulemaking, although we note that the Commission is currently seeking a range of input with respect to omnibus intermediary account relationships, including through the recently issued advance notice of proposed rulemaking and concept release with respect to transfer agent regulations, which seeks comment in various areas including the processing of book entry securities, broker-dealer recordkeeping for beneficial owners, and the role of transfer agents to mutual funds.[249]

Another commenter recommended that monthly flow information be reported for only the last month of the reporting period, rather than for the three prior months, on the grounds that reporting this information for the three prior months would have ''no direct value to investors.'' [250] We are not persuaded by this suggestion. As discussed above, although Form N–PORT is primarily designed to assist the Commission and its staff, we believe that investors and other potential users may benefit from the information reported on Form N–PORT as well, either by analyzing Form N–PORT directly or through analyses prepared by third-party service providers. Unlike other information reported on Form N–PORT, which generally represents a snapshot ''as of'' a certain date, flows are calculated over a period of time. Because information reported on Form N–PORT will be publicly available on a quarterly basis but will provide monthly flow information, we are concerned that investors might potentially believe that one month's flows represent the fund's flows for the full quarter. For that reason, we are requiring funds to report monthly flow information for each of the preceding three months, as proposed.

g. Schedule of Portfolio Investments

Part C of Form N–PORT will require, as proposed, funds to report certain information on an investment-by-investment basis about each investment held by the fund and its consolidated subsidiaries as of the close of the preceding month. As proposed, funds will respond to certain questions that will apply to all investments (*i.e.,* the investment's identification, amount, payoff profile, asset and issuer type, country of investment or issuer, fair value level, and whether the investment was a restricted security). As proposed, funds will also respond, as applicable, to additional questions related to specific types of investments (*i.e.,* debt securities, repurchase and reverse repurchase agreements, derivatives, and securities lending).

Also, as proposed, funds will have the option of identifying any investments that are ''miscellaneous securities.'' [251] Unless otherwise indicated, funds will not report information related to those investments in Part C, but will instead report such information in Part D.[252]

i. Information for All Investments

Form N–PORT will require, as proposed, funds to report certain basic information about each investment held by the fund and its consolidated subsidiaries. In particular, funds will report the name of the issuer and title of issue or description of the investment, as they are currently required to do on their reported schedules of investments.[253] To facilitate analysis of fund portfolios, it is important for Commission staff to be able to identify individual portfolio securities, as well as the reference instruments of derivative investments through the use of an identifying code or number, which is not currently required to be reported on the schedule of investments. Fund shareholders and potential investors that are analyzing fund portfolios or investments across funds could similarly benefit from the clear identification of a fund's portfolio securities across funds. The staff has found that some securities reported by funds lack a securities identifier, and this absence has reduced the usefulness of other information reported.

To address this issue, and as proposed, we are requiring that funds report additional information about the issuer and the security. Funds will report certain securities identifiers, if available.[254] For example, for security-based swaps, funds may report the product ID if a product ID for that contract is used by one or more security-based swap data repositories.[255] Identifiers for other types of derivatives may also be used, if available.[256] If a unique identifier is reported, funds will also indicate the type of identifier used.[257] Such an identifier might be assigned by a security-based swap data repository or be internally generated by the fund or provided by a third party, but should be consistently used across the fund's filings for reporting that investment so that the Commission, investors, and other potential users of the information can track the investment from report to report.

We received comments regarding the use of unique identifiers generally, and LEI in particular. As discussed above, many commenters expressed support for the use of LEI for identification of funds, registrants, and counterparties.[258] However, one commenter asserted that a portfolio-based approach, including data on counterparties to whom funds have greatest exposures, would enable adequate monitoring of potential threats better than obtaining counterparty LEI and specific information for each bilateral transaction.[259] Other commenters expressed concerns regarding the ability of funds to verify the accuracy of LEIs provided by third-parties.[260] Another commenter suggested that each security held by a fund should be identified by ticker and CUSIP, or ISIN and SEDOL for foreign securities, together with the primary exchange where the security is traded at the date of the filing.[261] Another commenter urged the Commission not to mandate the use of certain unique identifiers for public and nonpublic funds, such as the Financial

[249] *See* Transfer Agent Regulations Concept Release, Securities Exchange Act Release No. 76743 (Dec. 22, 2015) [80 FR 81948 (Dec. 31, 2015)].

[250] *See* Confluence Comment Letter.

[251] *See* Part D of Form N–PORT. *See also supra* footnote 99 and accompanying text.

[252] *See infra* footnote 419 and accompanying and following text.

[253] *See* Item C.1 of Form N–PORT.

[254] *See* Item C.1.b, Item C.1.d, and Item C.1.e of Form N–PORT (requiring reporting of identifiers such as LEI of the issuer, CUSIP, ISIN, ticker or other unique identifier).

[255] *See* 17 CFR 242.900(aa) and (bb) (defining ''product'' and ''product ID,'' respectively). *See also* Regulation SBSR Adopting Release, *supra* footnote 61 (discussing use of product IDs under Regulation SBSR).

[256] *See, e.g.,* CFTC, Q&A—Swap Data Recordkeeping and Reporting Requirements, *available at http://www.cftc.gov/ucm/groups/public/@newsroom/documents/file/sdrr_qa.pdf* (discussing product identifiers for swaps).

[257] *See* Item C.1.e.iii of Form N–PORT.

[258] *See* footnote 64 and accompanying text.

[259] *See* CFA Comment Letter.

[260] *See* Oppenheimer Comment Letter; MFS Comment Letter; ICI Comment Letter.

[261] *See* Russ Wermers Comment Letter.

Instrumental Global Identifier (''FIGI'').[262]

As discussed above, we are adopting a portfolio-based approach in the securities lending context, including data on counterparties to whom funds have greatest exposures. However, we believe that the uniform reporting of LEIs by fund series and registrants, as well as securities issuers and fund counterparties, will further enhance our monitoring and analytical capabilities by providing a consistent means of identification that will facilitate the linkage of data reported on Form N–PORT with data from other filings and sources that is or will be reported elsewhere. We acknowledge that LEIs have not yet been fully integrated into the global financial system, and accordingly the form contains a qualifier that an LEI be reported, ''if any.'' We believe, however, that LEIs will become more widely used by regulators and the financial industry and note that our rulemaking will not require funds to report LEIs, if any, until 18 months following the effective date.

However, we understand that funds will in some instances be relying upon service providers and other third-parties who will be providing funds with LEI information to be reported to the Commission and publicly disclosed to investors and other possible users, and we understand that funds may find it difficult to verify such information other than to confirm that it has been generated and reported consistently with the methodologies of the fund's service providers. As discussed above, the fund may generally use its own methodology or the methodology of its service provider, so long as the methodology is consistently applied and is consistent with the way the fund reports internally and to current and prospective investors.[263] We do not believe, as some commenters suggested, that it is necessary to require specific alternative unique identifiers for securities or entities at this time, other than those identified in Form N–PORT, because we believe that allowing funds to select another identifier in the absence of an ISIN, CUSIP, or ticker gives funds appropriate flexibility in identifying such investments.

We are also requiring, as proposed, funds to report the amount of each investment as of the end of the reporting period, as is currently required under Regulation S–X.[264] Funds will report the number of units or principal amount for each investment, as well as the value of each investment at the close of the period, and the percentage value of each investment when compared to the net assets of the fund.[265] Funds will also report the currency in which the investment was denominated, and, if not denominated in U.S. dollars, the exchange rate used to calculate value.[266] We received no comments on this aspect of our proposal.

Also as proposed, we are requiring funds to report the payoff profile of the investment, indicating whether the investment is held long, short, or N/A, which will serve the same purpose as the current requirement in Regulation S–X to disclose investments sold short.[267] Funds will respond N/A for derivatives and will respond to relevant questions that indicate the payoff profile of each derivative in the derivatives portion of the form. These disclosures will identify short positions in investments held by funds. We received no comments on these disclosure requirements.

As proposed, funds will also report the asset type for the investment: short-term investment vehicle (*e.g.,* money market fund, liquidity pool, or other cash management vehicle), repurchase agreement, equity-common, equity-preferred, debt, derivative-commodity, derivative-credit, derivative-equity, derivative-foreign exchange, derivative-interest rate, structured note, loan, ABS-mortgage backed security, ABS-asset backed commercial paper, ABS-collateralized bond/debt obligation, ABS-other, commodity, real estate, other) and issuer type (corporate, U.S. Treasury, U.S. government agency, U.S. government sponsored entity, municipal, non-U.S. sovereign, private fund, registered fund, other).[268] We are also adopting a modification from the proposal to add a ''derivatives-other'' category to encompass derivatives that do not fall into the other categories of derivatives enumerated in this Item, so as to allow Commission staff, investors, and other users of the information reported on Form N–PORT to more easily aggregate the fund's derivative investments. We have based these categories in part on staff review of how funds currently categorize investments on their schedule of investments, and in part on the categories of investments required to be reported by private funds on Form PF.[269] These disclosures will allow the Commission, investors, and other potential users to assess the composition of fund portfolios in terms of asset and issuer types and also facilitate comparisons among similar types of investments.

One commenter recommended the use of a well-defined taxonomy for asset and issuer type, such as ISO 10962, or some truncation of the six-character ISO Classification of Financial Instruments code.[270] Although we acknowledge there could be benefits for data aggregation and analysis to using an existing standardized taxonomy for users of the form, Form N–PORT is primarily designed to meet the data needs of the Commission and its staff. We have drafted the asset categories in Form N–PORT specifically to address the Commission staff's data needs, whereas many of the existing taxonomies include extraneous information in some areas or insufficient information in other areas. For these reasons, we are adopting the asset categories on Form N–PORT largely as proposed.

Funds will also report, as proposed, for each investment, whether the investment is a restricted security.[271]

---

[262] *See* State Street Comment Letter (asserting that there are few third-party providers who currently use such unique identifiers and concluding that requiring the usage of such unique identifiers would give those providers an unfair competitive advantage relative to the rest of the industry). Information about the FIGI is available on the Object Management Group's Web site, a not-for-profit technology standards consortium. *See generally* Object Management Group, Documents Associated with Financial Industry Global Identifier (FIGI) Version 1.0—Beta 1 (Sept. 2014), *available at http://www.omg.org/spec/FIGI/1.0/Beta1/.*

[263] *See* General Instruction G of Form N–PORT (''Funds may respond to this Form using their own internal methodologies and the conventions of their service providers, provided the information is consistent with information that they report internally and to current and prospective investors. However, the methodologies and conventions must be consistently applied and the Fund's responses must be consistent with any instructions or other guidance relating to this Form.'').

[264] *See* Item C.2 of Form N–PORT. *See* rule 12–12 of Regulation S–X.

[265] *See* Item C.2.a–Item C.2.d of Form N–PORT. For derivatives, as appropriate, funds will provide the number of contracts.

[266] *See* Item C.2.b and Item C.2.c of Form N–PORT.

[267] *See* Item C.3 of Form N–PORT. *See* rule 12–12A of Regulation S–X [17 CFR 210.12–12A].

[268] *See* Item C.4.a and Item C.4.b of Form N–PORT.

[269] *See, e.g.,* Item 26 of Form PF (requiring filers to report exposures by asset type); Item 1 of Form N–Q (requiring filers to report the schedules of investments required by sections 210.12–12 to 12–14 of Regulation S–X); Item 1 of Form N–CSR (requiring filers to attach a copy of the report transmitted to stockholders pursuant to rule 30e–1 under the Act).

[270] *See* Morningstar Comment Letter. *See generally* International Standards Organization, Securities and related financial instruments—Classification of financial instruments, ISO 10962:2015 (July 17, 2015), *available at http://www.iso.org/iso/catalogue_detail.htm?csnumber=44799.*

[271] *See* Item C.6 of Form N–PORT. ''Restricted security'' will have the definition provided in rule 144(a)(3) under the Securities Act [17 CFR 230.144(a)(3)]. *See* General Instruction E of Form N–PORT. *See also* amended rule 12–13, nn. 6 and 8 of Regulation S–X, which will require similar disclosures in funds' schedules of investments to

This disclosure will provide investors and the Commission staff with more information about liquidity risks associated with the fund's investments.

Also as proposed, each fund will report whether the investment is categorized by the fund as a Level 1, Level 2, or Level 3 fair value measurement in the fair value hierarchy under GAAP.[272] Commission staff could use this information to identify and monitor investments that may be more susceptible to increased valuation risk and identify potential outliers that warrant additional monitoring or inquiry.[273] In addition, Commission staff will be better able to identify anomalies in reported data by aggregating all fund investments industry-wide into the various level categories. These disclosures will also provide investors and the Commission staff with more information about which of the fund's investments are more actively traded, and which investments are less actively traded and thus potentially less liquid. Currently, funds are required to categorize the fair value measurement of each investment in the fair value hierarchy in their financial statements.[274] We believe that based on this requirement, funds should have pricing information available to determine the categorization of their portfolio investments as Level 1, Level 2, or Level 3 within the fair value hierarchy.

Several commenters supported this aspect of our proposal, noting it would enhance portfolio transparency and allow investors, plans, and fund fiduciaries to more accurately evaluate liquidity and valuation risks in funds.[275] Another commenter asserted that our proposal to report the fair value level measurement for each individual investment held by the fund would represent no incremental burden relative to the current burden of reporting the total value of each fair value level category, because reporting systems should already contain the necessary information at the individual security level.[276]

However, one commenter cautioned that different fund families currently employ different accounting practices when classifying similar investments into fair value level hierarchies, and warned that the Commission staff should reconsider expectations that disclosure of these fair value levels would create comparability among different funds with regards to fair value level hierarchy classifications.[277] Another commenter echoed the sentiment that fair value level determinations reported by funds would likely differ from one fund group to another, and concluded that these determinations should be disclosed in aggregate by fair value level hierarchy classification as opposed to on an individual security basis.[278]

Several commenters also recommended that additional related information be reported, such as the uncertainty of valuation for thinly-traded securities and identification of the primary pricing sources used in determining the fair value level hierarchy of the investments.[279] Lastly, one commenter noted that certain funds of funds' investments may not have fair value level hierarchies assigned to them pursuant to FASB Accounting Standards Update 2015–07, and requested that Form N–PORT be revised to allow funds to report ''null'' to account for such investments.[280]

In response to the last comment, we are revising Form N–PORT to allow funds to report ''N/A'' to this item if an investment does not have a fair value level hierarchy assigned to it pursuant to FASB Accounting Standards Update 2015–07. This revision will allow funds to report fair value hierarchy information consistently across Form N–PORT and their shareholder reports.[281]

More generally, we acknowledge that there may be differences among fair value level hierarchy classifications between funds, even for the same investments, but believe that reporting of this information could still help Commission staff, investors, and other potential users to identify and monitor investments that may be more susceptible to increased valuation risk and identify potential outliers that warrant additional monitoring or inquiry.

We decline to add the additional information suggested by commenters related to valuation, such as more information regarding thinly-traded securities or position-level information on price sources. We believe that, unlike fair value hierarchy information, which funds already need to track for reporting purposes, this information is not currently reported by funds in any form and could be burdensome to begin reporting relative to the additional value it may provide. Accordingly, we decline to revise Form N–PORT to require funds to report this additional information.

As proposed, Form N–PORT would have required funds to report the country that corresponds to the country of investment or issuer based on the concentrations of the investment's risk and economic exposure, and, if different, the country in which the issuer is organized. As adopted, Form N–PORT will switch the sequence of those disclosures, thus requiring funds to report the country in which the issuer is organized and, if different, the country that corresponds to the country of investment or issuer based on the concentrations of the investment's risk and economic exposure.[282] These disclosures will provide the Commission staff with more information about country-specific exposures associated with the fund's investments. Specifically, the Commission believes that providing both the country based

identify securities that are restricted. *Cf.* footnote 290 and accompanying and following text.

[272] *See* ASC 820. An investment is categorized in the same level of the fair value hierarchy as the lowest level input that is significant to its fair value measurement. Level 1 inputs include quoted prices (unadjusted) for identical investments in an active market (*e.g.,* active exchange-traded equity securities). Level 2 inputs include other observable inputs, such as: (i) Quoted prices for similar securities in active markets; (ii) quoted prices for identical or similar securities in non-active markets; and (iii) pricing models whose inputs are observable or derived principally from or corroborated by observable market data through correlation or other means for substantially the full term of the security. Level 3 inputs are unobservable inputs. We are amending Regulation S–X to require that funds identify those investments whose value was determined using significant unobservable inputs. *See infra* section II.C.3.

[273] For a discussion of some of the challenges regulators may face with respect to Level 3 accounting, *see, e.g.,* Konstantin Milbradt, *Level 3 Assets: Booking Profits and Concealing Losses,* 25 Rev. Fin. Stud. 55–95 (2011).

[274] ASC 820–10–50–2 (Fair Value Measurement-Disclosure-General) requires for each class of assets and liabilities measured at fair value, the level of the fair value hierarchy within which the fair value measurements are categorized in their entirety (Level 1, 2, or 3).

[275] *See* Morningstar Comment Letter; Comment Letter of Harvest Investments, Ltd. (Aug. 11, 2015) (''Harvest Comment Letter'').

[276] *See* State Street Comment Letter.

[277] *See* Interactive Data Comment Letter.

[278] *See* Wells Fargo Comment Letter.

[279] *See* Comment Letter of Markit (Aug. 11, 2015) (''Markit Comment Letter'') (for thinly-traded securities or investments in assets with thinly-traded underlying assets, consider a disclosure indicating the uncertainty of valuation); Harvest Comment Letter (information about primary pricing sources should be made available, and third-party pricing services used should be disclosed on an individual security basis).

[280] *See* State Street Comment Letter.

[281] *See* Item C.8 of Form N–PORT.

[282] *See* Item C.5 of Form N–PORT. Also, as discussed further below, we are making the country of risk and economic exposure a nonpublic field in all Form N–PORT filings. Under the proposal, this would have meant that funds would be publicly reporting nothing if the country of risk and economic exposure were the same as the country in which the issuer is organized, because in that situation funds would only be reporting the country of risk and economic exposure, which will be nonpublic in Form N–PORT. Accordingly, we are requiring funds to report the country in which the issuer is organized as the default, and, only if different, to also report the country of risk and economic exposure.

on concentrations of risk and economic exposure and also the country in which the issuer is organized will assist the Commission in understanding the country-specific risks associated with such investments. For example, knowing the country of risk and economic exposure, including the country in which an issuer is organized, is important for understanding the effect of such investments in a portfolio when that country might be going through times of economic stress (*e.g.,* monetary controls or sanctions) or political unrest or other emergency circumstances.

We received mixed comments on this aspect of our proposal. Commenters generally supported the requirement to report the country in which the issuer is organized.[283] Commenters generally viewed the determination of country of risk as inherently subjective, but differed in terms of whether the Commission should provide a particular standard for determining the country of risk or whether the Commission should permit funds to report differing information for the same securities as a result of the existing diversity of approaches currently used by funds and service providers.[284] Commenters also disagreed regarding whether this information should be publicly reported or even reported at all.[285]

Partly in response to these concerns, and as discussed above, we are revising Form N–PORT to include instructions clarifying that in reporting information on Form N–PORT, funds may generally use their own internal methodologies and the conventions of their service providers, provided that the information they report is consistent with information that they report elsewhere (*e.g.,* the fund's schedule of portfolio holdings as prepared pursuant to Regulation S–X).[286] For example, we understand that for issuers with operations in multiple countries, some funds commonly use the issuer's country of domicile for purposes of internal recordkeeping and analysis and may choose to do the same for reporting country of risk on Form N–PORT, whereas funds that utilize other methodologies may prefer to rely upon their own chosen methodologies instead. Additionally, as discussed further below in section II.A.4, we are making the country of risk and economic exposure a nonpublic field in all Form N–PORT filings.[287]

More generally, several commenters sought confirmation that funds would not be required to look through any entities in its portfolio holdings except as specifically instructed in Form N–PORT.[288] As discussed above, Form N–PORT requires funds to disclose information about ''each investment held by the Fund and its consolidated subsidiaries.'' [289] Thus, Form N–PORT requires funds to report information about each underlying investment in a CFC, because CFCs are consolidated subsidiaries in funds' financial statements for reporting purposes.

The proposed form also would have required funds to identify each investment that is ''illiquid.'' [290] We note that the Liquidity Adopting Release, which we are adopting today, addresses liquidity risk management programs for open-end funds, which, among other things, requires information about the liquidity of fund investments to be reported on Form N–PORT.[291]

ii. Debt Securities

In addition to the information required above, as proposed, Form N–PORT would require additional information about each debt security held by the fund in order to gain transparency into the payment flows and potential convertibility into equity of such investments, as such information can be used to better understand the payoff profile and credit risk of these investments. First, funds would report the maturity date and coupon (reporting the annualized interest rate and indicating whether fixed, floating, variable, or none).[292]

While commenters were generally supportive of this requirement, they requested that we provide clear standards for reporting or more granular classifications.[293] For example, commenters noted that a more granular classification scheme for debt instruments is useful for investors in understanding the nature of the obligation supporting the instrument, such as issuers, security type, guarantors, and the investment's structure.[294] However, while more granular classifications could be useful to investors, we do not believe that the additional information would be justified in light of the burdens imposed because we believe that the classification being adopted provides sufficient detail to allow the staff, investors, and other potential users, to understand the nature of the fund investments. As a result, we are adopting this requirement as proposed.[295] Another commenter recommended that we consider a minimum reporting threshold of 10% of

[283] *See, e.g.,* SIFMA Comment Letter I; Dreyfus Comment Letter; Morningstar Comment Letter.

[284] *See, e.g.,* Wells Fargo Comment Letter (the Commission should include guidance and instructions for determining the country with the greatest concentration of risks and economic exposure in order to achieve consistent reporting across funds); Interactive Data Comment Letter (the Commission should support the prevailing diversity of approaches towards identifying country of risk as a necessary consequence of such reporting); SIFMA Comment Letter I (the Commission should either limit the disclosure requirement to country of issuer organization or else clarify that funds may use classifications generated by existing methodologies or available service providers); ICI Comment Letter (it is important for funds to have the flexibility to make these determinations using their own good faith judgment).

[285] *See, e.g.,* Interactive Data Comment Letter (supporting the disclosure of country of risk); Schwab Comment Letter (public disclosure may lead to investor confusion); Fidelity Comment Letter (the Commission should require non-public disclosure of this information until it is standardized); Morningstar Comment Letter (opposing the reporting of country of risk to the extent this information is proprietary and subjective, but supporting country of issuance on the grounds that it is more objective).

[286] *See* General Instruction G of Form N–PORT (''Funds may respond to this Form using their own internal methodologies and the conventions of their service providers, provided the information is consistent with information that they report internally and to current and prospective investors. However, the methodologies and conventions must be consistently applied and the Fund's responses must be consistent with any instructions or other guidance relating to this Form.''). *See also supra* footnote 77 and accompanying and following text.

[287] *See infra* footnote 515 and accompanying and following text.

[288] *See* Invesco Comment Letter; Schwab Comment Letter; CRMC Comment Letter; SIFMA Comment Letter I.

[289] *See* Part C of Form N–PORT (''For each investment held by the Fund and its consolidated subsidiaries, disclose the information requested in Part C.'').

[290] As proposed, Form N–PORT would have defined ''illiquid asset'' as ''an asset that cannot be sold or disposed of by the Fund in the ordinary course of business within seven calendar days, at approximately the value ascribed to it by the Fund.'' This definition is the same definition used in the liquidity guidance issued by the Commission for open-end funds. *See* Revisions of Guidelines to Form N–1A, Investment Company Act Release No. 18612 (Mar. 12, 1992) [57 FR 9829 (Mar. 20, 1992)] (''1992 Release'').

[291] *See* Liquidity Adopting Release, *supra* footnote 9.

[292] *See* Item C.9.a and Item C.9.b of proposed Form N–PORT.

[293] *See* SIFMA Comment Letter I (supporting all required information with the exception of the disclosures relating to securities in defaults and arrears); Wells Fargo Comment Letter; Interactive Data Comment Letter (''In general, we believe that a more granular classification scheme for debt instruments is useful for investors in understanding the nature of the obligation supporting the instrument''); State Street Comment Letter; Morningstar Comment Letter.

[294] *See* Interactive Data Comment Letter (additional disclosures should include classification of debt securities (*e.g.,* corporate bonds, municipal securities), bond insurance, conduit municipal filings, letters of credit, and identification of debt ranking); State Street Comment Letter (additional disclosures should include issuer, security type, security structure, guarantor, country, sector, and rating).

[295] *See* Item C.9.a and Item C.9.b of Form N–PORT.

exposure to each security type for additional security-specific reporting for debt securities, convertible securities, repurchase and reverse repurchase agreements, and derivatives.[296] However, as we discuss below in section II.A.2.g.iv, we believe that it is important that the Commission and investors have transparency in a fund's investments and do not believe that a reporting threshold for such instruments is appropriate, as it would not allow the Commission and investors to fully understand a fund's risks. Moreover, security-level reporting of a fund's underlying investments in such securities are currently reported in a fund's financial statements.[297]

As proposed, funds would also indicate whether the security is currently in default, whether interest payments for the security are in arrears or whether any coupon payments have been legally deferred by the issuer, as well as whether any portion of the interest is paid in kind.[298] Several commenters raised concerns regarding these disclosures. For example, one commenter argued that the public disclosure on default, arrears, or deferred coupon payments raises competitive concerns when a debt security is issued by a borrower that is a private company, as private borrowers may avoid registered funds in order to limit public disclosure if the company becomes distressed.[299] The commenter noted that public disclosure that a borrower is or may be financially distressed could increase prepayment risk and be disruptive to the fund's or adviser's relationship with the borrower.[300] Moreover, this disclosure could also harm private issuers by disclosing their financial distress to vendors and key employees and customers.[301] While we recognize that the disclosure of a private issuer in distress could have a negative impact on the issuer, we believe that it is important that Commission staff have access to information relating to fund investments that are in default or arrears in order to monitor individual fund and industry risk. It is similarly important that fund's investors have access to this information so that they can make fully informed decisions regarding their investment. Moreover, default or arrears relating to a fund's investments in private issuer debt are already publicly available on a fund's quarterly financial statements.[302]

Another commenter recommended eliminating the requirements relating to whether a debt security is currently in default or any of the interest payments are in arrears or have been deferred.[303] The commenter noted that these items require a subjective legal analysis on an instrument-by-instrument basis, on which conclusions among funds may vary and thus would not provide meaningful comparable information.[304] For similar reasons, another commenter supported the proposal, but recommended that the Commission should establish a clear standard for designating when a security is deemed to be in arrears.[305] As we previously discussed, this type of analysis and public reporting is not new to funds, as they are required to report results in their financial statements and on their schedules of investments.[306] Rather than provide funds with a definition that may not be applicable in all situations, or inconsistent with their financial statement reporting, we believe that it is more appropriate to allow funds to continue to use their own methodology in responding to these items on Form N–PORT, subject to the limitations of General Instruction G.[307]

As we discuss in more detail in section II.C.3 below, commenters noted that in-kind payments where *the fund* elects to receive payments-in-kind (as opposed to cash) do not raise the same risks as *an issuer* that only makes in-kind payments, because such a scenario does not represent an issuer who may be in financial difficulties and cannot pay cash dividends, as opposed to an investor who merely chooses to receive in-kind dividends rather than cash.[308] We agree and are adding an additional clarifying clause to Item C.9.e that a fund should not designate interest as paid-in-kind if the fund has the option to elect an in-kind payment and has elected to be paid-in-kind [309]

Finally, we proposed to require additional information for convertible securities, to indicate whether the conversion is mandatory or contingent.[310] We also proposed to require funds to disclose for each convertible security: The conversion ratio; information about the asset into which the debt is convertible; and the delta, which is the ratio of the change in the value of the option to the change in the value of the asset into which the debt is convertible. This reflects the sensitivity of the debt's value to changes in the price of the asset into which the debt is convertible. For example, based upon staff experience, we believe that the risk and reward profiles for mandatory and contingent conversions vary considerably and, thus we proposed to require disclosure of the type of conversion in order to better understand these risks. Similarly, we proposed to require disclosure of the conversion ratio and information about the asset into which the debt is convertible. Furthermore, the proposed requirement to provide the delta was also proposed to be required for options, as discussed further below, because convertible securities have optionality.[311] For similar reasons discussed below regarding options, we expressed our belief that providing the delta for convertible securities is important to understand the extent of both the credit exposure of the debt portion of the convertible bond as well as the market price exposure relative to the underlying security into which it can be converted or exchanged.

We received several comments relating to the disclosures of convertible securities. One commenter requested that the securities be consistently reported across funds and include additional instructions for calculating delta.[312] Another commenter noted that calculating delta for convertible bonds using the Black-Scholes model, which is commonly used for calculating the delta for options would be impractical and therefore requested further clarification for calculating delta for convertible bonds.[313] As discussed above, while we believe that it is important to receive consistent reporting between funds, we have endeavored to limit burdens on funds, when possible. Thus, rather than provide prescriptive instructions for funds to calculate delta, General Instruction G to Form N–PORT now clarifies that funds may use their own

[296] *See* Wells Fargo Comment Letter.

[297] *See generally* Article 12 of Regulation S–X.

[298] *See* Item C.9.c through Item C.9.e of proposed Form N–PORT.

[299] *See* Simpson Thacher Comment Letter.

[300] *See id.*

[301] *See id.*

[302] *See* rule 12–12, n. 5 of Regulation S–X.

[303] SIFMA Comment Letter I.

[304] *Id.*

[305] *See* Wells Fargo Comment Letter.

[306] *See* rule 12–12, n. 5 of Regulation S–X.

[307] *See* General Instruction G of Form N–PORT; *see also supra* footnote 79 and accompanying test.

[308] *See* Comment Letter of American Institute of CPAs (Aug. 17, 2015) (''AICPA Comment Letter''); Comment Letter of PricewaterhouseCoopers LLP (Aug. 7, 2016) (''PwC Comment Letter''); *see also infra* footnote 651 and accompanying text.

[309] *See* Item C.9.e of Form N–PORT.

[310] *See* Item C.9.f of proposed Form N–PORT.

[311] *See* text accompanying and following footnote 384 (discussing information required for options, including delta).

[312] *See* State Street Comment Letter (reporting delta should be consistent, but should include the following attributes to define the approach, such as: Volatility used, actual volatility used in the calculation, and attributes such as mandatory convertible.).

[313] *See* Morningstar Comment Letter.

current methodology.[314] For example, based on staff experience, we understand that delta for some instruments could be calculated using certain formulas, such as Black-Scholes, while funds might calculate the delta for convertible bonds using a different calculation.[315] Such variations in calculation among funds, or even by the same funds with different types of investments, are permissible so long as the calculations are consistent with how the fund reports information internally and to its current and prospective investors.[316] However, we agree with the commenter that calculating delta for certain convertible securities, such as contingent convertible bonds, may not be possible. We are therefore adding the clarifying instruction to Item C.9.f.v to only provide delta if it is applicable to that security.[317]

Another commenter suggested that we eliminate the additional information proposed in Form N–PORT for convertible securities as they do not represent significant data points from which to assess risk.[318] We, however, believe that the proposed information will not only assist staff with understanding the risks to a fund or the fund industry, it will also be used to better understand fund investments, industry trends, and new and emerging risks. We continue to believe that the items required for convertible securities will be valuable information for the staff, investors, and other potential users. As a result, we are adopting Item C.9 as proposed, subject to the clarifications in Item C.9.e and C.9.f.v. discussed above.[319]

iii. Repurchase and Reverse Repurchase Agreements

As we proposed, and in addition to the information required above for all investments, Form N–PORT requires each fund to report additional information for each repurchase and reverse repurchase agreement held by the fund. The fund will report the category that reflects the transaction from the perspective of the fund (repurchase, reverse repurchase), whether the transaction is cleared by a central counterparty—and if so the name of the central counterparty—or if not the name and LEI (if any) of the over-the-counter counterparty, repurchase rate, whether the repurchase agreement is tri-party (to distinguish from bilateral transactions), and the maturity date.[320] Funds will also report the principal amount and value of collateral, as well as the category of investments that most closely represents the collateral.[321]

These disclosures will enhance the information currently reported regarding funds' use of repurchase agreements and reverse repurchase agreements. Information regarding repurchase agreements will be comparable to similar disclosures currently required to be made by money market funds on Form N–MFP. The categories used for reporting collateral will track the categories currently used to report tri-party repurchase agreement information to the Federal Reserve Bank of New York. We believe that conforming the categories that will be used in Form N–PORT to categories used in other reporting contexts will ease reporting burdens and enhance comparability.[322]

One commenter agreed with our proposed reporting, but recommended, without further elaboration, that reporting of collateral be done on the basis of aggregate security type rather than at the individual security level.[323] Another commenter noted that our proposed reporting would align not only with information reported on Form N–MFP and collected by the Federal Reserve, but also with information reported by fund companies operating globally and offering managed products within Europe.[324]

In contrast, another commenter asserted that funds should apply the same taxonomy when reporting collateral that would be used when reporting the fund's portfolio investments on Form N–PORT, which would result in a more granular disclosure of collateral.[325] Other commenters expressed concerns about public disclosure of this information on a transaction-by-transaction basis and suggested that this information be collected on a firm-by-firm basis instead or be nonpublic, due in part to counterparties' concerns about the disclosure of such information to the public, including their competitors.[326]

After considering these comments, we are adopting this requirement as proposed. As mentioned above, the information that funds will report is aligned with similar information publicly reported on Form N–MFP by money market funds, reported to the Federal Reserve by banks, and publicly reported by fund companies operating globally and offering managed products in Europe. Uniform reporting of this information under the common taxonomy that has already been developed and is being used by other financial institutions will help facilitate the linkage of data reported on Form N–PORT with data from other filings and sources. For these reasons, we are not persuaded by the suggestions of one commenter to require collateral to be reported on an aggregate level,[327] nor are we persuaded by the commenter who suggested that funds should apply the same taxonomy when reporting collateral that would be required when reporting the fund's portfolio investments on Form N–PORT,[328] which would result in data that would be incompatible with collateral data reported more broadly elsewhere.

We are also not persuaded by assertions by commenters that this type of information could reveal any strategies competitors could use to their advantage. As indicated above, such information is currently routinely publicly disclosed in other contexts, and commenters did not specify how additional disclosure on Form N–PORT could result in harm. More generally, using a different taxonomy for funds with regards to repurchase and reverse repurchase agreements or keeping such information nonpublic or making it available on only an aggregated basis would hinder the ability of Commission

[314] *See* General Instruction G of Form N–PORT; *see also supra* section II.A.2.a.

[315] *See* Morningstar Comment Letter.

[316] *See* General Instruction G of Form N–PORT.

[317] *See* Item C.9.f.v of Form N–PORT.

[318] Wells Fargo Comment Letter (eliminate requirements such as whether the conversion is mandatory or contingent, the conversion ratio, information about the asset into which the debt is convertible, and the delta).

[319] *See* Item C.9 of Form N–PORT.

[320] *See* Item C.10.a–Item C.10.e of Form N–PORT. For example, if the fund is engaged in a repurchase transaction in which it is the cash borrower and is transferring securities to the counterparty, the fund will report the transaction as a ''reverse repurchase agreement.''

[321] *See* Item C.10.f of Form N–PORT. Funds will report the category of investments that most closely represents the collateral, selected from among the following (asset-backed securities; agency collateralized mortgage obligations; agency debentures and agency strips; agency mortgage-backed securities; private label collateralized mortgage obligations; corporate debt securities; equities; money market; U.S. Treasuries (including strips); other instrument). If ''other instrument,'' funds will also include a brief description, including, if applicable, whether it is a collateralized debt obligation, municipal debt, whole loan, or international debt.

[322] *See* Money Market Fund Reform 2014 Release, *supra* footnote 33, at nn. 1515–1518 and accompanying text (discussing comment letter stating that the categories used to report collateral for tri-party repurchase agreements to the Federal Reserve Bank of New York would allow for regular and efficient comparison of current and historical risk factors regarding repurchase agreements on a standardized basis).

[323] *See* Wells Fargo Comment Letter.

[324] *See* Morningstar Comment Letter.

[325] See Interactive Data Comment Letter.

[326] *See* SIFMA Comment Letter I; CFA Comment Letter.

[327] *See* Wells Fargo Comment Letter.

[328] *See* Interactive Data Comment Letter.

staff as well as investors and other potential users of this information to use the data on Form N–PORT as discussed above.

iv. Derivatives

As discussed above and in the Proposing Release, the current reporting regime for derivatives has led to inconsistent approaches to reporting derivatives information and, in some cases, insufficient information concerning the terms and underlying reference assets of derivatives to allow the Commission or investors to understand the investment. Additionally, as discussed further below, for options, warrants, and certain convertible bonds, the Commission believes that it is important to have a measurement of ''delta,'' a measure not reported in the financial statements or schedule of investments, to better understand the exposure to the underlying reference asset that the options, warrants, and certain convertible bonds produce in the portfolio. Currently, the Commission and investors are sometimes unable to accurately assess funds' derivatives investments and the exposures they create, which can be important to understanding funds' investment strategies, use of leverage, and potential risk of loss.

With this rulemaking, we will increase transparency into funds' derivatives investments by requiring funds to disclose certain characteristics and terms of derivative contracts that are important to understand the payoff profile of a fund's investment in such contracts, as well as the exposures they create or hedge in the fund. This will include, for example, exposures to currency fluctuations, interest rate shifts, prices of the underlying reference asset, and counterparty credit risk. As discussed further below, we are also amending Regulation S–X to make similar changes to the reporting regime for derivatives disclosures in fund financial statements.[329]

While we received comments supporting our proposal to include specific information about position-level derivatives,[330] some commenters believed that portfolio-level reporting (as opposed to position-level reporting) would be more appropriate for understanding how funds use derivatives and funds' derivative-based risks.[331] Other commenters requested that certain position-level disclosures relating to derivatives not be publicly reported noting that this information could be confusing to investors, proprietary, or potentially used by competitors to harm fund investors through front-running or reverse engineering of fund investing strategies.[332] Another requested that derivatives disclosure be subject to certain *de minimis* thresholds.[333]

As we discuss more fully below in section II.A.4, we continue to believe that it is important that, in addition to the Commission, investors receive enough information in order to evaluate an investment and make appropriate investing decisions. Moreover, much of the information required in Form N–PORT is already reported in fund financial statements, or will be with our amendments to Regulation S–X, albeit in an unstructured format. As we describe more fully in section II.A.4 below, we generally believe that the reporting requirements of Form N–PORT are appropriate given the filer's status as a registered investment company with the Commission. Moreover, we generally believe that investors, directly and indirectly, should have access to portfolio information in a structured data format, to assist them with making more informed investing decisions. We thus believe that certain position-level information should be reported publicly on a quarterly basis.[334]

Consequently, in addition to the information required above for all investments, we proposed to require additional information about each derivative contract in the fund's portfolio. As proposed, funds would report the type of derivative instrument that most closely represents the investment (*e.g.,* forward, future, option, etc.).[335] As discussed above in section II.A.2.a, commenters requested that we provide definitions of certain items in the form, such as ''derivatives'' and ''forwards.''[336] For the reasons discussed above, we are not adopting definitions for these items. Finally, a commenter suggested that we organize the disclosure of derivatives as reflected in the recently adopted amendments to Form ADV or Item 30 of Form PF arguing that these items would standardize the organization and reporting of derivatives across different Commission forms.[337]

As discussed below in section II.C.2, the derivative instrument type categories identified in Form N–PORT are similar to the categories disclosed by funds in amended Regulation S–X. We designed these categories to enable funds to report position-level information on their investments in derivatives, while leaving enough flexibility to allow funds to categorize investments in the future that are not currently traded by funds.[338] In contrast, the categories used in the Form ADV Release and Item 30 of Form PF are designed to collect aggregated information at the portfolio level for investment advisers advising separately managed accounts and private funds, respectively. As a result, the categories for Forms PF and ADV must be more specific, as the Commission does not receive more detailed position-level information for these types of filers. However, in the case of registered funds, the current disclosure regime requires funds to disclose position-level information to the Commission and investors; thus it is not necessary for more standardization across funds regarding definitions, as the Commission and investors could always review the fund's specific holdings.[339]

In the case of Form N–PORT, in addition to the categories, the Commission will receive additional position-specific data, which will allow the user of the information to better understand each position, without solely relying on the instrument type. However, we acknowledge the potential for confusion regarding the categorization of different types of

[329] *See infra* section II.C.2.

[330] *See, e.g.,* CFA Comment Letter (''Given the potential risks associated with certain uses of derivatives, we support the new reporting requirements.''); Wells Fargo Comment Letter.

[331] *See, e.g.,* Dreyfus Comment Letter (explaining that an investment-by-investment approach to reporting does not adequately explain how derivatives are being used); Simpson Thacher Comment Letter (derivatives reporting should focus on metrics based on a portfolio-level analysis).

[332] *See, e.g.,* State Street Comment Letter (details relating to nonpublic indexes or custom baskets underlying options and swaps contracts); MFS Comment Letter (financing rates for OTC derivatives); Pioneer Comment Letter; Wells Fargo Comment Letter; SIFMA Comment Letter I (all derivatives information should be nonpublic); Invesco Comment Letter (reference assets, specific terms, financing rates and contracts terms and conditions); ICI Comment Letter (delta for convertible securities, options, and warrants and derivative financing rates); Oppenheimer Comment Letter (derivatives payment terms, including financing rates); Simpson Thacher Comment Letter (position-level reporting for derivatives); SIFMA Comment Letter II.

[333] *See* Pioneer Comment Letter.

[334] *See infra* section II.A.4.

[335] *See* Item C.11.a of proposed Form N–PORT. Funds would report the category of derivative that most closely represents the investment, selected from among the following (forward, future, option, swaption, swap, warrant, other). If ''other,'' funds would provide a brief description.

[336] *See, e.g.,* T. Rowe Price Comment Letter (''derivatives'' and ''forwards''); ICI Comment Letter (''derivatives'').

[337] *See* BlackRock Comment Letter. *See also* Form ADV Release, *supra* footnote 3.

[338] *See infra* section II.C.2.

[339] *See generally,* Form N–CSR and Form N–Q.

swaps and are therefore adopting the derivatives instrument type categorizes that we proposed, but subject to a modification in Item C.11.a to include a clarification that specifically identifies that total return swaps, credit default swaps, and interest rate swaps should all be categorized under the ''swap'' instrument type.[340] We are adopting the derivatives instrument categories subject to this modification.[341]

As proposed, funds would also report the name and LEI (if any) of the counterparty (including a central counterparty).[342] We believe, and some commenters agreed, that this identifying information should assist the Commission, investors, and other potential users in better identifying and monitoring derivatives held by funds and the associated counterparty risks.[343] Other than requests to keep counterparty information nonpublic [344] and requests to phase in the disclosure of counterparty LEI's,[345] which are discussed above, we generally received positive comments on our proposed counterparty and LEI disclosures and are adopting them, as proposed.[346]

As proposed, Form N–PORT would also require funds to report terms and conditions of each derivative investment that are important to understanding the payoff profile of the derivative.[347] For options and warrants, including options on a derivative (*e.g.,* swaptions), funds would report the type (*e.g.,* put), payoff profile (*e.g.,* written), number of shares or principal amount of underlying reference instrument per contract, exercise price or rate, expiration date, and the unrealized appreciation or depreciation of the option or warrant.[348] Proposed Form N–PORT would require funds to provide a description of the reference instrument, including name of issuer, title of issue, and relevant securities identifier.[349] We received comments supporting these items [350] and are adopting them as proposed.[351]

We recognize that some derivatives have underlying assets that are indexes of securities or other assets or a ''custom basket'' of assets, the components of which are not always publicly available. We proposed requirements to ensure that the Commission, investors, and other potential users are aware of the components of such indexes or custom baskets. As proposed, if the reference instrument is an index for which the components are publicly available on a Web site and are updated on that Web site no less frequently than quarterly, funds would identify the index and provide the index identifier, if any.[352] We proposed to require at least quarterly public disclosure for the components of the index because it matches the frequency with which funds are currently required and, as adopted in this release, would continue to be required, to disclose their portfolio investments.[353] We proposed that if the index's components are not publicly available as provided above, and the notional amount of the derivative represents 1% or less of the NAV of the fund, the fund would provide a narrative description of the index.[354] If the index's components are not publicly available in that manner, and the notional amount of the derivative represents more than 1% of the NAV of the fund, we proposed that the fund would provide the name, identifier, number of shares or notional amount or contract value as of the trade date (all of which would be reported as negative for short positions), value, and unrealized appreciation or depreciation of every component in the index.[355]

We received a number of comments on our proposal to publicly disclose the components of the underlying index or custom basket. While some commenters agreed with our proposal,[356] others requested that we include a higher threshold before requiring reporting.[357] Some commenters, for example, suggested that the threshold for requiring any reporting of components be 5% of net asset value of the fund.[358] Others agreed with our proposed 1% threshold but stated that reporting should be based on whether the *net asset value* of the derivative instrument that is relying on the index or custom basket exceeds 1% of the fund's net asset value, rather than the derivative instrument's *notional value* (as was proposed), as net asset value is a better indicator of materiality.[359]

We continue to believe that it is important for the Commission,

[340] *See* Item C.11.a of Form N–PORT.

[341] *See id.*

[342] *See* Item C.11.b of proposed Form N–PORT.

[343] *See generally* Morningstar Comment Letter (''More-frequent portfolio disclosures will improve the counterparty information available to market participants. As a result, market participants could assist the SEC in identifying emerging risks—and they would likely direct assets away from counterparties perceived as excessively risky.''); CFA Comment Letter (supporting aspects of the proposal that would require derivative counterparty information); Wells Fargo Comment Letter (same). Commenters to the FSOC Notice indicated that counterparty data for derivative disclosures is not often available and discussed the need to have more transparency in this regard. *See, e.g.,* Comment Letter of Americans for Financial Reform to FSOC Notice (Mar. 27, 2015) (''Americans For Financial Reform FSOC Notice Comment Letter'') (asserting that counterparty data in derivative disclosures is not often available); Comment Letter of the Systemic Risk Council to FSOC Notice (Mar. 25, 2015) (discussing the need to have information about investment vehicles that hold bank liabilities).

[344] *See, e.g.,* SIFMA Comment Letter I.

[345] *See, e.g.,* State Street Comment Letter; BlackRock Comment Letter; *see generally supra* section II.A.2.a.

[346] *See* Item C.11.b of Form N–PORT; *see also* Morningstar Comment Letter; CFA Comment Letter; Wells Fargo Comment Letter. As discussed below in section II.C.2.a, in response to commenters' suggestions, for Regulation S–X purposes, we are not requiring funds to disclose the counterparty for centrally cleared or exchange traded derivatives. *See, e.g.,* rule 12–13, n. 4 of Regulation S–X. This is because we believe it may be necessary to have information about the central counterparty for a derivative (for example, to compare data with other data available to regulators) but such information may not be necessary for financial statements, where the primary purpose for providing this information to fund investors is to make investors aware of the fund's counterparties and any associated credit risk.

[347] We are requiring similar information on a fund's schedule of investments. *See infra* section II.C.2.

[348] *See* Item C.11.c of proposed Form N–PORT. As discussed above, funds would report the number of option contracts in Item C.2.a of Form N–PORT. *See also supra* footnote 265 and accompanying text.

[349] *See* Item C.11.c.iii.2 and Item C.11.c.iii.3 of proposed Form N–PORT. For the securities identifier, funds would report, if available, CUSIP of the reference asset, ISIN (if CUSIP is not available), ticker (if CUSIP and ISIN are not available), or other unique identifier (if CUSIP, ISIN, and ticker are not available). *See also supra* footnote 254 and accompanying and following text.

[350] *See* Wells Fargo Comment Letter; *see also* MFS Comment Letter.

[351] *See* Item C.11.c.i, Item C.11.c.ii, and Item C.11.c.iii of Form N–PORT.

[352] *See* Item C.11.c.iii.2 of proposed Form N–PORT. If the reference instrument is a derivative, funds would also indicate the category of derivative (*e.g.,* swap) and will provide all information required to be reported on Form N–PORT for that type of derivative. We received no comments on this requirement and are adopting it as proposed.

[353] *See infra* section II.A.4 (discussing proposed rules concerning the public disclosure of reports on Form N–PORT).

[354] *See supra* footnote 352.

[355] *See id.* Short positions in the index, if any, would be reported as negative numbers. The identifier for each index component would include CUSIP, ISIN (if CUSIP is not available), ticker (if CUSIP and ISIN are not available), or other identifier (if CUSIP, ISIN, and ticker are not available). If other identifier is provided, the fund would indicate the type of identifier used.

[356] *See, e.g.,* Morningstar Comment Letter (''Index providers are earning revenues from the licensing fees embedded in the derivative cost that is born by the fund and therefore its shareholders.''); CFA Comment Letter (expressing general support for the proposed derivatives reporting requirements).

[357] *See, e.g.,* Wells Fargo Comment Letter (additional index reporting should only be triggered when a derivative represents 5% of NAV); ICI Comment Letter.

[358] *See id.*

[359] *See, e.g.,* SIFMA Comment Letter I (''The proposal of 1% notional value is entirely different from the predicate requirement on which the Commission says the proposal is based. We believe the original 1% value requirement is a far better indicator of materiality and should be adopted in this connection as well.''); Oppenheimer Comment Letter (1% of net (not notional) value of derivatives).

investors, and other potential users to have transparency into a fund's exposures to assets, regardless of whether the fund directly holds investments in those assets or chooses to create those exposures through a derivatives contract.[360] Our proposed one percent threshold was based on our experience with the summary schedule of investments, which requires funds to disclose investments for which the value exceeds 1% of the fund's NAV in that schedule.[361] Similar to the threshold in the summary schedule of investments, we believe that providing a 1% *de minimis* for disclosing the components of a derivative with nonpublic reference assets considers the need for the Commission, investors, and other potential users to have transparency into the exposures that derivative contracts create while not requiring extensive disclosure of multiple components in a nonpublic index for instruments that represent a small amount of the fund's overall value.

Moreover, for purposes of this calculation, we believe that it is appropriate to measure whether such derivative instrument exceeds the 1% threshold based on the derivative's notional value, as opposed to the current market value of the derivative, because derivatives with a small market value could have a much larger potential impact on a fund's performance than the current market value would suggest, and thus believe that a derivative's notional value better measures its potential contribution to the gains or losses of the fund.[362]

We also solicited comment on whether we should limit the required disclosure of index components to the top 50 components and/or components that represent more than 1% of the index. In response to this request for comment commenters suggested that once a nonpublic index crosses the reporting threshold, we limit disclosure to the top 50 components and components that represent more than one percent of the index based on the notional value of the derivatives, as this standard is analogous to the current reporting requirement to identify holdings in the summary schedule of investments. Commenters stated that this would reduce reporting burdens for funds that invest in indexes with a large number of components.[363]

Some commenters also objected to the public disclosure of the components underlying an index as that disclosure could harm the intellectual property rights that index providers might assert and, as a result, harm investors who may lose the benefit of index products that would no longer be available to them, should an index provider choose to no longer do business with a fund, rather than have its index's components made publicly available.[364] Other commenters urged the Commission to delete this requirement as information on non-public indexes or custom baskets may be difficult for funds to obtain.[365] As discussed below in section III.B.3., commenters also noted that disclosure of the components of custom baskets underlying swaps are considered by some as proprietary information regarding a fund's investment strategies and could lead to the indexing strategy being imitated, resulting in harm to the fund and its investors through reverse engineering and free-riding.[366]

We believe that it is fundamental to the reporting by funds that fund shareholders have access to the information necessary to understand the exposures of their fund's investments.[367] Moreover, we note that a fund whose investment objective tracks an index or custom basket is currently required to publicly disclose its direct holdings quarterly in its financial statements.[368] Likewise, funds should not be able to use proprietary indexes to mask exposures to investments underlying a custom basket for a swap or options contract.[369]

Moreover, while some commenters noted that obtaining information on the components of an underlying index may be difficult,[370] again, we believe that fund shareholders need sufficient information to understand their fund's exposures, even if such transparency requires the fund to renegotiate licensing agreements or, in some cases results in the fund having to forego investments in a custom basket or nonpublic index.[371] As discussed further in section II.A.4, below, we believe that we have mitigated the potential for harm to fund investors that some commenters believed could result from the public reporting of non-public indexes and custom baskets by delaying the public reporting of reports on Form N–PORT by 60-days.

For the reasons discussed above, we believe that it is important that the Commission and investors have full transparency into any index or custom basket that significantly contributes to a fund's NAV. However, we were also persuaded by commenters that, in cases of indexes with a large number of components, and where the index only constitutes a small portion of the fund's investments, disclosure of every component could yield information on underlying investments that constitute only a ''miniscule'' percentage of the fund's NAV.[372] In these cases, requiring complete reporting of all the components could be burdensome without providing information that is minimally helpful for understanding the role of the investment in the fund. In such situations, limiting component reporting to the largest holdings of an index or custom basket could appropriately reduce reporting burdens while still providing transparency into the investment.

Accordingly, we are adopting a tiered reporting structure for the reporting of the components of an index or custom basket underlying a derivative. For investments in a non-public index or custom basket that represent more than 1%, but less than 5%, of a fund's net assets, funds will be required to report the top 50 components of the basket and, in addition, those components that exceed 1% of the notional value of the

[360] We are also modifying Regulation S–X to require similar disclosures. *See infra* section II.C.2.a (discussing proposed rule 12–13, n. 3 of Regulation S–X).

[361] *See* rule 12–12C, n. 3 of Regulation S–X [17 CFR 210.12–12C].

[362] *See* Item C.11.c.iii.2 of Form N–PORT. As discussed more fully below, we received several comments relating to the appropriate calculation of notional amount for derivative instruments. *See infra* footnotes 546–550 and accompanying text. We acknowledge that there are multiple ways of calculating notional amount for certain investments. *See id.* While the staff has previously provided examples of acceptable notional amount calculations, *see id.,* funds may use other methods of calculating notional amount so long as the methodology is applied consistently and is consistent with the way the fund reports notional amount internally and to current and prospective investors. *See* General Instruction G of Form N–PORT.

[363] *See* current rule 12–12C of Regulation S–X; *see, e.g.,* ICI Comment Letter; Oppenheimer Comment Letter; *see also* SIFMA Comment Letter I (top 5 components or the components reflecting 50% of the index). Commenters also noted their belief that reporting should be based on a percentage of NAV, rather than notional value, as percentage of NAV is a better indicator of materiality. *See* SIFMA Comment Letter I; Oppenheimer Comment Letter; *contra* Morningstar Comment Letter (''Arbitrary limits on positions that should be disclosed for portfolios or reference indexes can mask the risk of an instrument.'').

[364] *See, e.g.,* SIFMA Comment Letter I; Comment Letter of MSCI (Aug. 10, 2015) (''MSCI Comment Letter'') (even provision of delayed data is a concern).

[365] *See* Simpson Thacher Comment Letter; Dreyfus Comment Letter.

[366] *See, e.g.,* SIFMA Comment Letter II; MSCI Comment Letter; *see also infra* section III.B.3.

[367] *See* Morningstar Comment Letter.

[368] *See generally* Forms N–CSR and N–Q.

[369] *See* Morningstar Comment Letter.

[370] *See* Simpson Thacher Comment Letter; Dreyfus Comment Letter.

[371] *See* Morningstar Comment Letter.

[372] *See* ICI Comment Letter.

index. For investments in a non-public index or custom basket that exceed 5% of a fund's net assets, funds will be required to report all components.

We developed this tiered threshold in response to commenters, discussed above, that suggested a higher *de minimis* threshold of 5% of net assets for requiring any reporting of the underlying components. We recognize that this approach will be more burdensome for funds holding investments that fall within these thresholds than raising the *de minimis* for any reporting of components to 5% of net assets, which was suggested by some commenters. We believe, however, that investments representing between 1% and 5% of a fund's net assets are sufficiently significant to a fund that some reporting of individual components is appropriate and will help the Commission staff and investors to understand a fund's indirect exposures to investments that are the most significant components of the index. Further, limiting reporting for such derivative investments to the top 50 components and those components that exceed 1% of the notional value of the index, which is the same threshold used for the summary schedule of investments, will reduce the reporting burdens relative to the proposal for funds with such investments.[373] Conversely, we acknowledge that limiting the required reporting for those investments representing between 1% and 5% will not provide full transparency into such investments; we believe, however, that this approach appropriately balances providing information that is sufficient for the Commission and investors to understand the composition and risk of such investments, with reducing reporting burdens for funds. For investments in non-public indexes or custom baskets that exceed 5% of a fund net assets, funds will be required to report all components of the index or custom basket, as we believe that full transparency is appropriate for such investments because, as discussed above, funds should not be able to mask significant portions of their investment strategy by using a proprietary index or custom basket.

A commenter also objected to disclosure of unrealized appreciation or depreciation for each component of the index or custom basket arguing that such information would be costly to maintain as the fund would be required to create a record of the value of each underlying security in the index at the time the derivatives contract is entered into.[374] We agree. Moreover, we agree with the commenter that Form N–PORT will already require the fund to provide the unrealized appreciation and depreciation for the option or swap contract on a monthly basis, making the disclosure of unrealized appreciation and depreciation for components of the underlying index unnecessary.[375]

Thus, if the index's or custom basket's components are not publicly available and the notional amount of the derivative represents more than 1%, but less than 5%, of the net asset value of the fund, the fund will provide the name, identifier, number of shares or notional amount or contract value as of the trade date (all of which would be reported as negative for short positions), and value, for (i) the 50 largest components in the index or custom basket and (ii) any other components where the notional value for that component is over 1% of the notional value of the index or custom basket.[376] Likewise, if the index's or custom basket's components are not publicly available and the notional amount of the derivative represents more than 5% of the net asset value of the fund, the fund will provide the name, identifier, number of shares or notional amount or contract value as of the trade date (all of which would be reported as negative for short positions), and value, for all of the index's or custom basket's components.[377]

We also proposed to require funds to report the delta of options and warrants, which is the ratio of the change in the value of the option or warrant to the change in the value of the reference instrument.[378] This measure reflects the sensitivity of the value of the option or warrant to changes in the price of the reference instrument.

We requested comment on our proposal to require funds to report the delta for options and warrants. Some commenters supported our proposal to require funds to report delta for options and warrants.[379] Others objected to the Commission's proposal to collect delta because they believed it would provide little value because of the time delay between the end of the period date and the reporting date, and could be difficult to calculate.[380] Others did not specifically object to the Commission requiring delta, but requested that delta not be released to the public citing concerns of investor confusion regarding the subjectivity of delta (*i.e.* the calculation of delta is necessarily based upon inputs and assumptions that could vary between funds).[381]

We continue to believe that the reporting of delta for options and warrants will provide the Commission a more accurate measure of a fund's full exposure to the fund's investments in options and warrants. Accordingly, we believe that having the measurement of delta for options is important for the Commission to measure the impact, on a fund or group of funds that holds options on an asset, of a change in such asset's price. Also, as the Commission has previously observed, funds can use written options as a form of obtaining a leveraged position in an underlying reference asset.[382] Having a measurement of exposures created through this type of leverage can help the Commission better understand the risks that the fund faces as asset prices change, since the use of this type of leverage can magnify losses or gains in assets. Thus, while we acknowledge that the Commission will receive delta 30 days after the reporting date, it will still be a useful tool for the Commission and its staff to understand the fund's relative exposures to changes in the price of the underlying reference asset. Moreover, as discussed more fully below in section II.A.4, for the reasons discussed in that section, we have determined to make the reporting of delta non-public for all three months, which should mitigate commenters concerns regarding investor confusion relating to the subjectivity of calculating delta. Finally, based upon staff experience, we believe that it is general industry practice to calculate delta for options, warrants, and swaps.

As a result, we are adopting the requirement that funds report delta for options and warrants as proposed. While one commenter noted that there are a variety of models to calculate delta and requested a specific approach to calculating delta, based on staff

[373] *See* Morningstar Comment Letter; SIFMA Comment Letter I.

[374] *See, e.g.,* ICI Comment Letter.

[375] *See id.; see also* Item C.11.c.viii and Item C.11.f.v of Form N–PORT.

[376] *See* Item C.11.c.viii.2 of Form N–PORT. Short positions in the index, if any, will be reported as negative numbers. The identifier for each index component would include CUSIP, ISIN (if CUSIP is not available), ticker (if CUSIP and ISIN are not available), or other identifier (if CUSIP, ISIN, and ticker are not available). If other identifier is provided, the fund would indicate the type of identifier used.

[377] *Id.*

[378] *See* Item C.11.c.vii of proposed Form N–PORT.

[379] *See, e.g.,* Morningstar Comment Letter (requesting clarity on specific method to calculate delta); Wells Fargo Comment Letter.

[380] *See, e.g.,* Dreyfus Comment Letter (delta statistic may be of limited value because of the time lag associated with reporting); Simpson Thacher Comment Letter (obtaining information on delta may be difficult for funds).

[381] *See, e.g.,* ICI Comment Letter.

[382] *See* Derivatives Proposing Release, *supra* footnote 7, at 80886.

experience analyzing these metrics, we believe that such differences are not so large that the results would not be useful to the staff. Therefore we are not requiring specific delta formulas be used.[383] As a result, in order to reduce burdens and provide clarity to funds, as discussed above, we are adopting an instruction that will allow funds to use their own (or their service provider's) methodologies to calculate data for reports on Form N–PORT, including delta, subject to the instruction and other guidance relating to the Form.[384]

For futures and forwards (other than foreign exchange forwards, which share similarities with foreign exchange swaps and should be reported accordingly as discussed below), as proposed, Form N–PORT would require funds to report a description of the reference instrument, the payoff profile (*i.e.,* long or short), expiration date, aggregate notional amount or contract value as of the trade date, and unrealized appreciation or depreciation.[385] The description of the reference instrument would conform to the same requirements as the description of reference instruments for warrants and options.[386]

One commenter noted that the terms ''foreign exchange swaps'' and ''foreign exchange forwards'' are defined terms under the Commodity Exchange Act, as amended by the Dodd-Frank Act and such terms exclude non-deliverable forwards, which are included in the Commodity Exchange Act's definition of swaps. As the commenter pointed out, such distinctions between deliverable and non-deliverable forwards are not relevant in the context of reporting of forward contracts on Form N–PORT.[387] Accordingly, in order to avoid confusion, we are replacing the terms ''foreign exchange swaps'' and ''foreign exchange forwards'' with terms used in Regulation S–X, ''forward foreign currency contracts'' and ''foreign currency swaps,'' which make no distinction between deliverable and non-deliverable foreign exchange contracts.[388] Other than modifying these terms, which should have no effect on how information is reported on Form N–PORT, we received no other comments to this section of Form N–PORT. We are therefore adopting the reporting for futures and forwards as proposed.[389]

We also received no comments relating to our proposed elements for reporting of foreign forward foreign currency contracts and foreign currency swaps (other than the above-mentioned term changes) and are adopting it substantially as proposed with one clarifying instruction with respect to reporting depreciation.[390] Funds will therefore report the amount and description of currency sold, amount and description of currency purchased, settlement date, and unrealized appreciation or depreciation.[391]

For swaps (other than foreign currency swaps), as proposed, funds would report the description and terms of payments necessary for a user of financial information to understand the nature and terms of payments to be paid and received, including, as applicable: A description of the reference instrument, obligation, or index; financing rate to be paid or received; floating or fixed rates to be paid and received; and payment frequency.[392] The description of the reference instrument would conform to the same requirements as the description of reference instruments for forwards and futures.[393] Funds would also report upfront payments or receipts, unrealized appreciation or depreciation, termination or maturity date, and notional amount.[394]

Commenters expressed concern that publicly disclosing financing rates for swaps contracts could harm shareholders as financing rates are commercial terms of a deal that are negotiated between the fund and the counterparty to the swap.[395] As several commenters discussed, disclosure of favorable variable financing rates could result in costs to the fund in the form of less favorable variable financing rates for future transactions.[396] Counterparties could also choose not to transact with funds as a consequence of this disclosure, increasing the competition for the remaining counterparties resulting in higher fees for funds. However, the increased disclosure of a swap's terms may also improve the ability of other funds to negotiate more favorable terms resulting in more favorable fees and financing terms for funds. Further, we designed Form N–PORT to provide information sufficient to allow our staff, investors, and other potential users to better understand the investments held in a fund's portfolio. Without information like the payment terms for derivative instruments, valuing the risks and rewards of such an investment could be difficult for investors and other potential users. Moreover, in order for the Commission to understand such investments, the Commission staff must have access to the terms and conditions of such investments, of which the financing rates are a critical part.

One commenter noted that proposed Form N–PORT did not include certain data elements that relate to the detailed calculations of cash flows, such as inflation index based values and lags associated with principal resets for over-the-counter swaps and caps and floors embedded in swaps.[397]

As we discussed above, as proposed, Form N–PORT would require funds to provide a description and terms necessary for a user of financial information to understand the terms of payments to be paid and received.[398] We recognize that in complying with these instructions funds could determine that they should report terms like those suggested by the commenter for certain instruments. Given the variety of swaps instruments—for example, interest rate swaps, credit defaults swaps, total return swaps, each with its own respective terms and conditions—however, we do not believe that it is appropriate to specify the terms

[383] *See* Morningstar Comment Letter (''Academic research recommends the use of a variety of models to calculate delta depending on the instrument: Equity option, swaption, foreign exchange option, interest-rate options, and others. The proposal could be modified to define a specific approach with specific derivations of inputs for the most common type of derivatives.'').

[384] *See* General Instruction G of Form N–PORT.

[385] *See* Item C.11.d of proposed Form N–PORT.

[386] *See* Item C.11.d.ii of proposed Form N–PORT. *See also supra* footnote 349.

[387] *See* SIFMA Comment Letter I (the definitions of foreign exchange swaps and foreign exchange forwards include a distinction between deliverable and non-deliverable foreign exchange contracts). *See also* Department of Treasury, Determination of Foreign Exchange Swaps and Foreign Exchange Forwards under the Commodity Exchange Act (Nov. 16, 2012) (exempting foreign exchange swaps and foreign exchange forwards from the definition of ''swap''); rule 3a69–2(c)(1) of the Securities Exchange Act [17 CFR 240.3a69–2].

[388] *See* rule 12–13B of Regulation S–X [17 CFR 210.12–13B]; *see also infra* section II.C.2.c.

[389] *See* Item C.11.d of Form N–PORT.

[390] Throughout, Item C.11, where funds must report unrealized appreciation or depreciation, we added the clarifying instruction that depreciation should be reported as a negative number. *See* Item C.11.c.viii, Item C.11.d.v, Item C.11.e.iv, Item C.11.f.v, and Item C.11.g.v of Form N–PORT.

[391] *See* Item C.11.e of Form N–PORT.

[392] *See* Item C.11.f of proposed Form N–PORT. Funds would separately report the description and terms of payments to be paid and received. The description of the reference instrument, obligation, or index would include the information required to be reported for the descriptions of reference instruments for warrants, options, futures, or forwards.

[393] *See id.*

[394] *See* Item C.11.f.ii–Item C.11.f.v of proposed Form N–PORT.

[395] *See, e.g.,* MFS Comment Letter; Invesco Comment Letter; ICI Comment Letter (public benefit of disclosure does not outweigh potential competitive harm). The commenters' concerns regarding the public reporting of financing rates is discussed in more detail below in section II.A.4.

[396] *Id.*

[397] *See* Morningstar Comment Letter.

[398] *See supra* footnote 392.

of the swap with the level of granularity suggested by the commenter beyond what we specified in the instructions to Form N–PORT. As a result, we are adopting Form N–PORT's swaps reporting section substantially as proposed.[399]

Finally, for derivatives that do not fall into the categories enumerated in Form N–PORT, we proposed that funds would provide a description of information sufficient for a user of financial information to understand the nature and terms of the investment.[400] This description would include, as applicable, currency, payment terms, payment rates, call or put features, exercise price, and a description of the reference instrument, among other things.[401] As proposed, the description of the reference instrument would conform to the same requirements as the description of reference instruments for options and warrants.[402] Funds would also report termination or maturity (if any), notional amount(s), unrealized appreciation or depreciation, and the delta (if applicable).[403]

We received no comments on this aspect of the proposal other than one commenter that noted that the proposed list of derivative ''categories'' could leave major categories of derivatives to be reported as ''other.'' [404] As we discussed above, we continue to recognize that new derivatives products will evolve, and therefore Form N–PORT's derivatives reporting requirements are designed to be flexible enough to include the reporting of new investment products that may emerge. Moreover, funds may only categorize a derivatives as ''other'' if none of the identified categories applies, thus limiting the number of derivatives that will be categorized as ''other.'' [405] For these reasons, we are adopting the reporting requirements for other derivatives as proposed.[406]

v. Securities on Loan and Cash Collateral Reinvestment

As discussed above, and as we proposed, we will require funds to report on Form N–PORT, for each of their securities lending counterparties as of the reporting date, the full name and LEI of the counterparty (if any), as well as the aggregate value of all securities on loan to the counterparty.[407] We are also requiring, substantially as proposed, that funds report on Form N–PORT, on an investment-by-investment level, information about securities on loan and the reinvestment of cash collateral that secures the loans. For each investment held by the fund, a fund will report: (1) Whether any portion of the investment was on loan by the fund, and, if so, the value of the investment on loan; [408] (2) whether any amount of the investment represented reinvestment of the cash collateral and, if so, the dollar amount of such reinvestment; [409] and (3) whether any portion of the investment represented non-cash collateral treated as part of the fund's assets and received to secure loaned securities and, if so, the value of such non-cash collateral.[410]

These disclosures will provide information about how funds reinvest the cash collateral received from securities lending activity and should allow for more accurate determination of the value of collateral securing such loans. This information will also allow us to determine whether funds that are relying on exemptive orders or no-action assurances to engage in securities lending are complying with any associated conditions regarding collateral received for such activities. This will improve the ability of Commission staff, as well as investors, brokers, dealers, and other market participants to assess collateral reinvestment risks and associated potential liquidity risk and risk of loss, as well as better understand any potential leverage creation through the reinvestment of collateral.[411] These disclosures will also help identify those investments that funds might have to sell or redeem in the event of widespread termination or default by borrowers. More generally, we expect that this information will help to address concerns expressed by industry participants about the lack of transparency in funds' securities lending transactions.[412]

One commenter suggested that non-cash collateral information should not be publicly disclosed but did not elaborate on why such information should be kept nonpublic.[413] As discussed herein, we believe that disclosure of this information can serve many purposes, including improving the ability of Commission staff, as well as investors, brokers, dealers, and other market participants to better understand the collateral received by funds and the associated potential liquidity and loss risks, as well as identification of those instruments that one or more funds might have to sell in the event of default by borrowers. For these reasons, we are requiring, as proposed, that this information be publicly reported on Form N–PORT.

Several commenters recommended that non-cash collateral be reported in aggregate terms rather than as individual portfolio positions.[414] As discussed above in section II.A.2.d, one commenter explained that funds typically do not treat non-cash collateral as fund assets and consequently do not generally include non-cash collateral in their schedule of portfolio investments.[415] As discussed above, we are revising Form N–PORT to add a new Item requiring funds to report the aggregate principal amount and aggregate value of each type of non-cash collateral received for loaned securities that is not treated as a fund asset.[416] If the fund does treat the non-cash collateral as a fund asset and it is therefore included in the fund's schedule of portfolio investments, the fund will identify such assets on an investment-by-investment basis, as proposed.[417]

h. Miscellaneous Securities

In Part D of Form N–PORT, as we proposed, and as currently permitted by Regulation S–X, funds will have the option of identifying and reporting certain investments as ''miscellaneous securities.'' [418] Specifically, Form N–PORT permits funds to report an

[399] *See* Item C.11.f of Form N–PORT.

[400] *See* Item C.11.g of proposed Form N–PORT.

[401] *See* Item C.11.g.i of proposed Form N–PORT.

[402] *See id; see also supra* footnote 393 and accompanying text.

[403] *See* Item C.11.g.ii–Item C.11.g.v of proposed Form N–PORT.

[404] Morningstar Comment Letter.

[405] *See also* Morningstar Comment Letter (noting that the current taxonomy for Form N–PORT does not provide sufficient details for credit default swaps—including whether credit default swaps should be categorized as swaps or options). As discussed above, we have modified the swaps section of the form to make clear credit default swaps would be reported as a swap.

[406] *See* Item C.11.g of Form N–PORT.

[407] *See supra* footnote 196 and preceding, accompanying, and following text.

[408] *See* Item C.12.c of Form N–PORT.

[409] *See* Item C.12.a of Form N–PORT.

[410] *See* Item C.12.b of Form N–PORT.

[411] As discussed above, commenters to the FSOC Notice suggested that enhanced securities lending disclosures could be beneficial to investors and counterparties. *See supra* footnote 190.

[412] *See, e.g.,* SEC, Transcript of Securities Lending and Short Sale Roundtable (Sept. 29, 2009), *available at http://www.sec.gov/news/openmeetings/2009/roundtable-transcript-092909.pdf* (discussing, among other things, the lack of publicly available information to market participants about securities lending transactions).

[413] *See* Schwab Comment Letter.

[414] *See* RMA Comment Letter; ICI Comment Letter.

[415] *See* ICI Comment Letter.

[416] *Id.* (the Commission should require an additional item in which funds could disclose the details of any non-cash collateral received). *See* Item B.4 of Form N–PORT. *See also supra* footnote 208 and accompanying text.

[417] *See* Item C.12.b of Form N–PORT.

[418] *See generally supra* footnote 99 and accompanying text.

aggregate amount not exceeding 5 percent of the total value of their portfolio investments in one amount as ''Miscellaneous securities,'' provided that securities so listed are not restricted, have been held for not more than one year prior to the date of the related balance sheet, and have not previously been reported by name to the shareholders, or set forth in any registration statement, application, or report to shareholders or otherwise made available to the public. Funds electing to separately report miscellaneous securities will use the same Item numbers and report the same information that would be reported for each investment if it were not a miscellaneous security.[419] Consistent with the disclosure regime under Regulation S–X, all such responses regarding miscellaneous securities will be nonpublic and will be used for Commission use only, notwithstanding the fact that all other information reported for the third month of each fund's fiscal quarter on Form N–PORT will otherwise be publicly available.[420] Keeping information related to these investments nonpublic may serve to guard against the premature release of those securities positions and thus deter front-running and other predatory trading practices, while still allowing the Commission to have a complete record of the portfolio for monitoring, analysis, and checking for compliance with Regulation S–X.[421] The only information publicly reported for miscellaneous securities will be their aggregate value, which is consistent with current practice as permitted by Regulation S–X.[422]

Commenters generally supported the separate nonpublic disclosure of individual miscellaneous securities, and noted that the current reporting provisions under Regulation S–X regarding miscellaneous securities have been effective and not abused.[423] One commenter sought clarification as to whether an investment identified as a miscellaneous security in reports filed on Form N–PORT for the third month of each fiscal quarter (*i.e.,* reports that would be made public) would also need to be identified as a miscellaneous security in reports for the first and second months of each fiscal quarter (*i.e.,* reports that would be nonpublic).[424] As discussed further below, all information reported on Form N–PORT for the first and second months of each fiscal quarter will be nonpublic. Consequently, there is no need for funds to designate any of their investments for those reporting periods as miscellaneous securities. For additional clarity, however, we are adopting a modification from the proposal to instruct funds to only identify miscellaneous securities in reports filed for the last month of each fiscal quarter.[425] Another commenter questioned whether miscellaneous securities should be measured at fair value or estimated exposure, and recommended that miscellaneous securities should be measured at notional, or delta-adjusted exposure, rather than book value.[426] As we noted in the proposal, our intent in allowing funds to designate certain investments as miscellaneous securities is to allow funds to continue to report such information consistent with current practice as permitted by Regulation S–X.[427] Accordingly, we continue to believe that value rather than exposure should be used in determining which investments qualify as miscellaneous securities (*i.e.,* investments totaling 5 percent or less of the total value of the fund's portfolio), which is consistent with current practice as permitted under Regulation S–X. For these reasons, we are adopting this aspect of Form N–PORT as proposed.

i. Explanatory Notes

In Part E of Form N–PORT, as was proposed, funds will have the option of providing explanatory notes relating to the filing.[428] Any notes provided in public reports on Form N–PORT (*i.e.,* reports on Form N–PORT for the third month of the fund's fiscal quarter) will be publicly available, whereas notes provided in nonpublic filings of Form N–PORT will remain nonpublic.[429] Funds will also report, as applicable, the Part or Item number(s) to which the notes are related.[430]

These notes, which will be optional, could be used to explain assumptions that funds made in responding to specific items in Form N–PORT. Funds could also provide context for seemingly anomalous responses that may benefit from further explanation or discuss issues that could not be adequately addressed elsewhere given the constraints of the form. Similar information in other contexts has assisted Commission staff in better understanding the information provided by funds, and we expect that explanatory notes provided on Form N–PORT would do the same.[431]

One commenter supported the proposal to allow funds to report explanatory notes, but requested that the notes remain nonpublic.[432] Likewise, another commenter recommended that funds be allowed to designate explanatory notes as nonpublic, on a case-by-case basis.[433] We are partially persuaded by these requests. We believe that to the extent the explanatory notes would be helpful to investors, such notes ideally should be publicly available. We also note that similar explanatory notes are available on Form N–MFP and are publicly available.[434] However, we recognize that certain items on Form N–PORT will involve nonpublic information, and thus we believe it is appropriate that explanatory notes related to those items should be nonpublic as well. As a result, we have determined that explanatory notes related to nonpublic items such as miscellaneous securities, country of risk and economic exposure, or delta for individual options, warrants, and convertible securities will be nonpublic.[435] However, explanatory notes related to other items on Form N–PORT will be publicly available.

As discussed above, funds may generally use their own internal methodologies and the conventions of their service providers in reporting information on Form N–PORT.[436] Funds may explain any of their methodologies,

[419] *See* Part D of Form N–PORT.

[420] *See* rule 12–12 of Regulation S–X.

[421] *See, e.g.,* Shareholder Reports And Quarterly Portfolio Disclosure Of Registered Management Investment Companies, Investment Company Act Release No. 26372 (Feb. 27, 2004) [69 FR 11243 (Mar. 9, 2004)] (''Quarterly Portfolio Holdings Adopting Release'') at n. 64 and accompanying text.

[422] *See supra* footnotes 98–99 and accompanying text.

[423] *See* SIFMA Comment Letter I; Morningstar Comment Letter.

[424] *See* CRMC Comment Letter.

[425] *See* Part D of Form N–PORT (''For reports filed for the last month of each fiscal quarter, report miscellaneous securities. . . .'').

[426] *See* Morningstar Comment Letter.

[427] *See* Proposing Release, *supra* footnote 7, at n. 149 and accompanying and following text.

[428] *See* Part E of Form N–PORT. *Cf.* Item 4 of Form PF (providing advisers to private funds the option of explaining any assumptions that they made in responding to any questions in the form).

[429] *See infra* section II.A.4.

[430] *See* Part E of Form N–PORT.

[431] *See, e.g.,* Item C.24 of Form N–MFP (''Explanatory notes. Disclose any other information that may be material to other disclosures related to the portfolio security.'').

[432] *See* SIFMA Comment Letter I.

[433] *See* Dechert Comment Letter.

[434] *See* Item C.24 of Form N–MFP (''Explanatory notes. Disclose any other information that may be material to other disclosures related to the portfolio security. If none, leave blank.'').

[435] *See supra* footnotes 282–287 and accompanying and preceding text (discussing country of risk and economic exposure) and footnotes 378–381 and accompanying text (discussing delta for options, warrants, and convertible securities).

[436] *See supra* footnote 79.

including related assumptions, in Part E of Form N–PORT.[437]

j. Exhibits

In Part F of Form N–PORT, for reports filed for the end of the first and third quarters of the fund's fiscal year, as proposed, a fund will also attach the fund's complete portfolio holdings as of the close of the period covered by the report. These portfolio holdings will be presented in accordance with the schedules set forth in §§ 210.12–12 to 12–14 of Regulation S–X, and will not be required to be reported in a structured data format.

As discussed further below in section II.B, we are rescinding Form N–Q because reports on Form N–PORT for the first and third fiscal quarters will make similar reports on Form N–Q unnecessarily duplicative. While we recognize that the quarterly, publicly disclosed reports on Form N–PORT will provide structured data to investors and other potential users, we also recognize that some individual investors may not want to access the data in an XML format. We believe that such investors might prefer that portfolio holdings schedules for the first and third quarters continue to be presented using the form and content specified by Regulation S–X, which investors are accustomed to viewing in reports on Form N–Q and in shareholder reports. Therefore, as proposed, we are requiring that, for reports on Form N–PORT for the first and third quarters of a fund's fiscal year, the fund will attach its complete portfolio holdings for that fiscal quarter, presented in accordance with the schedules set forth in §§ 210.12–12 to 12–14 of Regulation S–X.

Requiring funds to attach these portfolio holdings schedules to reports on Form N–PORT will provide the Commission, investors, and other potential users with access to funds' current and historical portfolio holdings for those funds' first and third fiscal quarters. This will also consolidate these disclosures in a central location, together with other fund portfolio holdings disclosures in shareholder reports and reports on Form N–CSR for funds' second and fourth fiscal quarters.

Consistent with current practice and our proposal, funds will have until 60 days after the end of their second and fourth fiscal quarters to transmit reports to shareholders containing portfolio holdings schedules prepared in accordance with Regulation S–X for that reporting period.[438] In addition, although we proposed that funds would have 30 days after the end of their first and third fiscal quarters to file reports on Form N–PORT that would include portfolio holdings schedules prepared in accordance with Regulation S–X, we have modified this requirement from the proposal to allow funds 60 days.

Several commenters requested that funds be permitted to file Regulation S–X compliant portfolio holdings schedules within 60 days after the end of the reporting period for the first and third fiscal quarters consistent with how Form N–Q is filed today, rather than within 30 days after the end of the reporting period, as we proposed.[439] In light of the concerns raised by commenters about the time needed to prepare, validate, and file this information, as well as the fact that these schedules are designed for the benefit for investors rather than the Commission and regardless of when this information is filed with us it would not be made public to investors until 60 days after the end of the reporting period, we are extending the deadline to file such information until 60 days after the end of the relevant reporting period for the first and third fiscal quarters.[440]

3. Reporting of Information on Form N–PORT

As discussed above, we proposed that funds would report information on Form N–PORT in XML, so that Commission staff, investors, and other potential users could download structured data for immediate aggregation and comparison, for example by creating databases of fund portfolio information to be used for data analysis. Forms N–CSR and N–Q are not currently filed in a structured format, which results in reports that are comprehensible to a human reader, but are not suitable for automated processing, and generally require filers to reformat the required information from the way it is stored for normal business uses.[441] By contrast, requiring that reports on Form N–PORT be structured would allow the Commission and other potential users to combine information from more than one report in an automated way to, for example, construct a data base of fund portfolio investments without additional manual entry.[442]

Most commenters generally supported reporting in a structured format. Several commenters supported our proposal to require reports on Form N–PORT in XML,[443] while others advocated for the eXtensible Business Reporting Language (''XBRL''), a tagged system that is based on XML and was created specifically for the purpose of reporting financial and business information.[444] Another commenter noted that the Commission should standardize the formatting requirements across all fund reporting in order to ease the burden on funds that would have to comply with different formatting requirements (*i.e.,* ASCII/TXT, HTML, XBRL, XML).[445] Finally, another commenter noted that much of the information that will be reported in reports on Form N–PORT is already available in other Commission filings and is duplicative.[446]

Based upon our experiences with Forms N–MFP and PF, both of which require filers to report information in an XML format, we believe that requiring funds to report information on Form N–PORT in an XML format is the most appropriate method of structuring this type of data.[447] Moreover, the

[437] *See* Instruction G to Form N–PORT (''A Fund may explain any of its methodologies, including related assumptions, in Part E.'').

[438] *See supra* footnote 27 (discussing current requirements to transmit reports to shareholders)*; infra* section II.C (discussing our amendments to Regulation S–X).

[439] *See* Oppenheimer Comment Letter; State Street Comment Letter; Vanguard Comment Letter; Pioneer Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I; ICI Comment Letter.

[440] *See* Part F of Form N–PORT.

[441] Forms N–CSR and N–Q are required to be filed in HTML or ASCII/SGML. *See* rule 301 of Regulation S–T [17 CFR 232.301]; EDGAR, Filer Manual—Volume II, Version 27 (June 2014) at 5–1, *available at https://www.sec.gov/info/edgar/edgarfm-vol2-v27.pdf*.

[442] *See, e.g.,* IDC Comment Letter (''We fully support the SEC's efforts to collect information in a structured data format to enhance its ability to aggregate and analyze the information and data.''); *but see* Comment Letter of John Wahh (May 27, 2015) (''Wahh Comment Letter'') (questioning why the Commission needs to require structured data for funds); Comment Letter of L.A. Schnase (July 2, 2015) (''Schnase Comment Letter'') (questioning whether requiring structured reporting is appropriate or necessary for fund filings). *See also* Proposing Release, *supra* footnote 7, at 92–93.

[443] *See, e.g.,* SIFMA Comment Letter I; ICI Comment Letter; Morningstar Comment Letter (''We believe a single standard XML framework, as either an extension of current schema or an alignment with the emerging interoperability of the ISO standard, could ease reporting burdens.'').

[444] *See, e.g.,* Comment Letter of XBRL US (Aug. 11, 2015) (''XBRL US Comment Letter''); Comment Letter of Deloitte & Touche LLP (Aug. 11, 2015) (''Deloitte Comment Letter''); *but see* Morningstar Comment Letter (''Extensible Business Reporting Language has had very limited success, and certain aspects of the standard are too lenient for regular data validation.'').

[445] *See* Schnase Comment Letter (Commission should also ease the burdens on funds by allowing funds to input their data through a pre-formatted web portal or web form). Based on staff experience with XML filings, we believe that it is actually less burdensome for most funds to report fund information directly into an XML filing, rather than go through the time consuming exercise of manually entering fund data into a pre-formatted web form.

[446] *See* Wahh Comment Letter.

[447] We anticipate that the XML structured data file would be compatible with a wide range of open

interoperability of data between Forms N–MFP, PF, and N–PORT will aid the staff with cross-checking information reported to the Commission and in monitoring the fund industry.[448] As discussed further below in the economic analysis, the XML format will also improve the quality of the information disclosed by imposing constraints on how the information will be provided, by providing a built-in validation framework of the data in the reports.[449] While we acknowledge that some of the information we are requiring in Form N–PORT is duplicative to information filed in other forms, filing this information in an XML format will allow the staff to more efficiently review and analyze data for industry trends and risk monitoring purposes. We are therefore adopting the requirement that reports on Form N–PORT be filed in an XML format as proposed.[450]

We considered, as several commenters suggested, alternative formats to XML, such as XBRL. However, while XBRL allows issuers to capture the rich complexity of financial information presented in accordance with GAAP, we believe that XML is more appropriate for the reporting requirements that we are adopting. Form N–PORT, as well as Form N–CEN, as adopted, will contain a set of relatively simple characteristics of the fund's portfolio- and position-level data, such as fund and class identifying information, that is more suited for XML than XBRL, as explained further in section III.F below.

We also considered, as one commenter suggested, ways to standardize the formatting requirements across all fund reporting. However, based on staff experience reviewing fund filings, we believe that different filing formats (*e.g.,* PDF, HTML, XML) are appropriate for different types of filings, depending on their uses. For example, while PDF and HTML filings might be appropriate based on the filer, the content, and the end-user of the data, the PDF and HTML formats are not designed for conveying large quantities of data that require more robust validations to ensure data quality and consistency for aggregation, comparison, and analysis purposes.[451]

We proposed that funds report information on Form N–PORT on a monthly basis, no later than 30 days after the close of each month.[452] For the reasons discussed herein, and consistent with current disclosure practices, only information reported for the third month of each fund's fiscal quarter would be publicly available, and such information would not be made public until 60 days after the end of the third month of the fund's fiscal quarter.[453]

Several commenters requested that we instead require quarterly reporting, either permanently or for an initial period, citing to either data security concerns (discussed below), the increased filing burdens of Form N–PORT, or both.[454] However, the quarterly portfolio reports that the Commission currently receives on Forms N–Q and N–CSR can quickly become stale due to the turnover of portfolio securities and fluctuations in the values of portfolio investments. Monthly portfolio reporting will increase the frequency of portfolio reporting, which we believe will be useful to the staff for fund monitoring, particularly in times of market stress. This will also triple the frequency that data is reported to the Commission in a given year, as well as ensure that the Commission has more current information, which should in turn enhance the ability of staff to perform analyses of funds in the course of monitoring for industry trends, or identifying issues for examination or inquiry.

Notwithstanding data security concerns, which are discussed further below, commenters generally supported the proposed requirement for monthly reporting.[455] However, some commenters requested that we extend the monthly reporting deadline from 30 days to a longer period, such as 45 or 60 days.[456] Commenters noted that the data required by Form N–PORT resides on multiple platforms, including with third-party service providers, and that the time it will take to compile data, verify it, and convert it to an XML filing format is significant.[457] Additionally, one commenter stated that funds that have high volumes of as-of trades, such as funds that invest heavily in bonds and derivatives, could take longer to complete their month-end reconciliations.[458] Finally, the same commenter noted that retrieving information from multiple portfolio managers of sub-advised funds could also delay the process of month-end reconciliations.[459] Other commenters requested that we revise the filing periods for closed-end funds because closed-end funds may not have approved NAVs for 45-days or longer following month-end.[460]

We are requiring that funds file reports on Form N–PORT within 30 days of month-end. Based on staff experience with funds and fund filings, we believe that 30 days is sufficient time to report this information. Separately, we believe that requiring funds to file reports more than 30 days after month end will result in less timely data being submitted to the

source and proprietary information management software applications. Continued advances in structured data software, search engines, and other web-based tools may further enhance the accessibility and usability of the data. *See, e.g.,* Money Market Fund Reform, Investment Company Act Release No. 29132 (Feb. 23, 2010) [75 FR 10059 (Mar. 4, 2010)] (''Money Market Fund Reform 2010 Release'') at n. 341.

[448] *See* Morningstar Comment Letter.

[449] *See infra* section III.B.2.

[450] *See also infra* section II.D.1.

[451] *See id.*

[452] Commission staff understands that certain funds currently report their investments to shareholders as of the last business day of the reporting period, while other funds report their investments as of the last calendar day of the reporting period. In recognition of this fact, and in an effort to avoid disruptions to current fund operations, the information reported on Form N–PORT may reflect the fund's investments as of the last business day, or last calendar day, of the month for which the report is filed.

[453] As discussed above, portfolio schedules are currently available to the public in reports that are mailed to shareholders or filed with the Commission either 60 or 70 days following the end of each reporting period. *See supra* footnote 27 and accompanying text.

[454] *See, e.g.,* Comment Letter of Dodge & Cox (Aug. 7, 2015) (''Dodge & Cox Comment Letter'') (data security concerns); ICI Comment Letter (Commission should ensure that it is prepared to protect sensitive fund data before requiring monthly disclosures of fund holdings); MFS Comment Letter (same); Oppenheimer Comment Letter (data security concerns and burden of monthly filings); Carol Singer Comment Letter.

[455] Vanguard Comment Letter (''We generally support filing the new Form N–PORT on a monthly basis with a 30-day lag.''); Morningstar Comment Letter; Franco Comment Letter.

[456] *See, e.g.,* Vanguard Comment Letter (45 days after month end); MFS Comment Letter (same); ICI Comment Letter (same); T. Rowe Price Comment Letter (same); BlackRock Comment Letter (same); SIFMA Comment Letter I (45–60 day reporting window); SIFMA Comment Letter II (same); Dreyfus Comment Letter (45–60 days after month-end and move to bi-monthly or quarterly reporting); CRMC Comment Letter (60 days after close of month); Pioneer Comment Letter (same); Invesco Comment Letter (same); Dechert Comment Letter (longer period, generally); *but see* State Street Comment Letter (Supporting 30 day deadline, but requesting an additional 15 days for the first-year of reporting).

[457] *See, e.g.,* Vanguard Comment Letter; MFS Comment Letter.

[458] *See* State Street Comment Letter. The same commenter also noted that funds that have high volumes of over-the-counter derivatives trading would need more time to file reports on Form N–PORT because it would take the funds time to collect all of the fully executed derivatives contracts from counterparties before reporting at month-end.

[459] *See id.*

[460] *See* Comment Letter of UMB Fund Services, Inc. (Aug. 14, 2015); Carol Singer Comment Letter. Based upon staff experience, it is our understanding that most closed-end funds strike their NAV on at-least a monthly basis. Those that do not can do so, for Form N–PORT reporting purposes, by using the internal methodologies consistent with how they report internally and to current and prospective investors. *See* General Instruction G of Form N–PORT.

Commission, which will reduce the utility of portfolio information to the Commission. Therefore, we believe a 30-day filing period strikes the proper balance even though we recognize that preparing reports on Form N–PORT will initially require a significant effort by funds.[461] Moreover, as one commenter noted while advocating for bi-monthly or quarterly reporting, lag times of more than 30 days would make monthly reporting impractical, as reports would overlap with preparation time.[462] We also note that several commenters also noted that reporting on the same basis the fund uses to calculate NAV (which is generally on a T+1 basis), which the Form, as adopted, explicitly requires, will take less time relative to reporting on a T+0 basis, which is used for financial reporting.[463] For each of these reasons, we are adopting, as proposed, our requirement for reports on Form N–PORT to be filed with the Commission within 30 days of month-end.[464]

Several commenters discussed the need for appropriate data security practices for the data on Form N–PORT that will be kept nonpublic.[465] In many cases, these commenters stated that these data items could be competitively sensitive and that a breach could result in harm to the reporting funds. Some commenters also highlighted the need for appropriate data security safeguards should the Commission determine in the future to share any of the nonpublic information with one or more other regulatory agencies.[466] Some of these commenters believed that, before requiring nonpublic reports on Form N–PORT, the Commission should complete an independent, third-party review and verification of its data security practices and recommended that the Commission revisit its practices on an ongoing basis.[467] Some commenters suggested that the Commission provide additional information about its data security controls or its protocols for responding to an identified breach.[468] As discussed above, several commenters requested that we require quarterly, rather than monthly, reports on Form N–PORT, citing to data security concerns.[469]

The Commission recognizes the importance of sound data security practices and protocols for nonpublic information, including information that may be competitively sensitive. The Commission has substantial experience with the storage and use of nonpublic information reported on Form PF, delayed public disclosure of information on Form N–MFP (although the Commission no longer delays public disclosure of reports on Form N–MFP), as well as other nonpublic information that the Commission handles in its course of business. Commission staff is carefully evaluating the data security protocols that will apply to nonpublic data reported on Form N–PORT in light of the specific recommendations and concerns raised by commenters. Drawing on its experience, the staff is working to design controls and systems for the use and handling of Form N–PORT data in a manner that reflects the sensitivity of the data and is consistent with the maintenance of its confidentiality.[470] In advance of the compliance date, we expect that the staff will have reviewed the controls and systems in place for the use and handling of nonpublic information reported on Form N–PORT.

4. Disclosure of Information Reported on Form N–PORT

As discussed above, we proposed that the information reported on Form N–PORT for the third month of each fund's fiscal quarter be made publicly available 60 days after the end of the Fund's fiscal quarter.[471] We also proposed that the information reported on Form N–PORT for the first and second months of each fund's fiscal quarter, and any information reported in Part D of the Form, not be made public.[472]

Comments were mixed on this aspect of the proposal. We received a number of comments objecting to the public disclosure of any information on Form N–PORT on a quarterly basis.[473] Others generally supported, or did not oppose, quarterly public disclosure of Form N–PORT, but requested that certain information items be kept nonpublic.[474] In discussing these alternatives, several commenters noted similarity to the data that the Commission collects on a nonpublic basis from private funds on Form PF.[475] Finally, some commenters called for more frequent public disclosure of the information on Form N–PORT, as the information could assist intermediaries and market professionals with evaluating whether funds are

[461] *See infra* section III.B.3.

[462] Dreyfus Comment Letter (advocating for bi-monthly or quarterly reporting, with 45–60 days to file reports on Form N–PORT).

[463] *See* Schwab Comment Letter (reporting that converting from T+1 to T+0 accounting would add approximately 6–10 days to the process of compiling data for Form N–PORT). Commenters acknowledged that reporting holdings on a T+1 basis would save time and compiling data for month-end reporting. Some commenters stated that 45-days would be needed to file reports on Form N–PORT on a T+0 basis, however they suggested that 30 days could be sufficient with T+1 reporting. *See* Schwab Comment letter (urging the use of T+1 accounting or ''alternatively'' recommending a minimum of 45 days); Wells Fargo Comment Letter (recommending a 45 day reporting period if T+0 reporting is required); Others explicitly recommended a 45-day filing period even if we allow filing on T+1 basis. *See* ICI Comment Letter; Oppenheimer Comment Letter.

[464] *See* General Instruction A of proposed Form N–PORT.

[465] *See* CRMC Comment Letter; Dodge & Cox Comment Letter (recommending that the reporting requirement be suspended in the event of a data security breach); IDC Comment Letter; ICI Comment Letter; MFS Comment Letter; Comment Letter of Mutual Fund Directors Forum (Aug. 11, 2015) (''Mutual Fund Directors Forum Comment Letter'') (recommending that the Commission implement data security recommendations of the Government Accountability Office); Oppenheimer Comment Letter; SIFMA Comment Letter II; Simpson Thacher Comment Letter; State Street Comment Letter; Vanguard Comment Letter (recommending that the compliance period be extended to allow more time for the Commission to assess the data security of its systems).

[466] *See* CRMC Comment Letter; ICI Comment Letter.

[467] *See* IDC Comment Letter (noting recent report by the Government Accountability Office); ICI Comment Letter (noting recent reports by the Government Accountability Office and the Commission's Office of Inspector General and recommending specific data security practices); MFS Comment Letter; Oppenheimer Comment Letter (noting recent reports by the Government Accountability Office and the Commission's Office of Inspector General).

[468] *See* ICI Comment Letter (recommending that the Commission notify affected funds in the event of a breach); MFS Comment Letter; SIFMA Comment Letter II; Simpson Thacher Comment Letter (recommending that the Commission issue a release addressing data security and accepting public comments before adopting new reporting requirements).

[469] *See supra* footnote 454 and accompanying text.

[470] *See* Form PF Adopting Release, *supra* footnote 80. We recognize that there are differences between the N–PORT reporting requirements and the Form PF reporting requirements, such as frequency, granularity, and registration status, and our recognition of these differences guides our evaluation of appropriate measures for preservation of data security for reported information.

[471] *See* General Instruction F of proposed Form N–PORT.

[472] *Id.*

[473] *See* SIFMA Comment Letter II (''The fund's quarterly data could be mined for trading patterns in order to replicate the portfolio's underlying strategy (*e.g.,* the underlying analytics or equations behind a quantitative strategy.) This could lead to an attempt to front-run a fund.''); *see also* SIFMA Comment Letter I; Schwab Comment Letter; Fidelity Comment Letter; T. Rowe Price Comment Letter.

[474] *See, e.g.,* ICI Comment Letter (portfolio risk metrics, delta, liquidity determinations, country of risk and derivatives financing rates should be kept non-public.); BlackRock Comment Letter (risk metrics); Invesco Comment Letter (portfolio level risk metrics, derivatives information, illiquidity determinations, and securities lending information should remain non-public); Oppenheimer Comment Letter (risk metrics, illiquidity determinations, country of risk determinations, derivatives payment terms (including financing rates), and securities lending fees and revenue sharing splits should be kept non-public) SIFMA Comment Letter II (risk metrics; illiquidity determinations; country of risk; and derivative financing rates, custom baskets); BlackRock Derivatives Comment Letter (derivatives positions).

[475] *See, e.g.,* SIFMA Comment Letter I; ICI Comment Letter; BlackRock Comment Letter; *see also* AIMA Comment Letter; Confluence Comment Letter.

consistently executing their stated portfolio strategies.[476] These comments are addressed below.

Most commenters who addressed this issue did not support the public reporting of all Form N–PORT filings (*i.e.,* public disclosure on a monthly basis).[477] Such commenters generally believed that disclosure of all month-end Form N–PORT filings could increase the risk of front-running or free-riding, ultimately harming investors.[478] These commenters noted that more frequent disclosures would provide non-investors with free access to the research and analysis that investors pay advisers for through management and other fees.

As discussed further below, commenters that believed that Form N–PORT should remain nonpublic, or that believed certain information items should remain nonpublic, raised two concerns. First, some commenters argued that some of the information on Form N–PORT could potentially be proprietary, and lead to harm to the fund and its investors if publicly released. For example, for derivatives, payment terms, including financing rates, are negotiated rates; as a result, commenters expressed concern that public disclosure may harm a fund's ability to negotiate favorable terms on behalf of its investors.[479] Similarly commenters argued that disclosing detailed information on the components of nonpublic indexes could violate the intellectual property rights that index providers might assert and, as a result, harm investors who may lose the benefit of index products that would no longer be available to them, should an index provider choose to no longer do business with a fund, rather than have its index's components made publicly available.

Second, some commenters noted that if certain information items, such as the proposed risk metrics, monthly return information, and country of risk are publicly disclosed, it could potentially confuse and mislead investors.[480] For example, some commenters argued that risk metrics are calculated using inputs and assumptions that could make them subjective and investors could mistakenly seek to compare risk metrics across funds or believe that risk metric data represents a fund's overall risk.[481] Similarly, monthly return data (including monthly returns attributable to derivatives) could cause investors to mistakenly focus on short-term results or otherwise confuse investors.[482] Likewise, commenters noted that the country of risk determination is subjective and open to different determinations among funds and advisers which may lead to investor confusion.[483] Finally, some commenters that argued Form N–PORT should remain completely nonpublic questioned the utility of the information in Form N–PORT for investors.[484]

Subject to discrete information items discussed further below, the Commission is adopting as proposed the public disclosure of funds' quarter-end Form N–PORT with a 60-day delay from the reporting period. We decline to adopt the suggestion of some commenters that all reports filed on Form N–PORT remain nonpublic. The Commission believes that the public reporting requirements of Form N–PORT generally are appropriate given the filer's status as a registered investment company with the Commission, which is based on the tenets of disclosure and transparency to fund investors, and not as a private fund.[485] Moreover, as we discuss below, funds currently publicly report holdings information on a quarterly basis through Forms N–CSR and N–Q. We also note that Section 45(a) of the Investment Company Act requires information in reports filed with the Commission pursuant to the Investment Company Act be made public unless we find that public disclosure is neither necessary nor appropriate in the public interest or for the protection of investors.[486] For the reasons discussed above, we continue to believe that public disclosure of information about most of the items required on Form N–PORT is appropriate in the public interest, as well as for the protection of investors. Although Form N–PORT is not primarily designed for disclosing information to individual investors, we believe that many investors, particularly institutional investors, as well as academic researchers, financial analysts, and economic research firms, could use the information reported on Form N–PORT to evaluate fund portfolios and assess the potential for risks and returns of a particular fund.[487] Accordingly, whether directly or through third parties, we believe that the periodic public disclosure of the information to be reported on Form N–PORT could benefit fund investors. Moreover, we generally believe that investors should have access to portfolio information in a structured data format, and be given the opportunity to make their own decisions regarding the usefulness of the data. We have, however, made several modifications to our proposals, discussed above, in response to commenters.

We believe that, on balance, investors would benefit from the information that will be reported on Form N–PORT. Likewise, the Commission continues to believe that public availability of information, including the types of information that will be collected on Form N–PORT that may not currently be reported or disclosed by funds, can benefit investors and other potential users by assisting them in making more informed investment decisions.

We continue to recognize, however, that more frequent portfolio disclosure than is currently required could potentially harm fund shareholders by expanding the opportunities for professional traders to exploit this information by engaging in predatory trading practices, such as trading ahead of funds, often called ''front-running.'' [488] Similarly, the Commission is sensitive to concerns that more frequent portfolio disclosure may facilitate the ability of non-investors to ''free ride'' on a mutual fund's investment research, by allowing those investors to reverse engineer and

[476] *See* Franco Comment Letter (requesting that all portfolio filings be made public 180 to 360 days after filing); Morningstar Comment Letter (requesting public disclosure on a monthly basis reasoning that many fund complexes currently make portfolio holdings information public on at least a monthly basis).

[477] *See, e.g.,* Dodge & Cox Comment Letter; ICI Comment Letter; MFS Comment Letter.

[478] *See id.*

[479] *See, e.g.,* Oppenheimer Comment Letter; SIFMA Comment Letter I.

[480] *See, e.g.,* SIFMA Comment Letter I; SIFMA Comment Letter II; Fidelity Comment Letter; MFS Comment Letter; ICI Comment Letter.

[481] *See, e.g.,* ICI Comment Letter; Pioneer Comment Letter; SIFMA Comment Letter II.

[482] *See* CRMC Comment Letter; SIFMA Comment Letter I.

[483] *See, e.g.,* MFS Comment Letter; Pioneer Comment Letter; Schwab Comment Letter; Oppenheimer Comment Letter.

[484] *See, e.g.,* SIFMA Comment Letter I; Schwab Comment Letter; Fidelity Comment Letter.

[485] *See, e.g.,* section 45(a) of the Investment Company Act (requiring information in reports filed with the Commission pursuant to the Investment Company Act be made public unless we find that public disclosure is neither necessary nor appropriate in the public interest or for the protection of investors). Regarding those commenters that compared the information that Form N–PORT requires to that in Form PF, we note that Form PF is filed by private funds pursuant to Advisers Act section 204(b), making such data subject to the confidentiality protections applicable to data required to be filed under that section.

[486] *See id.*

[487] *See* Russ Wermers Comment Letter; *see generally* Franco Comment Letter (''. . . the Commission [should] adopt a more expansive view of its disclosure rulemaking mandate and more specifically a view that considers layered forms of its disclosure (and disclosure documents) that meet the needs of different constituent end-users of disclosure.'').

[488] *See, e.g.,* Quarterly Portfolio Holdings Adopting Release, *supra* footnote 421, at n. 128 and accompanying text.

''copycat'' the fund's investment strategies and obtain for free the benefits of fund research and investment strategies that are paid for by fund shareholders.[489] Both front-running and copycatting can adversely affect funds and their shareholders.[490] We raised such concerns in the Proposing Release, and, many commenters that discussed public disclosure of portfolio information agreed with these concerns.[491] However, one commenter argued that such effects were unlikely.[492]

We recognize that some free-riding and front running activity can occur even with quarterly disclosure, with the potential for investor harm.[493] Conversely, however, and as we noted in the Proposing Release, we previously received petitions for quarterly disclosures, noting numerous benefits that quarterly disclosure of portfolio schedules could provide, including allowing investors to better monitor the extent to which their funds' portfolios overlap, and hence enabling investors to make more informed asset allocation decisions, and providing investors with more information about how a fund is complying with its stated investment objective.[494] The Commission cited many of these benefits when it adopted Form N–Q, and based on staff experience and outreach, believes that the current practice of quarterly portfolio disclosures provides benefits to investors, notwithstanding the opportunities for front-running and reverse engineering it might create.[495]

We have considered both the benefits to the Commission, investors, and other potential users of public portfolio disclosures, including the reporting of such disclosures in a structured format and additional portfolio information that will be required on Form N–PORT, as well as the potential costs associated with making that information available to the public, which could be ultimately borne by investors.[496] Accordingly, in an attempt to minimize these potential costs and competitive harms from front-running and reverse engineering, we are requiring public disclosure of fund reports on Form N–PORT once each quarter, rather than monthly. This maintains the status quo regarding the frequency and timing of public portfolio disclosure, while providing investors and other potential users with the benefit of having more detailed portfolio information in a structured format.

As commenters pointed out, we recognize that we are requiring additional data points in Form N–PORT, as well as requiring the data to be structured, which represents a change regarding the scope of information available to the public. As discussed above, however, we believe that generally this additional information can benefit investors. Additionally, while we recognize that an increase in the amount of publicly available information has the potential to facilitate predatory trading, as discussed in section III.B.3 below, we do not believe that quarterly public disclosure with a 60-day lag will have a significant, additional competitive impact. We discuss commenters' concerns about specific data items below.

Funds are currently required to disclose their portfolio investments quarterly, via public filings with the Commission and semi-annual reports distributed to shareholders, with the exception of ''miscellaneous securities'' which funds are not required to disclose pursuant to Regulation S–X. Consequently, the Commission will not make public the information reported for the first and second months of each fund's fiscal quarter on Form N–PORT, nor any ''miscellaneous securities'' reported for the third month of each fund's fiscal quarter.[497] Only information reported for the third month of each fund's fiscal quarter on Form N–PORT will be made publicly available, and such information will not be made public until 60 days after the end of the third month of the fund's fiscal quarter.[498]

We continue to believe that maintaining the status quo with regard to the frequency and the time lag of portfolio reporting will allow the Commission, the fund industry, and the marketplace to assess the impact of the structured and more detailed data reported on Form N–PORT on the mix of information available to the public, and the extent to which these changes might affect the potential for predatory trading, before determining whether more frequent or more timely public disclosure would be beneficial to investors in funds.[499] For the reasons discussed above, we find that it is neither necessary nor appropriate in the public interest or for the protection of investors to make information reported for the first and second months of each fund's fiscal quarter on Form N–PORT or ''miscellaneous securities'' reported for the third month of each fund's fiscal quarter publicly available.[500]

As noted above, some commenters, while generally supporting quarterly

[489] *See, e.g., id.* at n. 129 and accompanying text.

[490] *See* ICI, *The Potential Effects of More Frequent Portfolio Disclosure on Mutual Fund Performance,* Perspective Vol. 7, No. 3 (June 2001) (''Potential Effects of More Frequent Disclosure''), *available at http://www.ici.org/pdf/per07-03.pdf.*

[491] See, *e.g.,* ICI Comment Letter (noting the risk of predatory trading with an increase in frequency of public disclosure of fund portfolio holdings); SIFMA Comment Letter I (same); Simpson Thacher Comment Letter (same); Vanguard Comment Letter (same); *see also* Proposing Release, *supra* footnote 7, at 33613–33614.

[492] *See* Morningstar Comment Letter (arguing that reverse-engineering concerns are largely unfounded).

[493] *See infra* section III.B.3

[494] *See* Quarterly Portfolio Holdings Adopting Release, *supra* footnote 421, at n. 32 and accompanying text (discussing prior investor petitions for rulemaking). Investors that petitioned for quarterly disclosure also argued that increasing the frequency of portfolio disclosure would expose ''style drift'' (when the actual portfolio holdings of a fund deviate from its stated investment objective) and shed light on and prevent several potential forms of portfolio manipulation, such as ''window dressing'' (buying or selling portfolio securities shortly before the date as of which a fund's holdings are publicly disclosed, in order to convey an impression that the manager has been investing in companies that have had exceptional performance during the reporting period) and ''portfolio pumping'' (buying shares of stock the fund already owns on the last day of the reporting period, in order to drive up the price of the stocks and inflate the fund's performance results).

[495] *See id.*

[496] In doing so, we also considered the various comment letters that we received regarding our proposal to make the third month's report public, and the costs and benefits of doing so. *See, e.g.,* SIFMA Comment Letter II; SIFMA Comment Letter I; Schwab Comment Letter; Fidelity Comment Letter; T. Rowe Price Comment Letter; *see also* Franco Comment Letter; Morningstar Comment Letter.

[497] *See* General Instruction F of Form N–PORT.

[498] We are maintaining the status quo of public disclosure of quarterly information based upon each fund's fiscal quarters, rather than calendar quarters, to ensure that public disclosure of information filed on Form N–PORT will be concurrent with the public portfolio disclosures reported on a semi-annual fiscal year basis on Form N–CSR. We believe that such overlap will minimize the risks of predatory trading, because otherwise funds with fiscal year-ends that fall other than on a calendar quarter- or year-end will have their portfolios publicly available more frequently than funds with fiscal year-ends that fall on a calendar quarter- or year-end, thus increasing the risks to those funds discussed above related to potential front-running or reverse engineering.

[499] *See also supra* footnote 360 and accompanying text (non-public indexes and custom baskets); *supra* footnotes 395–399 and accompanying text (derivatives financing rates); *supra* footnote 203 and accompanying text (securities lending counterparties); *supra* footnote 281 and accompanying text (repurchase and reverse repurchase agreements).

[500] *See* section 45(a) of the Investment Company Act. Form N–PORT has also been modified from the proposal to clarify that the Commission does not intend to make public the information reported on Form N–PORT for the first and second months of each fund's fiscal quarter that that is identifiable to any particular fund or adviser or any information reported with regards to country of risk and economic exposure, delta, or miscellaneous securities, or explanatory notes related to any of those topics that is identifiable to any particular fund or adviser. *See* General Instruction F of Form N–PORT. However, the SEC may use information reported on Form N–PORT in its regulatory programs, including examinations, investigations, and enforcement actions.

disclosure on Form N–PORT, believed that certain information items should remain nonpublic. Some commenters believed that some of the information in Form N–PORT could contain potentially proprietary information, and lead to harm to the fund and its investors if publicly released. For example, commenters expressed concern that public disclosure of negotiated payment terms for derivatives, such as financing rates, could harm a fund's ability to negotiate favorable terms.[501] However, as we discussed above in section II.A.2.g.iv, we designed Form N–PORT to provide information sufficient to allow our staff, investors, and other potential users to better understand the investments held in a fund's portfolio. This necessarily involves disclosing the payment terms for derivative instruments a fund invests in. Without such information, valuing the risks and rewards of such an investment could be difficult for investors and other potential users. We therefore do not believe that it would be necessary or appropriate in the public interest for the benefit of investors to mask such information for all reports on Form N–PORT.

Similarly, as discussed above, commenters noted that disclosing detailed information on the components of nonpublic indexes could violate the intellectual property rights that index providers might assert. This could result in harm to investors who may lose the benefit of index products that would no longer be available to them, should an index provider choose to no longer do business with a fund, rather than have its index's components made public and open the index to front-running and reverse engineering.[502] As we discussed more fully above in section II.A.2.g.iv, we continue to believe that it is important for the Commission, investors, and other potential users to have transparency into a fund's exposures to assets, regardless of whether the fund directly holds investments in those assets or chooses to create those exposures through a derivatives contract.[503]

Commenters also objected to the public disclosure of securities lending information, such as the identity of borrowers and the aggregate value of securities on loan to a counterparty, as such disclosures could cause securities lending counterparties, in an attempt to keep their securities lending exposures private, to be less willing to borrow securities from funds.[504] However, as we stated in section II.A.2.g.v, above, public disclosure of this information will improve the ability of Commission staff, as well as investors, brokers, dealers, and other market participants to better understand the collateral received by funds and associated potential liquidity and market risks, as well as identify those instruments that one or more funds might have to sell in the event of default by borrowers. For similar reasons, one commenter requested that the identity of counterparties to repurchase and reverse repurchase agreements be kept nonpublic.[505] However, as indicated above in section II.A.2.g.iii, such information is routinely publicly disclosed in other contexts, and we are unaware of any evidence that such disclosures have resulted in competitive disadvantages to the entities required to make such disclosures.

As we discussed in section II.A.2.g.ii, one commenter noted that public disclosure on default, arrears, or deferred coupon payments raises competitive concerns when a debt security relates to an issuer that is a private company, as private borrowers may avoid registered funds in order to avoid public disclosure if the company becomes distressed. However, as we noted in that section, we believe that it is important that a fund's investors have access to this information so that they can make fully informed decisions regarding their investment.

Finally, some commenters believed that certain items could be misinterpreted by investors, resulting in investors being misled or confused. Specifically, some commenters believed that monthly return data (including monthly returns attributable to derivatives) could cause investors to mistakenly focus on short-term results or otherwise confuse investors.[506] We disagree. As discussed in section II.A.2.e above, we agree with another commenter that believed such disclosures could improve information to investors, and noted that many funds already disclose monthly returns.[507]

Several commenters also believed that investors would be unduly confused by the disclosure of the portfolio-level and position-level risk metrics.[508] We decline to make the portfolio-level risk metrics (DV01/DV100 and SDV01/SDV100) nonpublic but have determined to keep the position-level risk metrics (delta) nonpublic for all N–PORT filings.[509] We agree with commenters that the calculation of delta can require a number of inputs and assumptions.[510] As a result, reported deltas for the same or similar investment products could vary because of complex differences in methodologies and assumptions that are not reported on the form nor easily explained to investors. Moreover, the disclosure of delta could, for some investors, imply a false sense of precision about how a particular investment's valuation will change in volatile market conditions. However, we continue to believe that such information is useful for the Commission's monitoring purposes, as the Commission has the ability to contact funds directly, when necessary, to better understand a fund's methodologies and assumptions. Thus, upon consideration of the comments, we find that it is neither necessary nor appropriate in the public interest or for the protection of investors to make delta publicly available at this time.[511] We recognize that, like delta, inputs and assumptions are used for calculating DV01, DV100, and SDV01. We believe, however, that the fact that these metrics will not be reported at the position-level sufficiently mitigates the potential risks discussed above. Because these measures will not be reported by position-level, investors and other potential users will not be comparing different risk metrics for the same investment in different funds. Similarly, we believe that portfolio level risk metrics are less likely to imply a false sense of precision for some investors because such measures are, by design, the aggregation of each investment's assumptions and projections.[512]

For similar reasons, we intend to keep information reported for country of risk and economic exposure nonpublic.[513] We are persuaded by commenters that this information is evaluated by funds using multiple factors, making it subjective, and acknowledge that, while useful to the Commission in terms of understanding the country-specific risks, may convey a false level of

[501] *See, e.g.,* Oppenheimer Comment Letter; SIFMA Comment Letter I.

[502] *See supra* section II.A.2.g.iv.

[503] *See id.*

[504] *See, e.g.,* SIFMA Comment Letter I; BlackRock Comment Letter; SIFMA Comment Letter II; *see also supra* section II.A.2.g.v.

[505] *See* SIFMA Comment Letter I.

[506] *See* CRMC Comment Letter; SIFMA Comment Letter I.

[507] *See* Morningstar Comment Letter.

[508] *See, e.g.,* SIFMA Comment Letter I; Dechert Comment Letter; Invesco Comment Letter.

[509] *See, e.g.,* ICI Comment Letter.

[510] *See id.*

[511] *See* section 45(a) of the Investment Company Act which requires information in investment company forms to be made available to the public, unless we find that public disclosure is neither necessary nor appropriate in the public interest or for the protection of investors.

[512] *See also supra* footnotes 173–178 and accompanying text.

[513] *See supra* footnote 287 and accompanying and following text.

precision.[514] We also acknowledge arguments by commenters that disclosure of such information could stifle divergences in determinations and incentivize funds to seek homogenized determinations from third party firms, potentially rendering the information less useful to Commission staff than if it were not publicly disclosed.[515] For these reasons, we find that it is neither necessary nor appropriate in the public interest or for the protection of investors to make information reported for country of risk and economic exposure publicly available at this time.[516]

Lastly, as discussed above, we recognize that explanatory notes related to nonpublic items should be nonpublic as well.[517] As a result, we find that it is neither necessary nor appropriate in the public interest or for the protection of investors to make explanatory notes reported for delta or country of risk and economic exposure publicly available at this time.[518] However, explanatory notes related to other items on Form N–PORT will be publicly available.

B. Rescission of Form N–Q and Amendments to Certification Requirements of Form N–CSR

1. Rescission of Form N–Q

Along with our adoption of new Form N–PORT, we are also rescinding Form N–Q, as we proposed. Management companies other than SBICs are currently required to report their complete portfolio holdings as of the end of their first and third fiscal quarters on Form N–Q. Because the data reported on Form N–PORT will include the portfolio holdings information contained in reports on Form N–Q, we believe that Form N–PORT will render reports on Form N–Q unnecessarily duplicative. Therefore, we believe it is appropriate to rescind Form N–Q rather than require funds to report similar information to the Commission on two separate forms.

However, as noted earlier, we believe that individual investors and other potential users might prefer that portfolio holdings schedules for the first and third quarters continue to be presented using the form and content specified by Regulation S–X, which investors are accustomed to viewing in reports on Form N–Q and in shareholder reports. Therefore, and as proposed, we are requiring that, for reports on Form N–PORT for the first and third quarters of a fund's fiscal year, the fund will attach its complete portfolio holdings for that fiscal quarter, presented in accordance with the schedules set forth in §§ 210.12–12 to 12–14 of Regulation S–X [17 CFR 210.12–12—12–14].

We requested comments on our proposed rescission of Form N–Q. One commenter supported our proposed rescission of Form N–Q.[519] Other commenters recommended maintaining Form N–Q, noting that Form N–PORT might not serve the interests of investors, while Form N–Q is an established channel through which funds currently provide pertinent information to shareholders.[520] We understand these concerns, but as noted above because the data reported on Form N–PORT will include the portfolio holdings information that would be contained in reports on Form N–Q, we believe that Form N–PORT will render reports on Form N–Q unnecessarily duplicative. We are also concerned about the possibility of investor confusion that may arise in the event of simultaneous public disclosure of portfolio reporting information for the same reporting periods on Form N–PORT as well as on Form N–Q. For these reasons, we are rescinding Form N–Q.

2. Amendments to Certification Requirements of Form N–CSR

In connection with the Commission's implementation of the Sarbanes-Oxley Act of 2002, Form N–Q and Form N–CSR currently require the principal executive and financial officers of the fund to make quarterly certifications relating to (1) the accuracy of information reported to the Commission, and (2) disclosure controls and procedures and internal control over financial reporting.[521] Rescission of Form N–Q will eliminate certifications as to the accuracy of the portfolio schedules reported for the first and third fiscal quarters.

Under today's amendments, and as we proposed, the certifications as to the accuracy of the portfolio schedules reported for the second and fourth fiscal quarters on Form N–CSR will remain. However, and as we proposed, we are amending the form of certification in Form N–CSR to require each certifying officer to state that he or she has disclosed in the report any change in the registrant's internal control over financial reporting that occurred during the most recent fiscal half-year, rather than the registrant's most recent fiscal quarter as currently required by the form.[522] Lengthening the look-back of this certification to six months, so that the certifications on Form N–CSR for the semi-annual and annual reports will cover the first and second fiscal quarters and third and fourth fiscal quarters, respectively, will fill the gap in certification coverage regarding the registrant's internal control over financial reporting that will otherwise occur once Form N–Q is rescinded. To the extent that certifications improve the accuracy of the data reported, removing such certifications could have negative effects on the quality of the data reported. Likewise, if the reduced frequency of the certifications affects the process by which controls and procedures are assessed, requiring such certifications semi-annually rather than quarterly could reduce the effectiveness of the fund's disclosure controls and procedures and internal control over financial reporting. However, we expect such effects, if any, to be minimal because certifying officers will continue to certify portfolio holdings for the fund's second and fourth fiscal quarters and will further provide semi-annual certifications concerning disclosure controls and procedures and internal control over financial reporting that would cover the entire year.

Commenters generally agreed with our proposed approach, although several commenters suggested maintaining Form N–Q on the grounds that Form N–PORT may not serve the interests of investors or because of their assertions that reports on Form N–PORT

[514] *See, e.g.,* ICI Comment Letter; Pioneer Comment Letter; Schwab Comment Letter; MFS Comment Letter; SIFMA Comment Letter II; Morningstar Comment Letter (commenting on the usefulness of this information to investors, but not offering an opinion as to whether this information should be publicly disclosed).

[515] *See, e.g.,* ICI Comment Letter; Oppenheimer Comment Letter.

[516] *See* section 45(a) of the Investment Company Act. We note that we are, for similar reasons, determining not to require disclosure of a fund's determination of the liquidity classification assigned to each investment as required to be reported on Form N–PORT. Liquidity Adopting Release, *supra* footnote 9.

[517] *See supra* footnote 435 and accompanying text.

[518] *See* section 45(a) of the Investment Company Act.

[519] *See* Schnase Comment Letter.

[520] *See* Schwab Comment Letter; Fidelity Comment Letter; SIFMA Comment Letter I.

[521] *See* Item 3 of Form N–Q (certification requirement); Form N–Q Adopting Release, *supra* footnote 421; Item 12 of Form N–CSR (certification requirement); Certification of Management Investment Company Shareholder Reports and Designation of Certified Shareholder Reports as Exchange Act Periodic Reporting Forms; Disclosure Required by Sections 406 and 407 of the Sarbanes-Oxley Act of 2002, Investment Company Act Release No. 24914 (Jan. 27, 2003) [68 FR 5348 (Feb. 3, 2003)] (adopting release for Form N–CSR).

[522] Amended Item 11(b) of Form N–CSR; amended paragraph 4(d) of certification exhibit of Item 12(a)(2) of Form N–CSR.

should be nonpublic.[523] For the reasons discussed above, and since we have determined not to make all filings of N–PORT nonpublic, we are rescinding Form N–Q and amending the certification requirements in Form N–CSR, as proposed.

C. Amendments to Regulation S–X

1. Overview

As part of our larger effort to modernize the manner in which funds report holdings information to investors, we are adopting amendments to Regulation S–X, which prescribes the form and content of financial statements required in registration statements and shareholder reports.[524] As discussed above, many of the amendments to Regulation S–X, particularly the amendments to the disclosures concerning derivative contracts, are similar to the requirements concerning disclosures of derivatives that will be required on reports on Form N–PORT.[525] The amendments to Regulation S–X will, among other things, require similar disclosures in a fund's financial statements in order to provide investors, particularly individual investors, with clear and consistently presented disclosures across funds concerning fund investments in derivatives in an unstructured format.

As outlined below, we are adopting amendments to Articles 6 and 12 of Regulation S–X that will: (1) Require new, standardized disclosures regarding fund holdings in open futures contracts, open forward foreign currency contracts, and open swap contracts,[526] and additional disclosures regarding fund holdings of written and purchased option contracts; (2) update the disclosures for other investments and investments in and advances to affiliates, as well as reorganize the order in which some investments are presented; and (3) amend the rules regarding the general form and content of fund financial statements. Our amendments will require prominent placement of details regarding investments in derivatives in a fund's schedule of investments, rather than allowing such schedules to be disclosed in the notes to the financial statements.

The comments that we received relating to our proposal to amend Regulation S–X were generally supportive of our efforts to improve the information that funds report to shareholders and the Commission.[527] However, commenters did provide comments on many aspects of our proposal, which we discuss below.

The rules that we are adopting will renumber the current schedules in Article 12 of Regulation S–X and break out the reporting of derivatives currently on Schedule 12–13 into separate schedules.[528] These changes are summarized in Figure 1, below.

---

[523] *See, e.g.,* ICI Comment Letter (agreeing with the proposed approach); State Street Comment Letter (same). *See also* Schwab Comment Letter (stating that Form N–PORT might not serve the interests of investors); Fidelity Comment Letter (same); SIFMA Comment Letter I (stating that reports on Form N–PORT should be nonpublic).

[524] *See* rule 1–01, *et seq.* of Regulation S–X [17 CFR 210.1–01, *et seq.*]. While ''funds'' are defined in the preamble as registered investment companies other than face-amount certificate companies, and any separate series thereof—*i.e.,* management companies and UITs—we note that our amendments to Regulation S–X apply to both registered investment companies and BDCs. *See infra* section II.C.6. Therefore, throughout this section, when discussing fund reporting requirements in the context of our amendments to Regulation S–X, we are also including changes to the reporting requirements for BDCs.

[525] *See supra* section II.A.2.g.iv.

[526] We recognize that under the federal securities laws, certain derivatives fall under the definition of securities, notwithstanding, for purposes of our amendments to Regulation S–X, we expect funds to adhere to the requirements of the disclosure schedules for the relevant derivative investment, regardless of how it would be defined under the federal securities laws. *See, e.g.,* rule 12–13C of Regulation S–X (Open swap contracts).

[527] *See, e.g.,* Comment Letter of Ernst & Young LLP (Aug. 10, 2015) (''EY Comment Letter'') (''We agree that many of these amendments would improve the transparency and comparability of investment company financial statements for their intended users.''); Deloitte Comment Letter (''We believe that the proposed rule related to the Commission's modernization project is consistent with the SEC's stated objective of improving the type and format of information regarding fund activities that investment companies provide to the Commission and investors . . . .''); SIFMA Comment Letter I (''We support the Commission's initiative to enhance and standardize the disclosure of derivatives and other portfolio investments in fund financial statements and believe that most of the proposed amendments to Regulation S–X will achieve that goal.''); *see also* AICPA Comment Letter. One commenter recommended that the Commission dispense with any requirement for position-level reporting of information regarding derivatives, as this information could confuse or mislead investors and could contain confidential information relating to a fund's investment strategy. Simpson Thacher Comment Letter. However, Article 12 of Regulation S–X already requires all position-level derivatives to be reported. Moreover, GAAP already requires a minimum level of position-level reporting of investments that does not distinguish between derivatives and securities. *See, e.g.,* FASB ASC 946–210–50–1 (Financial Services–Investment Companies-Disclosure—General-Schedule of Investments-Investment Companies Other than Nonregistered investments Partnerships).

[528] Throughout this release when we refer to a rule as it exists prior to any amendments we are making today, it is described as a ''current rule,'' while references to a rule as amended (or an existing rule that is not being amended today) are described as a ''rule'' or ''new rule.''

CHANGES TO ARTICLE 12 OF REGULATION S-X

CURRENT RULES	NEW RULES
12-12 (Investments in securities of unaffiliated issuers)	12-12 (Investments in securities of unaffiliated issuers)
12-12A (Investments—securities sold short)	12-12A (Investments—securities sold short)
12-12B (Open option contracts written)	12-13 (Open option contracts written)*
12-12C (Summary schedule of investments in securities of unaffiliated issuers)	12-12B (Summary schedule of investments in securities of unaffiliated issuers)*
	12-13A (Open futures contracts)*
	12-13B (Open forward foreign currency contracts)*
12-13 (Investments other than securities)	12-13C (Open swap contracts)*
	12-13D (Investments other than those presented in §§210.12-12, 12-12A, 12-12B, 12-13, 12-13A, 12-13B, and 12-13C)*
12-14 (Investments in and advances to affiliates)	12-14 (Investments in and advances to affiliates)

* Denotes new or renumbered schedules.

Figure 1

We believe, and commenters agreed, that these amendments will assist comparability among funds, and increase transparency for investors regarding a fund's use of derivatives.[529] We have endeavored to mitigate burdens on the industry by requiring similar disclosures both on Form N–PORT and in a fund's financial statements.[530] As we discussed in the Proposing Release, we continue to believe that these amendments are generally consistent with how many funds are currently reporting investments (including derivatives).[531]

2. Enhanced Derivatives Disclosures

In 2011, as part of a wider effort to review the use of derivatives by management investment companies, we issued a concept release and request for comment on a range of issues.[532] We received comment letters on the concept release from a variety of stakeholders. Several commenters noted that holdings of derivative investments are not currently reported by funds in a consistent manner.[533] Commenters also suggested that more disclosure on underlying risks was necessary, including more information on counterparty exposure and reporting relating to the notional amount of certain derivatives.[534] Another commenter specifically requested that we revise Regulation S–X in order to keep ''financial reporting current with developments in the financial markets.'' [535]

We are adopting rules that will standardize the reporting of certain derivative investments for fund financial statements. While the current rules under Regulation S–X establish general requirements for portfolio holdings disclosures in fund financial statements, they do not prescribe standardized information to be included for derivative instruments other than options. Current rule 12–13 of Regulation S–X (Investments other than securities) requires limited information on the fund's investments other than securities—that is, the investments not disclosed under current rules 12–12, 12–12A, 12–12B, and 12–14.[536] Thus, currently, under Regulation S–X, a fund's disclosures of open futures contracts, open forward foreign currency contracts, and open swap contracts are generally reported in accordance with rule 12–13.

To address issues of inconsistent disclosures and lack of transparency as to derivative instruments, we are amending Regulation S–X by adopting new schedules for open futures contracts, open forward foreign currency contracts, and open swap contracts. We received several comments generally supporting the Commission's proposals to provide

[529] *See, e.g.,* EY Comment Letter; SIFMA Comment Letter I.

[530] *See generally supra* section II.C.

[531] *See* Proposing Release, *supra* footnote 7, at 33616.

[532] Derivatives Concept Release, *supra* footnote 38.

[533] Comments submitted in response to the Derivatives Concept Release are available at *http://www.sec.gov/comments/s7-33-11/s73311.shtml. See* Morningstar Derivatives Concept Release Comment Letter (''This is because fund companies are not reporting derivative holdings in a consistent manner and are not reporting derivative holdings in a manner that identifies the underlying risk exposure.''); Comment Letter of Rydex|SGI to Derivatives Concept Release (Nov. 7, 2011) (''Rydex|SGI Derivatives Concept Release Comment Letter'') (''However, the quality and extent of such derivatives disclosure still varies greatly from registrant to registrant.'').

[534] *See* Morningstar Derivatives Concept Release Comment Letter (''Notional exposure . . . is a better measure of risk''); Comment Letter of Oppenheimer Funds to Derivatives Concept Release (Nov. 7, 2011) (''Instead, counterparty risks incurred through the investments in derivatives . . . should be considered in a new SEC rulemaking that is primarily disclosure based.''); Rydex|SGI Derivatives Concept Release Comment Letter (recommending that funds that invest in derivatives should disclose notional exposure for non-exchanged traded derivatives and a fund's exposure to counterparties). Commenters to the FSOC Notice made similar observations relating to counterparty disclosures. *See, e.g.,* Americans for Financial Reform FSOC Notice Comment Letter (''Counterparty data is also often not available.''); Comment Letter of The Systematic Risk Council Comment to FSOC Notice (Mar. 25, 2015) (discussing the need to have information about investment vehicles that hold bank liabilities).

[535] Comment Letter of Stephen A. Keen to Derivatives Concept Release (Nov. 8, 2011).

[536] The current schedule to rule 12–13 requires disclosure of: (1) Description; (2) balance held at close of period—quantity; and (3) value of each item at close of period. *See* current rule 12–13 of Regulation S–X.

more information about derivatives.[537] Other commenters objected to the public reporting of position level derivatives reporting arguing instead that we should focus on portfolio-level metrics analysis as it would more accurately reflect an investment company's overall use of, and, more meaningfully reflect its net exposure to derivatives.[538] Funds are currently required to report their position-level derivatives in accordance with Article 12 of Regulation S–X.[539] We believe that it is important for funds to continue to report position-level data for all investments in order to allow investors and other interested parties to fully understand their fund's holdings.[540]

We are also modifying the current disclosure requirements for purchased and written option contracts. Finally, we are adopting certain instructions regarding the presentation of derivatives contracts that are generally consistent with instructions that are currently included, or that we are adding, in either rule 12–12 (Investments in securities of unaffiliated issuers) or current rule 12–13 (Investments other than securities).[541]

a. Open Option Contracts Written—Rule 12–13 (Current Rule 12–12B) and Rule 12–12 (as Applicable to Options Purchased)

We are amending the current disclosure of written option contracts substantially as proposed.[542] We proposed to add new columns to the schedule for written option contracts that would require a description of the contract (replacing the current column for name of the issuer), the counterparty to the transaction,[543] and the contract's notional amount, which we are adopting as proposed.[544] Thus, for rule 12–13, for each open written options contract, funds will be required to disclose: (1) Description; (2) counterparty; (3) number of contracts; (4) notional amount; (5) exercise price; (6) expiration date; and (7) value.[545]

We received several comments relating to the proposed requirement to disclose notional amounts for open options contracts. Some commenters recommended that the Commission either eliminate the proposed notional amount column for certain options contracts as they believed it was unnecessary because, unlike the notional amount of swaps and futures, which communicates economic exposure, the notional amount of an option, without a delta adjustment, may not represent an equivalent position in the underlying reference asset[546] or, in the alternative, provide a clear definition of notional amount.[547] As we previously stated in the Derivatives Proposing Release, we believe that, although derivatives vary widely in terms of structure, asset class, risk and potential uses, for most types of derivatives the notional amount generally serves as an important data point for investors that seek to determine a fund's economic exposure to an underlying reference asset or metric.[548] We do not believe that it is necessary to provide funds with a prescriptive formula for calculating notional amount because we understand funds today calculate their derivatives' notional amounts for risk management, reporting or other purposes, and that funds would be able to use these calculations for financial statement reporting. Moreover, the Commission has previously discussed different types of derivatives transactions that are commonly used by funds, together with the method by which we understood a fund, for risk management, reporting or other purposes, could calculate a derivatives notional amount.[549] We believe that Regulation S–X will allow a fund to use these calculations methods, as well as other reasonable methods, to determine notional amounts of such derivatives transactions.[550]

We also proposed to add an instruction (proposed instruction 3) to current rule 12–12, which is the schedule by which purchased options are required to be disclosed, that would require funds to provide all information required by proposed rule 12–13 for written option contracts.[551] One commenter noted that some options contracts allow for a range of underlying securities to be delivered and requested that funds only be required to identify the security type to be delivered, rather than the full description called for in instruction 3 to rules 12–12 and 12–13.[552] We believe that providing a description of the investment underlying an option is necessary in order to fully understand the risks and rewards of such investment. For example, an options contract could allow for a range of underlying investments to be delivered and at the time the option is exercised, some of the investments could be riskier than others. We are therefore adopting the instruction as proposed.

For options where the underlying investment would otherwise be presented in accordance with another provision of rule 12–12 or proposed rules 12–13 through 12–13D, we also proposed requiring that the presentation of that underlying investment must include a description, as required by those provisions.[553] For example, reporting for a swaption would include the disclosures required under both the swaps rule (proposed rule 12–13C) and the options rule (proposed rule 12–13). We received no comments on this aspect of the proposal, and we are adopting it as proposed.

In order to assist investors in identifying and monitoring the counterparty risks associated with a fund's investments in derivatives, we proposed to require funds to disclose

[537] *See, e.g.,* CFA Comment Letter; Wells Fargo Comment Letter.

[538] *See, e.g.,* Simpson Thacher Comment Letter.

[539] *See supra* footnote 536 and accompanying text.

[540] *See id.*

[541] *See, e.g.,* rule 12–12, n. 2 of Regulation S–X (instructions for categorizing investments).

[542] Under current rule 12–12B, funds are required to report, for open option contracts, the name of the issuer, number of contracts, exercise price, expiration date, and value. *See* current rule 12–12B of Regulation S–X [17 CFR 210.12–12B].

[543] *See infra* footnote 554–555 and accompanying text.

[544] While rule 12–13 is specific to open option contracts written, the same disclosures also apply for purchased options as required by proposed Instruction 3 to rule 12–12. *See also* proposed rule 12–12B, n. 5 of Regulation S–X.

[545] *See* rule 12–13 of Regulation S–X.

[546] *See* ICI Comment Letter (recommending the elimination of notional amount for written options because the exercise price component of an option contract makes the notional amount less relevant than other derivative instruments, such as swaps and futures); MFS Comment Letter (recommending that the Commission eliminate the proposed notional amount column in the options table).

[547] *See* EY Comment Letter (supporting disclosures of notional amounts for open options contracts and notional and value amounts for open futures contracts, but noting that such requirements should include clear definitions); MFS Comment Letter (suggesting that the Commission either eliminate the notional amount column for open options contracts or, if the requirement is retained, clarify the methodology for calculating the notional amount of an option.); ICI Comment Letter (recommending that the Commission eliminate this requirement, or, should the Commission require notional amount, specify the calculation as: [number of contracts] × [exercise price] × [contract multiplier]).

[548] *See* Derivatives Proposing Release, *supra* footnote 7, at, n. 159 and accompanying text. *See also* Derivatives Concept Release, *supra* footnote 38, at n. 19 and accompanying text.

[549] *See* Derivatives Proposing Release, *supra* footnote 7, at Table 1; *see also id.*

[550] *See id.*

[551] *See* proposed rule 12–12, n. 3 of Regulation S–X.

[552] *See* AICPA Comment Letter.

[553] *See* proposed rules 12–12, n. 3; 12–12B, n. 5; and 12–13, n. 3 of Regulation S–X. One commenter requested clarification whether Regulation S–X would require disclosure of *any* investment with optionality. *See* AICPA Comment Letter. We did not intend to extend this requirement to bonds or other non-derivative instruments that contain optionality features.

the counterparty to a derivative.[554] We also acknowledged that counterparty risk is mitigated for exchange-traded instruments and therefore proposed an instruction for options and swaps that funds need not disclose the counterparty for exchange-traded instruments.[555] Commenters agreed, but noted that, like exchange-traded instruments, centrally cleared derivatives also do not bear the same type of risks (such as counterparty risk), as over-the-counter instruments.[556] Based on the comments that we received, we agree that counterparty risk can also be mitigated through central clearance and are therefore changing instruction 4 to rule 12–13 (open options contracts) (and instruction 4 to rule 12–13C (open swaps contracts)) to not require disclosure of the counterparty for both exchange-traded options and swaps and centrally cleared options and swaps.[557]

Another commenter suggested that funds should be required to present counterparty exposures net of collateral received or margin posted.[558] While we agree that receiving collateral and posting margin may mitigate some counterparty risk, in order to simplify the disclosures for investors and limit the burden for funds, we continue to believe that it is appropriate for funds to limit disclosure to the counterparty to the transaction, without the additional burden of providing collateral or margin information.[559]

As required in Form N–PORT,[560] in the case of an option contract with an underlying investment that is an index or basket of investments for which components are publicly available on a Web site as of the fund's balance sheet date,[561] or if the notional amount of the investment does not exceed one percent of the fund's NAV as of the close of the period, we proposed that the fund provide information sufficient to identify the underlying investment.[562] If the underlying investment is an index whose components are not publicly available on a Web site as of the fund's balance sheet date, or is based upon a custom basket of investments, and the notional amount of the option contract exceeds one percent of the fund's NAV as of the close of the period, as proposed, the fund would list separately each of the investments comprising the index or basket of investments.[563] We continue to believe that disclosure of the underlying investments of an option contract is an important element to assist investors in understanding and evaluating the full risks of the investment. The disclosures will provide investors with more transparency into both the terms of the underlying investment and the terms of the option. We also proposed to include a similar instruction for swap contracts.[564]

We received a number of comments on our proposal to publicly disclose the components of an underlying index, both with respect to Form N–PORT (discussed above) and Regulation S–X.[565] While one commenter agreed with our proposal,[566] others requested that we include a higher threshold before requiring disclosure, such as 5 percent.[567] Others agreed with our proposed 1% threshold but stated that reporting should be based on a percentage of net asset value, rather than notional value, as percentage of net asset value is a better indicator of materiality.[568]

As stated in the Proposing Release and in the Form N–PORT discussion above, we continue to believe that it is important for the Commission, investors, and other potential users to have transparency into exposures to assets that the fund has, regardless of whether the fund directly holds investments in those assets or chooses to create those exposures through a derivatives contract.[569] The 1% threshold is based on our experience with the summary schedule of investments, which requires funds to disclose investments for which the value exceeds 1% of the fund's NAV in that schedule.[570] We believe that, similar to the 1% threshold in the summary schedule of investments, providing a 1% *de minimis* threshold for disclosing the components of a derivative with nonpublic reference assets considers the need for the Commission, investors, and other potential users to have transparency into the exposures that derivative contracts create while not requiring extensive disclosure of multiple components in a nonpublic index for instruments that represent a smaller risk to the fund's overall performance. Separately, as discussed further below, we believe that this modification mitigates concerns some commenters had about public disclosure of such indexes.[571]

We also believe that it is appropriate to measure whether such derivative instrument exceeds the 1% threshold based on the derivative's notional value, as opposed to the current market value because derivatives with a small market value and a large notional amount could magnify losses or gains in net assets as compared to derivatives with a smaller notional amount, and thus believe that a derivative's notional value better measures its potential contribution to the gains or losses of the fund. Furthermore, as in Form N–PORT, we believe that providing a 1% *de minimis* for disclosing the components of a derivative with nonpublic reference assets considers the need for investors and other potential users to have transparency into the exposures that derivative contracts create while not requiring extensive disclosure of multiple components in a nonpublic index for instruments that represent a

---

[554] *See* proposed rule 12–13, Column B.

[555] *See* proposed rules 12–13, n. 4 and 12–13C, n. 4 of Regulation S–X.

[556] *See* State Street Comment Letter (requesting clarification on whether funds should report counterparty for exchange-traded derivatives); *see also* Morningstar Comment Letter (''The proposal to report counterparties for non-exchange-traded instruments is reasonable. Exposures to counterparties should be presented net of collateral received or margin posted.'').

[557] *See* rule 12–13, n. 4 of Regulation S–X; *see also* rule 12–13C, n. 4 of Regulation S–X; *supra* section II.A.2.g.iv.

[558] *See* Morningstar Comment Letter; *see also* CFA Comment Letter (generally supporting requirements for funds to report information relating to counterparty exposure).

[559] *See* rule 12–13, Column B; *see also* rule 12–13B, Column C; rule 12–13C, Column C.

[560] *See* Item C.11.c.iii of proposed Form N–PORT; *see also supra* section II.A.2.g.iv.

[561] As proposed, the components would be required to be publicly available on a Web site as of the fund's balance sheet date at the time of transmission to stockholders for any report required to be transmitted to stockholders under rule 30e–1. The components would be required to remain publicly available on a Web site as of the fund's balance sheet date until 70 days after the fund's next fiscal year-end. For example, components of an index underlying an option contract for a fund's 12/31/14 annual report must be made publicly available on a Web site as of 12/31/14 by the time that the 12/31/14 annual report is transmitted to stockholders. The components must remain publicly available until 3/10/16.

[562] *See* proposed rule 12–13, n. 3 of Regulation S–X. *See supra* footnotes 360–362 and accompanying text (discussing the rationale for similar proposed requirements in Form N–PORT).

[563] *See id.*

[564] *See* proposed rule 12–13C, n. 3 of Regulation S–X.

[565] *See also supra* section II.A.2.g.iv.

[566] *See, e.g.,* Morningstar Comment Letter (''Index providers are earning revenues from the licensing fees embedded in the derivative cost that is born by the fund and therefore its shareholders.'').

[567] *See, e.g.,* ICI Comment Letter; Wells Fargo Comment Letter (additional index reporting should only be triggered when a derivative represents 5% of NAV).

[568] *See, e.g.,* SIFMA Comment Letter I (''We believe the original 1% value requirement is a far better indicator of materiality and should be adopted in this connection as well.''); Oppenheimer Comment Letter (1% of net asset value).

[569] We are also modifying Form N–PORT to require similar disclosures. *See generally supra* section II.A.2.g.iv.

[570] *See* Instruction 3 to rule 12–12C of Regulation S–X; *see also* PwC Comment Letter.

[571] *See also supra* section II.A.2.g.iv.

small amount of the fund's overall value.

Commenters also suggested that funds should provide narrative disclosures about the components of a referenced index or custom basket, including any applicable industry or sector concentrations.[572] The same commenters and others suggested that once a nonpublic index crosses the reporting threshold, we limit disclosure to the top 50 components and components that represent more than one percent of the index based on the notional value of the derivatives, as this standard is analogous to the current reporting requirement to identify holdings in the summary schedule of investments.[573] As discussed above, we continue to believe that the notional amount generally serves as an appropriate measure of the index's economic exposure to an underlying reference asset or metric.[574]

While, as we discussed above, we believe that it is appropriate to adopt a tiered reporting requirement for reporting on Form N–PORT, we are not adopting a tiered reporting requirement for disclosures under Regulation S–X. Unlike Form N–PORT, which will be reported in a structured XML format, schedules of investments are designed to be investor friendly documents. By requiring the reporting in the schedule of investments of all components of an underlying index or custom basket, we agree with commenters that noted that requiring the potential volume of disclosing components in an index in financial statements could add considerable length to the schedule of investments, rendering them more difficult for investors to review than limiting such disclosures to the most significant components.[575] Additionally, such disclosures may minimize the importance to investors of direct portfolio holdings and increase reporting costs to funds.[576] Finally, investors or others interested in knowing all components of such indexes will still have access to such information on Form N–PORT, without adding the volume to the financial statements that could occur by requiring complete disclosure in the financial statements.[577]

As a result, we are making a modification from our proposed amendments to Regulation S–X to require funds to only report the top 50 components of the index or custom basket and any components that represent more than one percent of the notional value of the index or custom basket.[578] Thus, if the index's or custom basket's components are not publicly available and the notional amount of the derivative represents more than 1% of the net asset value of the fund, the fund will provide a description of the index or custom basket and list separately (i) the 50 largest components in the index or custom basket and (ii) any other components where the notional value for that component exceeds 1% of the notional value of the index or custom basket.[579] For each investment separately listed, the fund will include the description of the underlying investment as would be required by Article 12 of Regulation S–X as part of the description, the quantity held, the value at the close of the period, and the percentage value when compared to the custom basket's net assets.[580]

As discussed more fully above, commenters also objected to the public disclosure of the components underlying an index as that disclosure could harm the intellectual property rights that index providers might assert and, as a result, harm investors who may lose the benefit of index products that would no longer be available to them.[581] However, we believe that it is important that fund investors are provided with the information necessary to make informed investing decisions.[582] This necessarily means that investors and other potential users have access to relevant information relating to investments in derivatives, including the components underlying an index.[583] As discussed further in section II.A.4, above, we believe that the potential for harm to fund investors is mitigated through the current public reporting delays for fund shareholder reports.[584] We are also adopting, as proposed, but subject to the modifications discussed below,[585] certain instructions for rule 12–13 that are generally the same across all of the schedules for derivatives contracts.[586]

b. Open Futures Contracts—New Rule 12–13A

We are adopting as proposed new rule 12–13A, which will require standardized reporting of open futures contracts. Under current rule 12–13, many funds currently report for each open futures contracts a description of the futures contract (including its expiration date), the number of contracts held (under the balance held—quantity column), and any unrealized appreciation and depreciation (under the value column).[587] In order to allow investors to better understand the economics of a fund's investment in futures contracts, new rule 12–13A will require funds to also report notional amount and value.[588] Therefore, under new rule 12–13A, funds with open futures contracts will report: (1) Description; (2) number of contracts; (3) expiration date; (4) notional amount; (5) value; and (6) unrealized appreciation/depreciation.[589]

[572] *See, e.g.,* PwC Comment Letter; AICPA Comment Letter.

[573] *See, e.g.,* PwC Comment Letter; AICPA Comment Letter; ICI Comment Letter; MFS Comment Letter. Commenters also noted their belief that reporting should be based on a percentage of NAV, rather than notional value, as percentage of NAV is a better indicator of materiality. *See* SIFMA Comment Letter I; Oppenheimer Comment Letter (1% based on net, not notional, values); *contra* Morningstar Comment Letter (''Arbitrary limits on positions that should be disclosed for portfolios or reference indexes can mask the risk of an instrument.'').

[574] *See id.*

[575] *See* AICPA Comment Letter; PwC Comment Letter.

[576] *See* PWC Comment Letter (expressing concern that the cost of presenting numerous immaterial notional positions in the financial statements will exceed the benefit to the financial statement readers); AICPA Comment Letter (expressing concern that the cost of identifying and auditing numerous individual notional positions which typically are not reflected in the same accounting records as investment positions directly held, but instead appear in term sheets, counterparty confirmations, and off-line valuation spreadsheets—will exceed the benefit to financial statement readers).

[577] *Cf.* Franco Comment Letter (supporting more layered forms of disclosure ''that meet the needs of different constituent end-users of disclosure.'')

[578] *See* Instruction 3 to rule 12–13.

[579] *See* rules 12–13, n.3 and 12–13C, n.3 of Regulation S–X. We also modified language from the proposal to delete duplicative wording; *see* rule 12–13, n. 3 (deleting duplicative wording to ''list separately'') and clarify instructions and conform to similar instructions in Form N–PORT; *see* rules 12–13, n. 3 and 12–13C, n. 3 (changing ''is over'' to ''exceeds'' and adding ''custom'' to ''baskets'').

[580] *See id.; see also supra* section II.A.2.g.iv.

[581] *See supra section* II.A.2.g.iv.

[582] *Id.*

[583] *Id.*

[584] *See also infra* footnote 1271.

[585] *See supra* section II.C.4.

[586] Instruction 2 will add ''description'' and ''counterparty'' to the organizational categories of options contracts that must be listed separately. *See* rule 12–13, n. 2 of Regulation S–X. Instruction 4 will clarify that the fund need not include counterparty information for exchange-traded or centrally cleared options. *See* rule 12–13, n. 4 of Regulation S–X. Instruction 6 will require the fund to indicate each investment which cannot be sold because of restrictions or conditions applicable to the investment. *See* rule 12–13, n. 6 of Regulation S–X; *see also infra* section II.C.4. Instruction 7 will require the fund to indicate each investment whose value was determined using significant unobservable inputs. *See* rule 12–13, n. 7 of Regulation S–X; *see also infra* section II.C.4. Instruction 8 will require Column G (Value) to be totaled and agree with the correlative amount shown on the related balance sheet. *See* rule 12–13, n. 8.

[587] *See* current rule 12–13 of Regulation S–X.

[588] *See* rule 12–13A, Columns D and E of Regulation S–X.

[589] *See* rule 12–13A of Regulation S–X; *see also* Morningstar Comment Letter (''The notional of a

Continued

We proposed a requirement that funds must reconcile the total of Column F (unrealized appreciation/depreciation) to the total variation margin receivable or payable on the related balance sheet.[590] Although we received no comment on this aspect of the proposal, upon further review, we recognize that there may be instances where the total unrealized appreciation or depreciation for the fund's futures contracts might not reconcile to the variation margin receivable or payable on the balance sheet. As a result, we are therefore not adopting this proposed instruction.

We received a comment that suggested that the Commission provide specific definitions for the terms ''notional amount'' and ''value'' for futures contracts.[591] According to the commenter, ''notional amount'' may reference either the notional amount at the time the futures contract was entered into or the current notional value. Since we believe, for Regulation S–X purposes, that it would be more useful for investors to understand the current notional amount for a futures contract, we are adopting rule 12–13A with a new instruction from the proposal that instructs funds to report ''current notional amount'' pursuant to Column D of new rule 12–13A.[592] For purposes of Article 12 of Regulation S–X, we note that section 2(a)(41) of the Investment Company Act currently contains a definition of ''value'' which is applicable to Regulation S–X.[593]

We are also adopting, as proposed, but subject to the modifications discussed below,[594] certain new instructions to the schedule for rule 12–13A that are similar to the other derivatives disclosure requirements.[595]

c. Open Forward Foreign Currency Contracts—New Rule 12–13B

We are also adopting as proposed new rule 12–13B, which requires standardized disclosures for open forward foreign currency contracts.[596] Under current rule 12–13, many funds reported for each open forward foreign currency contract, a description of the contract (including a description of what is to be purchased and sold under the contract and the settlement date), the amount to be purchased and sold on settlement date (under the balance held—quantity column), and any unrealized appreciation or depreciation (under the value column).[597] In order to allow investors to better understand counterparty risk for forward foreign currency contracts, we are adopting as proposed, a requirement that funds also disclose the counterparty to each transaction.[598] Under new rule 12–13B, funds holding open forward foreign currency contracts will therefore report the: (1) Amount and description of currency to be purchased; (2) amount and description of currency to be sold; (3) counterparty; (4) settlement date; (5) unrealized appreciation/depreciation.[599]

One commenter recommended that we include a clear definition of ''forward contract'' to avoid potential confusion and foster consistent derivatives disclosure under Form N–PORT, Regulation S–X, and Form ADV.[600] Many funds appear to be already classifying forward foreign currency contracts in their financial statements, and the approach we are adopting allows flexibility as products evolve. We are therefore declining to adopt a definition of ''forward contract.''

Commenters suggested that open forward foreign currency contracts be grouped by currencies purchased or sold, or more specifically by US dollars when US domiciled funds mark currency to the US dollar within financial statements.[601] We do not believe that further refinement to the grouping of forward foreign currency contracts is necessary, as the commenters suggested, as new rule 12–13B provides funds with the flexibility to organize foreign currency contracts in the manner that they believe provides the clearest presentation of their financial statements. For example, if a fund concentrates its investments in a country such that its investments are generally denominated in a currency other than the US dollar, it may determine that grouping its contracts, including cross-currency forwards, by that currency would provide a clearer presentation to investors. We are therefore adopting instruction 1 to rule 12–13B as proposed, which will require the fund to separately organize forward foreign currency contracts where the description of currency purchased, currency sold, counterparties, or settlement dates differ.[602]

One commenter suggested that since most funds report derivatives on a gross basis, appreciation and depreciation for the disclosures of non-exchange-traded derivatives such as forward foreign currency contracts and swaps contracts should be disclosed in two separate columns or include subtotals, rather than in one column, as was proposed.[603] We agree that in certain circumstances this change in format would assist with reconciling the unrealized appreciation and depreciation with the corresponding figures on the fund's balance sheet and would encourage this presentation to the extent it provides such assistance. In some cases, however, an extra column may not be necessary [604] and we are therefore not adopting the commenters' suggested modifications to the disclosure tables for those rules, although we note that the rules do not prevent a fund from presenting the information in two separate columns, if it so chooses.[605]

We are also adopting, as proposed, but subject to the modifications discussed below,[606] certain new instructions to the schedule for rule 12–13B that are similar to the other derivatives disclosure requirements.[607]

futures contract is a key characteristic that is used to evaluate the impact on the portfolio. The disclosure is relevant and informative for investors and for fiduciaries acting on the behalf of shareholders and other investors.'').

[590] *See* proposed rule 12–13A, n. 7 of Regulation S–X.

[591] *See* AICPA Comment Letter.

[592] *See* rule 12–13A, n. 6.

[593] *See* section 2(a)(41) of the Investment Company Act.

[594] *See infra* section II.C.4.

[595] *See infra* section II.C.4. Instruction 1 will require funds to organize long purchases of futures contracts and futures contracts sold short separately. *See* rule 12–13A, n. 1 of Regulation S–X. Instruction 2 will require funds to list separately futures contracts where the descriptions or expiration dates differ. *See* rule 12–13A, n. 2 of Regulation S–X. Instruction 3 will clarify that the description should include the name of the reference asset or index. *See* rule 12–13A, n. 3 of Regulation S–X. Instruction 4 will require the fund to indicate each investment which cannot be sold because of restrictions or conditions applicable to the investment. *See* rule 12–13A, n. 4 of Regulation S–X; *see also infra* section II.C.4. Instruction 5 will require the fund to indicate each investment whose value was determined using significant unobservable inputs. *See* rule 12–13A, n. 5 of Regulation S–X; *see also infra* section II.C.4.

[596] *See* proposed rule 12–13B of Regulation S–X.

[597] *See* rule 12–13 of Regulation S–X.

[598] *See* rule 12–13B, Column C of Regulation S–X.

[599] *See* rule 12–13B of Regulation S–X.

[600] *See* T. Rowe Price Comment Letter.

[601] *See* State Street Comment Letter (forward foreign currency contracts should be grouped by purchased or sold US dollars); Morningstar Comment Letter (foreign currency forwards should be grouped and subtotaled by currencies purchased or sold).

[602] *See* rule 12–13B, n. 1 of Regulation S–X.

[603] *See* BlackRock Comment Letter.

[604] For example, if derivatives are presented net in accordance with ASC Topic 210 (Balance Sheet).

[605] *See* rule 12–13A, Column F and rule 12–13C, Column H of Regulation S–X.

[606] *See infra* section II.C.4.

[607] Instruction 1 will require the fund to separately list forward foreign currency contracts where the description of currency purchased, currency sold, counterparties, or settlement dates differ. *See* rule 12–13B, n. 1 of Regulation S–X. Instruction 2 will require the fund to indicate each investment which cannot be sold because of restrictions or conditions applicable to the investment. *See* rule 12–13B, n. 2 of Regulation S–X; *see also infra* section II.C.4. Instruction 3 will require the fund to indicate each investment whose value was determined using significant unobservable inputs. *See* rule 12–13B, n. 3 of

d. Open Swap Contracts—New Rule 12–13C

We are also adopting, substantially as proposed, rule 12–13C, which will standardize reporting of fund positions in open swap contracts.[608] Under current rule 12–13, for each open swaps contract, funds reported description (including a description of what is to be paid and received by the fund and the contract's maturity date), notional amount (under balance held—quantity column), and any unrealized appreciation or depreciation (under the value column).[609] Under new rule 12–13C, funds will also be required to report the counterparty to each transaction (except for exchange-traded and centrally cleared swaps), the contract's value, and any upfront payments or receipts.[610] This additional information will allow investors to both better understand the economics of the transaction, as well as its associated risks.[611] Therefore, funds will report for each swap the: (1) Description and terms of payments to be received from another party; (2) description and terms of payments to be paid to another party; (3) counterparty; (4) maturity date; (5) notional amount; (6) value; (7) upfront payments/receipts; and (8) unrealized appreciation/depreciation.[612] Commenters were generally supportive of this proposed disclosure, although some expressed concerns about some aspects of the disclosures, as discussed in more detail below. We are adopting rule 12–13C substantially as proposed in an effort to increase transparency of swap contracts, but are making some modifications in response to comments, which are discussed below. The final rules are designed to maintain enough flexibility for the variety of swap products that currently exist and future products that might come to market.

In addition to the major categories of swaps, commenters also recommended that centrally cleared swaps be grouped separately from over-the-counter swaps, as centrally cleared swaps do not bear the same types of risks as over-the-counter swaps.[613] While we do not believe that it is necessary to separately categorize centrally cleared swaps for purposes of Regulation S–X, as discussed more fully above, we are modifying proposed instruction 4 to Rule 12–13C to reflect that both exchange-traded and centrally cleared swaps need not list counterparty information.[614] Moreover, instruction 1 to rule 12–13C provides enough flexibility as drafted to allow funds to further categorize swaps contracts by over-the-counter or centrally cleared, should they choose to do so.[615]

We are also adopting instruction 3 of rule 12–13C as proposed, which will provide specific examples of the more common types of swap contracts (*e.g.,* credit default swaps, interest rate swaps, and total return swaps).[616] We recognize that other types of swaps exist (*e.g.,* currency swaps, commodity swaps, variance swaps, and subordinated risk swaps). For example, for a cross-currency swap, funds will report for purposes of Column A of rule 12–13C, a description of the interest rate to be received and the notional amount that the calculation of interest to be received is based upon. Column B of rule 12–13C will include a description of the interest rate to be paid and the notional amount that the calculation of interest to be paid is based upon. Column E will include both notional amounts and the currency in which each is denominated, or the same information could be presented in two separate columns.

In the context of providing comments on Form N–PORT, one commenter noted that credit default swaps are unique enough instruments that they should be treated separately from other types of swaps.[617] We designed our amendments to Regulation S–X with enough flexibility to allow funds to report the significant elements of current and future investments and believe that rule 12–13C adequately requires funds to disclose the information sufficient for a user of financial information to understand the terms of payments to be received and paid of a fund's investments in swaps contracts, including credit default swaps. We are therefore adopting this portion of instruction 3 as proposed and not providing a separate schedule for credit default swaps.[618]

Consistent with comparable reporting requirements that we proposed in connection with Form N–PORT and rule 12–13 (open options contracts), in the case of a swaps contract with an underlying investment that is an index or basket of investments for which components are publicly available on a Web site as of the fund's balance sheet date,[619] or if the notional amount of the investment does not exceed one percent of the fund's NAV as of the close of the period, we proposed that the fund provide information sufficient to identify the underlying investment.[620] We also proposed that if the underlying investment is an index whose components are not publicly available on a Web site as of the fund's balance sheet date, or is based upon a custom basket of investments, and the notional amount of the swaps contract exceeds one percent of the fund's NAV as of the close of the period, the fund would list separately each of the investments comprising the index or basket of investments.[621]

In a modification from the proposal, and as discussed more fully in the open option contracts[622] and the Form N–PORT sections of this release,[623] in the case of a swaps contract with a referenced asset that is an index whose components are publicly available on a

Regulation S–X; *see also infra* section II.C.4. Instruction 4 will clarify that Column E (unrealized appreciation/depreciation) should be totaled and agree with the total of correlative amounts shown on the related balance sheet. *See* rule 12–13B, n. 4 of Regulation S–X.

[608] *See* rule 12–13C of Regulation S–X.

[609] *See* rule 12–13 of Regulation S–X.

[610] *See* rule 12–13C, Columns C, F, and G of Regulation S–X.

[611] For example, upfront payments or receipts disclose whether cash was paid or received when entering into a swap contract, allowing investors to better understand the initial cost of the investment, if any.

[612] *See* rule 12–13C of Regulation S–X. The description and terms of payments to be paid and received (and other information) to and from another party should reflect the investment owned by the fund and allow an investor to understand the full nature of the transaction. One commenter suggested that, for over-the-counter swaps, appreciation and depreciation should be disclosed in two separate columns or include subtotals for appreciation and depreciation instead of one column. *See* BlackRock Comment Letter. But, for the same reasons as discussed in our discussion of rule 12–13B, we are not adopting the corresponding modification to the table for rule 12–13C, although the rules do not prevent a fund from presenting the information in two separate columns, if it so chooses.

[613] *See, e.g.,* State Street Comment Letter; BlackRock Comment Letter.

[614] *See supra* footnote 557 and accompanying text; *see also* rule 12–13C, n. 4 of Regulation S–X.

[615] *See* rule 12–13C, n. 1 of Regulation S–X.

[616] *See* rule 12–13C, n. 3 of Regulation S–X.

[617] *See* Morningstar Comment Letter (Commission should require disclosure of protection written and protection purchased with the description containing the underlying, as well as columns for notional, ongoing payment, initial payment, maturity, and value.); *see also supra* section II.A.2.g.iv.

[618] *See* rule 12–13C, n. 3 of Regulation S–X.

[619] As proposed, the components would be required to be publicly available on a Web site as of the fund's balance sheet date at the time of transmission to stockholders for any report required to be transmitted to stockholders under rule 30e–1. The components would be required to remain publicly available on a Web site as of the fund's balance sheet date until 70 days after the fund's next fiscal year-end. For example, components of an index underlying an option contract for a fund's 12/31/14 annual report must be made publicly available on a Web site as of 12/31/14 by the time that the 12/31/14 annual report is transmitted to stockholders. The components must remain publicly available until 3/10/16.

[620] *See* proposed rule 12–13, n. 3 of Regulation S–X. *See supra* footnotes 360–362 and accompanying text (discussing the rationale for similar proposed requirements in Form N–PORT).

[621] *See id.*

[622] *See supra* section II.C.2.a.

[623] *See supra* section II.A.2.g.iv.

Web site as of the fund's balance sheet date, or if the notional amount of the holding does not exceed one percent of the fund's NAV as of the close of the period, we are requiring that the fund provide information sufficient to identify the referenced asset, such as a description.[624] If the referenced asset is an index or custom basket whose components are not publicly available on a Web site as of the balance sheet date, and the notional amount of the derivative represents more than 1% of the net asset value of the fund as of the close of the period, the fund will provide a description of the index or custom basket and list separately (i) the 50 largest components in the index or custom basket and (ii) any other components where the notional value for that components is over 1% of the notional value of the index or custom basket.[625] For each investment separately listed, the fund will include the description of the underlying investment as would be required by Article 12 of Regulation S–X, as part of the description, the quantity held, the value at the close of the period, and the percentage value when compared to the custom basket's net assets.[626] As with underlying investments for option contracts, we believe that disclosure of the underlying referenced assets of a swap would assist investors in better understanding and evaluating the full risks of investments in swaps.

For swaps which pay or receive financing payments, we proposed that funds would disclose variable financing rates in a manner similar to disclosure of variable interest rates on securities in accordance with instruction 4 to proposed rule 12–12.[627] Commenters expressed concern that disclosing financing rates for swaps contracts could harm fund investors as financing rates are negotiated between parties.[628] We believe, however, that the Commission's objective to increase transparency and enhance investor understanding in these instruments by giving investors the opportunity to better understand the investments held in a fund's portfolio justifies the disclosure of financing rates for swaps contracts.[629] We are therefore adopting this portion of instruction 3 to rule 12–13C as proposed.[630]

We are also adopting, as proposed, but subject to the modifications discussed below,[631] other instructions to this rule that are similar across all of our rules for derivatives contracts, as well as one modification to our proposed instruction 7.[632]

e. Other Investments—Rule 12–13D (Current Rule 12–13)

We are also adopting, as proposed, amendments to current rule 12–13 and, for organization and consistency, are renumbering it as rule 12–13D.[633] Rule 12–13D will continue, as is currently required by rule 12–13, to be the schedule by which funds report investments not otherwise required to be reported pursuant to Article 12.[634] We received no comments on our proposed amendments to current rule 12–13 (and are adopting rule 12–13D as proposed). Thus rule 12–13D will require reporting of: (1) Description; (2) balance held at close of period-quantity; and (3) value of each item at close of period.[635] We expect that funds will report, among other holdings, investments in physical holdings, such as real estate or commodities, pursuant to rule 12–13D. As discussed below, we are amending current rule 12–13's requirement that funds disclose ''each investment not readily marketable'' [636] in favor of disclosures concerning whether an investment is restricted and if an investment's value was determined using significant unobservable inputs.[637] We are also adopting the proposed new instructions to the schedule that are generally the same across all the schedules for derivatives contracts, subject to the modifications discussed below.[638]

3. Amendments to Current Rules 12–12 Through 12–12C

While we did not propose changes to the current schedules for rules 12–12, 12–12A, and 12–12C, we proposed certain additional rule instructions that would include new reporting requirements, as well as certain clarifying changes, including renumbering several of the schedules. With the exception of the instructions discussed below, we are adopting the amendments to new rules 12–12 through 12–12B as proposed.

We proposed several modifications to the instructions to rule 12–12, the rule concerning disclosure of investments in securities of unaffiliated issuers. We proposed to modify instruction 2 to rule 12–12 (and the corresponding instructions to proposed rules 12–12A, 12–12B, 12–13D, and 12–14) which would require funds to categorize the schedule by type of investment, the related industry, *and* the related country, or geographic region.[639] Commenters noted that requiring categorization of both the industry *and* geographic region (as opposed to categorizing one factor) would add considerable length to the schedule of investments and make it more difficult to understand.[640] We were persuaded

[624] *See* rule 12–13C, n. 3 of Regulation S–X.

[625] *See* rule 12–13C, n. 3 of Regulation S–X.

[626] *See id.*

[627] *See* proposed rules 12–13C, n. 3; and 12–12, n. 4 of Regulation S–X.

[628] *See, e.g.,* MFS Comment Letter; Invesco Comment Letter; ICI Comment Letter (public benefit of disclosure does not outweigh potential competitive harm).

[629] For example, negotiated terms of an investment in a restricted security of a private company are required to be disclosed. *See* current rule 12–12, n. 6 of Regulation S–X. For the same reasons we discussed above, we believe that it is necessary for funds to report the specific terms for other derivatives holding information.

[630] *See* rule 12–13C, n. 3 of Regulation S–X.

[631] *See infra* section II.C.4.

[632] Instruction 5 will require the fund to indicate each investment which cannot be sold because of restrictions or conditions applicable to the investment. *See* rule 12–13C, n. 5 of Regulation S–X; *see also infra* section II.C.4. Instruction 6 will require the fund to indicate each investment whose value was determined using significant unobservable inputs. *See* rule 12–13C, n. 6 of Regulation S–X; *see also infra* section II.C.4. Instruction 7 will require that Columns G (upfront payments/receipts) and H (unrealized appreciation/depreciation) be totaled and agree with the totals of their respective amounts shown on the related balance sheet. *See* rule 12–13C, n. 7 of Regulation S–X. Note we proposed for instruction 7 to also include Column F (value) in the total, however, upon further review, we have determined that correlating the amounts from Columns F, in addition to Columns G and H would be duplicative and therefore unnecessary.

[633] *See* rule 12–13D of Regulation S–X.

[634] *See id.*

[635] *Id.*

[636] *See* rule 12–13, n. 4 of Regulation S–X.

[637] *See* proposed rule 12–13D, n. 6 of Regulation S–X (requiring the fund to indicate each investment which cannot be sold because of restrictions or conditions applicable to the investment); rule 12–13D, n. 7 (requiring the fund to indicate each issue of securities whose value was determined using significant unobservable inputs); *see also infra* section II.C.4.

[638] Instruction 1 will require the fund to organize each investment separately where any portion of the description differs. *See* rule 12–13D, n. 1 of Regulation S–X. Instruction 2 will require the fund to categorize the schedule by the type of investment, and related industry, country, or geographic region, as applicable. *See* rule 12–13D, n. 2 of Regulation S–X. Instruction 3 will require that the description of the asset include information sufficient for a user to understand the nature and terms of the investment. *See* rule 12–13D, n. 3 of Regulation S–X; *see also infra* section II.C.4.

[639] *See* proposed rule 12–12, n. 2 of Regulation S–X; *see also* proposed rules 12–12A, n. 2; 12–12B, n. 1; 12–13D, n. 2; and 12–14, n. 2 of Regulation S–X.

[640] *See, e.g.,* Oppenheimer Comment Letter; State Street Comment Letter; Vanguard Comment Letter; MFS Comment Letter; Wells Fargo Comment Letter (in chart or table); SIFMA Comment Letter I; ICI Comment Letter; BlackRock Comment Letter (results in additional costs to shareholders, without a corresponding benefit); AICPA Comment Letter. In response to our proposal to categorize investments by both industry and geographic regions, some commenters suggested as an alternative that funds should report the percentage of securities by country or geographic region as a separate schedule, graph, or chart. *See, e.g.,* State

that requiring categorization of both industry and geographic region would add unnecessary length and confusion to the schedule of investments, which could ultimately undermine the schedule's usefulness to investors, and are therefore not adopting these requirements.[641]

One commenter requested that, should we adopt the proposed instructions relating to categorization of both industry and geographic region (which, as discussed in the prior paragraph, we are not adopting), the instructions should be integrated into Regulation S–X that standardize how funds report geographic concentrations.[642] Others noted that the disclosure of country of risk or geographic region should be treated as nonpublic since it is subjective in nature and based on unique assumptions and inputs used by fund management.[643] Since we have decided to not adopt the proposed instructions which would have required funds to categorize investments by both industry and geographic regions, we do not think it is necessary to include specific instructions on how funds should report geographic concentrations or treat the disclosure as nonpublic. However, we note the current GAAP requirement to disclose significant concentrations of credit risk, which includes information about shared regions that identify the concentration remains unchanged.[644]

In order to provide more transparency to a fund's investments in debt securities, we are adopting, with certain modifications discussed below, our proposed instruction to rule 12–12 requiring a fund to indicate the interest rate or preferential dividend rate and maturity date for certain enumerated debt instruments.[645] When disclosing the interest rate for variable rate securities, we proposed that the fund describe the referenced rate and spread.[646] In proposing disclosures for variable rate securities, we requested comment on other alternatives, such as period-end interest rate (*e.g.* the investment's interest rate in effect at the end of the period).[647] We received several comments supporting our proposal to provide the reference rate and spread for variable rate securities, reasoning that the disclosure of the components of the variable rate would be easier for investors and other interested parties to determine the investment's current rate at any given time (as opposed to the rate at the end of the reporting period).[648] However, another commenter suggested that the period-end interest rate is the most appropriate variable rate security disclosure for shareholders.[649]

We continue to believe that disclosure of the referenced rate and spread will allow investors to better understand the economics of the fund's investments in variable rate debt securities. We are persuaded, however, that the period-end interest rate is also important for investors because it will provide investors with the actual interest rate of the investment at the period end, thereby giving investors both the ability to understand the investment's current return (through period-end rate) and to better understand how interest rate changes could affect the investment's future returns. Therefore, in a modification from the proposal, we are now including in the instruction a requirement that the fund both describe the referenced rate and spread and provide the end of period interest rate for each investment, or include disclosure of each referenced rate at the end of the period.[650] For securities with payments-in-kind, we proposed that the fund provide the rate paid in-kind in order to provide more transparency to investors when the fund is generating income that is not paid in cash.[651] We received no comments addressing this item and therefore are adopting as proposed.[652]

We also proposed to modify the current instruction to rule 12–12 [653] that requires a fund to identify each issue of securities held in connection with open put or call option contracts and loans for short sales, by adding the requirement to also indicate where any portion of the issue is on loan.[654] We received no comments on this item. This disclosure, which we believe is consistent with current industry practices, will increase the transparency of the fund's securities lending activities, and we are adopting the modification to the instruction as proposed.[655]

We proposed to modify current instruction 3 of rule 12–12 (proposed instruction 5 of rule 12–12) concerning the organization of subtotals for each category of investments, making the instructions consistent with those in proposed rule 12–12B (current rule 12–12C), Summary schedule of investments in securities of unaffiliated issuers.[656] We received no comments on this item and are adopting as proposed.[657]

Likewise, we are adopting several modifications to rule 12–12A regarding the presentation of securities sold short, in order to conform the instructions to rule 12–12.[658]

Funds are permitted to include in their reports to shareholders a summary portfolio schedule, in lieu of a complete portfolio schedule, so long as it conforms with current rule 12–12C

Street Comment Letter; MFS Comment Letter; ICI Comment Letter; BlackRock Comment Letter; AICPA Comment Letter. However, given the fact that we are not adopting this proposal, we believe a separate schedule is unnecessary.

[641] *See* rule 12–12, n. 2 of Regulation S–X; *see also* rules 12–12A, n. 4; 12–12B, n. 2; 12–13D, n. 2; and 12–14, n. 2 of Regulation S–X.

[642] *See* SIFMA Comment Letter I.

[643] *See, e.g.,* MFS Comment Letter; ICI Comment Letter (pertaining to disclosure of country of risk in Form N–PORT).

[644] *See* FASB ASC 825–10–50–21(a) (Financial Instruments-Overall-Disclosure-Concentrations of Credit Risk of All Financial Instruments).

[645] *See* proposed rule 12–12, n. 4 of Regulation S–X.

[646] *See id.*

[647] *See* Proposing Release, *supra* footnote 7, at 33622.

[648] *See* State Street Comment Letter; *see also* Morningstar Comment Letter (Disclosure would allow investors to identify when cash flows associated with a fund's returns are fixed or variable).

[649] *See* Wells Fargo Comment Letter.

[650] *See* rules 12–12, n. 4; 12–12A, n. 3; 12–14, n. 3 of Regulation S–X. For purposes of clarity, we also amended our proposed instructions to 12–12A and 12–14 to state the complete instruction, rather than, as proposed, reference the instruction in rule 12–12, n. 4. *Id.*

[651] *See* proposed rule 12–12, n. 4 of Regulation S–X.

[652] *See* rule 12–12, n. 4 of Regulation S–X; *see also See* rules 12–12A, n. 3 and 12–14, n. 3 of Regulation S–X.

[653] *See* current rule 12–12, n. 7 of Regulation S–X.

[654] *See* proposed rule 12–12, n. 11 of Regulation S–X; *see also* proposed rule 12–12B, n. 14 of Regulation S–X.

[655] *See* rule 12–12, n. 10 of Regulation S–X; *see also* rule 12–12B, n. 13 of Regulation S–X.

[656] *See* proposed rule 12–12, n. 5 of Regulations S–X; *see also* proposed rule 12–12B, n. 2 of Regulation S–X

[657] *See* rule 12–12, n. 5 of Regulations S–X; *see also* rules 12–12A, n. 4; rule 12–12B, n. 2 of Regulation S–X; *see also* rule 12–14, n. 7 of Regulation S–X.

[658] Instruction 2 will require the fund to organize the schedule in rule 12–12A in the same manner as is required by Instruction 2 of rule 12–12. *See* rule 12–12A, n. 2. Instruction 3 will require the fund to identify the interest rate or preferential dividend rate and maturity date as required by Instruction 4 of rule 12–12. *See* rule 12–12A, n. 3 of Regulation S–X. Instruction 4 will require the subtotals for each category of investments, subdivided both by type of investment and industry, country, or geographic region to be shown together with their percentage value compared to net assets, in the same manner as is required by Instruction 5 of rule 12–12. *See* rule 12–12A, n. 4 of Regulation S–X. Instruction 6 will require the fund to identify each issue of securities whose fair value was determined using significant unobservable inputs. *See* rule 12–12A, n. 6 of Regulation S–X; *see also infra* section II.C.4.

The proposal included an instruction in the schedule, as we proposed in the other schedules, that would require the fund to identify each issue of securities held in connection with open put or call option contracts. *See* proposed rule 12–12A, n. 7 of Regulation S–X. We are not adopting this instruction because, as noted by one commenter, it is not relevant to securities sold short. *See* AICPA Comment Letter.

(Summary schedule of investments in securities of unaffiliated issuers) and the full schedule is filed under Form N–CSR.[659] In order to maintain numbering consistency and organization throughout the regulation, we are renaming current rule 12–12C (Summary schedule of investments in securities of unaffiliated issuers) as rule 12–12B. As in rule 12–12 and 12–12A, we proposed to modify the schedule of proposed rule 12–12B (current rule 12–12C), but again added similar changes to its instructions. We received no comments addressing this proposal and, subject to the relevant modifications discussed above, we are adopting these instructions as proposed. [660]

4. Instructions Common to Rules 12–12 Through 12–12B and 12–13 Through 12–13D

We proposed several instructions to the proposed rules in order to maintain consistency with the disclosures required by current rules 12–12 and 12–13. Current rule 12–13 contains an instruction requiring identification of ''each investment not readily marketable.'' [661] We proposed to modify this requirement in current rule 12–13 (new rule 12–13D), and add it to the new schedules we are adopting or modifying concerning derivatives, by adding instructions that funds must indicate (1) whether an investment was fair valued by using significant unobservable inputs [662] and (2) whether an investment cannot be sold because of restrictions or conditions applicable to the investment.[663] These proposed instructions were intended to increase transparency into the marketability of, and observability of valuation inputs for, a fund's investments by instead requiring separate identification of investments that are restricted investments, as well as those investments that were fair valued using significant unobservable inputs. Similarly, for proposed rules 12–12, 12–12A, and 12–12B, we proposed to include an instruction requiring funds to indicate whether an issue of securities was fair valued by using significant unobservable inputs.[664]

We received comments generally supporting the disclosure of investments fair valued using significant unobservable inputs.[665] However, in order to make ''value'' consistent with current Article 12, the final rule amendments only refer to ''value'' (rather than ''fair value,'' as we do in the proposed amendments to Regulation S–X), which is consistently used and defined under Regulation S–X.[666] We are therefore adopting the requirement that funds indicate if an investment's value was determined using significant unobservable inputs.[667]

We received one comment relating to our proposed instruction requiring identification of a derivative that cannot be sold because of restrictions or conditions applicable to the derivative.[668] That commenter noted that we should clarify and provide examples of what is meant by restrictions applicable to derivatives.[669] We believe the instruction is clear that a derivative that cannot be sold as of the reporting date because of a restriction applicable to the investment itself (as opposed to *e.g.* illiquidity in the market) should be identified. Therefore, we are adopting the instruction as proposed.[670]

Current rules 12–12, 12–12C, and 12–13 each contain an instruction to include tax basis disclosures for investments.[671] We proposed extending this requirement to the proposed rules concerning derivatives holdings and securities sold short [672] because we believed that this type of tax basis information may be important to investors in investment companies, which are generally pass-through entities pursuant to Subchapter M of the Internal Revenue Code.[673] We received several comments arguing against extending our proposed tax basis disclosures to the proposed derivatives schedules. Several commenters noted their belief that disclosure of tax basis by investment type would not provide meaningful disclosure to investors, while increasing the volume and complexity of the financial statements.[674] Others stated that the tax-basis information is unnecessary in light of recently added GAAP-required disclosure of tax basis components of dividends and distributions.[675] The current GAAP requirement that funds disclose the components of distributable

[659] *See* rule 6–10(c)(2) of Regulation S–X [17 CFR 210.6–10(c)(2)]; *see also* Quarterly Portfolio Holdings Adopting Release, *supra* footnote 421.

[660] Instruction 2 will add ''type of investment'' to the current subtotal requirements for the summary schedule. *See* proposed rule 12–12B, n. 2 of Regulation S–X. Instruction 3 will extend rule 12–12's requirement that funds indicate the interest rate or preferential dividend rate and maturity date for certain enumerated securities. *See* rule 12–12B, n. 3 of Regulation S–X. Instruction 5 will require for options purchased all information that would be required by rule 12–13 for written option contracts. *See* rule 12–12B, n. 5 of Regulation S–X. Instruction 12 will require the fund to indicate each issue of securities whose fair value was determined using significant unobservable inputs. *See* rule 12–12B, n. 12 of Regulation S–X; *see also infra* section II.C.4. Instruction 13 will extend rule 12–12's requirement that the fund indicate ''where any portion of the issue is on loan.'' *See* rule 12–12B, n. 13 of Regulation S–X.

[661] *See* current rule 12–13, n. 4 of Regulation S–X (''The term 'investment not readily marketable' shall include investments for which there is no independent publicly quoted market and investments which cannot be sold because of restrictions or conditions applicable to the investment or the company.'').

[662] *See* proposed rules 12–13, n. 7; 12–13A, n. 5; 12–13B, n. 3; 12–13C, n. 6; 12–13D, n. 7 of Regulation S–X.

[663] *See* proposed rules 12–13, n. 6; 12–13A, n. 4; 12–13B, n. 2; 12–13C, n. 5;12–13D, n. 6, of Regulation S–X.

[664] *See* proposed rules 12–12, n. 9; 12–12A, n. 6; 12–12B, n. 12.

[665] *See, e.g.,* Harvest Comment Letter; Markit Comment Letter.

[666] *See, e.g.,* current rule 12–12, Column C (''Value of each item at close of period''); current rule 12–13, Column C (same).

[667] *See* rule 12–13, n. 7 of Regulation S–X; *see also* rules 12–12, n. 9; 12–12A, n. 6, 12–12B, n. 12; 12–13A, n. 5; 12–13B, n. 3; 12–13C, n. 6; and 12–13D, n. 7 of Regulation S–X. These instructions will require funds to identify each investment categorized in Level 3 of the fair value hierarchy in accordance with ASC Topic 820. *See* FASB ASC 820–10–20 (Fair Value Measurement-Overall-Glossary) (''ASC 820–10–20'') (defining ''level 3 inputs'' as ''unobservable inputs for the asset or liability''); *see also* FASB ASC 820–10–35–37A (Fair Value Measurement-Overall-Subsequent Measurement-Fair Value Hierarchy) (''ASB 820–10–35–37A'') (''In some cases, the inputs used to measure the fair value of an asset or a liability might be categorized within different levels of the fair value hierarchy. In those cases, the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is *significant* to the entire measurement.'') (emphasis added); Harvest Comment Letter (supporting disclosure of level 3 securities).

[668] *See* State Street Comment Letter.

[669] *Id.* (''For example, it is unclear whether the lockup period for trading blocks would be included as a restriction applicable to derivatives. If the SEC's purpose is to have a narrow definition, then it is unclear whether the stricter definition includes limitation on the types of entities that would be able to buy an instrument such as rule 144a [sic] restrictions, which limits trading to qualified institutional buyers.''). Consistent with this example, a restricted security subject to rule 144A would be identified as restricted under rules 12–12, 12–12A, or 12–12B only if the security has restrictions and the fund cannot sell the security to qualified institutional buyers at the report date due to those restrictions.

[670] *See* rule 12–13, n. 6 of Regulation S–X; *see also* rules 12–13A, n. 4; 12–13B, n. 2; 12–13C, n. 5; and 12–13D, n. 6 of Regulation S–X.

[671] *See* rule 12–12, n. 8; 12–12C, n. 11; and 12–13, n. 7 of Regulation S–X.

[672] *See* proposed rule 12–13, n. 10 of Regulation S–X; *see also* proposed rules 12–12A, n. 8; 12–13A, n. 8; 12–13B, n. 6; 12–13C, n. 9; and 12–13D, n. 11 of Regulation S–X.

[673] *See* 26 U.S.C. 851, *et seq.*

[674] *See* PwC Comment Letter; EY Comment Letter; CRMC Comment Letter; State Street Comment Letter; MFS Comment Letter; ICI Comment Letter; AICPA Comment Letter.

[675] *See* Oppenheimer Comment Letter; MFS Comment Letter; and ICI Comment Letter (Recommending that the Commission require funds to present tax basis information relating to the tax basis components of dividends and distributions in the notes to the financial statements); *see also* FASB ASC 946–20–50–12 (Financial Services—Investment Companies, Investment Company Activities) (''ASC 946–20–50–12'');

earnings (including undistributed ordinary income, undistributed long-term capital gains, capital loss carryforwards and unrealized appreciation/depreciation) on a tax basis using the most recent tax year-end enables investors to determine the amount of accumulated and undistributed earnings that they could potentially receive in the future and on which they could be taxed.[676] Some commenters recommended an alternative that funds should disclose the aggregate tax basis of all investments relating to the portfolio as whole, or those that are recorded as assets or liabilities.[677]

We agree that tax disclosures relating to the portfolio as a whole provides sufficient information for investors. However, current GAAP disclosures do not require funds to report the cost of all investments in an unrealized appreciation and the cost of all assets in an unrealized depreciation on a gross basis, which we believe may be useful to investors to further understand the potential amounts they might receive and on which they could be taxed. As a result, we have determined not to extend the tax basis disclosures currently required by rules 12–12, 12–12B, and 12–13 to our new disclosures of derivative investments (rules 12–13 through 12–13C) and securities sold short (rule 12–12A). For the same reasons, we are removing this disclosure requirement from each of the rules 12–12, 12–12B (current rule 12–12C), and 12–13D (current rule 12–13)[678] and instead moving it to Article 6 of Regulation S–X as a rule of general application requiring that funds report these tax basis disclosures relating to the portfolio as a whole.[679]

We also proposed to require funds to identify illiquid investments.[680] As we stated in the proposal, liquidity is an important consideration for a fund's investors in understanding the risk exposure of a fund.[681] We received numerous comments registering concerns with this proposed instruction to require portfolio-level liquidity disclosures.[682] For example, commenters noted that disclosure of illiquid assets could confuse fund shareholders, as they could erroneously assume that disclosure of illiquid assets is an objective determination.[683] Similarly, commenters noted that liquidity information could become stale given the time delay between the end of the period and the time that such information would become available to the public.[684] Others expressed concern that portfolio-level liquidity disclosures in financial statements would be difficult and costly to audit, as auditors would be required to engage specialists to determine the validity of the fund's liquidity determinations for each investment.[685] Moreover, as discussed in the Liquidity Adopting Release, we are concurrently adopting portfolio-level liquidity reporting on Form N–PORT which we believe mitigates many of the commenters' concerns and is a more appropriate method of public reporting.[686] Accordingly, we are not adopting the proposed instructions in Regulation S–X relating to the liquidity of investments.[687]

5. Investments In and Advances to Affiliates—Rule 12–14

We proposed amendments to rule 12–14 (Investments in and advances to affiliates).[688] Rule 12–14 currently requires a fund to make certain disclosures about its investments in and advances to any ''affiliates'' or companies in which the investment company owns 5% or more of the outstanding voting securities.[689] The rule currently requires that a fund disclose the ''amount of equity in net profit and loss for the period'' for each controlled company, but does not require disclosure of realized or unrealized gains or losses. Based upon staff experience, we believe that the presentation of realized gains or losses and changes in unrealized appreciation or depreciation would assist investors with better understanding the impact of each affiliated investment on the fund's statement of operations. As a result, we had proposed to modify Column C of the schedule to rule 12–14 to require ''net realized gain or loss for the period,''[690] and Column D to require ''net increase or decrease in unrealized appreciation or depreciation for the period'' for each affiliated investment.[691] We received one comment supporting this aspect of the proposal and are adopting it as proposed.[692]

Likewise, in instruction 6(e) and (f), we proposed to require disclosure of total realized gain or loss and total net increase or decrease in unrealized appreciation or depreciation for affiliated investments in order to

[676] ASC 946–20–50–12; *see also* ICI Comment Letter. We believe that this level of information in the aggregate is sufficient for investor needs and additionally recognize the complexity involved in capturing the tax characterizations of certain investments in the format of the Schedules. *See* PwC Comment Letter.

[677] *See* PwC Comment Letter; and Vanguard Comment Letter (federal tax disclosure should be provided, annually instead of semiannually, on an aggregate basis, instead of in separate investment schedules).

[678] *See* current rules 12–12, n. 8; 12–12C, n. 11; 12–13, n. 7 of Regulation S–X.

[679] *See* rule 6–03(h)(2) (adding the requirement that the fund ''state the following amounts based on cost for Federal income tax purposes: (i) Aggregate gross unrealized appreciation for all investments in which there is an excess of value over tax cost, (ii) The aggregate gross unrealized depreciation for all investments in which there is an excess of tax cost over value, (iii) The net unrealized appreciation or depreciation, and (iv) The aggregate cost of investments for Federal income tax purposes.'')

[680] *See* proposed rule 12–12, n. 10 of Regulation S–X; *see also* proposed rules 12–12B, n. 13; and 12–13, n. 8 of Regulation S–X; *see also* proposed rules 12–13A, n. 6; 12–13B, n. 4; 12–13C, n. 7; and 12–13D, n. 8 of Regulation S–X. *See generally* 1992 Release, *supra* footnote 290.

[681] *See* Proposing Release, *supra* footnote 7, at 116. *See also* Liquidity Adopting Release, *supra* footnote 9.

[682] *See* State Street Comment Letter (Commission should provide guidance as to what assumptions would be appropriate in determining if an investment is illiquid); PwC Comment Letter (Recommending disclosure of fund's basis for determining illiquid investment as defined by management/board of directors); EY Comment Letter (defer adopting until the proposed illiquidity standards have been updated); CRMC Comment Letter (same); Pioneer Comment Letter; *contra* Morningstar Comment Letter (''The requirement to identify positions that are illiquid is adequate and appropriate to replace 'investments not readily marketable.' This information can tie directly to monitoring of investment limitations under the Act.'').

[683] *See, e.g.,* PwC Comment Letter; Oppenheimer Comment Letter; MFS Comment Letter (liquidity determinations should be non-public); Deloitte Comment Letter; Invesco Comment Letter; Schwab Comment Letter; ICI Comment Letter; and AICPA Comment Letter.

[684] *See* Deloitte Comment Letter.

[685] *See, e.g.,* PwC Comment Letter; ICI Comment Letter; and AICPA Comment Letter. Commenters also suggested, as an alternative, requiring registrant to label the disclosure of illiquid investments as ''unaudited subject to change based on market conditions'' as a way to mitigate financial statement and audit costs. *See* Deloitte Comment Letter. However, while this suggestion may mitigate some auditing costs for funds, as discussed above, we have determined that disclosures on Form N–PORT, with portfolio-level liquidity information being made public, provides an appropriate method of providing information for the benefit of the Commission, investors, and other interested third parties.

[686] *See* Liquidity Adopting Release, *supra* footnote 9.

[687] *See id.*

[688] *See* proposed rule 12–14 of Regulation S–X.

[689] *See* rule 12–14 of Regulation S–X; *see also* section 2(a)(3)(A) of the Investment Company Act (defining an ''Affiliated person'' as ''any person directly or indirectly owning, controlling, or holding with power to vote, 5 per centum or more of the outstanding voting securities of such other person.'').

[690] *See* proposed rule 12–14, Column C of Regulation S–X. Column C of current rule 12–14 requires disclosure of the ''amount of equity in net profit and loss for the period,'' which is derived from the controlled company's income statement and does not directly translate to the impact to a fund's statement of operations. We proposed to replace this requirement with ''net realized gain or loss for the period.''

[691] *See* proposed rule 12–14, Column D of Regulation S–X.

[692] *See* Morningstar Comment Letter; *see also* Columns C and D of Rule 12–14 of Regulation S–X.

correlate these totals to the statement of operations.[693] Disclosure of these realized gains or losses and changes in unrealized appreciation or depreciation, in addition to the current requirement to disclose the amount of affiliated income, will allow investors to understand the full impact of an affiliated investment on a fund's statement of operations.[694] We received no comments on this proposal and are therefore adopting our modifications to instructions 6(e) and 6(f) as proposed.[695]

Additionally, we proposed a new instruction 7 in order to make the categorization of investments in and advances to affiliates consistent with the method of categorization used in rules 12–12, 12–12A, and 12–12B, for which we received no comments and are adopting as proposed.[696]

We proposed several other amendments to the instructions to rule 12–14 in order to, in part, conform the rule to our disclosure requirements in rules 12–12 and 12–13. Subject to the modifications discussed above in section II.C.4, we are adopting as proposed.[697]

6. Form and Content of Financial Statements

Finally, we are adopting substantially as proposed, revisions to Article 6 of Regulation S–X, which prescribes the form and content of financial statements filed for funds. Many of the revisions we are adopting today are intended to conform Article 6 with our changes to Article 12 and update other financial statement requirements.[698] As part of these changes, we proposed to modify the title and the description of Article 6 from ''Registered Investment Companies'' to ''Registered Investment Companies and Business Development Companies'' to clarify that BDCs are subject to Article 6 of Regulation S–X.[699] This amendment is a technical amendment and does not change existing requirements for BDCs.[700] Commenters did not object to this change,[701] and we are adopting it as proposed.[702]

In order to allow a more uniform presentation of investment schedules in a fund's financial statements, we proposed to rescind subparagraph (a) of rule 6–10 under Regulation S–X, regarding which schedules are to be filed.[703] One commenter noted that consolidated subsidiary information could be useful for investors, as information about the specific entities' ownership may make the structure of the fund more transparent to investors.[704] We were persuaded that such information may be useful to investors and are therefore not rescinding subparagraph (a) of rule 6–10.[705]

Another commenter requested that we require disclosure of costs associated with the management of controlled foreign corporations (''CFCs'') or expenses embedded in the return being received in the footnotes to the financial statements.[706] The commenter also requested that funds be required to report these expenses either in calculations of total operating expenses or as acquired fund expenses in other filings.[707] We believe that disclosure of these expenses are already included, as applicable, in (1) the expenses reported within the statement of operations of the consolidated investment company where the CFC is a consolidated entity,[708] or (2) in the required Acquired Fund Fees and Expenses disclosures within the prospectus filing of the investment company where the CFC is not consolidated; and therefore no further modifications are necessary.[709]

Current rule 6–10(a) also provides that if the information required by any schedule (including the notes thereto) is shown in the related financial statement or in a note thereto without making such statement unclear or confusing, that procedure may be followed and the schedule omitted.[710] As we stated in the Proposing Release, we believe that some funds may have interpreted this guidance as allowing presentation of some Article 12 schedules (*e.g.,* rules 12–13 and 12–14) in the notes to the financial statements, as opposed to immediately following the schedules required by rules 12–12, 12–12A, and

[693] *See* proposed rule 12–14, n. 6(e) and (f) of Regulation S–X.

[694] *See* current rule 6–07 of Regulation S–X [17 CFR 210.6–07].

[695] *See* rule 12–14, n. 6(e) and (f) of Regulation S–X.

[696] *See id.,* n. 7; *see also* proposed rules 12–12, n. 5; 12–12A n. 4; and 12–12B, n. 2 of Regulation S–X.

[697] Instruction 1 will delete the instruction to segregate subsidiaries consolidated in order to make the disclosures under rule 12–14 consistent with the fund's balance sheet. *See* rule 12–14, n. 1 of Regulation S–X. Instruction 2 will require the fund to categorize the schedule to rule 12–14 in the same manner as is required by Instruction 2 of rule 12–12. *See* rule 12–14, n. 2 of Regulation S–X. Instruction 3 will require the fund to identify the interest rate or preferential dividend rated and maturity date, as applicable. *See* rule 12–14, n. 3 of Regulation S–X. Instruction 4 will add Column F to the columns to be totaled and update the instruction to state that Column F should agree with the correlative amount shown on the related balance sheet. *See* rule 12–14, n. 4 of Regulation S–X. Instruction 5 will update the reference to Instruction 8 of rule 12–12 and reference to rule 12–13 to reflect the changes in the numbering of the instructions for those rules. *See* rule 12–14, n. 5 of Regulation S–X. Instructions 6(a) and (b) will update references to Column D to reference Column E in order to reflect our proposed changes to rule 12–14's schedule. *See* rule 12–14, nn. 6(a) and (b) of Regulation S–X. Instruction 6(d), which adds clarifying language from Instruction 7 of rule 12–12, will provide the fund with more detail on the definition of non-income producing securities. *See* rule 12–14, n. 6(d) of Regulation S–X. Instruction 8 will require the fund to identify each issue of securities whose fair value was determined using significant unobservable inputs. *See* rule 12–14, n. 8 of Regulation S–X; *see supra* section II.C.4. Instruction 9 will require the fund to indicate each issue of securities held in connection with open put or call option contracts, loans for short sales, or where any portion of the issue is on loan, as required by note 10 to rule 12–12. *See* rule 12–14, n. 9 of Regulation S–X.

[698] We proposed to amend the reference in rule 6–03(c) to § 210.3A–05, as that section of Regulation S–X was rescinded in 2011. *See* Rescission of Outdated Rules and Forms, and Amendments to Correct References, Securities Act Release No. 33–9273 (Nov. 4, 2011) [76 FR 71872 (Nov. 21, 2011)]. We received no comments on this proposed amendment and are adopting as proposed. *See* rule 6–03(c) of Regulation S–X [17 CFR 210.6–03(c)].

[699] *See* proposed rules 6–01; 6–03; 6–03(c)(1); 6–03(d); 6–03(i); 6–04; and 6–07 of Regulation S–X.

A BDC is a closed-end fund that is operated for the purpose of making investments in small and developing businesses and financially troubled businesses and that elects to be regulated as a BDC. *See* section 2(a)(48) of the Investment Company Act (defining BDCs). BDCs are not subject to periodic reporting requirements under the Investment Company Act, although they must comply with periodic reporting requirements under the Exchange Act.

[700] *See* Instruction 1.a to Item 6.c of Form N–2 (''A business development company should comply with the provisions of Regulation S–X generally applicable to registered management investment companies. (*See* section 210.3–18 [17 CFR 210.3–18] and sections 210.6–01 through 210.6–10 of Regulation S–X [17 CFR 210.6–01 through 210.6–10]).'').

[701] *See, e.g.,* Deloitte Comment Letter. This commenter suggested that, in addition, we also clarify that Article 6 applies to Securities Act registrants who meet the definition of ''Investment Company'' under FASB or IFRS, yet are not registered under the Investment Company Act. *Id.* The change to reference BDCs is a technical change that is not intended to expand the entities subject to Article 6. *See supra* footnote 699 and accompanying text. The Proposing Release addressed the reporting and disclosure of information by registered investment companies and BDCs. Since the Proposing Release did not address the possibility of subjecting other entities, such as the ones described by the commenter, to this rulemaking, extending the regulations could have unforeseen implications, including potentially subjecting such entities to the requirements of Article 6. We believe such a change is beyond the scope of this rulemaking.

[702] *See* rules 6–01; 6–03; 6–03(c)(1); 6–03(d); 6–03(i); 6–04; 6–04.10; and 6–07 of Regulation S–X.

[703] *See* proposed rule 6–10 of Regulation S–X.

[704] Deloitte Comment Letter (''For example, if certain consolidated investments are owned by a consolidated subsidiary domiciled in a foreign jurisdiction where the political climate might be unstable or where creditors may have inferior or superior rights to assets, investors are better served when informed of these economic distinctions.'').

[705] *See* rule 6–10(a) of Regulation S–X.

[706] *See* Morningstar Comment Letter.

[707] *Id.*

[708] *See* FASB ASC 946–810 (Financial Services—Investment Companies—Consolidation).

[709] *See* Item 3 and Instruction 3(f) to Item 3 of Form N–1A.

[710] *See* current rule 6–10(a) of Regulation S–X.

12–12C. Our proposal to rescind rule 6–10(a) would have also eliminated this instruction. Commenters generally supported eliminating this instruction as it would assist with the comparability of funds by shareholders.[711] In light of the increased use of derivatives by funds, we continue to believe that all schedules required by rule 6–10 should be presented together within a fund's financial statements, and not in the notes to the financial statements. We recognize that this may change current practice for some funds but believe that, coupled with more detailed disclosure rules for derivatives, this amendment would provide more consistent disclosure and improve the usability of financial statements for investors. However, as discussed above, we were persuaded to not rescind rule 6–10(a) in these final rules. Thus we are adopting a conforming modification to rule 6–10(a) to eliminate this specific instruction.[712]

We also proposed changes to rules 6–03 and 6–04 to specifically reference the investments required to be reported on separate schedules in amended Article 12.[713] We received no comment on these proposals and are adopting them as proposed.[714] Additionally, we proposed to eliminate current rule 6–04.4, which requires disclosure of ''Total investments'' on the balance sheet under ''Assets,'' recognizing that investments reported under proposed rules 12–13A through 12–13D could potentially be presented under both assets and liabilities on the balance sheet.[715] For example, a fund may hold a forward foreign currency contract with unrealized appreciation and a different forward foreign currency contract with unrealized depreciation. The fund may present on its balance sheet an asset balance for the contract with unrealized appreciation and a liability balance for the contract with unrealized depreciation. Totaling the amounts of investments reported under assets could be misleading to investors in this example, or in other examples where a fund holds derivatives in a liability position (*e.g.,* unrealized depreciation on an interest rate swap contract). A ''Total investments'' amount in the Assets section of the fund's balance sheet would include the fund's investments in securities and derivatives that are in an appreciated position, but it would not include the unrealized depreciation on the interest rate swap contract, which would be classified under the Liabilities section of the fund's balance sheet. Given the increasing use of derivatives by funds, we continue to believe eliminating current rule 6–04.4 would provide more complete information to investors. We received no comments on this proposal and are adopting this change as proposed, as well as the corresponding proposed change in rule 6–03(d) to remove the reference to ''total investments reported under [rule 6–04.4].'' [716] As discussed above in section II.C.4, we are also adding a requirement to rule 6–03(h) requiring funds to report the cost of all investments in an unrealized appreciation and the cost of all assets in an unrealized depreciation on a gross basis.[717]

We are also adopting, as proposed, an amendment to rule 6–04 to refer individually to our derivatives disclosures in proposed rules 12–13A through 12–13C.[718] As is currently the case, these proposed amendments are not meant to require gross presentation where netting is allowed under U.S. GAAP.[719] For example, if a fund held a forward foreign currency contract which had unrealized appreciation and another forward foreign currency contract which had unrealized depreciation, the fact that forward foreign currency contracts are mentioned in proposed rules 6–04.3(b) and 6–04.9(d) is not meant to require both contracts to be presented gross on the balance sheet if netting were allowed under U.S. GAAP. We received no comments on this proposal.

We also proposed, amendments to rule 6–05.3 which would specifically require presentation of items relating to investments other than securities in the notes to financial statements.[720] Current rule 6–05.3 only requires presentation in the notes to financial statements of disclosures required by rules 6–04.10 through 6–04.13, which include information relating to securities sold short and open option contracts written.[721] Our proposal would also have amended rule 6–05.3 to require fund financial statements to reflect all unaffiliated investments other than securities presented on separate schedules under Article 12.[722] We received no comments on this aspect of the proposal and are adopting it as proposed.[723]

We also proposed to add new disclosure requirements that are designed to increase transparency to investors about certain investments and activities. First, we proposed to add new subsection (m) to rule 6–03 that would require funds to make certain disclosures in connection with a fund's securities lending activities and cash collateral management in order to allow investors to better understand the income generated from, as well as the expenses associated with, securities lending activities.[724] As discussed in more detail below, after consideration of issues raised by commenters, we have determined that it is more appropriate to require that these disclosures be made in a fund's Statement of Additional Information (or, for closed-end funds, reports on Form N–CSR) or in Form N–CEN, rather than to require their inclusion in its financial statements.[725]

Second, we proposed to amend rule 6–07 to require funds to make a separate disclosure for income from non-cash dividends and payment-in-kind interest on the statement of operations.[726] Our proposed amendment to rule 6–07 was intended to increase transparency for investors in order to allow them to better understand when fund income is earned, but not received, in the form of cash. While one commenter generally supported disclosure for in-kind payments,[727] many recommended, if the Commission should adopt such a disclosure, that we provide a disclosure threshold for non-cash income, such as one similar to the requirement to disclose expense items that exceed 5

[711] *See, e.g.,* State Street Comment Letter; ICI Comment Letter.

[712] *See* rule 6–10(a) of Regulation S–X (''When information is required in schedules for both the person and its subsidiaries consolidated, it may be represented in the form of a single schedule, provided that items pertaining to the registrant are separately shown and that such single schedule affords a properly summarized presentation of the facts.'') Additionally, in order to conform rule 6–10(c) with the new requirements under Article 12, we added schedules corresponding to our proposed new schedules of derivatives investments, as discussed above. *See* rule 6–10(c) of Regulation S–X.

[713] *See* proposed rules 6–03(d); 6–04.3; 6–04.9 of Regulation S–X. We also proposed to amend rule 6–04.10 to reflect that the amount of liabilities for securities sold short and for open options contracts written would be reported under proposed rule 6–04.9. *See* proposed rule 6–04.10 of Regulation S–X.

[714] *See* rules 6–03(d); 6–04.3; 6–04.9; and 6–04.10 of Regulation S–X.

[715] *See* current rule 6–04.4 of Regulation S–X [17 CFR 201.6–04.4].

[716] *See* rules 6–04.4; and 6–03(d) of Regulation S–X.

[717] *See* rule 6–03(h).

[718] *See* rules 6–04.3; 6–04.6; and 6–04.9 of Regulation S–X.

[719] *See* FASB ASC 210 (Balance Sheet) and ASC 815.

[720] *See* proposed rule 6–05.3 of Regulation S–X.

[721] *See* current rule 6–05.3 of Regulation S–X [17 CFR 210.6–05.3].

[722] *See* proposed rule 6–05.3 of Regulation S–X.

[723] *See* rule 6–05.3 of Regulation S–X.

[724] *See* proposed rule 6.03(m) of Regulation S–X.

[725] *See infra* section II.F and section II.D.4.c.iii.

[726] *See* proposed rule 6–07.1 of Regulation S–X.

[727] *See* ICI Comment Letter (supporting disclosure of payment-in-kind income with a 5 percent threshold).

percent of total expenses.[728] We agree with commenters' that a disclosure threshold for non-cash disclosures would alleviate unnecessary reporting burdens. We also agree with commenters that, in order to keep all income disclosures under rule 6–07.1 consistent, a 5 percent *de minimis* threshold, which is the current requirement for categories of investment income and expenses under current rule 6–07.1, is also appropriate for our amended non-cash income disclosure under rule 6–07.1.[729] As a result, we are modifying the proposal by adopting a new instruction to rule 6–07.1 clarifying that a separate disclosure of income from payment-in-kind interest or non-cash dividends, like other types of income under current rule 6–07.1, is only required if all income of this type exceeds 5 percent of the fund's investment.[730]

Other commenters requested that we define ''non-cash dividends'' and ''payment-in-kind-interest earned.'' [731] Finally, as in Form N–PORT, some commenters noted that certain in-kind payments, such as when a fund has the option to elect to receive either cash or in-kind payments, do not raise the same risks as in-kind payments resulting from a distressed issuer and should therefore be disclosed separately.[732] As discussed above in connection with Form N–PORT, we agree that in-kind payments resulting from an election, rather than, for example, issuer distress, do not involve the same risk of issuer default. Therefore not requiring funds to report on Form N–PORT interest paid in-kind if the fund has the option of electing in-kind payments and has elected to be paid in-kind.[733] However, we believe for the statement of operations, it is important that all types of income from in-kind payments be subject to the separate disclosure threshold so that investors can compare this information to other funds. Thus, we do not believe that it is appropriate or necessary to provide prescriptive definitions of ''non-cash dividends'' and ''payment-in-kind-interest earned ''for purposes of income statement disclosure and, unlike Form N–PORT, we are not amending Regulation S–X to differentiate income from different types of in-kind payments.[734]

We proposed to amend rule 6–07.7(a) in order to conform statement of operations disclosures of the net realized gains or losses from investments to include our additional derivatives disclosures in proposed rules 12–13A through 12–13C.[735] Likewise, we proposed similar changes to proposed rule 6–07.7(c) (current rule 6–07.7(d)) in order to conform statement of operations disclosures of the net increase or decrease in the unrealized appreciation or depreciation of investments to include our new derivatives disclosures.[736] We received no comments on this proposal and are adopting both changes as proposed.[737]

We also proposed to eliminate Regulation S–X's requirement for specific disclosure of written options activity under current rule 6–07.7(c).[738] This provision was adopted prior to FASB adopting disclosures generally applicable to derivatives, including written options, now required by FASB ASC Topic 815.[739] We continue to believe that the requirement for specific disclosures for written options activity should be removed because they are generally duplicative of the requirements of FASB ASC Topic 815, which include disclosure of the fair value amounts of derivative instruments, gains and losses on derivative instruments, and information that would enable users to understand the volume of derivative activity.[740] Commenters expressed support for this proposal, which we are adopting.[741]

We proposed to eliminate the exception in Schedule II of current rule 6–10 which does not require reporting under current rule 12–13 if the investments, at both the beginning and end of the period, amount to one percent or less of the value of total investments.[742] We believe that it is appropriate to eliminate this exception, because a fund may have significant notional amounts in its portfolio that could be valued at one percent or less of the value of total investments. Accordingly, removing this exception will provide more transparency to investors regarding a fund's derivatives activity. We received no comments on this proposal, and we are adopting it as proposed.[743]

D. Form N–CEN and Rescission of Form N–SAR

1. Overview

We are adopting a new framework by which registered investment companies will report census-type information to the Commission by rescinding Form N–SAR and replacing it with a new form—Form N–CEN.[744] Most commenters generally supported our proposal to replace Form N–SAR with Form N–CEN, agreeing that Form N–CEN provides both the Commission and the public with enhanced and updated census-type information on a wide range of compliance, risk assessment, and policy related matters.[745] Form N–SAR was adopted by the Commission in

[728] *See* State Street Comment Letter (recommending a 10% benchmark); AICPA Comment Letter (5% threshold); MFS Comment Letter (opposed to separate presentation of non-cash income for payment-in-kind securities because the schedule of investments provides adequate disclosure of securities with payment-in-kind income, but supporting a de minimis threshold for other types of non-cash income); PwC Comment Letter (same).

[729] *See, e.g.,* PwC Comment Letter; and MFS Comment Letter.

[730] *See* rule 6–07.1 of Regulation S–X.

[731] *See* PwC Comment Letter; and AICPA Comment Letter.

[732] *See, e.g.,* AICPA Comment Letter; and PwC Comment Letter; *see also supra* section II.A.2.g.ii.

[733] *See supra* section II.A.2.g.ii; *see also* Item C.9.e of Form N–PORT.

[734] *See* rule 6–07.1 of Regulation S–X. Commenters specifically requested that we not require separate disclosures for amortization and accretion as it is unnecessary because shareholders generally do not distinguish between cash interest income and income in the form of accretion or amortization. *See, e.g.,* PwC Comment Letter; MFS Comment Letter; ICI Comment Letter; AICPA Comment Letter. We agree and are not including a separate disclosure for amortizations and accretions.

[735] *See* proposed rule 6–07.7(a) of Regulation S–X.

[736] *See* proposed rule 6–07.7(c) of Regulation S–X.

[737] *See* rules 6–07.7(a) and (c) of Regulation S–X.

[738] *See* current rule 6–07.7(c) of Regulation S–X [17 CFR 210.6–07.7(c)].

[739] *See* ASC 815 (Derivatives and Hedging).

[740] *Id.* Rule 6–07.7(c) requires disclosure in a note to the financial statements of the number and associated dollar amounts as to option contracts written: (i) At the beginning of the period; (ii) during the period; (iii) expired during the period; (iv) closed during the period; (v) exercised during the period; and (vi) balance at end of the period. The balances at the beginning of the period and end of the period are available in the prior period-end and current period-end schedules of open option contracts written, respectively. By eliminating the written options roll-forward, investors would no longer have information regarding the number of contracts expired, closed, or exercised during the period. However, disclosures required by ASC 815 provide gains and losses on derivative instruments, including written options, along with information that would enable users to understand the volume of derivative activity during the period.

[741] *See, e.g.,* ICI Comment Letter; BlackRock Comment Letter.

[742] *See* current rule 6–10(c)(1) Schedule II of Regulation S–X; *see also* proposed rule 6–10(b)(1) Schedule II of Regulation S–X.

[743] We also made several technical, non-substantive changes to the proposed rules. *See* rules 6–03(d) and 6–07 (moved ''business development companies'' to after ''other than face-amount certificates.'').

[744] We are rescinding Form N–SAR and replacing it with a new census reporting form, Form N–CEN, rather than amending Form N–SAR in order to avoid technical difficulties that could arise with filing reports on an amended Form N–SAR (*e.g.,* difficulties related to changes to filing format and form specifications). We have modified the numbering convention for items within Form N–CEN to be consistent with that of the numbering conventions of other forms (*e.g.,* Forms N–MFP and N–PORT).

[745] *See, e.g.,* SIFMA Comment Letter I; ICI Comment Letter; Invesco Comment Letter; Morningstar Comment Letter; BlackRock Comment Letter.

1985 and requires that funds report a variety of census-type information to the Commission, including information relating to a fund's organization, service providers, fees and expenses, portfolio strategies and investments, portfolio transactions, and share transactions. Funds generally must file reports on Form N–SAR semi-annually, except for UITs, which file annually.[746] By contrast, as discussed further below, all funds will now file reports on Form N–CEN annually.[747]

In recent years, Commission staff has found that the utility of the information reported on Form N–SAR has become increasingly limited. We believe there are two primary reasons for this limited utility. First, in the past two decades, we have not substantively updated the information reported on the form to reflect new market developments, products, investment practices, or risks. Second, the technology by which funds file reports on Form N–SAR has not been updated and limits the Commission staff's ability to extract and analyze the data reported. We believe that by updating the content and format requirements for census reporting through new Form N–CEN, the Commission will be better able to carry out its regulatory functions while at the same time reducing burdens on filers.

Many commenters agreed that Form N–SAR is outdated and commended the Commission's efforts to improve the relevance of information reported to the Commission.[748] Commenters generally supported Form N–CEN as proposed, and we are adopting the form substantially as proposed with some modifications to address specific issues raised by commenters, as discussed in more detail below.

Form N–CEN gathers similar census information about the fund industry that funds currently report on Form N–SAR, which will be able to be aggregated and analyzed by Commission staff to better understand industry trends, inform policy, and assist with the Commission's examination program. To improve the quality and utility of information reported, Form N–CEN streamlines and updates information reported to the Commission to reflect current Commission staff information needs and developments in the industry.[749] Where possible, we have endeavored to exclude items from Form N–CEN that are disclosed or reported pursuant to other Commission forms, or are otherwise available; however, in some limited cases, we are collecting information on Form N–CEN that may be similarly disclosed or reported elsewhere, but that the staff would benefit from collecting in a structured format.

In order to improve the utility of the information reported to the Commission, we are requiring that reports on Form N–CEN be structured in an XML format.[750] Under this format, filers will no longer be required to use outdated technology for census reporting. Additionally, the XML structured format will allow reported information to be more efficiently and effectively validated, aggregated, compared, and analyzed through automated means and, therefore, more useful to end users.

One commenter expressed support for the XML format.[751] As discussed above in connection with Form N–PORT, certain others generally advocated for XBRL, a tagged system that is based on XML and was created specifically for the purpose of reporting financial and business information.[752] Another commenter noted that the Commission should standardize the formatting requirements (*i.e.,* ASCII/TXT, HTML, XBRL, XML) across all fund reporting in order to ease the burden on funds that would have to comply with different formatting requirements.[753]

As discussed above in connection with Form N–PORT, based upon our experiences with Forms N–MFP and PF, both of which require filers to report information in an XML format, we believe that requiring funds to report information on Form N–CEN in an XML format will provide the information that we seek in an appropriate manner.[754] Moreover, the interoperability of data between Forms N–MFP, PF, N–PORT, and N–CEN will aid the staff with cross-checking information reported to the Commission and in monitoring the fund industry.[755] As discussed further below in the economic analysis, the XML format will also improve the quality of the information disclosed by imposing constraints on how the information will be provided and by providing a built-in validation framework of the data in the reports.[756] We are therefore adopting the requirement that reports on Form N–CEN be filed in an XML format as proposed.

2. Who Must File Reports on Form N–CEN

We are adopting, as proposed, the requirement that all registered investment companies, except face-amount certificate companies,[757] file reports on Form N–CEN.[758] No commenters objected to this requirement.[759] As proposed, funds offering multiple series will be required to report information in Part C of the form as to each series separately, even if some information is the same for two

[746] *See* current rule 30b1–1 and current rule 30a–1.

[747] *See* rule 30a–1.

[748] *See, e.g.,* ICI Comment Letter; SIFMA Comment Letter I; Invesco Comment Letter; BlackRock Comment Letter.

[749] We are streamlining our data collection, in part, through the use of yes/no questions in order to flag certain information for follow-up, if necessary, by Commission staff. *See, e.g.,* Item B.10 and Item C.6.a of Form N–CEN. For example, staff of our Office of Compliance Inspections and Examinations may rely on responses to flag questions in Form N–CEN to indicate areas for follow-up discussion or to request additional information.

[750] The Commission has adopted a number of other forms that are structured in an XML format, including Form N–MFP. Reports on Form N–SAR, by contrast, are filed using an outdated filing application.

[751] Morningstar Comment Letter (noting that the format will provide more accessible data to the public and reduce the amount of defective reporting currently possible in Form N–SAR).

[752] *See* AICPA Comment Letter; XBRL US Comment Letter; *but see* Morningstar Comment Letter (''Extensible Business Reporting Language has had very limited success, and certain aspects of the standard are too lenient for regular data validation.''). *See also supra* footnotes 444–449 and accompanying text.

[753] *See* Schnase Comment Letter (opining that the Commission should also ease the burdens on funds by allowing funds to input their data through a pre-formatted web portal or web form).

[754] *See supra* footnotes 444–449 and accompanying text. Based on our experience with reports on Form N–MFP and other XML-based reports, we anticipate that the XML structured data file will be compatible with a wide range of open source and proprietary information management software applications. Continued advances in structured data software, search engines, and other web-based tools may further enhance the accessibility and usability of the data. *See, e.g.,* Money Market Reform 2010 Release, *supra* footnote 447, at n. 341.

[755] *See* Morningstar Comment Letter.

[756] *See infra* section III.B.

[757] Face-amount certificate companies are investment companies which are engaged or propose to engage in the business of issuing face-amount certificates of the installment type, or which have been engaged in such businesses and have any such certificates outstanding. *See* section 4(1) of the Investment Company Act. Face-amount certificate companies currently are not required to file reports on Form N–SAR. *See* General Instruction A of Form N–SAR. Face-amount certificate companies will continue to file periodic reports pursuant to section 13 [17 CFR 240.13a–1] or section 15(d) of the Exchange Act [17 CFR 240.15d–1].

[758] *See* Proposing Release, *supra* footnote 7, at section II.E.2. *See also* rule 30a–1. Consistent with Form N–SAR, BDCs, which are not registered investment companies, will not be required to file reports on Form N–CEN.

[759] *See* Morningstar Comment Letter (noting that the filing requirement is appropriate, but also suggesting that the Commission allow flexibility on how a fund chooses to report the data, including filing at the CIK-level with separate ''nodes'' for each series ID and designing the data base that is to house this information using the filing data and CIK as a key for each registrant-level data record).

or more series.[760] One commenter opined that one report covering multiple series would be sufficient as many questions apply to the registrant.[761]

Like Form N–SAR, the sections of Form N–CEN that a fund is required to complete will depend on the type of registrant in order to better tailor the reporting requirements.[762] As was proposed, all funds will be required to complete Parts A and B, and file any attachments required under Part G. In addition, funds will be required to complete the following Parts as applicable:

- All management companies, other than SBICs, will complete Part C;
- Closed-end funds and SBICs will complete Part D;
- ETFs (including those that are UITs) will complete Part E;[763] and
- UITs will complete Part F.[764]

3. Frequency of Reporting and Filing Deadline

Management investment companies currently file reports on Form N–SAR semi-annually,[765] and UITs file such reports annually.[766] To reduce reporting burdens, we proposed that reports on Form N–CEN be filed on an annual basis, regardless of type of filer.[767] While one commenter suggested semi-annual reporting on Form N–CEN if certain additional requirements were to be included,[768] most commenters generally supported the annual filing requirement.[769] Because Form N–CEN requires census-type information, which in our experience does not change as frequently as, for example, portfolio holdings information, we continue to believe that an annual filing requirement will be sufficient for purposes of review by Commission staff, as well as investors and other market participants that might use this information.[770] We are, therefore, adopting as proposed the requirement that reports on Form N–CEN be filed on an annual basis.[771]

We proposed that for all funds, the reporting period for Form N–CEN reports would be based on the fund's fiscal year.[772] Currently, management companies file Form N–SAR reports on a fiscal year basis,[773] while UITs file Form N–SAR reports on a calendar year basis.[774] After further consideration, we have determined to require that management companies and UITs include in Form N–CEN reports information from the same time period as they currently report on Form N–SAR because we believe that calendar-year reporting for UITs will yield more comparable data while also reducing costs for reporting UITs.[775] One commenter expressed support for reporting by funds on a fiscal year basis, as that would permit comparisons by data users between information reported on Form N–CEN and information on Form N–CSR.[776] As regards management investment companies, which are required to file reports on Form N–CSR, we agree that fiscal year reporting could have this beneficial effect, though the same would not be true of UITs. Therefore, under the final rule, management companies will file reports on Form N–CEN on a fiscal year basis while UITs will file such reports on a calendar year basis.[777]

We have also added an instruction to the form to clarify that management investment companies that offer multiple series with different fiscal year ends must file a report as of each fiscal year end that responds to (i) Parts A, B, and G, and (ii) Part C and, if applicable, Part E as to only those series with the fiscal year end covered by the report.[778] UITs that offer multiple series will file a single annual report covering all series as of the end of the calendar year.

Additionally, we received a number of comments on the proposed 60-day filing period. Some commenters supported this proposed filing period.[779] Several other commenters, however, requested that the filing period be extended to at least a 75-day period, arguing, among other things, that a longer time period would help stagger the filing deadline from other end-of-month filing requirements and allow sufficient time to address accounting-related questions.[780]

[760] General Instruction A of Form N–CEN. Unlike Form N–PORT where separate reports will be filed for each series, registrants will file one report on Form N–CEN covering all series (as is currently done with reports on Form N–SAR). We are adopting this framework for Form N–CEN to help minimize reporting burdens, as much of the information that will be required by Form N–CEN (for example, the information reported pursuant to Part A and Part B) will be the same across a fund's various series. We note that Form N–SAR's approach to series information is slightly different than that of Form N–CEN, in that Form N–SAR allows registrants to indicate instances where the information is the same across all series, rather than requiring repetitive information. *See* General Instruction D(8) of Form N–SAR. Unlike Form N–SAR, however, to limit the reporting of repetitive information, Form N–CEN is organized such that information that is generally the same for all series is reported in Parts A and B of the form, with Part C, the part of the form that requires each series to respond separately, requesting information that is more likely to differ between series.

[761] *See* State Street Comment Letter.

[762] *See* General Instruction A of Form N–CEN. As reflected in General Instruction A, registrants will be required to respond to each item in each required Part. To the extent an item in a required Part is inapplicable to a registrant, the registrant should respond ''N/A'' to that item. Registrants will not, however, have to provide responses to items in Parts they are not required to respond to.

[763] *See id.* Certain investment products known as ''exchange-traded managed funds'' will also be required to complete Part E of Form N–CEN.

[764] *See id.* Management companies that are registered on Form N–3 are also required to complete certain items in Part F as directed by Item B.6.c.i of Form N–CEN. *See* General Instruction A of Form N–CEN.

[765] *See* current rule 30b1–1.

[766] *See* current rule 30a–1.

[767] *See* Proposing Release, *supra* footnote 7, at 33634.

[768] *See* Morningstar Comment Letter (suggesting semi-annual reporting as of the fund's fiscal year end should the Commission decide to include Items 34–44, Items 47–52, Item 54, Item 72, and Item 75 of Form N–SAR, as suggested). *See infra* section II.D.5 concerning these current Form N–SAR Items.

[769] *See, e.g.,* Carol Singer Comment Letter; State Street Comment Letter; Wells Fargo Comment Letter.

[770] As discussed above, certain items that are currently reported on Form N–SAR that would be helpful to have updated on a more frequent basis are included on Form N–PORT. For example, Item 28 of Form N–SAR requires the fund to provide its monthly sales and repurchases of the Registrant's/Series' shares. In order to increase the timeliness of the information reported to the staff for funds flows, certain information relating to monthly flows will be reported on Item B.6 of Form N–PORT.

[771] Because Form N–CEN is to be filed annually by all registered investment companies, we are rescinding 17 CFR 270.30b1–1 and revising 17 CFR 270.30a–1 to require all registered investment companies to file reports on Form N–CEN, as proposed. *See infra* section II.G (concerning technical and conforming amendments related to current rule 30b1–1 and current rule 30a–1). *See* rule 30a–1.

[772] *See* Proposing Release, *supra* footnote 7, at 33634.

[773] *See* current rule 30b1–1.

[774] *See* current rule 30a–1.

[775] In particular, we note that the items relating to UITs in Part F require reporting of aggregate information across all series of the UIT (as distinct from Part C, which requires series-specific information in the case of management companies offering multiple series). As proposed, UITs with multiple series with different fiscal year end dates would have been required to file more than once per year, at least once for each unique date. Considering that the reported information itself relates to the entire UIT and not each individual series, we have determined, after further consideration, that it would be less costly for UITs to report once per year, even if their series have different fiscal years. Moreover, we believe that the resulting data will be more useful to the Commission and other data users because the reported information will be as of a consistent date across UITs, and therefore more readily compared and contrasted. Accordingly, we are requiring UITs to file Form N–CEN reports on a calendar year basis even where the UIT offers multiple series with different fiscal years.

[776] *See* Morningstar Comment Letter.

[777] *See* rule 30a–1.

[778] *See* General Instruction C.1 of Form N–CEN.

[779] *See* Carol Singer Comment Letter; State Street Comment Letter.

[780] *See, e.g.,* Comment Letter of The Committee of Annuity Insurers (Aug. 11, 2015) (''CAI Comment Letter'') (75 days after fiscal year end); ICI Comment Letter (at least 75 days); Invesco Comment Letter (75 days after fiscal year end); MFS Comment Letter (75 days after fiscal year end, at least for initial filing for all funds in the fund complex); T. Rowe Price Comment Letter (75 days after fiscal year end).

We have been persuaded by these comments and are adopting a filing period of 75 days after the fiscal year-end (for management companies) and calendar year-end (for UITs). We believe that a 75-day filing period appropriately balances the staff's need for timely information against the time necessary for a fund to collect, verify, and report the required information to the Commission. Furthermore, the census-type information reported on Form N–CEN, in our experience, does not change frequently, thereby reducing the risk that a longer filing period would cause the information provided to become stale.

Current rule 30b1–3 under the Investment Company Act requires a fund to file a transition report on Form N–SAR when a fund's fiscal year changes.[781] Because reports on Form N–CEN are required to be filed annually rather semi-annually, we believe that a rule outlining the requirements for a transition report will no longer be necessary as transition report filing requirements for fiscal year changes involve less complexity in the case of reports required to be filed once a year rather than twice a year. Consequently, we are rescinding rule 30b1–3 as proposed. We received no comments on this aspect of the proposal. To ensure, however, that reports are filed at least annually, we are requiring that reports on Form N–CEN not cover a period of more than 12 months as proposed.[782] Thus, if a fund changes its fiscal year, a report filed on Form N–CEN may cover a period shorter than 12 months, but may not cover a period longer than 12 months or a period that overlaps with a period covered by a previously filed report.[783] We received no comments on this aspect of the proposal.

As proposed, a fund would be able to file an amendment to a previously filed report on Form N–CEN at any time, including an amendment to correct a mistake or error in a previously filed report.[784] A fund that files an amendment to a previously filed report on the form should provide information in response to all items of Form N–CEN, regardless of why the amendment is filed.[785] Commenters did not object to these proposed requirements although one commenter suggested that an amendment should not be required for any subsequent changes to previously reported information and that, except for any material errors, any subsequent changes should be reported in the next filing period.[786] We are adopting these requirements as proposed.[787] Although funds generally should correct a material mistake in a Form N–CEN report by filing an amendment to that report, Form N–CEN does not generally require registrants to file amendments in order to update information throughout the year. Rather, changes in information during the course of the year would be reflected in the fund's next report on the form.

Similar to Form N–PORT,[788] Form N–CEN also includes general filing instructions,[789] as well as definitions of specific terms referenced in the form.[790] As discussed in connection with Form N–PORT above, we have eliminated proposed instructions regarding the signature and filing of reports,[791] because we believe that the general rules and regulations applicable under the Act provide sufficient guidance regarding those issues.[792] As discussed further below, we have also revised, consistent with the changes to Form N–PORT discussed above, the definitions of ''Exchange-Traded Fund'' and ''Exchange-Traded Managed Funds'' to clarify that the terms would apply to a series or class of a UIT organized as an ETF or ETMF.[793] We have also revised, as we did in Form N–PORT, the definition of ''LEI'' to reflect new terminology regarding LEIs.[794]

4. Information Required on Form N–CEN

a. Part A—General Information

We are adopting, as proposed, Part A of Form N–CEN. We did not receive comments on Part A. Part A, which will be completed by all funds, will collect information about the reporting period covered by the report. It requires funds to report the fiscal-year end date and indicate if the report covers a period of less than 12 months.[795]

b. Part B—Information About the Registrant

We proposed a number of reporting items under Part B of Form N–CEN to provide information about the registrant. Although commenters did not raise broad objections to the reporting requirements under Part B, many commenters raised concerns with and/or requested clarification on specific reporting items. We are adopting Part B substantially as proposed with some modifications in response to comments on specific reporting items. Where we have received comments on specific reporting requirements, we discuss them in more detail below.

As proposed, Part B of Form N–CEN would have been required to have been completed by all funds and would have required certain background and other identifying information about the funds. Part B of Form N–CEN, as proposed, would have included an instruction that required funds offering multiple series to provide a response for each series when the response to an item in Part B of the form differed between series, and to label the response with the name and series identification number of the series to which a response relates.[796] In order to provide more clarity to filers as to when series information is required in Part B of the form, we have removed the proposed instruction to Part B and have instead added sub-items requesting series information, when applicable, for certain items in Part B of the form. We have added these sub-items to the items in Part B where we believe identification of the particular series would be most helpful to our monitoring efforts and general review and analysis of the information reported on the form.[797]

As proposed, Part B of the form requires certain background and other identifying information about the fund. This background information will allow the staff to categorize filers by fund type and will assist with our oversight of

781 *See* current rule 30b1–3; *see also infra* section II.G concerning technical and conforming amendments to current rule 30b1–3.

782 *See* General Instruction C.1 of Form N–CEN.

783 *Id.*

784 *See* General Instruction E of proposed Form N–CEN.

785 *Id.*

786 *See* State Street Comment Letter.

787 *See* General Instruction C.2 of Form N–CEN.

788 *See supra* section II.A.3 regarding Form N–PORT.

789 *See* General Instruction C of Form N–CEN.

790 *See* General Instruction E of Form N–CEN.

791 General Instruction E of proposed Form N–CEN.

792 *See* General Instruction B to Form N–CEN (''The General Rules and Regulations under the Act contain certain general requirements that are applicable to reporting on any form under the Act. These general requirements should be carefully read and observed in the preparation and filing of reports on this Form, except that any provision in the Form or in these instructions shall be controlling.'').

793 General Instruction E of Form N–CEN. *See supra* footnotes 93–94 and accompanying text; *infra* footnote 896 and accompanying text.

794 *See supra* footnote 95 and accompanying text. Form N–CEN's revised definition of ''LEI'' refers to the legal entity identifier ''endorsed'' by LEI ROC or ''accredited'' by GLEIF, as opposed to ''assigned or recognized'' by those two entities. General Instruction E to Form N–CEN.

795 *See* Item A.1 of Form N–CEN.

796 *See* Instruction to Part B of proposed Form N–CEN.

797 *See* Item B.10, Item B.11, Item B.14, Item B.19, Item B.20, Item B.22, and Item B.23 of Form N–CEN. We note that, with respect to those items in Part B that do not include sub-items for series information, a registrant may still provide more than one response to the item (where applicable), but the response will not be required to indicate the relevant series to which it relates.

funds. Included in this background information is the fund's name,[798] Investment Company Act filing number,[799] and other identifying information, such as its CIK [800] and LEI,[801] each of which we are adopting as proposed. In addition, we are adopting as proposed the requirement that the report include the fund's address, telephone number, and public Web site (if any),[802] and the location of the fund's books and records.[803] While the fund's name, address, telephone number, and filing number are currently required by Form N–SAR,[804] some of the additional information, such as the fund's CIK, LEI, public Web site and location of books and records are new. As discussed in the proposal and the Form N–PORT section above, information such as the CIK and LEI will assist the Commission and other data users with organizing the data and allow the data reported on Form N–CEN to be cross-referenced with data received from other sources.[805] For tracking purposes, Form N–CEN also requires information relating to whether the filing is the initial or final filing.[806]

We are adopting, as proposed, the requirement that funds include the location of their books and records in reports on Form N–CEN. We note that books and records information is currently required by fund registration forms; [807] however, this information is not filed with the Commission in a structured format. We believe that having books and records information in a structured format will increase our efficiency in preparing for exams and, thus, we have determined to include this information in Form N–CEN.[808] In addition, so as not to create unnecessary burdens, we are adopting proposed amendments to Forms N–1A, N–2, N–3, N–4, and N–6 to exempt funds from those forms' respective books and records disclosure requirements if the information is provided in a fund's most recent report on Form N–CEN.[809]

Similar to Form N–SAR,[810] Form N–CEN requires information regarding whether the fund is part of a ''family of investment companies.'' [811] The form, which includes a substantially similar definition as Form N–SAR,[812] defines a ''family of investment companies'' to mean, except with respect to insurance company separate accounts, any two or more registered investment companies that (i) share the same investment adviser or principal underwriter; and (ii) hold themselves out to investors as related companies for purposes of investment and investor services.[813] This item will assist Commission staff with analyzing multiple funds across the same family of investment companies. One commenter suggested that a broader term such as ''fund complex'' would be a beneficial alternative to the proposed term ''family of investment companies.'' [814] We believe, however, that ''fund complex,'' as such term is defined for purposes of Form N–1A, for example, could be overly broad (*e.g.,* could unintentionally incorporate unaffiliated sub-advisers), and thus, we have determined to adopt the item as proposed.[815]

We are adopting, as proposed, a requirement in Form N–CEN that the fund provide its classification (*e.g.,* open-end fund, closed-end fund), similar to Form N–SAR.[816] Unlike the requirements of Form N–SAR, however, we are also adopting, as proposed, a requirement in Form N–CEN that specifically asks whether the fund issues a class of securities registered under the Securities Act.[817] These questions are intended to elicit background information on the fund, which will assist us in our monitoring and oversight functions (for example, identifying those funds that have not issued securities registered under the Securities Act).

We are also adopting, as proposed, the requirement in Form N–CEN that a management company report information about its directors, including each director's name, whether they are an ''interested person'' (as defined by section 2(a)(19) of the Investment Company Act), and the Investment Company Act file number of any other registered investment company for which they serve as a director.[818] Some commenters supported inclusion of such information [819] and one commenter suggested that the Commission request additional information concerning individual directors (and chief compliance officers (''CCOs'')), such as length of service, roles certain directors have on the board, and prior experience as fund directors.[820] Another commenter opposed the inclusion of additional disclosure requirements concerning the board or individual directors beyond those in the proposed

[798] Item B.1.a of Form N–CEN.

[799] Item B.1.b of Form N–CEN.

[800] Item B.1.c of Form N–CEN. Because UITs that register on Form N–8B–2 obtain CIKs for the UIT itself as well as for series offered by the UIT, we have made a clarifying modification to Form N–CEN by including a requirement in Part F of the form that such UITs also report the CIKs for each of their existing series. *See* Item F.6.b of Form N–CEN.

[801] Item B.1.d of Form N–CEN.

[802] Item B.2 of Form N–CEN.

[803] Item B.3 of Form N–CEN; *see also infra* footnotes 807–809 and accompanying text.

[804] Item 1 and Item 2 of Form N–SAR.

[805] *See supra* section II.A.2.a (discussing additional information such as CIK and LEI and comment letters received regarding the use of identifiers).

[806] Item B.4 of Form N–CEN. As proposed, the instruction to Item B.4—then numbered as ''Item 5''—stated that a fund should indicate that a filing is its final filing on Form N–CEN only if the fund has filed an application to deregister on Form N–8F ''or otherwise.'' We believe it would be useful to filers for the instruction to provide more context as to what should be considered ''or otherwise.'' Therefore, the final Form clarifies that a fund should indicate that a filing on Form N–CEN is its final filing ''only if the Registrant has filed an application to deregister or will file an application to deregister before its next required filing on this form.'' We note that even if a fund indicates a filing is its final filing on Form N–CEN, a fund is required to file reports on Form N–CEN until it is deregistered.

[807] *See* Item 33 of Form N–1A; Item 32 of Form N–2; Item 36 of Form N–3; Item 30 of Form N–4; and Item 31 of Form N–6.

[808] Additionally, by including books and records information in Form N–CEN, we may receive more frequently updated books and records information from closed-end funds. Closed-end funds do not update their registration statements as regularly as open-end funds and, thus, the information regarding their books and records may not always be current.

[809] Funds that have not yet filed a report on Form N–CEN will have to continue to include this information in their registration statement filings.

[810] Item 19, Item 94, and Item 116 of Form N–SAR; s*ee also* General Instruction H to Form N–SAR (defining ''family of investment companies'').

[811] Item B.5 of Form N–CEN.

[812] *See id.; see also* Instruction 1 to Item 17 of Form N–1A.

[813] Instruction to Item B.5 of Form N–CEN. The instruction, like the definition of ''family of investment companies'' in Form N–SAR, also clarifies that insurance company separate accounts that may not hold themselves out to investors as related companies (products) for purposes of investment and investor services should consider themselves part of the same family if the operational or accounting or control systems under which these entities function are substantially similar. *See* General Instruction H to Form N–SAR.

[814] *See* Morningstar Comment Letter.

[815] *See* Instruction 1(b) to Item 17 of Form N–1A (defining ''fund complex'' to mean two or more registered investment companies that: (1) Hold themselves out to investors as related companies for purposes of investment and investor services; *or* (2) have a common investment adviser or have an investment adviser that is an affiliated person of the investment adviser of any of the other registered investment companies).

[816] Item B.6 of Form N–CEN; *see also* Item 5, Item 6, Item 27, Item 58, Item 59 and Item 117 of Form N–SAR. If the registrant is an open-end fund, Form N–CEN also requires information on the total number of series of the registrant and, if a series of the registrant with a fiscal year end covered by the report was terminated during the reporting period, information regarding that series. *See* Item B.6.a.i–Item B.6.a.ii of Form N–CEN. In addition, registrants that indicate they are management companies registered on Form N–3 are directed by Item B.6 to respond to certain additional items in Part F of the form that relate to insurance company separate accounts. *See* Item B.6.c.i of Form N–CEN.

[817] Item B.7 of Form N–CEN.

[818] Item B.8 of Form N–CEN.

[819] *See* Franco Comment Letter; Morningstar Comment Letter.

[820] Morningstar Comment Letter.

form without a prior statement of regulatory purpose and opportunity for public comment.[821] We have determined to adopt these requirements as proposed because we believe it appropriately balances the need for director information in a structured format with efforts to minimize the partially duplicative reporting requirements.[822]

However, in a modification from the proposal, we have determined to add one additional reporting requirement concerning directors. In the Proposing Release, we solicited comment regarding whether Form N–CEN should require any additional information concerning directors. In response, a commenter stated that, as discussed below, the proposed form would require funds to report CRD numbers for CCOs, as applicable, and suggested that data users could more readily analyze particular directors across funds and over time if a unique identifier were reported for each director.[823] We acknowledge that not all fund directors have associated CRD numbers, but we are persuaded by the commenter that, for those that do, reporting of the CRD number would improve data comparability and help us in our risk assessment and examination functions by making it easier for Commission staff to identify persons and collect information across funds.[824]

In addition, as proposed, a fund will be required to provide the CCO's name, CRD number (if any), address, and phone number,[825] as well as indicate if the CCO has changed since the last filing.[826] If the fund's CCO is compensated or employed by any person other than the fund, or an affiliated person of the fund, for providing CCO services, the fund will also be required to report the name and IRS Employer Identification Number of the person providing such compensation.[827] One commenter objected to this reporting requirement stating that the information is already provided in other Commission filings.[828] As we stated in the Proposing Release, we recognize that some funds provide this information in their registration statements. However, as we also noted, not all funds do [829] and we believe that this requirement will provide staff with information on all fund CCOs and will allow the staff to contact a fund's CCO directly.

One commenter suggested that the Commission require additional information concerning CCOs, such as ''length of service and prior experience in order to aid in assessing the caliber of a fund or a fund company's regulatory practices.'' [830] We believe, however, that the reporting requirement as proposed and adopted is sufficient for our regulatory oversight purposes and appropriately balances the benefits of additional information for Form N–CEN data users against the burdens imposed upon filers. Specifically, because Commission data users could link Form N–CEN information about CCOs across filings, over time, using the required CRD number, the reporting requirements that we are adopting today will still allow users to inform themselves about a CCO's length of service without adding another reporting requirement.[831] Another commenter expressed support for the CCO reporting requirement but suggested that the item should also require the fund to report the name of the investment adviser's CCO as well.[832] We are not adopting this suggestion because Form N–CEN is designed to collect census-type information, including certain corporate governance information, about funds—not similar information about investment advisers. Investment advisers are currently required to report the name and contact information of the adviser's CCO on Form ADV, which facilitates the ability of the Commission to link fund and investment adviser CCO data without imposing an additional reporting burden on funds.[833] Accordingly, we believe that the item requirement as proposed is appropriate and are adopting it without any changes.

We are also adopting, substantially as proposed, the requirement in Part B that funds report matters that have been submitted to a vote of security holders during the relevant period.[834] Information regarding submissions of matters to a vote of securities holders is currently reported in Form N–SAR by management companies in the form of an attachment with multiple reporting requirements.[835] In order to alleviate the burden on filers, we are reducing the information to be reported regarding votes of security holders to a yes/no question that is primarily meant to allow staff to quickly identify funds with such votes, so that they can follow up as appropriate, such as by reviewing more detailed information required by other filings.[836]

[821] *See* IDC Comment Letter. It was unclear whether the commenter intended also to express concerns about the proposed requirements concerning directors, in addition to the concerns it expressed about other potential requirements concerning directors. *Id.* (''First, the Release asks about the information regarding fund directors that is proposed to be included in Form N–CEN, which includes each director's name, whether they are an ''interested person'' and the Investment Company Act file number of any other fund for which they serve as a director. Specifically, the Release asks whether funds should be required to include on Form N–CEN any additional information concerning the board or individual directors, such as information about the length of service of directors. The Release does not discuss why the Commission might be interested in this or other possible director-related information or how it would be used. Absent a clear statement of how information about directors would assist the Commission in carrying out its regulatory functions, and the opportunity to comment on any such information, we do not support adding it to Form N–CEN.'') To the extent that the commenter was commenting on the proposed requirements, we note, as we did in the Proposing Release, that although the information is reported in a management company's Statement of Additional Information and provided in annual reports to shareholders, providing this information to the Commission in a structured format will allow the Commission and other potential data users to sort and analyze the data more efficiently. *See* Proposing Release, *supra* footnote 7, at 33636.

[822] This information (along with additional director information) is also disclosed in a management company's Statement of Additional Information and its annual report to shareholders, albeit in an HTML or ASCII, rather than structured, format. *See, e.g.,* Item 17 and Item 27(b)(5) of Form N–1A (requiring, for example, disclosures regarding length of service, position(s) held with the fund, and other directorships held by the director).

[823] *See* Morningstar Comment Letter; *infra* notes 825–833 and accompanying text.

[824] Item B.8.b of Form N–CEN.

[825] Item B.9 of Form N–CEN. Because we expect that funds will provide the CCO's direct phone number in response to this information request, the CCO's phone number will not be made publicly available in Form N–CEN filings on EDGAR. *See* General Instruction D to Form N–CEN.

[826] Item B.9.i of Form N–CEN.

[827] Item B.9.j of Form N–CEN. We proposed to require funds provide the name and ''Employee Identification Number'' of the person providing compensation for CCO services (Proposing Release, *supra* footnote 7, at n. 409 and accompanying text). We are adopting a reference to ''IRS Employer Identification Number'' to conform with Form ADV (*see, e.g.,* Item 7 of Schedule A of Form ADV).

[828] *See* Schnase Comment Letter.

[829] *See, e.g.,* Item 17 of Form N–1A (requesting information regarding fund officers). For example, Form N–1A defines the term ''officer'' to mean ''the president, vice-president, secretary, treasurer, controller, or any other officer who performs policy-making functions.'' It is our understanding that in some fund complexes, the CCO does not fit within the category of officers covered by this definition (*i.e.,* the CCO does not perform a policy-making function), and therefore, information as to their CCO is not provided pursuant to the item.

[830] Morningstar Comment Letter.

[831] The same commenter stated that the required CRD numbers should be sufficiently specific to analyze the information over time. *See id.*

[832] *See* Franco Comment Letter.

[833] *See, e.g.,* Item 1.J of Part 1A of Form ADV.

[834] *See* Item B.10 of Form N–CEN. We have added an instruction to the item to clarify that registrants registered on Forms N–3, N–4 or N–6, should respond ''yes'' to the item only if security holder votes were solicited on contract-level matters.

[835] *See* Item 77.C of Form N–SAR; *see also* Instruction to Specific Items for Item 77C of N–SAR.

[836] *See, e.g.,* rule 30e–1(b) under the Investment Company Act (requiring management companies to include in shareholder reports certain information relating to matters submitted to a vote of shareholders through the solicitation of proxies or

Continued

Form N–CEN, like Form N–SAR, will also include an item relating to material legal proceedings during the reporting period.[837] One commenter suggested that the Commission define legal proceedings for purposes of Form N–CEN.[838] The relevant item includes an instruction highlighting certain proceedings that should be described in response to the item[839] and the item itself only requests information on ''material legal proceedings, other than routine litigation incidental to the business.'' We believe the instruction and language of the item appropriately describes the legal proceedings funds should include when responding to this item. Another commenter suggested that the Commission state that derivative suits reported in response to this item are deemed to satisfy the requirements under section 33 of the Investment Company Act for filing pleadings and other documents in connection with that type of lawsuit.[840] Section 33 requires every fund which is a party and every affiliated person of such fund who is a party defendant to any action or claim by a fund or a security holder thereof in a derivative capacity or representative capacity against certain persons to file certain documents related to the action or claim with the Commission.[841] We do not believe that reporting pursuant to this requirement, taken alone, would be an appropriate alternative for a fund to use to satisfy the legal proceeding filing requirements under section 33, as Form N–CEN requires only a brief description of the proceeding (as well as the case or docket number (if any) and names of the principal parties to the proceeding) and does not itself require the filing of all materials plainly required by section 33.[842] Moreover, for data users interested in the materials required to be filed under section 33, the reporting required by Form N–CEN would not be the same as, nor in many cases a suitable substitute for, the materials themselves. Accordingly, we are adopting the reporting item as proposed.

Form N–SAR currently requires management companies to report a number of data points relating to fidelity bond and errors and omissions insurance policy coverage.[843] As proposed, we are limiting this request to two separate items in Form N–CEN in order to limit the number of items to those most useful to the Commission staff and reduce burdens on filers.

One item requires funds to report if any claims were filed under the management company's fidelity bond and the aggregate dollar amount of any such claims.[844] One commenter requested that we eliminate the item requesting fidelity bond information, stating that the information is already provided elsewhere by funds.[845] The other item requires registrants to report if the management company's officers or directors are covered under any directors and officers/errors and omissions insurance policy and, if so, whether any claims were filed under the policy during the reporting period with respect to the registrant.[846] The staff appreciates that some of this information may be disclosed in other filings with the Commission, although it is not reported in a structured data format.[847] We continue to believe that having responses to these questions in a structured data format will help alert Commission staff to insurance claims made by the fund or its officers and directors as a result of legal issues related to the fund. Accordingly, we are adopting these reporting requirements as proposed.

In order to better understand instances when funds receive financial support from an affiliated entity, we are adopting, substantially as proposed but with a modification that is designed to address a commenter's suggestion, a new requirement for information regarding the provision of such financial support.[848] We adopted disclosure requirements relating to fund sponsors' support of money market funds as part of our money market reform amendments in 2014, including a new requirement that money market funds file reports on Form N–CR, reporting, among other things, the receipt of financial support.[849] As with money market funds, we believe that it is important that the Commission understand the nature and extent to which a fund's sponsor provides financial support to a fund. Therefore, we are extending this requirement to all funds that will file reports on Form N–CEN. As we stated in the Proposing Release, although we believe it is an infrequent practice, based on staff experience, non-money market funds have received sponsor support in the past and we believe this item will allow Commission staff to readily identify any funds that have received such support for further analysis and review, as appropriate.

One commenter suggested that, for purposes of Form N–CEN, the instruction concerning the definition of ''financial support'' provide additional guidance concerning exclusions from the definition. The proposed instruction regarding the definition of ''financial support'' provided for certain of the exclusions suggested by the commenter, such as for routine waiver of fees or reimbursement of fund expenses and routine inter-fund lending.[850] We continue to think that the proposed exclusions are appropriate, and we are adopting those exclusions today.[851] However, the commenter also suggested specifying that the purchase of a defaulted or devalued security would constitute ''financial support'' only when it is intended to increase or stabilize the value or liquidity of the fund's portfolio.[852] We agree with the commenter that purchases of a defaulted

otherwise) [17 CFR 270.30e–1(b)]. The information request in Form N–CEN applies to UITs as well as management companies. The Form N–SAR requirement applies only to management companies (*see* Item 77.C of Form N–SAR; *see also* Instruction to Specific Items for Item 77C of Form N–SAR). We believe it is important for the Commission to have information for all registered investment companies on matters submitted for security holder vote in order to assist us in our oversight and examination functions.

[837] Item B.11 of Form N–CEN. As in Item 77.E of Form N–SAR, if there were any material legal proceedings, or if a proceeding previously reported had been terminated, the registrant will file an attachment as required by Part G of Form N–CEN. *See* Item G.1.a.i of Form N–CEN. We note that Form N–CEN, unlike Form N–SAR, will require UITs to respond to the information request related to material legal proceedings. For the same reasons discussed above with respect to matters submitted for security holder vote, we believe it is important to have information on material legal proceedings of all registered investment companies. *See supra* footnotes 834–836 and accompanying text.

[838] *See* State Street Comment Letter.

[839] *See* Instruction to Item B.11 of Form N–CEN, which states, ''[f]or purposes of this Item, the following proceedings should be described: (1) Any bankruptcy, receivership or similar proceeding with respect to the Registrant or any of its significant subsidiaries; (2) any proceeding to which any director, officer or other affiliated person of the Registrant is a party adverse to the Registrant or any of its subsidiaries; and (3) any proceeding involving the revocation or suspension of the right of the Registrant to sell securities.''

[840] *See* Schnase Comment Letter.

[841] Section 33 of the Investment Company Act.

[842] We note that the commenter did not explain how reporting pursuant to this requirement, taken alone, would be consistent with the requirements of section 33.

[843] Items 80–85 and Items 105–110 of Form N–SAR.

[844] Item B.12 of Form N–CEN; *cf.* Item 83 of Form N–SAR.

[845] *See* Schnase Comment Letter (referring to fidelity bond disclosures submitted on Edgar Form 40–17G and Form 40–17G/A (for amendments)).

[846] Item B.13 of Form N–CEN; *cf.* Item 85 of Form N–SAR.

[847] For example, a fund is required to provide and maintain a fidelity bond against larceny and embezzlement, which in general covers each officer and employee of the fund who has access to securities or funds. *See* rule 17g–1(a) under the Investment Company Act [17 CFR 270.17g–1(a)].

[848] Item B.14 of Form N–CEN.

[849] *See* Money Market Fund Reform 2014 Release, *supra* footnote 33.

[850] *See* Dechert Comment Letter; Instruction to Item 15 of proposed Form N–CEN.

[851] *See* Instruction to Item B.14 of Form N–CEN.

[852] *See* Dechert Comment Letter.

or devalued security at fair value need only be characterized as ''financial support'' for purposes of Form N–CEN if they are intended to increase or stabilize the value or liquidity of the fund's portfolio, and, accordingly, have modified the instruction in this manner.[853] In addition, and as proposed, if a fund other than a money market fund received financial support, it will also be required to provide more detailed information in the form of an attachment as required by Part G of Form N–CEN.[854]

We are also adopting, as proposed, an item in Form N–CEN requiring reporting as to whether the fund relied on orders from the Commission granting the fund an exemption from one or more provisions of the Investment Company Act, Securities Act or Securities Exchange Act during the reporting period.[855] Funds are required to identify any such order by release number.[856] Collecting this information in a structured format will assist us with our oversight functions and improve our ability to monitor fund reliance on exemptive orders.

One commenter expressed support for this new reporting requirement, including the reporting of release numbers applicable to such exemptive orders.[857] The commenter suggested, however, that in addition to release numbers, the form include the classification or category of the exemptive order in relation to the Commission's Investment Company Act Notices and Orders Category Listing Web page [858] and similar reporting requirements for a fund's reliance on staff no-action letters.[859] We have determined to adopt the reporting item as proposed. We believe that reporting requirements regarding reliance on no-action letters may impose additional administrative costs on filers. Therefore, we believe that the requested information as proposed balances the Commission's need for information to monitor a fund's regulatory compliance with the costs imposed on registrants reporting this information.

As proposed, Form N–CEN, similar to Form N–SAR,[860] will require identifying information for the fund's principal underwriters [861] and independent public accountants,[862] including, as applicable, name, SEC file number, CRD number, PCAOB number, LEI (if any), state or foreign country, and whether a principal underwriter was hired or terminated or if the independent public accountant changed since the last filing.[863] We are adopting these requirements as proposed.

If the independent public accountant changed since the last filing, under the proposal, the fund would also have been required to provide a detailed narrative attachment to Form N–CEN similar to the exhibit in Form N–SAR reporting a change in independent registered public accountants, along with the predecessor accountant's letter reporting the change in independent registered public accountants also required to be reported on Form N–SAR.[864]

Some commenters expressed concern that because Form N–CEN would be an annual reporting form, rather than a semi-annual reporting form like Form N–SAR, the exhibit may be filed a significant amount of time after an accountant had changed.[865] Commenters instead suggested that the proposed attachment be filed by funds with their semi-annual Form N–CSR filings.[866] We are persuaded by these concerns, and are modifying the requirement by moving the change in independent public accountant attachment from Form N–CEN to Form N–CSR as a new attachment to reports on that form.[867] We share commenters' concerns that, as proposed, a significant amount of time may lapse before shareholders would be provided the letter reporting a change in independent registered public accountants. We also believe that moving the attachment from Form N–CEN to Form N–CSR will help ensure concurrent review and written agreement by the predecessor accountant of the required management statement in both annual and semi-annual reports, as reports on Form N–CSR are required to be filed no later than 10 days after reports to shareholders are transmitted. Thus, Form N–CEN provides a means to track funds that change accountants in a structured data format on an annual basis, while the accountant's letter regarding the change will become available to the public semi-annually as an exhibit on Form N–CSR.

We also proposed to include for all funds several other accounting and valuation related items that are currently required for management companies by Form N–SAR, and that provide important information to the Commission regarding possible accounting and valuation issues related to a fund. Commenters generally did not object to these proposed reporting requirements,[868] and we are adopting them largely as proposed, with some revisions in response to specific commenter suggestions. These items include a question relating to material changes in the method of valuation of the fund's assets.[869] If there have been material changes in the method of valuation of assets during the reporting period, Item B.20 requires that the fund report the types of investments involved.

One commenter expressed support for this reporting requirement, noting that the information would be sufficient to conduct due diligence on pricing and valuation issues.[870] This commenter

[853] *See* Instruction to Item B.14 of Form N–CEN.

[854] Item G.1.a.ii of Form N–CEN. Money market funds currently provide this information through reports on Form N–CR. However, all funds, including money market funds, will be required to respond ''yes'' or ''no'' to Item B.14 of Form N–CEN.

[855] Item B.15 of Form N–CEN. If any actions were taken during the reporting period, which were required to be reported on Form N–1Q pursuant to an exemptive order, Form N–SAR requires that information be reported in response to Sub-Item 77P of Form N–SAR. *See* Instructions to Sub-Items 77P and 102O of Form N–SAR. Form N–CEN requires the fund to file as an attachment any information required to be filed pursuant to exemptive orders issued by the Commission and relied on by the fund. Instruction 5 to Item G.1 of Form N–CEN.

[856] *See* Item B.15.a.i of Form N–CEN.

[857] *See* Morningstar Comment Letter.

[858] Investment Company Act Notices and Orders Category Listing Web page is available at: *https://www.sec.gov/rules/icreleases.shtml*.

[859] *See* Morningstar Comment Letter.

[860] Item 11, Item 13, Item 77.K, Item 91, Item 102.J, Item 114, and Item 115 of Form N–SAR.

[861] Item 17 of proposed Form N–CEN.

[862] Item 18 of proposed Form N–CEN.

[863] Item 17.b and Item 18.f of proposed Form N–CEN, respectively.

[864] Item 79.a.iii of proposed Form N–CEN.

[865] *See* AICPA Comment Letter; and PwC Comment Letter (noting that Item 27(c)(4) of Form N–1A and Item 24, Instruction 5, of Form N–2 both require that the management statement required under Item 4.01 of Form 8–K be presented in both semi-annual and annual shareholder reports. Thus, for any change in accountants occurring in the first six months of a registrant's fiscal year, management's statement regarding a change in accountants would be required to be issued and filed publicly in the fund's semi-annual shareholder report while the predecessor accountant's letter reported semi-annually on former Form N–SAR would, under the proposal, have been filed in Form N–CEN six months later).

[866] *See* AICPA Comment Letter; and PwC Comment Letter.

[867] *See* Item 12(a)(4) of Form N–CSR.

[868] *See, e.g.*, Morningstar Comment Letter.

[869] Item B.20 of Form N–CEN. As discussed in the Proposing Release, valuation methodologies are approved by fund directors for use by funds to determine, in good faith, the fair value of portfolio securities (and other assets) for which market quotations are not readily available. For example, valuation methodology changes may include, but are not limited to, changing from use of bid price to mid-price for fixed income securities or changes in the trigger threshold for use of fair value factors on international equity securities. Unlike Form N–SAR, this requirement will apply to UITs as well as management investment companies. As we noted in the Proposing Release, we believe it is important for the Commission to have information on accounting and valuation for all registered investment companies in order to assist us in our oversight and examination functions.

[870] Morningstar Comment Letter.

also suggested aligning the type of investments involved with the list of asset types identified in Form N–PORT.[871] After considering the commenter's request, we have added an additional sub-item and clarifying instructions to Item B.20 to require the applicable ''asset type'' category specified in Item C of Form N–PORT.[872] We believe that requiring responses based on the categories used in Form N–PORT will provide some measure of standardization that will generally assist the staff in its monitoring of changes in valuation methodologies by asset class, and will provide regulatory consistency that will assist Commission staff in its review of information reported pursuant to both forms.

In addition, and as proposed, funds will also be required to provide a brief description of the types of investments involved.[873] However, we have modified the instruction to this sub-Item from the proposal to provide that if the change in methodology relates to a sub-asset type included in the response to Item B.20.c, then funds should report the sub-asset class in responding to Item B.20.d.[874] This modification is intended to avoid duplicative responses to Item B.20.c and Item B.20.d by eliciting more specific information as to any sub-asset classes contained in the broader Form N–PORT asset categories that are impacted by the change of valuation methodologies. Unlike reports on Form N–SAR, Form N–CEN does not require a separate attachment detailing the circumstances surrounding a change in valuation methods.[875] Instead, to facilitate review of this information in a structured format, Form N–CEN includes specific items in the form itself, including the date of change, explanation of change, type of investment, statutory or regulatory basis for the change, and the fund(s) involved.[876] Also as proposed, Form N–CEN carries forward the requirement from Form N–SAR[877] that the fund identify whether there have been any changes in accounting principles or practices, and, if any, to provide more detailed information in a narrative attachment to the form.[878]

We are also adopting, largely as proposed, a requirement in Form N–CEN that management companies other than SBICs, file a copy of their independent public accountant's report on internal control as an attachment to their reports on the form.[879] To flag instances where a report noted any material weaknesses, Form N–CEN also includes, as proposed, a question that asks whether the report on internal control noted any material weaknesses.[880] In addition, as was proposed, Form N–CEN contains a new requirement that the fund report if the certifying accountant issued an opinion other than an unqualified opinion with respect to its audit of the fund's financial statements.[881] These questions will elicit information on potential accounting issues identified by a fund's accountant.

We are also adopting, largely as proposed, a requirement in Form N–CEN, not contained in Form N–SAR, to indicate whether, during the reporting period, an open-end fund made any payments to shareholders or reprocessed shareholder accounts as a result of an NAV error.[882] One commenter expressed support for additional information related to NAV errors.[883] Another commenter recommended that this item be omitted from Form N–CEN, arguing that the item is not an appropriate reporting item for a census form, would likely engender inquiries and claims from potential litigants, and could be obtained through the Commission's examination program.[884] We continue to believe, however, that the item will assist the staff's monitoring efforts and the yes/no reporting structure of the item will be a useful means to flag the occurrence of NAV corrections whereby Commission staff can request further information in connection with staff examinations and other inquiries.[885]

In addition, one commenter requested that we revise the item to ensure that any errors that ''exceeded the registrant's threshold for reprocessing'' were captured, even if the reprocessing was paid for by a service provider.[886] After consideration of the comment, we agree that this question should capture all incidents of reprocessed shareholder accounts regardless of the source of payment and have revised the item to clarify that a registrant should respond affirmatively if any payments were made to shareholders (*i.e.,* regardless of the source of the payment) or if any shareholder accounts were reprocessed as a result of an error in calculating the registrant's NAV.[887]

As proposed, Form N–CEN also requires information from management companies regarding payments of dividends or distributions that required a written statement pursuant to section 19(a) of the Investment Company Act and rule 19a–1 thereunder.[888] These questions will assist the staff in monitoring valuation of fund assets and the calculation of the fund's NAV, as well as compliance with distribution

[871] *See id.*

[872] *See* Item B.20.c of Form N–CEN and related instruction (requiring responses to provide the applicable ''asset type'' category specified in Item C.4.a of Form N–PORT).

[873] Item B.20.d of Form N–CEN.

[874] *See* Instruction to Item B.20 of Form N–CEN. Thus, if a fund changed its valuation methodologies with respect to municipal securities, the fund would report ''debt' in response to Item B.20.c and ''municipal securities'' in response to Item B.20.d.

[875] *See* Item 77.J and Item 102.I of Form N–SAR.

[876] *Compare* Item 77.J of Form N–SAR *with* Item B.20 of Form N–CEN. An instruction to Item B.20 of Form N–CEN clarifies that we do not expect responses to this item to include changes to valuation techniques used for individual securities (*e.g.,* changing from market approach to income approach for a private equity security). Form N–SAR does not contain a similar instruction, but we are including it in Form N–CEN to provide clarity for filers and because we believe that responding to Item B.20 of Form N–CEN for individual securities may be overly burdensome.

[877] *See* Item 77.L and Item 102.K of Form N–SAR.

[878] Item B.21 and Item G.1.a.iv of Form N–CEN. Like the information requested regarding changes in valuation methods, Form N–SAR only requests information from management companies regarding changes in accounting principles and practices. Unlike Form N–SAR, Form N–CEN requires this information from UITs as well, for the same reasons as discussed above with respect to changes in valuation methods. *See supra* footnote 869.

[879] Item G.1.a.iii of Form N–CEN. Management companies other than SBICs are currently required to file a copy of the independent public accountant's report on internal control with their reports on Form N–SAR. *See* Item 77.B of Form N–SAR. We continue to believe that a copy of the management company's report on internal control should be filed with the Commission and thus are carrying over the filing requirement to Form N–CEN.

[880] Item B.18 of Form N–CEN. One commenter suggested that the word ''find'' in the text of proposed Item 19 be changed to ''note,'' stating that the term ''find'' could be misinterpreted, creating an ''expectation gap'' over the nature of the consideration of internal control in an audit of financial statements, particularly for investment companies, which (except for BDCs) are not subject to the integrated audit requirements of the Sarbanes-Oxley Act. *See* PwC Comment Letter. We are persuaded by the commenter's concern and have revised the language of the item from ''find'' to ''note'' as recommended.

[881] Item B.19 of Form N–CEN.

[882] Item B.22 of Form N–CEN.

[883] Morningstar Comment Letter.

[884] *See* SIFMA Comment Letter I.

[885] Regarding the commenter's concerns regarding potential increased litigation risk or inquiries based on public disclosure, based on our experience, we understand that these types of payments and reprocessing transactions are typically already disclosed to investors through account statements.

[886] *See* BlackRock Comment Letter.

[887] Item B.22.a of Form N–CEN.

[888] Item B.23 of Form N–CEN. Section 19(a) of the Investment Company Act generally prohibits a fund from making a distribution from any source other than the fund's net income, unless that payment is accompanied by a written statement that adequately discloses the source or sources of the payment. *See* 15 U.S.C. 80a–19(a). Rule 19a-1 under the Investment Company Act specifies the information required to be disclosed in the written statement. [17 CFR 270.19a–1]; *see also* Shareholder Notices of the Sources of Fund Distributions—Electronic Delivery, IM Guidance Update No. 2013–11 (Nov. 2013), *available at http://www.sec.gov/divisions/investment/guidance/im-guidance-2013-11.pdf.*

requirements under section 19(a) and rule 19a–1. One commenter stated that there is not currently a consistent method used across funds to determine whether a rule 19a–1 notice is required, and that this inconsistency could limit comparability of the reported data.[889] The commenter suggested that the Commission could increase comparability of the reported data by clarifying the method that should be used to determine whether a 19a–1 notice is required.[890] Although we recognize, as the commenter suggests, that different substantive practices relating to 19a–1 notices could affect the comparability of the reported data, revising the substantive provisions of rule 19a–1 is beyond the intended scope of the requirements of Form N–CEN.

c. Part C—Items Relating to Management Investment Companies

i. Background and Classification of Funds

We proposed a number of reporting items under Part C of Form N–CEN to provide the Commission and its staff with background information on the fund industry and to assist us in meeting our legal and regulatory requirements, such as requirements under the Paperwork Reduction Act. Additionally, certain demographic information in Part C will allow the Commission to better identify particular types of management companies for monitoring and analysis if, for example, an issue arose with respect to a particular fund type. We are adopting those reporting items substantially as proposed with some modifications in response to comments. Where we have received comments on specific reporting requirements, we discuss them in more detail below.

Part C will be completed by management investment companies other than SBICs. As in the proposal, for management companies offering multiple series, the required information will be reported separately as to each series.[891]

Similar to Form N–SAR and as proposed, Form N–CEN includes general identifying information on management companies and any series thereof, including the full name of the fund, the fund's series identification number and LEI, and whether it is the fund's first time filing the form.[892]

Unlike Form N–SAR, specific information on the classes of open-end management companies, including information relating to the number of classes authorized, added, and terminated during the relevant period are required under Form N–CEN.[893] In addition, Form N–CEN includes a requirement (unlike Form N–SAR) to specifically provide identifying information for each share class outstanding, including the name of the class, the class identification number, and ticker symbol.[894]

Form N–CEN also requires—substantially as proposed with some modifications in response to public comment—management companies to identify if they are any of the following types of funds: [895] ETF or exchange-traded managed fund (''ETMF''); [896] index fund; [897] fund seeking to achieve performance results that are a multiple of an index or other benchmark, the inverse of an index or other benchmark, or a multiple of the inverse of an index or other benchmark; [898] interval fund; [899] fund of funds; [900] master-feeder fund; [901] money market fund; [902] target date fund; [903] and underlying fund to a variable annuity or variable life insurance contract.

For purposes of reporting on Form N–CEN, as proposed, ''index fund'' is defined as an investment company, including an ETF, which seeks to track the performance of a specified index.[904] The definition is largely similar to the definition of ''index fund'' in rule 2a19–3 under the Investment Company Act, but will capture both broad-based and affiliated indexes.[905] Additionally, we note that the definition is substantially similar to the definition of ''index fund'' in Form N–SAR, but also takes into account the emergence of ETFs.[906] One commenter expressed support for the proposed definition of index fund, but

[889] *See* State Street Comment Letter.

[890] *Id.*

[891] General Instruction A to Form N–CEN.

[892] Item C.1 of Form N–CEN; *see also supra* section II.A.2.a (discussing the use of LEIs for purposes of Form N–PORT and related comments received regarding the use of LEIs). The requirements relating to the name of the fund and if this is the first filing with respect to the fund are currently required by Form N–SAR. *See* Item 3 and Item 7.C of Form N–SAR.

[893] Item C.2.a–Item C.2.c of Form N–CEN.

[894] Item C.2.d of Form N–CEN.

[895] Item C.3 of Form N–CEN. As discussed herein, many of the types of funds listed in Item C.3 are defined in Form N–CEN. With the exception of ''index fund'' and ''money market fund,'' these terms are not currently defined in Form N–SAR. *See* General Instruction H and Item 69 of Form N–SAR.

[896] Item C.3.a of Form N–CEN. As discussed above, we have revised, consistent with the changes to Form N–PORT discussed above, the definitions of ''Exchange-Traded Fund'' and ''Exchange-Traded Managed Funds'' to clarify that the definitions would apply to a class or series of a UIT organized as an ETF or ETMF. *See supra* footnote 793 and accompanying text. Consequently, for purposes of reporting on Form N–CEN, ''exchange-traded fund'' is defined as an open-end management investment company (or series or class thereof) or UIT (or series thereof), the shares of which are listed and traded on a national securities exchange at market prices, and that has formed and operates under an exemptive order under the Investment Company Act granted by the Commission or in reliance on an exemptive rule under the Act adopted by the Commission. Similarly, ''exchange-traded managed fund'' is defined as an open-end management investment company (or series or class thereof) or UIT (or series thereof), the shares of which are listed and traded on a national securities exchange at NAV-based prices, and that has formed and operates under an exemptive order under the Investment Company Act granted by the Commission or in reliance on an exemptive rule under the Act adopted by the Commission. *See* General Instruction E of Form N–CEN. These definitions are substantially identical to the definitions we proposed, however, we have added a parenthetical to each definition to clarify that an ETF or exchange-traded managed fund would include a series of a UIT that meets the rest of the applicable definition. We believe that these are appropriate definitions as they are similar to the one used for determining the applicability of ETF registration statement disclosure requirements for open-end funds. *See* General Instruction A of Form N–1A. Currently, all ETFs and exchange-traded managed funds rely on relief from certain provisions of the Investment Company Act that is granted by Commission order. *See* ETF Proposing Release, *supra* footnote 5; Eaton Vance Management, *et al.,* Investment Company Act Release No. 31333 (Nov. 6, 2014) [79 FR 67471 (Nov. 13, 2014)] (Notice); Eaton Vance Management, *et al.,* Investment Company Act Release No. 31361 (Dec. 2, 2014) (Order). The Commission, however, proposed in 2008 to codify the exemptive relief previously granted to ETFs by order. *See* ETF Proposing Release, *supra* footnote 5 (proposing rule 6c-11).

[897] Item C.3.b of Form N–CEN.

[898] Item C.3.c of Form N–CEN. This item is being modified from the proposed requirement, which would have required a fund to indicate if it seeks to achieve performance results that are a multiple of a benchmark, the inverse of a benchmark, or a multiple of the inverse of a benchmark. The modifications clarify that the benchmark may be an index.

[899] Item C.3.d of Form N–CEN.

[900] Item C.3.e of Form N–CEN.

[901] Item C.3.f of Form N–CEN.

[902] Item C.3.g of Form N–CEN.

[903] Item C.3.h of Form N–CEN. As in the proposal, for purposes of reporting on Form N–CEN, ''target date fund'' is defined as an investment company that has an investment objective or strategy of providing varying degrees of long-term appreciation and capital preservation through a mix of equity and fixed income exposures that changes over time based on an investor's age, target retirement date, or life expectancy. *See* Instruction 5 to Item C.3.b of Form N–CEN. This is the same definition as was proposed by the Commission in our 2010 proposing release relating to target date funds. *See* Investment Company Advertising Release, *supra* footnote 6. We note that one commenter suggested that target-date funds should also self-identify whether their glide path is ''to'' or ''through'' retirement. *See* Morningstar Comment Letter. We have not made any changes in response to this comment because we believe that the identifying information requested by the form with respect to target-date funds is sufficient for the Commission's purposes.

[904] *See* Instruction 2 to Item C.3 of Form N–CEN.

[905] *See* rule 2a19–3 under the Investment Company Act [17 CFR 270.2a19–3] (referring to an index fund for purposes of the rule as a fund that has ''an investment objective to replicate the performance of one or more broad-based securities indices . . .'').

[906] *See* Instruction to Item 69 of Form N–SAR.

strongly encouraged that funds using indexes constructed by affiliated service providers be disclosed clearly and that funds disclose whether the index tracked by the fund is exclusively constructed for the fund.[907] We agree with the commenter and are requiring index funds to indicate whether the index whose performance the fund tracks is constructed by an affiliated person of the fund and whether the index is exclusively constructed for the fund.[908] We believe this information will further assist Commission staff in monitoring trends in funds that track these indexes, which often use more complex methodologies that choose constituents by weighing factors other than market capitalization. It also will assist staff in monitoring conflicts of interest that could exist when an index is constructed by an affiliated person of the fund or is exclusively constructed for the fund.

As proposed, ''interval fund'' is defined as a closed-end management company that makes periodic repurchases of its shares pursuant to rule 23c–3 under the Investment Company Act.[909] One commenter suggested that the definition of interval fund should not be limited to closed-end funds, but rather, expanded to other investment companies.[910] We believe, however, that the definition is appropriate as proposed because the term ''interval fund'' is commonly used to refer to funds that rely on rule 23c–3.[911]

For purposes of reporting on Form N–CEN, we also proposed to define ''fund of funds'' as a fund that acquires securities issued by another investment company in excess of the amounts permitted under section 12(d)(1)(A) of the Investment Company Act.[912] Some commenters suggested that we revise the definition to exclude funds that invest in money market funds for cash management purposes in excess of the amount permitted under section 12(d)(1)(A) in reliance on rule 12d1–1 of the Investment Company Act.[913] After consideration of these comments, we acknowledge that the definition as proposed would have included a larger universe of funds than we intended for our regulatory purposes. The proposed definition would have yielded data that would have impeded identification of those funds that acquire securities issued by another investment company in excess of the amounts permitted under section 12(d)(1)(A) other than those that do so only for short-term cash management purposes. Therefore, we have revised the instructions to Item C.3 to note that for purposes of the item, the term ''fund of funds'' does not include a fund that acquires securities issued by another investment company solely in reliance on rule 12d1–1.[914] We received no other comments on the other definitions for fund types.

As proposed, ''master-feeder fund'' was defined as a two-tiered arrangement in which one or more funds holds shares of a single fund in accordance with section 12(d)(1)(E) of the Investment Company Act.[915] We understand that certain interpretations of this definition could exclude some funds that operate in a master-feeder structure and hold themselves out as master-feeder funds, but for technical reasons must obtain exemptive relief from the Commission rather than rely on section 12(d)(1)(E) to operate in this manner. Accordingly, we have revised the definition of ''master-feeder fund'' to more clearly include two-tiered arrangements in which one or more funds holds shares of a single fund pursuant to exemptive relief granted by the Commission.[916]

ETFs and ETMFs, index funds, and master-feeder funds are also required to provide additional information under Part C.[917] First, as in the proposal, Form N–CEN requires a management company to further indicate if it is an ETF or an ETMF.[918] Second, as in the proposal, index funds will be required to report certain standard industry calculations of relative performance. In particular, index funds will be required to report a measure of the difference between the index fund's total return during the reporting period[919] and the index's return both before and after fees and expenses—commonly called the ''tracking difference''[920]—and also a measure of the volatility of the day-to-day tracking difference over the course of the reporting period—commonly called the fund's ''tracking error.''[921] One commenter suggested that tracking difference and tracking error should be reported monthly on Form N–PORT rather than annually on Form N–CEN, because monthly reporting would allow the Commission to receive observations for all index funds for the same time period, and the commenter opined that the additional information would help the Commission be more responsive, particularly in times of market stress.[922] Although we recognize that there may be additional potential benefits of monthly reporting, as the commenter suggests, we continue to believe that annual reporting more appropriately balances the usefulness of the reported information to the Commission and other data users with the additional administrative costs that would be associated with a requirement for monthly reporting and the associated recordkeeping necessary to support it.

---

[907] Morningstar Comment Letter.

[908] Item C.3.b.i of Form N–CEN.

[909] *See* Instruction 3 to Item C.3 of Form N–CEN.

[910] Morningstar Comment Letter (noting that there is one investment company registered on Form N–1A whose redemption parameters are largely similar to an interval fund pursuant to exemptive relief and suggesting that the definition of interval fund be expanded to other investment companies in light of the existence of this fund).

[911] *See* rule 23c–3 under the Investment Company Act [17 CFR 270.23c–3]. We believe that it is more appropriate to maintain the definition of interval fund as a closed-end fund that makes periodic purchases of its shares pursuant to rule 23c–3 as proposed, rather than expand the definition to capture funds that share some similar characteristics with interval funds but operate outside the context of rule 23c–3. For example, we believe that reports on Form N–CEN will appropriately capture an open-end fund that operates with redemption procedures similar to an interval fund pursuant to exemptive relief in response to Item B.15 of Form N–CEN.

[912] *See* 15 U.S.C. 80a–12(d)(1)(A); Instruction 1 to Item 27 of proposed Form N–CEN.

[913] Schwab Comment Letter; ICI Comment Letter; MFS Comment Letter.

[914] *See* Instruction 1 to Item C.3 of Form N–CEN.

[915] *See* Instruction 4 to Item 27 of proposed Form N–CEN.

[916] *See* Instruction 4 to Item C.3. of Form N–CEN which defines the term ''master-feeder fund'' to mean ''a two-tiered arrangement in which one or more funds (each a feeder fund) holds shares of a single Fund (the master fund) in accordance with section 12(d)(1)(E) of the Act (15 U.S.C. 80a–12(d)(1)(E)) *or pursuant to exemptive relief granted by the Commission*'' (emphasis added).

[917] *See* Item C.3.a, Item C.3.b, and Item C.3.f of Form N–CEN.

[918] *See* Item C.3.a.i and Item C.3.a.ii of Form N–CEN.

[919] With respect to index funds that are ETFs, we expect a fund to use its NAV-based total return, rather than market-based total return, in responding to Item C.3.a.i and Item C.3.a.ii of Form N–CEN.

[920] Item C.3.b.i of Form N–CEN. The tracking difference is the return difference between the fund and the index it is following, annualized. Morningstar ETF Research, Ben Johnson, *et al., On the Right Track: Measuring Tracking Efficiency in ETFs* (Feb. 2013) (''Morningstar Paper'') at 29, *available at http://media.morningstar.com/uk/MEDIA/Research_Paper/Morningstar_Report_Measuring_Tracking_Efficiency_in_ETFs_February_2013.pdf.* Thus, tracking difference = $(1 + R_{NAV} - R_{INDEX})^{1/N} - 1$, where R_{NAV} is the total return for the fund over the reporting period, R_{INDEX} is the total return for the index for the reporting period, and N is the length of the reporting period in years. N will equal to 1 if the reporting period is the fiscal year. *Id.*

[921] *See* Item C.3.b.ii of Form N–CEN. Tracking error is commonly understood as the standard deviation of the daily difference in return between the fund and the index it is following, annualized. Morningstar Paper, *supra* footnote 920, at 29. Thus, tracking error = $\text{std}(R_{NAV} - R_{INDEX}) \times \sqrt{n}$, where R_{NAV} is the daily return for the fund, R_{INDEX} is the daily return for the index, std(·) represents the standard deviation function, and n is the number of trading days in the fiscal year. *Id.*

[922] *See* Morningstar Comment Letter (recommending that tracking difference and tracking error be reported on N–PORT with trailing one-year data rather than annually on Form N–CEN).

Moreover, we believe that the frequency and timeliness of reports on Form N–CEN are, both generally and specifically with respect to these reporting requirements, sufficient for collecting census-type information, but that reporting of these particular annualized figures on Form N–PORT would not be so timely or so frequent as to advance the purposes the commenter suggested (*viz.,* to respond in periods of market stress), particularly in light of the Form N–PORT 60-day reporting delay.

While supporting the inclusion of tracking difference and tracking error reporting items, a couple of commenters suggested alternatives to the calculation methods underlying the reporting requirements, including, for example, measuring tracking error on a weekly or monthly basis rather than a daily basis as proposed.[923] With respect to tracking error, we believe that it is important to calculate tracking error using the same observation frequency across funds and that, based on staff experience, a daily frequency for tracking data is likely more commonly calculated and therefore more readily available to funds than the alternatives proposed. We also believe that daily calculations better reflect the nature of the daily redeemability of an open-end fund, including capturing the daily trading activities on the secondary market for ETFs. One commenter argued that daily tracking error calculations may contain temporary anomalies outside portfolio management control, such as differences in holidays or pricing sources used by the fund and/or index providers or temporary market aberrations which may cause a higher daily tracking error.[924] We do not believe such differences would be uninformative. Rather, we believe receiving information on these potential anomalies will better inform investors and Commission staff about the behaviors of index funds and the indexes they track and assist the Commission in our oversight responsibilities. Overall, we do not perceive significant additional benefits in the alternative calculation methods recommended by commenters and continue to believe that the calculation methodologies for tracking difference and tracking error, as proposed, are appropriate.

Specifically, tracking difference will be calculated as the annualized difference between the index fund's total return during the reporting period and the index's return during the reporting period, and tracking error will be calculated as the annualized standard deviation of the daily difference between the index fund's total return and the index's return during the reporting period.[925] Reporting of these measures will help data users, including the Commission, investors, and other potential users, evaluate the degree to which particular index funds replicate the performance of the target index.[926] In addition, tracking difference and tracking error before fees and expenses[927] will allow data users to better understand the effect of factors other than fees and expenses on the degree to which the index fund replicates the performance of the target index.[928]

Finally, as proposed, master funds will be required to provide identifying information with respect to each feeder fund, including information on unregistered feeder funds (*i.e.,* feeder funds not registered as investment companies with the Commission), such as offshore feeder funds.[929] Similarly, a feeder fund will be required to provide identifying information of its master fund.[930]

We are also adopting, as proposed, the requirement in Form N–CEN that a management company report if it seeks to operate as a non-diversified company, as defined in section 5(b)(2) of the Investment Company Act.[931] Form N–SAR, in contrast, asks if the management company was a diversified investment company at any time during the period or at the end of the reporting period.[932] The item in Form N–CEN is forward looking rather than backward looking as in Form N–SAR and is intended to include as part of the universe of non-diversified funds those funds that seek to operate as non-diversified companies even if they should happen to meet the definition of a ''diversified company'' as of the end of a particular reporting period.[933] We believe this item will allow our staff to more accurately ascertain the universe of non-diversified funds and, thus, better assist us in our analysis and inspection functions. One commenter suggested that this reporting requirement also consider the identification of funds that intended to operate as non-diversified at some point during the reporting period but have since changed to diversified status.[934] We believe that the reporting requirement as proposed is appropriate for our purpose of being able to efficiently identify non-diversified companies.

ii. Investments in Certain Foreign Corporations

Form N–CEN requires, as proposed, that a management company identify if it invests in a CFC for the purpose of investing in certain types of instruments, such as commodities.[935] If it does, it must include the name and LEI of such corporation, if any.[936] As discussed above in section II.A.2.b, some funds use CFCs for making certain investments, particularly in commodities and commodity-linked derivatives, often for tax purposes. Information regarding assets invested in a CFC for the purpose of investing in certain types of instruments will provide investors greater insight into CFCs that may have certain legal, tax, and country-specific risks associated with them. Combined with the information that we are collecting in Form N–PORT, Commission staff will use this information to better understand the use of CFCs, which could allow for more efficient collaboration with foreign financial regulatory authorities to the extent the Commission may need books and records or other information for specific funds or general inquiries related to CFCs.

iii. Securities Lending

As discussed above, we are adopting requirements that funds provide certain

[923] *See* Invesco Comment Letter (recommending that tracking error be based on a monthly basis rather than a daily basis and that tracking difference be calculated pursuant to an excess return calculation); Confluence Comment Letter (recommending that tracking error be based on a weekly basis rather than a daily basis, arguing that daily periodicity will show excess volatility, providing the Commission and investors with a skewed picture of tracking error).

[924] *See* Invesco Comment Letter.

[925] *See* Proposing Release, *supra* footnote 7, at 33639–40. *See also* Morningstar Paper, *supra* footnote 920, at 29.

[926] *See* Morningstar Paper, *supra* footnote 920, at 5. We believe that this information will help data users understand which funds are best tracking their target indexes and could highlight outlier funds.

[927] *See* Item C.3.b.ii.1 and Item C.3.b.iii.1 of Form N–CEN.

[928] *See* Morningstar Paper, *supra* footnote 920, at 9.

[929] Item C.3.f.ii of Form N–CEN.

[930] Item C.3.f.i of Form N–CEN.

[931] Item C.4 of Form N–CEN.

[932] *See* Item 60 of Form N–SAR.

[933] For example, if a fund generally operates as a non-diversified fund, but as a result of market conditions or other reasons, happens to meet the definition of ''diversified fund'' as of the end of the reporting period, it will still be required to indicate that it was a non-diversified fund for purposes of this item.

[934] *See* Schnase Comment Letter.

[935] Item C.5.a of Form N–CEN. As in the proposal, an instruction to the item defines ''controlled foreign corporation'' as having the meaning provided in section 957 of the Internal Revenue Code.

[936] *Id.*

securities lending information in reports on Form N–PORT to help inform the Commission, investors and other market participants about the scale of securities lending activity by funds and their related cash collateral reinvestments.[937] Additionally, we are adopting requirements that funds include in their statements of additional information[938] certain information concerning their income and expenses associated with securities lending activities in order to increase the transparency of this information to investors and other potential users.[939]

We proposed, and continue to believe it is appropriate, that some important information concerning securities lending activity by funds should be reported in a structured format, but on a less frequent basis than reports on Form N–PORT. In this regard, we believe that the proposed annual reporting requirement on Form N–CEN yields sufficiently timely data and more appropriately balances the requirements' benefits with their associated costs than would additional monthly reporting requirements on Form N–PORT. Some commenters expressed general support for reporting securities lending information on Form N–CEN.[940] One commenter suggested that the Commission require even more detailed reporting requirements concerning services provided by securities lending agents, including, for example, information about how securities are selected for loan, contending that the public availability of the information may assist a fund board in understanding fees and services and drawing conclusions concerning their comparability.[941]

We acknowledge that the commenter's recommended additions could yield information that may be useful to the Commission as well as to some data users, and recognize that a fund board's consideration of securities lending services may rightfully include consideration of how securities are selected for loan and the other matters raised by the commenter. However, the information required by Form N–CEN is intended primarily for Commission regulatory purposes, and—balancing those purposes against the reporting costs associated with additional requirements—we have determined that the requirements we are adopting today are appropriate. The adopted requirements are meant to yield census-type information that is, to the extent practicable, comparable across reporting funds and that permits the Commission and other potential users to follow up, as appropriate, on patterns and idiosyncrasies in the reported data. We believe, therefore, that the nuanced information the commenter suggests requiring is better provided in a fund's registration statement than in reports on Form N–CEN, to the extent required.

We are therefore adopting, as proposed, a requirement that each management company report annually on new Form N–CEN whether it is authorized to engage in securities lending transactions and whether it loaned securities during the reporting period.[942] In addition, we are adopting, as proposed, reporting requirements regarding information about the fees associated with securities lending activity and information about the management company's relationship with certain securities-lending-related service providers.

As in the proposal, management companies that loaned any securities during the reporting period will be required to report certain information, with some modifications in response to comments. Specifically, those management companies will be required to report annually whether any borrower of securities failed to return the loaned securities by the contractual deadline with the result that the fund (or its securities lending agent) liquidated collateral pledged to secure the loaned securities or that the fund was otherwise adversely impacted during the reporting period.[943]

However, this reporting requirement has been modified from the proposal, which would have required funds to report whether a borrower defaulted on its obligations to return loaned securities or return them on time in connection with a security on loan during that period. Some commenters requested that the Commission narrow the definition of borrower default to exclude "technical" defaults, citing concerns that the item, as proposed, could be read to require that funds report any default, including defaults that are not likely to result in potential harm to the fund and would not appropriately represent counterparty risk.[944] These types of defaults may occur when loaned securities are returned to a fund after the contractual deadline due to operational issues related to processing or communication, which, according to commenters, is not uncommon.[945] Commenters recommended various alternatives to defining borrower default, including, for example, as any default that causes a fund to liquidate securities lending collateral pledged in connection with the securities lending arrangement[946] or any default that results in losses to the fund.[947] Others noted that a fund can be further protected from borrower default if it is indemnified by the securities lending agent against loss resulting from a shortfall in pledged collateral when a borrower has defaulted.[948]

We are persuaded by commenters and have modified the reporting requirement regarding borrower default to focus on failures to return loaned

[937] *See supra* sections II.A.2.d and II.A.2.g.v.

[938] "Statement of additional information" means the statement of additional information required by Part B of the registration form applicable to the fund.

[939] *See* discussion *infra* section II.F regarding securities lending disclosures in the Statement of Additional Information and Form N–CSR; *see also supra* footnote 192.

[940] *See, e.g.,* BlackRock Comment Letter; Blackrock Directors Comment Letter; CFA Comment Letter; EY Comment Letter (suggesting, however, that securities lending disclosures proposed in Regulation S–X would be more appropriate in Form N–CEN than on Form N–PORT); Fidelity Comment Letter (recommending, however, that information concerning third-party lending agent arrangements should be non-public); Morningstar Comment Letter; RMA Comment Letter; SIFMA Comment Letter I; State Street Comment Letter.

[941] *See* Blackrock Directors Comment Letter (recommending that the Commission specifically require disclosures on whether qualified dividend income management is provided by lending agents, the client fund, or other third parties; whether securities for loan are selected by the lending agent, the client fund, or other third parties; and whether the lender's securities lending program includes "specials" only (and, if so, how "specials" are defined) or general collateral as well).

[942] Item C.6.a–Item C.6.b of Form N–CEN.

[943] Item C.6.b.i of Form N–CEN.

[944] *See, e.g.,* Fidelity Comment Letter; SIFMA Comment Letter I; Vanguard Comment Letter.

[945] *See* ICI Comment Letter; SIFMA Comment Letter I; Vanguard Comment Letter (recommending that the definition of borrower default be limited to any default that causes a fund to liquidate securities lending collateral pledged in connection with the securities lending arrangement); RMA Comment Letter and State Street Comment Letter (recommending that borrower default be limited to any default due to events of insolvency or upon an agent lender otherwise formally declaring a default by the borrower pursuant to the relevant borrower agreement); Fidelity Comment Letter (recommending that borrower default be limited to any default that results in losses to the fund, which could arise when the value of collateral for loaned securities and any reimbursement payments due to the fund are insufficient to eliminate losses associated with the default).

[946] *See* ICI Comment Letter; Vanguard Comment Letter; SIFMA Comment Letter I.

[947] *See* Fidelity Comment Letter. *See also* RMA Comment Letter and State Street Comment Letter (generally recommending borrower default being defined as any default due to events of insolvency or upon an agent lender otherwise formally declaring a default by the borrower pursuant to the relevant borrower agreement). We believe these recommended definitions of default are too narrow because a fund could be harmed by a borrower's failure to return loaned securities whether or not the borrower is insolvent or the lending agent declares an event of default.

[948] *See, e.g.,* RMA Comment Letter; State Street Comment Letter.

securities that result in the fund (or its securities lending agent) having to liquidate collateral pledged to secure the loaned securities or the fund otherwise being adversely impacted.[949] We have also added an instruction to clarify that, for purposes of this reporting requirement, other adverse impacts to the fund would include, for example, (1) a loss to the fund if collateral and indemnification were not sufficient to replace the loaned securities or their value, (2) the fund's ineligibility to vote shares in a proxy,[950] or (3) the fund's ineligibility to receive a direct distribution from the issuer.[951] We believe that with these modifications to the proposal, the Commission may better monitor the risks associated with borrower defaults that have the potential to expose the fund and its shareholders to harm without having funds account for technical defaults that do not pose the same risks.

We are also adopting, as proposed, a requirement that management companies report whether a securities lending agent or any other entity indemnifies the fund against borrower default on loans administered by the agent and certain identifying information about the entity providing indemnification if not the securities lending agent.[952] In addition, in a modification from the proposal, we are now including a requirement that management companies report whether the fund exercised its indemnification rights during the reporting period.[953] A commenter recommended that the Commission require funds to report whether they exercised their indemnification rights to, in part, provide information about defaults and the extent to which counterparty risks are covered by third parties that provide indemnification.[954] We agree with the commenter that this additional requirement would illuminate the frequency of defaults and indemnifications thereby providing the Commission with information about such counterparty defaults and the extent to which those risks are covered by third parties that provide indemnification. We believe that this additional requirement, together with the other default and indemnification requirements, will yield data that will allow the Commission, investors, and other potential users to more effectively assess the counterparty risks associated with borrower default in the securities lending market and the extent to which those risks are mitigated by—or concentrated in—third parties that provide indemnification against default.[955]

One commenter recommended that details concerning indemnification protection should be made nonpublic.[956] We continue to believe, however, that public reporting is a necessary part of improving transparency regarding a fund's securities lending activities. Specifically, we believe that the information regarding indemnification provisions is relevant to investors evaluating the risks associated with securities lending and comparing those risks across funds, particularly for funds that regularly engage in securities lending activities.

Because management companies often engage external service providers as securities lending agents or cash collateral managers, we believe that some of the risks associated with securities lending activities by management companies could be impacted by these service providers and the nature of their relationships with the management companies and the interconnectedness these service providers may have one with another. Accordingly, we are adopting, as proposed, a requirement that management companies report some basic identifying information about each securities lending agent and cash collateral manager.[957] One commenter suggested that the Commission define the terms ''securities lending agent'' and ''cash collateral manager'' for purposes of Form N–CEN.[958] While we continue to believe that these terms are generally understood within the fund industry, we have clarified in the Form that the term ''cash collateral manager'' refers to an entity that manages a pooled investment vehicle in which a fund's cash collateral is invested.[959] In addition, we are requiring that funds report whether each of these service providers is a first- or second-tier affiliated person of the management company.[960] One commenter specifically expressed support for this reporting requirement.[961] This data will highlight those funds that might be expected to rely on Commission exemptive relief in order to engage in securities lending activities with affiliates.[962] Additionally, the disclosure of whether the cash collateral manager is a first- or second-tier affiliate of the securities lending agent[963] could alert the Commission, investors, and other market participants to potential conflicts of interest when an entity managing a cash collateral reinvestment portfolio is affiliated with a securities lending agent that is compensated with

[949] *See* Item C.6.b.i of Form N–CEN.

[950] Proxy voting rights generally transfer with loaned securities. *See* Concept Release on the U.S. Proxy System, Investment Company Act Release No. 29340 (July 14, 2010) [75 FR 42982 (July 22, 2010)] at 42994–95.

[951] *See* Instruction to Item C.6.b.i.2 of Form N–CEN.

[952] Item C.6.c.iv and Item C.6.c.v of Form N–CEN.

[953] Item C.6.c.vi of Form N–CEN.

[954] *See* ICI Comment Letter.

[955] As discussed above, commenters to the FSOC Notice suggested that enhanced securities lending disclosures could be beneficial to investors and counterparties. *See supra* footnote 190.

[956] *See* Fidelity Comment Letter (noting that public disclosure may negatively impact a fund's ability to negotiate for lending services).

[957] Item C.6.c.i–Item C.6.c.ii and Item C.6.d.i–Item C.6.d.ii of Form N–CEN.

[958] *See* RMA Comment Letter (noting that the terms are generally well-understood within the fund industry, but suggesting that, for purposes of Form N–CEN, the Commission could define the term ''securities lending agent'' to mean a party employed by a lender to administer the lender's securities lending program according to the prescribed terms of a legal agreement and the term ''cash collateral manager'' to mean a party employed by the lender to manage cash collateral on behalf of securities loans).

[959] *See* Item C.6.d of Form N–CEN.

[960] *See* Item C.6.c.iii and Item C.6.d.iv of Form N–CEN (requiring a Fund to report if the named securities lending agent or cash collateral manager is an ''affiliated person'' (*i.e.* first-tier affiliate) or ''an affiliated person of an affiliated person'' (*i.e.* second-tier affiliate) of the Fund). *See also* section 2(a)(3) of the Investment Company Act for a definition of the term ''affiliated person.'' 15 U.S.C. 80a–2(a)(3).

[961] *See* RMA Comment Letter.

[962] Section 17(d) of the Investment Company Act makes it unlawful for a first- or second-tier affiliate, among others, acting as principal, to effect any transaction in which the fund, or a company it controls, is a joint or a joint and several participant in contravention of Commission rules. 15 U.S.C. 80a–17(d). Rule 17d–1(a) prohibits a first- or second-tier affiliate of a registered fund, among others, acting as principal from participating in or effecting any transaction in connection with any joint enterprise or other joint arrangement or profit-sharing plan in which the fund (or any company it controls) is a participant unless an application or arrangement or plan has been filed with the Commission and has been granted. 17 CFR 270.17d–1. These provisions would prohibit a fund from lending to a borrower that is a first- or second-tier affiliate or compensating a securities lending agent that is a first- or second-tier affiliate with a share of revenue generated by the lending program unless the fund (and/or its affiliate) has obtained an exemptive order from the Commission. These provisions also generally prohibit a fund from investing cash collateral in a first- or second-tier affiliated liquidity pool unless the fund satisfies the conditions in rule 12d1–1 under the Investment Company Act, which provides exemptive relief, subject to certain conditions, for fund investments in an affiliated registered money market fund and a pooled investment vehicle that would be an investment company but for sections 3(c)(1) and 3(c)(7) of the Investment Company Act and that the fund reasonably believes operates in compliance with money market fund regulations. *See* Fund of Funds Investments, Investment Company Act Release No. 27399 (June 20, 2006) [71 FR 36640 (June 27, 2006)] at n. 27 and accompanying text.

[963] Item C.6.d.iii of Form N–CEN.

a share of revenue generated by the cash collateral reinvestment pool.

As proposed, Form N–CEN also requires each management company to report whether it has made any of several specific types of payments, including a revenue sharing split, non-revenue sharing split (other than an administrative fee), administrative fee, cash collateral reinvestment fee, and indemnification fee, to one or more securities lending agents or cash collateral managers during the reporting period.[964] In the Proposing Release, we sought comment on whether, in addition to requiring management companies to report whether they made each of the proposed types of payments associated with securities lending, we should also require disclosure of specific rates or amounts paid for each of the enumerated types of compensation.[965] Two commenters expressed general support for disclosure of securities lending income and compensation of securities lending agents and cash collateral managers but recommended that, if compensation figures were required, that they be calculated on the basis of income and fees paid during the reporting period.[966]

We believe that the information we proposed about the types of payments relating to securities lending activities will allow the Commission, investors and other management company boards of directors to understand better the nature of fees a management company pays in connection with securities lending activities and whether, for example, the revenue sharing split that the company pays to a securities lending agent includes compensation for other services such as administration or cash collateral management.[967] We recognize the potential benefits for some data users of access to information about amounts paid for each of the types of compensation in a structured format. However, in light of the fact that Form N–CEN reporting requirements are intended primarily for the Commission's regulatory purposes and that there would be additional reporting costs related to such a change, and further recognizing that additional securities lending information will now be available to investors pursuant to new Statement of Additional Information (or, for closed-end funds, Form N–CSR) requirements discussed below,[968] we have determined not to require reporting of specific compensation amounts or fee rates in reports on Form N–CEN. In addition, we have included in Form N–CEN, a requirement that management companies report the monthly average of the value of portfolio securities on loan during the reporting period.[969] This requirement was originally proposed to be included in Regulation S–X along with other securities lending disclosure requirements.[970] We have determined to move this information to Form N–CEN as we believe having this information in a structured format will assist our staff in its analyses of the information. As previously noted, we have also determined to move the other proposed securities lending disclosures from Regulation S–X to the Statement of Additional Information (or, for closed-end funds, Form N–CSR), as we believe the Statement of Additional Information (or, for closed-end funds, Form N–CSR) is a more appropriate location for these disclosures.[971] One commenter recommended that funds be required to report average monthly aggregate dollar amounts on loan for each counterparty to the securities loan.[972] We continue to believe, however, that information on the overall monthly average of the value of portfolio securities on loan provides a better understanding of a fund's securities lending program without burdening registrants with additional counterparty reporting requirements.

Finally, we are also adopting a requirement that funds report the net income from securities lending activities in Form N–CEN.[973] We proposed to require disclosure of this information in fund financial statements pursuant to proposed amendments to Regulation S–X, and we sought comment on whether the information should be required in reports on Form N–CEN.[974] One commenter suggested that the proposed securities lending financial statement disclosure requirements be instead included in Form N–CEN, as presentation there would be less likely to detract from other material information in the financial statements.[975] Another commenter suggested that requiring additional information on Form N–CEN, including income from securities lending activities, would make the other required information more complete and useful.[976] We agree with commenters that reporting of net income from securities lending activities would yield useful information for the Commission and other data users and have determined to add this requirement. In particular, information about net income from securities lending activity in a structured format provides useful context for the other securities lending reporting requirements, such as those concerning fees.

Together, the data that these requirements will yield will allow the Commission to better understand the interaction of these service providers with management companies. We also believe that the reporting of this data will increase the transparency of information available to the public on the lending and borrowing of securities by funds, a subset of the market participants engaged in securities lending activities.[977] In addition to informing the Commission's risk analysis, we believe that this information will also help inform other data users about the use of, and possible risks associated with, the lending of

[964] *See* Item C.6.e of Form N–CEN; *see also* Proposing Release, *supra* footnote 7, at section II.E.4.c.iii. Management companies that report that ''other'' payments were made to one or more securities lending agents or cash collateral managers during the reporting period will also be required to describe the type or types of other payments. *See* Item C.6.e.vi of Form N–CEN. In addition, management companies will be required to disclose the total amount of each payment for the reporting period and describe the services provided for the payment. *See infra* section II.F.2 regarding amendments to the Statement of Additional Information and Form N–CSR.

[965] *See* Proposing Release, *supra* footnote 7, at 33641–42.

[966] *See* RMA Comment Letter; State Street Comment Letter.

[967] In evaluating the fees and services of any securities lending agent, the board of directors of a management company that engages in securities lending may be assisted by reviewing and comparing information on securities lending agent fee arrangements of other management companies. *See, e.g.,* SIFE Trust Fund, SEC No-Action Letter (pub. avail. Feb. 17, 1982) (management company's board of directors determines that the securities lending agent's fee is reasonable and based solely on the services rendered); Neuberger Berman Equity Funds, *et al.,* Investment Company Act Release No. 25880 (Jan. 2, 2003) [68 FR 1071 (Jan. 8, 2003)] (Notice); Neuberger Berman Equity Funds, *et al.,* Investment Company Act Release No. 25916 (Jan. 28, 2003) (Order) (management company's board of directors, including a majority of independent directors, will determine initially and review annually, among other things, that (i) the services to be performed by the affiliated securities lending agent are appropriate for the lending fund, (ii) the nature and quality of the services to be provided by the agent are at least equal to those provided by others offering the same or similar services; and (iii) the fees for the agent's services are fair and reasonable in light of the usual and customary charges imposed by others for services of the same nature and quality).

[968] *See infra* section II.F.

[969] Item C.6.f of Form N–CEN

[970] *See* proposed rule 6–03(m)(6) of Regulation S–X; Proposing Release, *supra* footnote 7, at 33624.

[971] *See supra* section II.C.6 (discussing securities lending disclosures in the Statement of Additional Information and Form N–CSR).

[972] *See* John Adams Comment Letter.

[973] Item C.6.g of Form N–CEN.

[974] Proposed rule 6–03(m)(3) of Regulation S–X; Proposing Release, *supra* footnote 7, at 33625.

[975] EY Comment Letter.

[976] *See* BlackRock Directors Comment Letter.

[977] *See, e.g., supra* footnote 192.

portfolio securities by management companies.

iv. Reliance on Certain Rules

We are adopting, as proposed, a requirement in Form N–CEN that management companies report whether they relied on certain rules under the Investment Company Act during the reporting period.[978] A similar reporting item is contained in Form N–SAR.[979] However, Form N–CEN requires information with respect to additional rules not currently covered by Form N–SAR.[980] We are collecting information on these additional rules to better monitor reliance on exemptive rules and to assist us with our accounting, auditing and oversight functions, including, for some rules, compliance with the Paperwork Reduction Act. For example, reporting of reliance on rules 15a–4 and 17a–8 under the Investment Company Act will allow the staff to monitor significant events relating to interim investment advisory agreements and affiliated mergers, respectively.

One commenter suggested that the Commission specify the name of each rule next to the rule number.[981] We believe, however, that the rule number descriptions as proposed in Item C.7 are consistent with other reporting forms and provide sufficient information for registrants, and thus, are adopting the item as proposed.

In addition, we are adopting, as proposed, amendments to rule 10f–3 to eliminate the requirement that funds provide the Commission with reports on Form N–SAR regarding any transactions effected pursuant to the rule.[982] Rule 10f–3 currently requires funds to maintain and preserve certain information—the same information also required to be filed pursuant to Form N–SAR—in its records regarding rule 10f–3 transactions.[983] Our amendments to rule 10f–3 will eliminate the requirement to periodically report this information,[984] but will not alter the requirement to maintain and preserve it. The Commission believes it is unnecessary for funds to continue to file this information because Commission staff can request the information in connection with staff inspections, examinations and other inquiries.[985] We did not receive comment on this aspect of the proposal.

v. Expense Limitations

As in Form N–SAR,[986] Form N–CEN requires information regarding expense limitations.[987] The requirements in Form N–CEN are, as proposed, modified from Form N–SAR and require information on whether the management company had an expense limitation arrangement in place, whether any expenses of the fund were waived or reduced pursuant to the arrangement, whether the waived fees are subject to recoupment, and whether any expenses previously waived were recouped during the period.[988] We believe that more specific questions relating to management company expense limitation arrangements will limit uncertainty for management companies when responding to these items and will be a useful means to flag the occurrence of expense limitations whereby Commission staff can request further information in connection with staff examinations and other inquiries. One commenter expressed support for the expense limitation reporting requirement but suggested that the item include reporting of the actual dollar values of the expense information.[989] We continue to believe, however, that the reporting item, as proposed, appropriately balances the burden on funds of providing this information and information necessary for our regulatory purposes. The adopted requirements are meant to yield census-type information that is, to the extent practicable, comparable across reporting funds and that permits the Commission and other potential users to follow up, as appropriate, on patterns and idiosyncrasies in the reported data. We believe therefore that the detailed and nuanced information the commenter suggests requiring is better provided in a fund's registration statement than in reports on Form N–CEN, to the extent required or otherwise appropriate.

vi. Service Providers

Form N–CEN (similar to Form N–SAR)[990] will, as proposed, collect identifying information on the management company's service providers, including its advisers and sub-advisers,[991] transfer agents,[992] pricing services agents,[993] custodians (including custodians that provide services as sub-custodians),[994] shareholder servicing agents,[995] administrators,[996] and affiliated broker-dealers.[997] Together, these items will assist the Commission in analyzing the use of third-party service providers by management companies, as well as identify service providers that service large portions of the fund industry.

Unlike Form N–SAR, Form N–CEN will, as proposed, also require the

[978] Item C.7 of Form N–CEN.

[979] *Compare id.* (requiring management companies to identify if they relied upon any of the following rules: Rule 10f–3 (exemption for the acquisition of securities during the existence of an underwriting or selling syndicate) [17 CFR 270.10f–3], rule 12d1–1 [17 CFR 270.12d1–1] (exemptions for investments in money market funds), rule 15a–4 [17 CFR 270.15a–4] (temporary exemption for certain investment advisers), rule 17a–6 [17 CFR 270.17a–6] (exemption for transactions with portfolio affiliates), rule 17a–7 [17 CFR 270.17a–7] (exemption of certain purchase or sale transactions between an investment company and certain affiliated persons thereof), rule 17a–8 [17 CFR 270.17a–8] (mergers of affiliated companies), rule 17e–1 [17 CFR 270.17e–1] (brokerage transactions on a securities exchange), rule 22d–1 [17 CFR 270.22d–1] (exemption from section 22(d) to permit sales of redeemable securities at prices which reflect sales loads set pursuant to a schedule), rule 23c–1 [17 CFR 270.23c–1] (repurchase of securities by closed-end companies), rule 32a–4 [17 CFR 270.32a–4] (independent audit committees)) *with* Item 40, Item 77.N, Item 77.O, Item 102.M, and Item 102.N of Form N–SAR (requiring information regarding rule 2a–7 [17 CFR 270.2a–7] (money market funds), rule 10f–3 (see above for description), and rule 12b–1 [17 CFR 270.12b–1] (distribution of shares by registered open-end management investment company)).

[980] *Id.*

[981] Schnase Comment Letter.

[982] *See* adopted amendments to rule 10f–3.

[983] *See* rule 10f–3(c)(12) under the Investment Company Act [17 CFR 270.10f–3(c)(12)].

[984] *See* rule 10f–3(c)(9) under the Investment Company Act [17 CFR 27010f–3(c)(9)].

[985] Similar exemptive rules take this approach and do not require filings with the Commission. *See, e.g.,* rule 17a–7 under the Investment Company Act [17 CFR 270.17a–7] and rule 17e–1 under the Investment Company Act [17 CFR 270.17e–1]. We note that we previously proposed deleting this filing requirement from rule 10f–3 in 1996. *See* Exemption for the Acquisition of Securities During the Existence of an Underwriting Syndicate, Investment Company Act Release No. 21838 (Mar. 21, 1996) [61 FR 13620 (Mar. 27, 1996)]. We chose not to delete the filing requirement in the final amended rule in light of the other amendments to the rule at that time, including the increase in the percentage limit on the principal amount of an offering that an affiliated fund could purchase. *See* Exemption for the Acquisition of Securities During the Existence of an Underwriting of Selling Syndicate, Investment Company Act Release No. 22775 (July 31, 1997) [62 FR 42401 (Aug. 7, 1997)].

[986] *See* Item 53.A–Item 53.C of Form N–SAR (requiring the fund to identify if expenses of the Registrant/Series were limited or reduced during the reporting period by agreement, and, if so, identify if the limitation was based upon assets or income).

[987] Item C.8 of Form N–CEN.

[988] *Id.* Form N–CEN also includes an instruction that filers should provide information in response to the item concerning any direct or indirect limitations, waivers or reductions, on the level of expenses incurred by the fund during the reporting period. The instructions also provide an example of how an expense limit may be applied—when an adviser agrees to accept a reduced fee pursuant to a voluntary fee waiver or for a temporary period such as for a new fund in its start-up phase. *See* Instruction to Item C.8 of Form N–CEN.

[989] *See* Morningstar Comment Letter.

[990] *See* Item 8 and Items 10–15 of Form N–SAR.

[991] Item C.9 of Form N–CEN.

[992] Item C.10 of Form N–CEN. Form N–SAR equates a ''shareholder servicing agent'' with a ''transfer agent.'' *See* Instruction to Item 12 of Form N–SAR.

[993] Item C.11 of Form N–CEN.

[994] Item C.12 of Form N–CEN.

[995] Item C.13 of Form N–CEN.

[996] Item C.14 of Form N–CEN.

[997] Item C.15 of Form N–CEN.

management company to provide information on whether the service provider was hired or terminated during the reporting period and whether it is affiliated with the fund or its adviser(s).[998] In addition, like Form N–SAR, and as proposed, Form N–CEN requests custodians to indicate the type of custody, but will expand upon the types of custody listed.[999]

One commenter recommended that the text of Item C.10 separate the term ''transfer agent'' from ''sub-transfer agents'' by including disclosures about the nature of the services rendered by sub-transfer agents to help assess shareholder costs paid.[1000] The commenter did not, however, suggest a particular list of specific services. We note that the proposed form requested information with respect to ''each'' service provider, which we believe would include service providers providing services to the fund in a sub-service provider capacity.[1001] However, in response to this comment, we have clarified for each relevant service provider, including transfers agents, that the fund must report sub-service providers in response to the service provider items.[1002] Thus, with respect to the item, we have added a sub-item requiring that funds indicate if the transfer agent is a sub-transfer agent.[1003] We have determined not to require a description of the services provided by each transfer agent (or of other service providers) in Form N–CEN as we believe the information as proposed is sufficient for our regulatory purposes and because it is unclear whether, absent a specific set of listed services in Form N–CEN, which the commenter did not provide, this information on services would yield comparable census-type data across funds.

With respect to custodian information, one commenter suggested that the form should require identification of the primary custodian only, citing that the primary custodian is the primary service provider of the fund, whereas any sub-custodians, depositories, or clearing organizations that provide custodial services will be a function of the specific instruments that the fund invests in during the reporting period.[1004] We note that identifying sub-custodians on Form N–CEN is consistent with reporting requirements on Form N–SAR.[1005] Because sub-custodians and other sub-service providers may provide important services to funds, we continue to believe that requesting information about sub-custodians and other sub-service providers in addition to the primary service providers is appropriate and useful for purposes of our oversight responsibilities. For example, should an adverse market event affect a particular sub-custodian, Commission data analysts could use the required information about sub-custodians to identify potentially affected funds. Information about the primary custodian alone would not permit such identification.

As proposed, the form would have included two new requirements regarding pricing services. Management companies would have to provide identifying information on persons that provided pricing services during the reporting period,[1006] as well as persons that formerly provided pricing services to the management company during the current and immediately prior reporting period that no longer provide services to that company.[1007] Based on staff experience, management companies and their boards often rely on pricing agents to help price securities held by the fund.

One commenter expressed support for the new reporting requirements, noting that the information would be sufficient to conduct due diligence on pricing and valuation issues.[1008] One commenter expressed concern that reporting pricing services no longer retained could improperly imply that valuation services provided by the former service provider were incorrect and/or unreliable.[1009] In response to that comment, we have determined to remove from the form the item requiring funds to provide information on pricing services no longer retained. We have instead revised Item C.11 of the form, which requires information on persons who provided pricing services to the fund during the reporting period, to ask whether a pricing agent was hired or terminated during the report period.[1010] Unlike the proposed requirement and in response to the commenter's concern, Item C.11 as modified does not identify specifically the pricing service that was terminated. A similar question is also included in the form for other fund service providers and, as with the information provided for other service providers, will still provide Commission staff with a method for identifying whether a fund has initiated or terminated a service provider relationship during the reporting period.[1011]

As in the proposal, Part C will also require identifying information on the ten entities that, during the reporting period, received the largest dollar amount of brokerage commissions from the management company[1012] and with which the management company did the largest dollar amount of principal transactions.[1013] Form N–SAR also requests identifying information on these entities,[1014] which is not available elsewhere in a structured format. We continue to believe that brokerage commission and principal transaction information provides valuable information to Commission staff about management company brokerage practices, and will assist the staff in identifying the broker-dealers who service management company clients, monitoring for changes in business practices, and assessing the types of trading activities in which funds are engaged. Additionally, similar to Form N–SAR, Form N–CEN requires information concerning whether the management company paid commissions to broker-dealers for ''brokerage and research services'' within the meaning of section 28(e) of

---

998 *See, e.g.,* Item C.9.a.vii, Item C.9.c.vii, Item C.9.c.viii, Item C.10.a.vi, Item C.10.b, Item C.11.a.v, Item C.11.b, Item C.12.a.v, Item C.12.b, Item C.13.a.v, Item C.13.b, Item C.14.a.v and Item C.14.b of Form N–CEN.

999 *Compare* Item 15.E and Item 18 of Form N–SAR *with* Item C.12.a.vii.1–Item C.12.a.vii.9 of Form N–CEN.

1000 Morningstar Comment Letter.

1001 We understand that a sub-service provider generally contracts with a primary service provider of the fund, rather than the fund itself, to provide a certain subset of the services that the primary service provider has otherwise agreed to provide the fund.

1002 *See* Item C.10.a.vii, Item C.12.a.vi, Item C.13.a.vi, and Item C.14.a.vi of Form N–CEN. We note that a similar requirement was proposed with respect to custodians. *See* Item 37.a.vi of proposed Form N–CEN.

1003 *See* Item C.10.a.vii of Form N–CEN.

1004 State Street Comment Letter.

1005 *See, e.g.,* Instructions to Item 15 of Form N–SAR; *see also* Item 15 and Item 92 of Form N–SAR, including Item 15.E and Item 92.D of Form N–SAR, which require reporting of rule 17f–5 [17 CFR 270.17f–5] foreign custodians.

1006 *See* Item 35 of proposed Form N–CEN.

1007 *See* Item 36 of proposed Form N–CEN.

1008 Morningstar Comment Letter.

1009 *See* Fidelity Comment Letter.

1010 As proposed, Item 35(f) would have asked ''Was the pricing service first retained by the Fund to provide pricing services during the current reporting period?'' As adopted, Item C.11.b asks ''Was a pricing service hired or terminated during the reporting period?''.

1011 *See, e.g.,* Item C.10–Item C.14 of Form N–CEN (requesting information regarding transfer agents, custodians, shareholder servicing agents, and third-party administrators).

1012 Item C.16 of Form N–CEN.

1013 Item C.17 of Form N–CEN.

1014 Items 20–23 of Form N–SAR. Form N–SAR includes an instruction designed to help filers distinguish between agency and principal transactions for purposes of reporting information regarding brokerage commissions and principal transactions. *See* Instruction to Items 20–23 of Form N–SAR. A substantially similar instruction will be included in Form N–CEN. *See* Instructions to Item C.16 and Item C.17 of Form N–CEN.

the Exchange Act.[1015] We did not receive comment on these aspects of the proposal.

In a modification from the proposal, we are now including a requirement that (1) funds other than money market funds report their monthly average net assets during the reporting period,[1016] and (2) money market funds report the daily average net assets during the reporting period.[1017] Funds currently report this information on Form N–SAR reports.[1018]

One commenter suggested that such net asset information (*e.g.,* Item 75) as well as fee and expense information (*e.g.,* Items 34–44, 47–52, 54, and 72), currently available semi-annually on Form N–SAR should carry over into Form N–CEN, arguing that the removal of these reporting items will make the fee and expense information more difficult to acquire and analyze.[1019] The commenter argued, in part, that while this information could be calculated based on information available through other sources, the manual aggregation of this information would put comprehensive analysis out of reach for investors and fund boards unless they were using services from third-party market data providers that may have the means to conduct such data aggregation. We continue to believe that fee and expense information reported on Form N–SAR need not be reported on Form N–CEN because fee and expense information is largely already disclosed in fund registration statements and, with respect to some information, in a structured format.[1020] However, we find the commenter's suggestion regarding reporting of average net assets persuasive and have added the reporting items of Item 75 of Form N–SAR into Form N–CEN.[1021] We believe that this information will assist data users in their analysis of various reporting items, including other information reported on Form N–CEN (for example, the monthly average of the value of portfolio securities on loan that will be reported pursuant to Item C.6.f).

d. Part D—Closed-End Management Companies and Small Business Investment Companies

The Commission recognizes that closed-end funds and SBICs have particular characteristics that warrant questions targeted specifically to them.[1022] Like Form N–SAR and as proposed, Form N–CEN requires additional information to be reported by closed-end funds in Part D of the form and also treats SBICs differently than other management investment companies, requiring them to complete Part D of the form in lieu of Part C.[1023] The information required in Part D will provide us with information that is particular to closed-end funds and SBICs and, thus, will assist us in monitoring the activities of these funds and our examiners in their preparation for exams of these funds. Where we have received comments on specific reporting requirements of Part D, we discuss them in more detail below.

Similar to Form N–SAR, we are adopting, as proposed, a reporting requirement in Part D of Form N–CEN for information on the securities that have been issued by the closed-end fund or SBIC, including the type of security issued (common stock, preferred stock, warrants, convertible securities, bonds, or any security considered ''other''), title of each class, exchange where listed, and ticker symbol.[1024] As in the proposal, we are requiring new information relating to rights offerings[1025] and secondary offerings by the closed-end fund or SBIC,[1026] including whether there was such an offering during the reporting period and if so, the type of security involved.[1027] Together, this information will allow the staff to quickly identify and track the securities and offerings of closed-end funds and SBICs when monitoring and examining these funds.

Like Form N–SAR,[1028] we are also adopting, as proposed, a requirement that each closed-end fund or SBIC report information on repurchases of its securities during the reporting period.[1029] However, unlike Form N–SAR, which requires information on the number of shares or principal amount of debt and net consideration received or paid for sales and repurchases for common stock, preferred stock, and debt securities, we are adopting, as proposed, the requirement in Form N–CEN that a closed-end fund or SBIC only needs to indicate if it repurchased any outstanding securities issued by the closed-end fund or SBIC during the reporting period and indicate which type of security.[1030]

As proposed, we are also carrying over Form N–SAR's requirements[1031] relating to default on long-term debt[1032] and dividends in arrears.[1033] However, unlike Form N–SAR, which requires an attachment providing detailed information on defaults and arrears on senior securities,[1034] Form N–CEN only will require a yes/no question and text-based responses.[1035] Also as proposed,

[1015] Item C.18 of Form N–CEN; *see also* Item 26.B of Form N–SAR (requiring disclosure if the fund's receipt of investment research and statistical information from a broker or dealer was a consideration which affected the participation of brokers or dealers or other entities in commissions or other compensation paid on portfolio transactions of Registrant). Section 28(e) of the Exchange Act establishes a safe harbor that allows money managers to use client funds to purchase ''brokerage and research services'' for their managed accounts under certain circumstances without breaching their fiduciary duties to clients. *See* 15 U.S.C. 78bb(e); *see also* Commission Guidance Regarding Client Commission Practices Under Section 28(e) of the Securities Exchange Act of 1934, Securities Exchange Act Release No. 34–54165 (July 18, 2006) [71 FR 41978 (July 24, 2006)]. We continue to believe that an item indicating whether a fund uses soft dollars will assist our staff in their examinations and provide census data as to the number and type of funds that rely on the safe harbor provided by section 28(e).

[1016] Item C.19.a of Form N–CEN.

[1017] Item C.19.b of Form N–CEN.

[1018] *See* Item 75 of Form N–SAR.

[1019] *See* Morningstar Comment Letter.

[1020] *See infra* footnote 1169 and accompanying text. We note that certain fee and expense information for closed-end funds, which is not disclosed in a structured format in closed-end fund registration statements, is included in Part D of Form N–CEN. *See* Item D.8 and Item D.9 of Form N–CEN. These items will provide Commission staff with the fee and expense information for closed-end funds that the staff finds most useful to have in a structured data format.

[1021] *See* Item C.19 of Form N–CEN.

[1022] *See* Items 86–88 of Form N–SAR (relating specifically to closed-end funds) and Items 89–104 of Form N–SAR (relating specifically to SBICs).

[1023] As discussed above, SBICs are unique investment companies that operate differently than other management investment companies. *See supra* footnote 49.

[1024] Item D.1 of Form N–CEN; *cf.* Items 87–88 and Item 96 of Form N–SAR (requesting information on the title and ticker of each class of securities issued on an exchange and information regarding certain specific types of securities). An instruction to Item D.1 of Form N–CEN indicates that the fund should provide the ticker symbol for any security not listed on an exchange, but has a ticker symbol.

[1025] Item D.2 of Form N–CEN.

[1026] Item D.3 of Form N–CEN.

[1027] *See* Item D.3.a and Item D.3.b of Form N–CEN. Item D.2.c of Form N–CEN also requires the percentage of participation in a primary rights offering and an accompanying instruction to this item addresses the method of calculating such percentage.

[1028] *See* Item 86 and Item 95 of Form N–SAR.

[1029] Item D.4 of Form N–CEN.

[1030] We note that, with respect to closed-end funds, financial information relating to monthly sales and repurchases of shares will be reported monthly on Form N–PORT. *See* Item B.6 of Form N–PORT (requiring the aggregate dollar amounts for sales and redemptions/repurchases of fund shares during each of the last three months).

[1031] *See* Item 77.G and Item 102.F of Form N–SAR.

[1032] Item D.5 of Form N–CEN.

[1033] Item D.6 of Form N–CEN.

[1034] Item 77.G and Item 102.F of Form N–SAR.

[1035] Item D.5 of Form N–CEN requires, with respect to any default on long-term debt, the nature of the default, the date of the default, the amount of the default per $1000 face amount, and the total amount of default. An instruction to this item defines ''long-term debt'' to mean a debt with a period of time from date of initial issuance to maturity of one year or greater. Item D.6 of Form N–CEN requires, with respect to any dividends in arrears, the title of the issue and the amount per

Continued

we are similarly carrying over the Form N–SAR requirement[1036] regarding modifications to the constituent's instruments defining the rights of holders.[1037] Similar to Form N–SAR, if a closed-end fund or SBIC made modifications to such an instrument, it also will be required to file an attachment in Part G of Form N–CEN with a more detailed description of the modification.[1038] This item provides the Commission with information on and copies of documents reflecting changes to shareholders' rights.

We are also adopting, as proposed, requirements in Part G of Form N–CEN that closed-end funds or SBICs file attachments regarding material amendments to organizational documents,[1039] new or amended investment advisory contracts,[1040] information called for by Item 405 of Regulation S–K,[1041] and, for SBICs only, senior officer codes of ethics.[1042] Where possible, we sought to eliminate the need to file attachments with the report in order to simplify the filing process and maximize the amount of information we receive in a data tagged format. However, the attachments required by Form N–CEN will provide us with information that is not otherwise updated or filed with the Commission and, thus, we believe they should continue to be filed in attachment form. All of the attachments in Form N–CEN that are specific to closed-end funds and SBICs are also currently required by Form N–SAR.[1043]

Similar to Form N–SAR, we are adopting, as proposed, a requirement for other census-type information relating to management fees and net operating expenses. Closed-end funds will be required to report the fund's advisory fee as of the end of the reporting period as a percentage of net assets.[1044] Some commenters expressed support for this specific item requirement.[1045] One of the commenters also suggested that funds report the actual management fee paid as a percentage of the average NAV of the fund during the reporting period so that the fee reported reflects the fee charged during the reporting period.[1046] We are adopting the requirement as proposed because it meets our regulatory purposes and is consistent with the fee disclosure requirements for closed-end funds in their registration statements.[1047] We believe that reporting in this manner will yield information that is more readily comparable across types of funds, as open-end funds must currently disclose tagged fee information as a percentage of net assets in XBRL in the fund's risk/return summary.[1048]

Additionally, as proposed, closed-end funds and SBICs will both be required to report the fund's net annual operating expenses as of the end of the reporting period (net of any waivers or reimbursements) as a percentage of net assets.[1049] Unlike open-end funds, which provide management fee and net expense information to the Commission in a structured format,[1050] such information is not reported to or updated with the Commission in a structured format by closed-end funds or SBICs. This information will allow the Commission to track industry trends relating to fees. As proposed, Form N–CEN carries forward the Form N–SAR requirement that market price per share[1051] and NAV per share[1052] of the fund's common stock be reported for the end of the reporting period.

Finally, as proposed, Form N–CEN (like Form N–SAR) will require information regarding an SBIC's investment advisers,[1053] transfer agents,[1054] and custodians (including custodians that provide services as sub-custodians).[1055] This information is the same as what will be reported by open-end and closed-end funds in Part C of Form N–CEN, but SBICs will not be required to fill out Part C of the form. The majority of questions in Part C of Form N–CEN are inapplicable to SBICs or otherwise request information that will not be helpful to us in carrying out our regulatory functions with respect to SBICs. Accordingly, we are excepting SBICs from filling out Part C of the form and instead including for SBICs certain service provider questions from Part C in Part D of the form.

e. Part E—Exchange-Traded Funds and Exchange-Traded Managed Funds

As we proposed, we are adopting a section in Form N–CEN related specifically to ETFs—Part E—which ETFs will complete in addition to Parts A, B, and G, and either Part C (for open-end funds) or Part F (for UITs). For purposes of Form N–CEN, an ETF is a special type of investment company that is registered under the Investment Company Act as either an open-end fund or a UIT. Unlike other open-end funds and UITs, an ETF generally does not sell or redeem its shares except in large blocks (or ''creation units'') and with broker-dealers that have contractual arrangements with the ETF (called ''authorized participants'').[1056]

share in arrears. This item defines ''dividends in arrears'' to mean dividends that have not been declared by the board of directors or other governing body of the fund at the end of each relevant dividend period set forth in the constituent instruments establishing the rights of the stockholders.

1036 Item 77.I and Item 102.H of Form N–SAR.

1037 Item D.7 of Form N–CEN.

1038 Item G.1.b.ii of Form N–CEN.

1039 Item G.1.b.i of Form N–CEN.

1040 Item G.1.b.iii of Form N–CEN.

1041 Item G.1.b.iv of Form N–CEN.

1042 Item G.1.b.v of Form N–CEN. This item applies only to SBICs because other management investment companies, including closed-end funds, provide this information in filings on Form N–CSR. *See* Item 2 and Item 3 of Form N–CSR; *see also* rule 30d–1 under the Investment Company Act [17 CFR 270.30d–1].

1043 *Compare* Item G.1.b of Form N–CEN *with* Item 77.Q.1, Item 77.Q.2, Item 102.P.1, Item 102.P.2, and Item 102.P.3 of Form N–SAR; *see also* Instructions to Specific Item 77Q1(a), Item 77Q1(e), Item 77Q2, Item 102P1(a), Item 102P1(e), Item 102P2, and Item 102P3 of Form N–SAR.

1044 Item D.8 of Form N–CEN; *cf.* Items 47–52 and Item 72.F of Form N–SAR (requesting advisory fee information for management companies, including closed-end funds). Whereas Form N–SAR requests information regarding the advisory fee rate and the dollar amount of gross advisory fees, an instruction to Item D.8 of Form N–CEN explains that the management fee reported should be based on the percentage of amounts incurred during the reporting period.

1045 *See* ICI Comment Letter (agreeing that management fee information should be backward looking); State Street Comment Letter (also agreeing that the advisory fee should be backward looking, noting that backward looking disclosures are consistent with the annual financial statements of regulated investment companies).

1046 *See* ICI Comment Letter.

1047 *See* Item 3 of Form N–2 (requesting management fee information as a percentage of net assets attributable to common shares).

1048 *See* General Instruction C.3.G to Form N–1A.

1049 Item D.9 of Form N–CEN; *cf.* Item 72.X and Item 97.X of Form N–SAR (requesting total expenses in dollars for closed-end funds and SBICs).

1050 Management fee information for open-end funds is currently tagged in XBRL format in the fund's risk return summary and is therefore not required by Form N–CEN. *See* General Instruction C.3.G to Form N–1A.

1051 Item D.10 of Form N–CEN; *see* Item 76 and Item 101 of Form N–SAR

1052 Item D.11 of Form N–CEN; *see* Item 74.V.1 and Item 99.V of Form N–SAR.

1053 Item D.12 of Form N–CEN.

1054 Item D.13; *see supra* footnotes 990–997 and accompanying text; *see also supra* footnotes 1000–1002, and accompanying text (discussing the addition of a sub-item related to sub-transfer agents).

1055 Item D.14 of Form N–CEN.

1056 For purposes of Form N–CEN, ''creation unit'' is defined as ''a specified number of Exchange-Traded Fund or Exchange-Traded Managed Fund shares that the fund will issue to (or redeem from) an authorized participant in exchange for the deposit (or delivery) of specified securities, positions, cash, and other assets.'' Instruction to Item E.3 of Form N–CEN. We have made a modification from the proposed definition of ''creation unit'' to clarify, consistent with current Commission exemptive relief, that a ''creation unit'' could also include ''positions'' that may not be ''assets.'' For purposes of Form N–CEN, ''authorized participant'' is defined as ''a broker-dealer that is also a member of a clearing agency registered with the Commission or a DTC Participant, and which has a written agreement with the Exchange-Traded Fund or Exchange-Traded Managed Fund or one of

However, national securities exchanges list ETF shares for trading, which allows investors to purchase and sell individual shares throughout the day in the secondary market. Thus, ETFs possess characteristics of traditional open-end funds and UITs, which issue redeemable shares, and of closed-end funds, which generally issue shares that trade at negotiated prices on national securities exchanges and that are not redeemable.[1057]

ETFs currently are subject to the same information reporting requirements on Form N–SAR as are other open-end funds or UITs, and they are not required to report additional, more specialized information because Form N–SAR predates the introduction of ETFs to the market and has not been amended to address ETFs' distinct characteristics. In 2009, the Commission amended its registration statement disclosure requirements for ETFs [1058] that are open-end funds to better meet the needs of investors who purchase those ETF shares in secondary market transactions.[1059] We believe that it is appropriate to similarly tailor some of the comprehensive information reporting requirements in Form N–CEN to the special characteristics of ETFs. As we proposed, funds and UITs meeting the definition of ''exchange-traded fund'' in Form N–CEN will be required to report information pursuant to the items in Part E of the form, as will certain similar investment products known as ''exchange-traded managed funds.'' [1060] Taken together, we believe that, in addition to informing the Commission's risk analysis and, potentially, future policymaking concerning ETFs, the information these requirements will yield could also help inform the interested public about the operation of, and possible risks associated with, these funds.

Some commenters supported having a distinct section for ETFs.[1061] However, as discussed in detail below, some commenters expressed certain concerns about specific reporting items, and, in particular, the public disclosure of certain reporting items.[1062] We are adopting proposed Part E, with some modifications in response to specific commenter concerns, which are addressed in more detail below. In particular, several of the modifications we are making today are intended to address concerns raised by commenters that certain of the proposed Part E reporting requirements may yield data that is not representative of the ETF's activity over the course of the reporting period and may not be appropriately reflective of the range of activity in the ETF primary market today or in the future.[1063]

Some of the new reporting requirements for ETFs that we are adopting today as part of Form N–CEN relate to an ETF's (or its service provider's) interaction with authorized participants. These entities have an important role to play in the orderly distribution and trading of ETF shares and are significant to the ETF marketplace.[1064] Because of their importance, we proposed new reporting requirements concerning these entities,[1065] and we have determined to adopt these new reporting requirements as proposed.

Currently, the information we have regarding reliance by ETFs on particular authorized participants is limited, and we believe that collecting information concerning these entities on an annual basis will allow us to understand and better assess the size, capacity, and concentration of the authorized participant framework and also inform the public about certain characteristics of the ETF primary markets. Accordingly, we are adopting, as proposed, a new requirement for each ETF to report identifying information about its authorized participants.[1066] More specifically, Form N–CEN will require an ETF to report the name of each of its authorized participants (even if the authorized participant did not purchase or redeem any ETF shares during the reporting period) [1067] and certain other identifying information,[1068] including the authorized participant's SEC file number.[1069] One commenter expressly supported reporting of this information, but suggested that authorized participants, rather than funds, should be required to provide this identifying information to the Commission, reasoning that authorized participants would have more ready access to the required information than funds.[1070] Although we acknowledge that authorized participants would be expected to have access to the required information, we believe that, because authorized participants are counterparties to ETFs in primary market transactions, the required information should also be available to ETFs with which the authorized participants contract and transact. Because the requirements are intended in part to yield information about reliance by ETFs on particular authorized participants, and the Commission as well as other data users seeking census-type information about ETFs will likely be able to find and analyze it most efficiently using reports on Form N–CEN, we believe that ETFs themselves are the most appropriate source for the required information.

In addition, we are adopting a requirement for each ETF to report the dollar value of the ETF shares that each authorized participant purchased and redeemed from the ETF during the reporting period.[1071] Some commenters objected to the inclusion of this requirement in Form N–CEN, expressing concerns that reporting authorized participant activities on Form N–CEN could discourage authorized participants from participating in the ETF market, leading to further concentration in the authorized participant community or authorized participants' moving their ETF-related trading activities to banks or ''clearing''

its designated service providers that allows the authorized participant to place orders to purchase or redeem creation units of the Exchange-Traded Fund or Exchange-Traded Managed Fund.'' Instruction to Item E.1.b of Form N–CEN. We have made a modification from the proposed definition of ''authorized participant'' to clarify, consistent with current Commission exemptive relief, that the definition of ''authorized participant'' includes broker-dealers that are DTC participants and otherwise fall within the definition's scope.

[1057] *See generally* Actively Managed Exchange-Traded Funds, Investment Company Act Release No. 25258 (Nov. 8, 2001) [66 FR 57614 (Nov. 15, 2001)]; ETF Proposing Release, *supra* footnote 5.

[1058] *See* General Instruction A of Form N–1A (defining ''Exchange-Traded Fund'').

[1059] *See* Enhanced Disclosure and New Prospectus Delivery Option for Registered Open-End Management Investment Companies, Securities Act Release No. 8998 (Jan. 13, 2009) [74 FR 4546, 4558 (Jan. 26, 2009)].

[1060] General Instruction A to Form N–CEN; *see also supra* footnote 763.

[1061] *See, e.g.,* BlackRock Comment Letter; Morningstar Comment Letter.

[1062] *See* BlackRock Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I; State Street Comment Letter.

[1063] *See, e.g., infra* footnotes 1077, 1081, 1091–1092 and accompanying text.

[1064] *See* ETF Proposing Release, *supra* footnote 5, at 14620–21.

[1065] Proposing Release, *supra* footnote 7, at 33645–46; Liquidity Proposing Release, *supra* footnote 11, at 62348.

[1066] Item E.2.a–Item E.2.d of Form N–CEN.

[1067] Item E.2.a of Form N–CEN.

[1068] Item E.2.b–Item E.2.d of Form N–CEN.

[1069] Item E.2.b of Form N–CEN.

[1070] *See* State Street Comment Letter (stating that it would be appropriate for an ETF to list the authorized participants with which it has contracted, but that the additional information proposed in Part E (including the SEC file number, central registration depository (CRD) number, LEI number, and the dollar value of the ETF shares purchased and redeemed during the reporting period) would be more appropriately requested from the authorized participants themselves).

[1071] Item E.2.e–Item E.2.f of Form N–CEN.

authorized participants.[1072] We continue to believe, however, that collection of this additional information may allow the Commission staff to monitor how ETF purchase and redemption activity is distributed across authorized participants and, for example, the extent to which a particular ETF—or ETFs as a group—may be reliant on one or more particular authorized participants. We believe that adopting the new reporting requirements is appropriate in light of these benefits notwithstanding the possibility that public availability of the information might affect the ETF primary markets in the manner those commenters suggest.

We also proposed, in the Liquidity Proposing Release, to require an ETF to report whether it required that an authorized participant post collateral to the ETF or any of its designated service providers in connection with the purchase or redemption of ETF shares during the reporting period.[1073] We understand that some ETFs (or their custodians), particularly ETFs that invest in non-U.S. securities, require authorized participants transacting primarily on an in-kind basis to post collateral when purchasing or redeeming shares, most often for the duration of the settlement process. This can protect the ETF in the event, for example, that the authorized participant fails to deliver the basket securities.[1074] The requirement to post collateral for creating or redeeming ETF shares impacts the authorized participant's operating capital, which could, in turn, affect the ability and willingness of authorized participants to transact with such ETFs or transact with other market makers on an agency basis. Accordingly, we continue to believe that information about required posting of collateral by authorized participants when purchasing or redeeming shares—alongside the other information that will be required in Form N–CEN—will be helpful in understanding whether, and to what extent, there may be concentration in the authorized participant framework for such ETFs. Therefore, we are adopting this requirement as proposed.[1075]

Other new reporting requirements relate to certain characteristics of ETF creation units—the large blocks of shares that authorized participants may purchase from or redeem with the ETF. In the primary market, ETF shares, bundled in creation units, are sold or redeemed for consideration composed of some combination of the ETF's constituent portfolio securities (*i.e.,* an ''in-kind'' basis) and cash (*i.e.,* on a cash basis). Whether transacting in kind or in cash, there may be costs that result from the process of carrying out the transaction. In addition, when an authorized participant purchases (or redeems) ETF shares all or partly in cash, absent a countervailing effect, the ETF would experience additional costs (*e.g.,* brokerage, taxes) involved with buying the securities with cash or selling portfolio securities to satisfy a cash redemption. In the course of such primary market transaction, the particular authorized participant wishing to purchase (or redeem) shares typically bears the costs associated with transacting in the creation unit or units in the form of one or more transaction fees. The costs, therefore, are not directly borne by non-transacting shareholders. In the Proposing Release, we characterized these transaction fees as taking two specific forms (*viz.,* ''fixed fees'' and ''variable fees'') with corresponding purposes, and that characterization reflects our understanding of the typical transaction costs in the ETF primary markets today.[1076] As discussed below, a commenter raised concerns that transaction fees may not uniformly fit within the two types of fees discussed in the Proposing Release, and we are persuaded that it is appropriate to modify the proposed form's characterization of these transaction fees in Form N–CEN as we are adopting it today.[1077]

In order to better understand the capital markets implications of different creation unit requirements, primary market transaction methods, and transaction fees, we proposed requirements that ETFs annually report summary information about these characteristics of creation units and primary market transactions. ETFs are not currently required to report the information discussed below in a structured format, and public availability of many of the new data items is limited and indeterminable. To better understand how common different transaction methods are and the degree to which they vary across ETFs and over time, we proposed to require that ETFs report the total value (i) of creation units that were purchased by authorized participants ''primarily'' in exchange for portfolio securities on an in-kind basis; (ii) of those that were redeemed ''primarily'' on an in-kind basis; (iii) of those that were purchased by authorized participants ''primarily'' in exchange for cash; and (iv) of those that were redeemed ''primarily'' on a cash basis.[1078] For purposes of these reporting requirements concerning transaction methods and transaction fees, we proposed to define ''primarily'' to mean greater than 50% of the value of the creation unit.[1079] One commenter expressed general support for this information, opining that it would be helpful for investors.[1080] Another commenter, however, expressed concerns with the proposed distinction between transactions conducted ''primarily'' on an in-kind basis and those conducted ''primarily'' in exchange for cash, arguing that treating a creation unit that is almost entirely in-kind with a small cash balancing amount as equivalent to one that is effected with nearly half the value of the creation unit in the form of cash would yield data that would not serve the requirement's purpose.[1081]

We found this comment persuasive, and we agree with the commenter that it would better achieve the proposed requirement's purpose of better understanding different creation unit requirements, primary market transaction methods, and transaction fees to collect such information in a manner that obviates the need for the ''primarily'' distinction about which the commenter expressed concern. Therefore, in a modification from the proposal, we have eliminated the proposed distinction between ''primarily'' in-kind and ''primarily'' cash transactions. Instead, as adopted, Form N–CEN will require ETFs to report, based on the dollar value paid for each creation unit purchased by authorized participants during the

[1072] *See* BlackRock Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I; State Street Comment Letter.

[1073] Liquidity Proposing Release, *supra* footnote 11, at 62348.

[1074] *See, e.g.,* ICI, The Role and Activities of Authorized Participants of Exchange-Traded Funds (Mar. 2015) at 4, *available at https://www.ici.org/pdf/ppr_15_aps_etfs.pdf.* In addition to ETFs that invest in non-U.S. securities, Commission Staff understands that there are other ETFs that have collateral requirements for purchases and redemptions, such as ETFs that invest in debt securities.

[1075] Item E.2.g of Form N–CEN.

[1076] *See* Proposing Release, *supra* footnote 7, at 33646. We characterized a ''fixed fee'' as a fee covering the transactional costs associated with assembling (or disassembling) creation units. *Id.* We characterized a ''variable fee'' as one intended to ensure that the purchasing or redeeming party bears the costs associated with transacting entirely or partially on a cash basis. *Id.*

[1077] *See* Invesco Comment Letter.

[1078] *See* Item 60 of proposed Form N–CEN; *see also* Proposing Release, *supra* footnote 7, at 33646.

[1079] Instruction 9 to Item 60 of proposed Form N–CEN; *see also See* Proposing Release, *supra* footnote 7, at 33646.

[1080] *See* BlackRock Comment Letter.

[1081] Invesco Comment Letter.

reporting period, (i) the average percentage of that value composed of cash; [1082] (ii) the standard deviation of the percentage of that value composed of cash; [1083] (iii) the average percentage of that value composed of non-cash assets and other positions exchanged on an in-kind basis: [1084] And (iv) the standard deviation of the percentage of that value composed of non-cash assets and other positions exchanged on an in-kind basis.[1085] The ETF will also be required to report, based on the total dollar value of creation units redeemed by authorized participants during the reporting period, (i) the average percentage of that value composed of cash; [1086] (ii) the standard deviation of the percentage of that value composed of cash; [1087] (iii) the average percentage of that value composed of non-cash assets and other positions exchanged on an in-kind basis; [1088] and (iv) the standard deviation of the percentage of that value composed of non-cash assets and other positions exchanged on an in-kind basis.[1089] We believe that this modified requirement will better achieve the purposes of the proposed requirement and address the commenter's concerns about the proposed distinction between ''primarily'' in-kind and ''primarily'' cash transactions.

To better understand the effects of primary market transaction fees on ETF pricing and trading and to better inform the public about such fees, we also proposed a requirement that ETFs report applicable transaction fees—including each of ''fixed'' and ''variable'' fees—applicable to the last creation unit purchased and the last creation unit redeemed during the reporting period of which some or all of the creation unit was transacted on a cash basis, as well as the same figures for the last creation unit purchased and the last creation unit redeemed during the reporting period of which some or all of the creation unit was transacted on an in-kind basis.[1090]

As discussed above, one commenter expressed concerns about a potential lack of uniformity in how ETFs name and calculate transactional fees and suggested that the Commission provide definitional guidance about the types of fees to be reported in order to receive accurate and standardized information.[1091] Another commenter expressed concerns that the information the proposed requirement would have yielded—which would have pertained specifically to the last creation units purchased or redeemed in the reporting period—may not be representative of the transactions occurring during the period and suggested that an alternative formulation would be more meaningful and helpful for investors.[1092]

We find both of these comments persuasive, and consistent with our overarching objectives of the proposed requirement to collect information that helps data users better understand the effects of primary market transaction fees on ETF pricing and trading and to better inform the public about such fees in a manner that is more representative of the ETF's activity over the course of the reporting period, while being flexible enough to embrace the range of activity in the ETF market today and, to the extent practicable, in the future. Therefore, in a modification from the proposal that we believe will better help us meet these objectives while also responding to commenters' concerns, we are requiring reporting of average fees based on the terms by which they are applied rather than how they are characterized or what purpose they serve. Thus we have modified the proposed requirement in two respects: First, the terms ''fixed fee'' and ''variable fee'' have been eliminated, and the fees required to be reported have been specified in a manner that would allow ETFs that today or in the future employ an alternative transaction fee schedule to report those fees consistent with their actual practice. Second, the requirement to report as to the last creation unit purchased or redeemed has been replaced with a requirement to report as to the average creation unit purchased or redeemed during the reporting period, so that the information reported will better reflect the ETF's fees over the course of the reporting period rather than at a specific moment in time. Accordingly, we are adopting a requirement that, as to creation units purchased by authorized participants during the reporting period, ETFs report the average transaction fee (i) charged in dollars per creation unit; [1093] (ii) charged for one or more creation units on the same business day; [1094] and (iii) charged as a percentage of the value of the creation unit.[1095] ETFs will also be required to report, as to only those creation units purchased by authorized participants that were fully or partially composed of cash, the average transaction fee (i) charged in dollars per creation unit; [1096] (ii) charged for one or more creation units on the same business day; [1097] and (iii) charged as a percentage of the value of the cash in the creation unit.[1098] Finally, as in the proposed requirements, ETFs will be required to report the parallel information for the redemption of creation units by authorized participants.[1099] We believe that this modified requirement will better achieve the purposes of the proposed requirement and address the commenters' concerns about the lack of uniformity in the naming and calculating of ETF primary market transaction fees as well as the representativeness of the fees on the last business day of the reporting period.

We also are adopting, as proposed, a requirement for ETFs to report the number of ETF shares required to form a creation unit as of the last business day of the reporting period,[1100] which we believe will also allow the Commission and other data users to better analyze any effects that ETFs' creation unit size requirements may have on ETF pricing and trading. One commenter expressed support for this information, opining that it would be helpful for investors.[1101] In addition to information about authorized participants and creation units, we are requiring, as proposed, that ETFs, like closed-end funds, report the exchange on which the ETF is listed so that Commission staff may be better able to quickly gather information as to which ETFs may be affected should an idiosyncratic risk or market event arise in connection with a particular exchange.[1102] In a modification from the proposal, we are also adopting a requirement that ETFs provide their ticker symbol. As discussed above, management investment companies with one or more classes of shares outstanding will be required to provide a ticker symbol, if any, relating to that class,[1103] and as we observed

1082 Item E.3.b.i of Form N–CEN.

1083 Item E.3.b.ii of Form N–CEN.

1084 Item E.3.b.iii of Form N–CEN.

1085 Item E.3.b.iv of Form N–CEN.

1086 Item E.3.c.i of Form N–CEN.

1087 Item E.3.c.ii of Form N–CEN.

1088 Item E.3.c.iii of Form N–CEN.

1089 Item E.3.c.iv of Form N–CEN.

1090 Proposing Release, *supra* footnote 7, at 33646; *see also* Item 60.e–Item 60.h of proposed Form N–CEN.

1091 Invesco Comment Letter.

1092 BlackRock Comment Letter (suggesting instead that a range of fees paid over the reporting period be required).

1093 Item E.3.d.i.1 Form N–CEN.

1094 Item E.3.d.i.2 Form N–CEN.

1095 Item E.3.d.i.3 Form N–CEN.

1096 Item E.3.d.ii.1 Form N–CEN.

1097 Item E.3.d.ii.2 Form N–CEN.

1098 Item E.3.d.ii.3 of Form N–CEN.

1099 Item E.3.e of Form N–CEN.

1100 Item E.3.a of Form N–CEN.

1101 *See* BlackRock Comment Letter.

1102 Item E.1.a of Form N–CEN.

1103 *See* Item C.2.d.iii; 892–894.

throughout the Proposing Release, identifiers will assist the Commission with organizing the data received and allow the staff to cross-reference the data reported on Form N–CEN with data received from other sources.[1104] We have determined that it is appropriate for ETFs to provide a ticker symbol also, as not all ETFs would be subject to the ticker symbol requirement for management investment companies.

Finally, with respect to ETFs that are UITs, we are requiring information regarding whether the index whose performance the fund tracks is constructed by an affiliated person of the fund and/or exclusively constructed for the fund, as requested by a commenter,[1105] and, as proposed, information regarding tracking difference and tracking error.[1106] One commenter expressed support for the reporting of tracking difference and tracking error, stating that it would be helpful for investors.[1107] Another commenter suggested that tracking error should be reported on a monthly basis, rather than on a daily basis, as proposed.[1108] The index fund information is also required of open-end index funds and, for the same reasons discussed above in connection with those requirements, the form will require this same information of ETFs that are UITs.[1109] As discussed above, commenters made similar suggestions about the methodology for calculating tracking error in the open-end fund index context, and we have determined to adopt the proposed methodology for the same reasons discussed in connection with the open-end index fund requirements.[1110]

f. Part F—Unit Investment Trusts

As proposed, Part F of Form N–CEN requires information specific to UITs. Like Form N–SAR, Form N–CEN recognizes that UITs have particular characteristics that warrant questions targeted specifically to them.[1111] The information requested in Part F will inform us further about the scope and composition of the UIT industry and, thus, will assist us in monitoring the activities of UITs and our examiners in their preparation for exams of UITs. We did not receive specific comments on Part F of the form and are adopting it as proposed.

Form N–CEN (similar to Form N–SAR[1112]) also requires certain identifying information relating to a UIT's service providers and entities involved in the formation and governance of UITs, including its depositor,[1113] sponsor,[1114] trustee,[1115] and administrator.[1116] We are also adopting, as proposed, an item in Form N–CEN that asks whether a UIT is a separate account of an insurance company,[1117] and, depending on a UIT's response to this item, it will then proceed to answer certain additional questions in Part F.[1118] While Form N–SAR generally does not differentiate between UITs that are and are not separate accounts of insurance companies, Form N–CEN makes this distinction. We believe that by distinguishing between these different types of UITs, the form will allow us to better target the information requests in the form appropriate to the type of UIT. We also believe this new approach will allow filers to better understand the information being requested of them because it will be more reflective of their operations and should thus improve the consistency of the information reported.

As in the proposal and similar to Form N–SAR,[1119] a UIT that is not a separate account of an insurance company will provide the number of series existing at the end of the reporting period that had securities registered under the Securities Act[1120] and, for new series, the number of series for which registration statements under the Securities Act became effective during the reporting period[1121] and the total value of the portfolio securities on the date of deposit.[1122] As proposed, Form N–CEN also carries over from Form N–SAR[1123] requirements relating to the number of series with a current prospectus,[1124] the number of existing series (and total value) for which additional units were registered under the Securities Act,[1125] and the value of units placed in portfolios of subsequent series.[1126] We are also adopting, as proposed, a requirement in Form N–CEN that a UIT that is not a separate account of an insurance company provide the total assets of all series combined as of the reporting period,[1127] which is also currently required by Form N–SAR.[1128]

We are also adopting, as proposed, new requirements in Form N–CEN for separate accounts offering variable annuity and variable life insurance contracts. Specifically, if the UIT is a separate account of an insurance company, Form N–CEN requires reporting of its series identification number[1129] and, for each security that has a contract identification number assigned pursuant to rule 313 of Regulation S–T, the number of individual contracts that are in force at the end of the reporting period.[1130]

With respect to insurance company separate accounts, we are also adopting, as proposed, new requirements in Form N–CEN to identify and provide census information for each security issued through the separate account. These requirements will include the name of the security,[1131] contract identification number,[1132] total assets attributable to the security,[1133] number of contracts sold,[1134] gross premiums received,[1135] and amount of contract value

[1104] *See, e.g.,* Proposing Release, *supra* note 7, at 33635.

[1105] *See supra* footnote 907 and accompanying text.

[1106] Item E.4 of Form N–CEN.

[1107] *See* BlackRock Comment Letter.

[1108] *See* Invesco Comment Letter. *See supra* footnotes 920–928 and accompanying text.

[1109] *See* Item C.3.b of Form N–CEN; *supra* section II.D.4.c.i.

[1110] *See supra* footnotes 923–928 and accompanying text.

[1111] *See* Items 111–133 of Form N–SAR (relating specifically to UITs).

[1112] *See* Item 111 (depositor information), Item 112 (sponsor information), Item 113 (trustee information), and Item 114 (principal underwriter information) of Form N–SAR.

[1113] Item F.1 of Form N–CEN.

[1114] Item F.4 of Form N–CEN (only applies to UITs that are not insurance company separate accounts).

[1115] Item F.5 of Form N–CEN (only applies to UITs that are not insurance company separate accounts).

[1116] Item F.2 of Form N–CEN; *see also supra* footnotes 1001–1002 (discussing the addition of a sub-administrator sub-item). Form N–SAR does not request information about a UIT's administrator.

[1117] Item F.3 of Form N–CEN; *see* Item 117.A of Form N–SAR.

[1118] If a UIT responds ''yes'' to this item, it will proceed to respond to Item F.12–Item F.17 of the form. However, if a UIT responds ''no'' to this item, it will proceed to Item F.4–Item F.11, and Item F.17. *See* Instruction to Item F.3 of Form N–CEN.

[1119] *See* Items 118–120 of Form N–SAR (all UITs are required to complete these items).

[1120] Item F.6.a of Form N–CEN. As noted earlier, because UITs that register on Form N–8B–2 obtain CIKs for the UIT itself as well as for series offered by the UIT, we have made a clarifying modification to Form N–CEN by including a requirement that such UITs report the CIKs for each of their existing series in response to Item F.6.b of Part F of the form in addition to reporting the CIK for the UIT itself in response to Item B.1.c. *See supra* footnote 800.

[1121] Item F.7.a of Form N–CEN.

[1122] Item F.7.b of Form N–CEN.

[1123] *See* Items 121–124 of Form N–SAR (all UITs are required to complete these items).

[1124] Item F.8 of Form N–CEN.

[1125] Item F.9 of Form N–CEN.

[1126] Item F.10 of Form N–CEN.

[1127] Item F.11 of Form N–CEN.

[1128] *See* Item 127.L of Form N–SAR (all UITs are required to complete this item). Form N–CEN does not require UITs to report certain assets held by a UIT as required by Item 127 of Form N–SAR. *See* Items 127.A–K of Form N–SAR.

[1129] Item F.12 of Form N–CEN.

[1130] Item F.13 of Form N–CEN.

[1131] Item F.14.a of Form N–CEN.

[1132] Item F.14.b of Form N–CEN.

[1133] Item F.14.c of Form N–CEN.

[1134] Item F.14.d of Form N–CEN.

[1135] Item F.14.e of Form N–CEN.

redeemed.[1136] This item also requires additional information relating to section 1035 exchanges, including gross premiums received pursuant to section 1035 exchanges,[1137] number of contracts affected in connection with such premiums,[1138] amount of contract value redeemed pursuant to section 1035 redemptions [1139] and the number of contracts affected by such redemptions.[1140] In addition, as proposed, insurance company separate accounts will be required to provide information on whether they relied on rules 6c–7 [1141] and 11a–2 [1142] under the Investment Company Act. This information, which is specific to UITs that are separate accounts of insurance companies and is either not otherwise filed with the Commission or is not filed in a structured format, will further assist the Commission in its oversight of UITs, including monitoring trends in the variable annuity and variable life insurance markets.

Finally, as proposed, Form N–CEN carries over the Form N–SAR [1143] requirement that a UIT provide certain information relating to divestments under section 13(c) of the Investment Company Act.[1144] Thus, if a UIT intends to avail itself of the safe harbor provided by section 13(c) with respect to its divestment of certain securities, it will continue to make the following disclosures on Form N–CEN: Identifying information for the issuer, total number of shares or principal amount divested, date that the securities were divested, and the name of the statute that added the provisions of section 13(c) in accordance with which the securities were divested.[1145] If the UIT holds any securities of the issuer on the date of the filing, it will also provide the ticker symbol, CUSIP number, and total number of shares or, for debt securities, the principal amount held on the date of the filing.[1146]

g. Part G—Attachments

Like Form N–SAR,[1147] Form N–CEN requires, substantially as proposed, certain attachments to reports filed on the form in order to provide the staff with more granular information regarding certain key issues.[1148] Due to the narrative format of the information required, these attachments will not be required to be reported in a structured data format. Where possible, we eliminated the need to file attachments with the census reporting form in order to simplify the filing process and maximize the amount of information we receive in a structured format.[1149] Accordingly, we believe we have limited the number of attachments to the form to those that are most useful to the staff, either because of investor protection issues or because the information is not available elsewhere. Moreover, all except one of the attachments to Form N–CEN are current requirements in Form N–SAR.[1150]

Thus, as proposed, all funds are required, where applicable, to file attachments regarding legal proceedings,[1151] provision of financial support,[1152] independent public accountant's report on internal control,[1153] and changes in accounting principles and practices, where applicable.[1154] Unlike the proposal, however, the registrant will not be required under the form to file an attachment related to changes in the fund's independent public accountant (*i.e.,* information called for by Item 4 of Form 8–K under the Exchange Act). As previously discussed in section II.D.4.b above, this change was made in response to comments.[1155]

In addition, as in the proposal, all funds will be required, where applicable, to provide attachments relating to information required to be filed pursuant to exemptive orders issued by the Commission and relied on by the registrant,[1156] and other information required to be included as an attachment pursuant to Commission rules and regulations.[1157] Moreover, we are adopting, as proposed, requirements for closed-end funds and SBICs to provide attachments, where applicable, relating to material amendments to organizational documents,[1158] instruments defining the rights of the holders of any new or amended class of securities,[1159] new or amended investment advisory contracts,[1160] information called for by Item 405 of Regulation S–K,[1161] and, for SBICs only, senior officer codes of ethics.[1162] As proposed, each attachment required by Form N–CEN includes instructions describing the information that should be provided in the attachment.[1163]

[1136] Item F.14.h of Form N–CEN.

[1137] Item F.14.f of Form N–CEN.

[1138] Item F.14.g of Form N–CEN.

[1139] Item F.14.i of Form N–CEN.

[1140] Item F.14.j of Form N–CEN.

[1141] Item F.15 of Form N–CEN. Rule 6c–7 under the Investment Company Act provides exemptions from certain provisions of sections 22(e) and 27 of the Investment Company Act for registered separate accounts offering variable annuity contracts to participants in the Texas Optional Retirement Program. *See* 17 CFR 270.6c–7.

[1142] Item F.16 of Form N–CEN. Rule 11a–2 under the Investment Company Act relates to offers of exchange by certain registered separate accounts or others, the terms of which do not require prior Commission approval. *See* 17 CFR 270.11a–2.

[1143] Item 133 of Form N–SAR. Section 13(c) of the Investment Company Act provides a safe harbor for a registered investment company and its employees, officers, directors and investment advisers, based solely upon the investment company divesting from, or avoiding investing in, securities issued by persons that the investment company determines, using credible information that is available to the public, engage in certain investment activities in Iran or Sudan. The safe harbor, however, provides that this limitation on actions does not apply unless the investment company makes disclosures about the divestments in accordance with regulations prescribed by the Commission. *See* 15 U.S.C. 80a–13(c)(2)(B). Management investment companies are required to provide the disclosure on Form N–CSR, pursuant to Item 6(b) of the form, and UITs are required to provide the disclosure on Form N–SAR, pursuant to Item 133 of the form. *See* Technical Amendments to Forms N–CSR and N–SAR in Connection With the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010, Securities Exchange Act Release No. 34–63087 (Oct. 13, 2010) [75 FR 64120 (Oct. 19, 2010)].

[1144] Item F.17 of Form N–CEN.

[1145] Item F.17.a of Form N–CEN.

[1146] Item F.17.b of Form N–CEN. An instruction to Item F.17 addresses when the UIT should report divestments pursuant to this item.

[1147] *See* Item 77.E, Item 77.I, Item 77.K, Item 77.L, Item 77.N, Item 77.P, Item 77.Q.1, Item 77.Q.2, Item 102.D, Item 102.H, Item 102.J, Item 102.K, Item 102.M, Item 102.O, Item 102.P.1, Item 102.P.2, and Item 102.P.3 of Form N–SAR.

[1148] Form N–SAR requires only management companies to file attachments to reports on the form, whereas Form N–CEN requires certain attachments for all Registrants.

[1149] With respect to certain attachments currently in Form N–SAR, we are integrating the data requirements into the form itself, rather than keep the attachment requirements. *See, e.g.,* Item 77.G and Item 102.F of Form N–SAR; Item D.5 (default on long-term debt) and Item D.6 (dividends in arrears) of Form N–CEN. However, not all of the attachments currently required by Form N–SAR lend themselves to integration into the form, either because of the amount of information reported in the attachment or because the attachment is a standalone document (*e.g.,* the accountant's report on internal control).

[1150] *But see supra* footnote 1148.

[1151] Item G.1.a.i of Form N–CEN.

[1152] Item G.1.a.ii of Form N–CEN.

[1153] Item G.1.a.iii of Form N–CEN. As noted in Item G.1.a.iii, this item will only apply to management companies other than SBICs.

[1154] Item G.1.a.iv of Form N–CEN.

[1155] *See supra* footnotes 860–867 and accompanying text.

[1156] Item G.1.a.v of Form N–CEN.

[1157] Item G.1.a.vi of Form N–CEN.

[1158] Item G.1.b.i of Form N–CEN. Unlike open-end funds, closed-end funds and SBICs do not otherwise update or file the information requested by this item with the Commission and, thus, we believe the information should continue to be filed as an attachment to the census reporting form.

[1159] Item G.1.b.ii of Form N–CEN.

[1160] Item G.1.b.iii of Form N–CEN. Unlike open-end funds, closed-end funds and SBICs do not otherwise update or file the information requested by this item with the Commission and, thus, we believe the information should continue to be filed as an attachment to the census reporting form.

[1161] Item G.1.b.iv of Form N–CEN.

[1162] Item G.1.b.v of Form N–CEN.

[1163] For example, the instructions to Item G.1.b.v require SBICs to attach detailed information regarding the senior officer code of ethics and certain information regarding the audit committee. The instructions also require SBICs to meet certain

Continued

As noted earlier, all of the attachments required by Form N–CEN, except one, are currently required by Form N–SAR.[1164] The new attachment relates to the provision of financial support and will be filed by a fund (other than a money market fund) if an affiliate, promoter or principal underwriter of the fund, or affiliate of such person, provided financial support to the fund during the reporting period.[1165] As discussed in section II.D.4.b, we are adopting this requirement, as proposed, and including it in Form N–CEN because we believe that it is important that the Commission understand the nature and extent to which a fund's sponsor provides financial support to a fund.

5. Items Required by Form N–SAR That Will Be Eliminated by Form N–CEN

As we discussed above and in the Proposing Release, with Form N–CEN, we seek to modernize and improve the information that we collect in order to reflect changes in the fund industry since Form N–SAR's adoption in 1985. Accordingly, and substantially as proposed, we are not carrying forward certain items in Form N–SAR to Form N–CEN that we believe are no longer needed by Commission staff or are outdated in their current form. For example, in Form N–CEN, we are not including Form N–SAR's requirement relating to considerations which affected the participation of brokers or dealers or other entities in commissions or other compensation paid on portfolio transactions.[1166] Many commenters agreed that Form N–SAR is outdated and commended the Commission's efforts to improve the relevance of information reported to the Commission.[1167] Where we have received comments on specific reporting requirements, we discuss them in more detail below.

As proposed, Form N–CEN eliminates a number of Form N–SAR items where the information is (or will be) reported elsewhere—for example, items relating to fees and expenses, including front-end and deferred/contingent sales loads, redemption and account maintenance fees, rule 12b–1 fees, and advisory fees.[1168] Many of the fee and expense items required by Form N–SAR are already reported, in a structured format, in the risk-return summary required by Form N–1A for open-end funds, as well as in an unstructured format in other places in fund registration statements.[1169] For other fee and expense items, the information is either not frequently used by Commission staff or we believe that the benefit of having such information is minimal while the burden to funds of reporting such information is costly.[1170] For similar reasons as above, we are also not requiring other information in Form N–CEN, including information relating to adjustments to shares outstanding by stock split or stock dividend, minimum initial investments, investment practices, portfolio turnover, number of shares outstanding, number of shareholder accounts, and certain other condensed balance sheet data items.[1171]

One commenter requested that the Commission include certain information required on Form N–SAR that was proposed to be eliminated in Form N–CEN.[1172] That commenter, for example, suggested that certain fee and expense information currently available semi-annually on Form N–SAR (*e.g.,* Items 34–44, 47–52, 54, 72, and 75) should carry over into Form N–CEN. As discussed above, we find the commenter's concerns persuasive with respect to Item 75 of Form N–SAR and have added a reporting requirement in Form N–CEN that (1) funds other than money market funds provide the fund's monthly average net assets during the reporting period, and (2) money market funds provide the fund's daily average net assets during the reporting period.[1173] Otherwise, we continue to believe that Form N–CEN strikes an appropriate balance between the current information needs of Commission staff as well as the developments in the fund industry and the reduction of reporting burdens for registrants where information may be similarly disclosed or reported elsewhere.

We are also eliminating, as proposed, certain information requirements specifically relating to SBICs and UITs that we no longer believe are necessary to collect on a census form because, much like the items discussed above, the benefit of having such information is minimal to the Commission's oversight and examination functions while the burdens to these funds of reporting such information is costly.[1174] Additionally, with respect to the Form N–SAR item relating to closed-end fund monthly sales and repurchases of shares,[1175] this information will be reported on Form N–PORT,[1176] rather than Form N–CEN.

The full list of items from Form N–SAR that will be included in Form N–CEN or eliminated is included in Figure 2 below.

BILLING CODE 8011–01–P

requirements regarding the availability of their senior office code of ethics.

[1164] *See supra* footnote 1150 and accompanying text.

[1165] Item G.1.a.ii of Form N–CEN.

[1166] Item 26 of Form N–SAR. Form N–CEN does, however, contain information relating to funds that paid commissions to brokers and dealers for research services. *See* Item C.18 of Form N–CEN.

[1167] *See, e.g.,* ICI Comment Letter; SIFMA Comment Letter I; Invesco Comment Letter; BlackRock Comment Letter.

[1168] *See generally* Items 29–44 and Items 47–52 of Form N–SAR. Form N–CEN does, however, contain an item relating to expense limitations, reductions, and waivers. *See* Item C.8 of Form N–CEN. As discussed above, Form N–CEN also requires information on management fees and net operating expenses for closed-end funds, as that information is not available elsewhere in a structured format. *See* Item D.8 and Item D.9 of Form N–CEN; *see also supra* section II.D.4.d.

[1169] *See* General Instruction C.3.G to Form N–1A; *see generally* Form N–1A, Form N–2, Form N–4, Form N–5, and Form N–6.

[1170] We acknowledge that some of the information reported in reports on Form N–SAR related to loads paid to captive or unaffiliated broker-dealers has been used by interested third-parties, including researchers. *See, e.g.,* Susan E.K. Christoffersen, Richard Evans, & David K. Musto, *What do Consumers' Fund Flows Maximize? Evidence from Their Brokers' Incentives,* J. of Fin., Vol. 68(1), 201–235 (2013) (''Christoffersen Journal Article''). While this is evidence of a discrete instance where such information has been useful to a third party, based on staff experience with this information and Form N–SAR information generally, we believe that no longer requiring funds to gather and report this information appropriately balances the burden on funds of providing this information and the overall utility of the information to the Commission, investors and third parties.

[1171] *See generally* Item 57, Item 61, and Items 70–74 of Form N–SAR.

[1172] *See* Morningstar Comment Letter.

[1173] *See* discussion at *supra* footnotes 1016–1021 and accompanying text (discussing Item C.19 of Form N–CEN.

[1174] *See* Item 86, Item 93, Item 95, Items 97–100, Items 103–104, Item 109, and Items 125–132 of Form N–SAR.

[1175] *See* Item 86 (closed-end funds) of Form N–SAR; *see also* Item 28 (management investment companies generally) of Form N–SAR.

[1176] *See* Item B.6 of Form N–PORT.

INCLUSION OF FORM N-SAR DATA ITEMS IN FORM N-CEN

FORM N-SAR ITEM NO.	DESCRIPTION	INCLUDED WITHOUT CHANGE	INCLUDED BUT MODIFIED	SIMILAR DATA WILL BE AVAILABLE THROUGH OTHER SOURCES*	NO LONGER REQUIRED TO BE REPORTED BY ALL FUNDS
1	Registrant information	✓			
2	Registrant address	✓			
3	First filing	✓			
4	Final filing	✓			
5	SBIC identification	✓			
6	UIT information	✓			
7	Series or multiple portfolio company		✓		
	ALL MANAGEMENT INVESTMENT COMPANIES EXCEPT SBICS				
8	Investment adviser	✓			
10**	Administrator	✓			
11	Principal underwriter	✓			
12	Shareholder servicing agent	✓			
13	Independent public accountant	✓			
14	Broker or dealer which is an affiliated person	✓			
15	Custodian arrangements	✓			
18**	Central depository or book-entry system		✓		
19	Family of investment companies		✓		
20	Brokerage commissions paid on portfolio transactions		✓		

INCLUSION OF FORM N-SAR DATA ITEMS IN FORM N-CEN

FORM N-SAR ITEM NO.	DESCRIPTION	INCLUDED WITHOUT CHANGE	INCLUDED BUT MODIFIED	SIMILAR DATA WILL BE AVAILABLE THROUGH OTHER SOURCES*	NO LONGER REQUIRED TO BE REPORTED BY ALL FUNDS
21	Aggregate brokerage commissions	✓			
22	Portfolio transactions with entities acting as principal		✓		
23	Aggregate principal purchase/sale transactions		✓		
24	Holding of securities of registrant's regular brokers or dealers			✓	
25	Holding of securities of registrant's regular brokers or dealers			✓	
26	Considerations affecting participation of brokers or dealers				✓
27	Open-end investment company	✓			
28	Monthly sales and repurchases of registrant's/series' shares			✓	
29	Registrant/series imposing a front-end sales load			✓	
30	Total front-end sales load collected by underwriters and sales load rates				✓

INCLUSION OF FORM N-SAR DATA ITEMS IN FORM N-CEN

FORM N-SAR ITEM NO.	DESCRIPTION	INCLUDED WITHOUT CHANGE	INCLUDED BUT MODIFIED	SIMILAR DATA WILL BE AVAILABLE THROUGH OTHER SOURCES*	NO LONGER REQUIRED TO BE REPORTED BY ALL FUNDS
31	Net sales loads retained and paid out by underwriters				✓
32	Net amount paid to unaffiliated dealers				✓
33	Net amount paid to retail sales force				✓
34	Deferred or contingent deferred sales loads			✓	
35	Deferred or contingent deferred sales loads collected				✓
36	Deferred or contingent deferred sales loads retained				✓
37	Redemption fees			✓	
38	Redemption fees collected				✓
39	Account maintenance fees			✓	
40	Registrant/series using its assets directly to make payments under a 12b-1 plan			✓	
41	Direct use of assets under 12b-1 plan			✓	
42	Percentage of payments under the 12b-1 plan			✓	
43	Payments under the 12b-1 plan			✓	

INCLUSION OF FORM N-SAR DATA ITEMS IN FORM N-CEN

FORM N-SAR ITEM NO.	DESCRIPTION	INCLUDED WITHOUT CHANGE	INCLUDED BUT MODIFIED	SIMILAR DATA WILL BE AVAILABLE THROUGH OTHER SOURCES*	NO LONGER REQUIRED TO BE REPORTED BY ALL FUNDS
44	Unreimbursed payments under the 12b-1 plan				✓
45	Advisory contract		✓		
46	More than one investment adviser		✓		
47	Advisory fee based on percentage of assets			✓	
48	Contractual advisory fee rate			✓	
49	Advisory fee based on percentage of income			✓	
50	Advisory fee based on percentage of income and assets			✓	
51	Performance based advisory fee			✓	
52	Advisory fee based on assets, income or performance			✓	
53	Expense limitations or reductions		✓		
54	Services supplied by investment advisers or administrators				✓
55	Overdrafts and bank loans				✓
56	Advisory clients			✓	
57	Stock splits or stock dividends				✓
58	Fund classifications		✓		

INCLUSION OF FORM N-SAR DATA ITEMS IN FORM N-CEN

FORM N-SAR ITEM NO.	DESCRIPTION	INCLUDED WITHOUT CHANGE	INCLUDED BUT MODIFIED	SIMILAR DATA WILL BE AVAILABLE THROUGH OTHER SOURCES*	NO LONGER REQUIRED TO BE REPORTED BY ALL FUNDS
59	Management investment company		✓		
60	Diversified investment company		✓		
61	Minimum required investment			✓	
62	Percentage of portfolio in various debt securities			✓	
63	Dollar weighted average maturity			✓	
64	Insured or guaranteed securities				✓
65	Insured or guaranteed securities attributed to value used in computing NAV				✓
66	Classification of funds investing in equity securities			✓	
67	Registrant/series investing primarily and regularly in a balanced portfolio of debt and equity securities			✓	
68	Investments in issuers engaged in production or distribution of precious metals or located outside the United States			✓	
69	Registrant/series as an index fund	✓			

INCLUSION OF FORM N-SAR DATA ITEMS IN FORM N-CEN

FORM N-SAR ITEM NO.	DESCRIPTION	INCLUDED WITHOUT CHANGE	INCLUDED BUT MODIFIED	SIMILAR DATA WILL BE AVAILABLE THROUGH OTHER SOURCES*	NO LONGER REQUIRED TO BE REPORTED BY ALL FUNDS
70	Investment policies and practices			✓	
71	Portfolio purchases, sales, monthly average value, and turnover rate			✓	
72	Income and expenses			✓	
73	Dividends and distributions			✓	
74	Assets, liabilities, net assets			✓	
75	Computation of average net assets	✓			
76	Market price per share for closed-end investment companies	✓			
77	Attachments		✓		
78	Wholly-owned subsidiaries consolidated in report			✓	
79	"811" numbers for wholly-owned investment company subsidiaries consolidated in report				✓
80	Fidelity bonds in effect			✓	
81	Joint fidelity bond			✓	
82	Fidelity bond deductible			✓	
83	Fidelity bond claims	✓			
84	Losses that could have been filed as a claim under the fidelity bond				✓

INCLUSION OF FORM N-SAR DATA ITEMS IN FORM N-CEN

FORM N-SAR ITEM NO.	DESCRIPTION	INCLUDED WITHOUT CHANGE	INCLUDED BUT MODIFIED	SIMILAR DATA WILL BE AVAILABLE THROUGH OTHER SOURCES*	NO LONGER REQUIRED TO BE REPORTED BY ALL FUNDS
85	Errors and omissions insurance policy	✓			
CLOSED-END MANAGEMENT INVESTMENT COMPANIES EXCEPT SBICs					
86	Sales, repurchases, and redemptions of securities		✓		
87	Securities of registrant registered on a national securities exchange or listed on NASDAQ		✓		
88	Senior securities		✓		
SBICs					
89	Investment adviser		✓		
90	Transfer agent	✓			
91	Independent public accountant	✓			
92	Custodian arrangements		✓		
93	Advisory clients other than investment companies			✓	
94	Family of investment companies		✓		
95	Sales, repurchases, and redemptions of securities		✓		

INCLUSION OF FORM N-SAR DATA ITEMS IN FORM N-CEN

FORM N-SAR ITEM NO.	DESCRIPTION	INCLUDED WITHOUT CHANGE	INCLUDED BUT MODIFIED	SIMILAR DATA WILL BE AVAILABLE THROUGH OTHER SOURCES*	NO LONGER REQUIRED TO BE REPORTED BY ALL FUNDS
96	Securities of registrant registered on a national securities exchange or listed on NASDAQ		✓		
97	Income and expenses				✓
98	Dividends and distributions				✓
99	Assets, liabilities and shareholders' equity				✓
100	Computation of average net assets				✓
101	Market price per share	✓			
102	Attachments		✓		
103	Wholly-owned subsidiaries consolidated in report				✓
104	"811" numbers for wholly-owned investment company subsidiaries consolidated in report				✓
105	Fidelity bonds in effect			✓	
106	Joint fidelity bond			✓	
107	Fidelity bond deductible			✓	
108	Fidelity bond claims		✓		

INCLUSION OF FORM N-SAR DATA ITEMS IN FORM N-CEN

FORM N-SAR ITEM NO.	DESCRIPTION	INCLUDED WITHOUT CHANGE	INCLUDED BUT MODIFIED	SIMILAR DATA WILL BE AVAILABLE THROUGH OTHER SOURCES*	NO LONGER REQUIRED TO BE REPORTED BY ALL FUNDS
109	Losses that could have been filed as a claim under the fidelity bond				✓
110	Errors and omissions insurance policy	✓			
			UITs		
111	Depositor	✓			
112	Sponsor		✓		
113	Trustee		✓		
114	Principal underwriter	✓			
115	Independent public accountant	✓			
116	Family of investment companies		✓		
117	Separate account of an insurance company		✓		
118	Series having effective registration statements	✓			
119	New series having effective registration statements	✓			
120	Value of new series that became effective	✓			
121	Series for which a current prospectus existed at the end of the period	✓			

INCLUSION OF FORM N-SAR DATA ITEMS IN FORM N-CEN

FORM N-SAR ITEM NO.	DESCRIPTION	INCLUDED WITHOUT CHANGE	INCLUDED BUT MODIFIED	SIMILAR DATA WILL BE AVAILABLE THROUGH OTHER SOURCES*	NO LONGER REQUIRED TO BE REPORTED BY ALL FUNDS
122	New units of existing series	✓			
123	Value of new securities deposited in existing series	✓			
124	Value of units of prior series placed in portfolio of subsequent series	✓			
125	Amount of sales loads collected				✓
126	Amount of sales loads collected from secondary market operations				✓
127	Classification of series and assets			✓	
128	Insured or guaranteed securities				✓
129	Insured or guaranteed securities				✓
130	Insured or guaranteed securities				✓
131	Total expenses			✓	
132	811 number of series included in filing			✓	
133	Divestment of securities	✓			

* While not available in Form N-CEN, similar data is or will be available through other sources, such as Form N-PORT or a fund's prospectus, statement of additional information, or financial statements.

** Items 9, 16, and 17 are reserved in Form N-SAR.

Figure 2

BILLING CODE 8011–01–P

E. Option for Web Site Transmission of Shareholder Reports

The Commission proposed new rule 30e–3 under the Investment Company Act, which would have permitted a fund to satisfy requirements under the Act and rules thereunder to transmit reports to shareholders if the fund made the reports and certain other materials accessible on a Web site. Reliance on the rule would have been subject to certain conditions, including conditions relating to (1) the availability of the shareholder report and other required information; (2) implied shareholder consent; (3) notice to shareholders of the availability of shareholder reports; and (4) shareholder ability to request paper copies of the shareholder report or other required information. The proposed option was intended to modernize the manner in which periodic information is transmitted to shareholders. When we proposed the rule, we stated that we believed it would improve the information's overall accessibility while reducing burdens such as printing and mailing costs that are borne by funds and, ultimately, by fund shareholders.[1177]

Proposed rule 30e–3 generated substantial public comment, with over 900 commenters expressing views on the rule. Comments received on the proposal were mixed. Many commenters expressed support for the proposed rule, citing, for example, positive internet access and use trends, consistency with the preferences of many investors, intra- and inter-agency regulatory consistency benefits, and anticipated reduction in printing and mailing expenses for funds and their shareholders.[1178] However, many other commenters expressed concerns with the proposed rule, arguing, for example, that the proposed rule would have potential adverse effects on investor readership of shareholder reports generally and on certain demographic groups in particular.[1179] Commenters also disagreed about the size and distribution of printing and mailing expense savings that would result from the rule as proposed, particularly in the context of investors who purchase shares through intermediaries.[1180]

While the Commission plans to continue to consider how to promote electronic transmission to those who might prefer it, the comments discussed above raised issues with respect to this proposal that merit further consideration. We have, therefore, determined not to adopt proposed rule 30e-3 at this time.

F. Amendments to Forms Regarding Securities Lending Activities

We are also adopting form amendments that require a management investment company to disclose in its registration statement (or, in the case of a closed-end fund, its reports on Form N–CSR) certain disclosures regarding securities lending activities.[1181] We proposed similar requirements as part of the proposed amendments to Regulation S–X, including disclosure in the fund's financial statements of (1) the gross income from securities lending, including income from cash collateral reinvestment; (2) the dollar amount of all fees and/or compensation paid by the fund for securities lending activities and related services, including borrower rebates and cash collateral management services; (3) the net income from securities lending activities; (4) the terms governing the compensation of the securities lending agent, including any revenue sharing split, with the related percentage split between the fund and the securities lending agent, and/or any fee-for-service, and a description of services included; (5) the details of any other fees paid directly or indirectly, including any fees paid directly by the fund for cash collateral management and any management fee deducted from a pooled investment vehicle in which cash collateral is invested; and (6) the monthly average of the value of portfolio securities on loan.[1182] We proposed these disclosures in order to allow investors to better understand the income generated from, as well as the expenses associated with, a fund's securities lending activities.[1183]

We received a number of comments addressing our proposed securities lending disclosures. Comments on the proposed disclosure requirements were mixed. Most of the commenters who addressed the issue expressed support for requiring disclosure of securities lending income and fees, although some specifically opposed or expressed concerns about the proposed requirement to disclose the terms governing the compensation of the securities lending agent.[1184] Some commenters expressed opposition generally to the public nature of the proposed new disclosure requirements concerning fund securities lending activities.[1185] Some commenters also

---

[1177] *See* Proposing Release, *supra* footnote 7, at 33626.

[1178] *See, e.g.,* BlackRock Comment Letter; ICI Comment Letter; Schnase Comment Letter.

[1179] *See, e.g.,* Comment Letter of Leah J. Adams (Jan. 9, 2016); Comment Letter of Anonymous (Jan. 10, 2016); Comment Letter of Julia Benson (Jan. 10, 2016); Comment Letter of Broadridge Financial Solutions, Inc. (Jan. 13, 2016) (''Broadridge Comment Letter''); Comment Letter of Julia Cole (Jan. 8, 2016); Comment Letter of Lisa A. Darling (Aug. 7, 2015); Comment Letter of Don (Jan. 10, 2016); Comment Letter of Keene Ferrer (Jan. 9, 2016); Comment Letter of Association of Free Community Papers (Aug. 11, 2015); Comment Letter of Anthony W. Golden (Aug. 11, 2015); Comment Letter of Patricia Hanbury (Jan. 10, 2016); Comment Letter of Zane Hollenberger (July 27, 2015); Comment Letter of Lucy James (Jan. 9, 2016); Comment Letter of Gary Kasufkin (Jan. 12, 2016); Comment Letter of Debbi Lambert (Aug. 6, 2015); Comment Letter of William D. Looman (Jan. 9, 2016); Comment Letter of Sharon L. McCain (Jan. 9, 2016); Comment Letter of National Association of Letter Carriers (Aug. 4, 2015); Comment Letter of Dan Oved (Jan. 8, 2016); Comment Letter of Tim Plunk (July 16, 2015); Comment Letter of Joanne Rock (Aug. 7, 2015); Comment Letter of Thomas Scibek (Aug. 10, 2015); Comment Letter of Robin Snyder (Aug. 6, 2015); Comment Letter of Teresa (Jan. 8, 2016); Comment Letter of Manuel E. Velosa, Jr. (Jan. 10, 2016); Comment Letter of Wise (Aug. 3, 2015); Form Letter Type A (7 copies received); Form Letter Type B (234 copies received); Form Letter Type C (57 copies received); Form Letter Type D (93 copies received); Form Letter Type E (43 copies received).

[1180] *See, e.g.,* Broadridge Comment Letter; ICI Comment Letter.

[1181] *See* Item 19(i) of Form N–1A; Item 21(j) of Form N–3; Item 12 of Form N–CSR. Because closed-end funds do not offer their shares continuously, and are therefore generally not required to maintain an updated Statement of Additional Information to meet their obligations under the Securities Act, we are requiring closed-end funds to disclose their securities lending activities information annually on Form N–CSR.

[1182] *See* proposed rule 6–03(m) of Regulation S–X; Proposing Release, *supra* footnote 7, at 33624.

[1183] *See id.*

[1184] *See* AICPA Comment Letter (stating that the requirements would provide meaningful information to investors and other potential users and allow them to better understand the fund's securities lending activities, except for disclosure of the terms governing the compensation of the securities lending agent other than for related parties); BlackRock Comment Letter (stating that ''investor protection is well served by a level playing field that allows investors to make informed choices on a risk adjusted basis'' and that uniform and clear information requirements associated with securities lending activities will empower mutual fund directors to more effectively evaluate and compare securities lending services); Deloitte Comment Letter (opposing required financial statement disclosure of indirect fees); Fidelity Comment Letter (expressing support for enabling investors to better understand the income generated from securities lending activity and all proposed disclosures except for fee split with a third-party lending agent); ICI Comment Letter (expressing support for the proposed requirements except the required public disclosure of the terms governing the compensation of the securities lending agent); PwC Comment Letter (opposing the proposed financial statement disclosure requirement of the terms of compensation, including any revenue sharing split, while stating that the categories of disclosure would provide meaningful information to readers); RMA Comment Letter (opposing a requirement to disclose borrower rebates and recommending that, if required, revenue sharing percentage disclosure be calculated using the fund's net lending income and fees paid during the reporting period); Simpson Thacher Comment Letter (opposing required public disclosure of securities lending splits); State Street Comment Letter (opposing disclosure requirement for borrower rebates and recommending requirements for actual income and fees paid rather than contractual terms); *cf.* BlackRock Directors Comment Letter (stating, in the context of proposed Form N–CEN requirements, that ''[i]mproved transparency as to the economic terms in the market for securities lending services will assist independent directors in assessing annually the customary charges imposed for such services'').

[1185] *See* Invesco Comment Letter (opposing required public disclosure of fund's securities lending activities); MFS Comment Letter (opposing

Continued

expressed particular concerns relating to the location of the required disclosure in the fund's financial statements.[1186]

We continue to believe that because net earnings from securities lending can contribute to the investment performance of a fund, investors and others would benefit from the additional transparency into the impact of securities lending fees on the income from these activities and further believe that the benefits of this additional transparency justify the potential unintended consequences, highlighted by commenters and discussed below, of public disclosure of certain information. We have, however, made certain modifications to the proposed requirements in an effort to mitigate some of these potential consequences.[1187] As discussed in greater detail below, these modifications include, for example, replacing the proposed requirement that funds disclose the terms governing the compensation of the securities lending agent—including any revenue split—with a requirement to report actual fees paid during the fund's prior fiscal year, because commenters persuaded us that backward-looking dollar-based requirements would yield clearer disclosure than would the proposed requirements and may also enhance disclosure comparability across funds for investors and reduce preparation complexity for funds.

1. Determination To Adopt Requirements as Amendments to Registration Statement and Annual Report Forms

As proposed, certain disclosures relating to securities lending activities, including income and expenses, would have been required to be included in a fund's financial statements.[1188] However, we sought public comment on whether the proposed or similar disclosures should instead be provided as part of other disclosure documents such as the Statement of Additional Information.[1189] In response, some commenters raised concerns about including this information in the fund's financial statements, including concerns about cost and that lengthy disclosure concerning securities lending activity in a fund's financial statements could detract from other financial statement disclosures.[1190] After consideration of these issues raised by commenters, we have determined that it is appropriate to require funds to include these disclosures in their Statements of Additional Information (or, for closed-end funds, in their reports on Form N–CSR), rather than to require their inclusion in fund financial statements. Therefore, we are adopting these disclosure requirements as amendments to the fund registration forms (*viz.,* Forms N–1A and N–3) and reports on Form N–CSR (for closed-end funds only), rather than as amendments to Regulation S–X.[1191]

2. Requirement To Disclose Securities Lending Income, Expenses, and Services

As discussed in detail below, the final rules will require funds to disclose gross and net income from securities lending activities, fees and compensation in total and broken out by enumerated types, and a description of the services provided to the fund by the securities lending agent. We proposed to require disclosure of gross income from securities lending, including income from cash collateral reinvestment;[1192] the dollar amount of fees and compensation paid by the fund for securities lending activities and related services, including borrower rebates and payments for cash collateral management services;[1193] the net income from securities lending activities;[1194] the details of any other fees paid directly or indirectly, including any fees paid directly by the fund for cash collateral management and any management fee deducted from a pooled investment vehicle in which cash collateral is invested;[1195] and the terms governing the compensation of the securities lending agent, including any revenue sharing split, with the related percentage split between the fund and the securities lending agent, and/or any fee for service and a description of services included.[1196] After consideration of issues raised by commenters, we are generally adopting the substance of the proposed fee disclosure requirements but are requiring funds to make these disclosures in their Statements of Additional Information (or, in the case of a closed-end fund, Form N–CSR) rather than as part of their financial statements (as proposed). We are amending the Statement of Additional Information requirements in Forms N–1A and N–3, and Form N–CSR (for closed-end funds) to require funds to disclose dollar amounts of income and fees and compensation paid to service providers related to their securities lending activities during their most recent fiscal year, as illustrated in Table 1 below.[1197]

required public disclosure of securities lending fees); SIFMA Comment Letter I (opposing public disclosure requirements concerning financial arrangements of fund securities lending activities); Wells Fargo Comment Letter (opposing required public disclosure of securities lending income and expenses); *cf.* IDC Comment Letter (opposing required public disclosure of compensation and other fee and expense information relating to securities lending arrangements).

[1186] *See infra* note 1190.

[1187] *See infra* footnotes 1212–1219 and accompanying text.

[1188] *See* proposed rule 6–03(m) of Regulation S–X; Proposing Release, *supra* footnote 7, at 33624.

[1189] *See* Proposing Release, *supra* footnote 7, at 33625.

[1190] *See* Deloitte Comment Letter (noting that indirect fees ''are typically management's estimate that is imprecise'' and stating that additional costs of auditing the disclosure of these fees ''would most likely outweigh any benefits of reporting this information''); EY Comment Letter (stating that ''the proposed disclosures would result in the presentation of detailed information with varying degrees of usefulness that could detract from other material information presented in the financial statements'' and recommending that ''the Commission use other reporting mechanisms more suited for that purpose'').

[1191] *See* Item 19(i) of Form N–1A; Item 21(j) of Form N–3; Item 12 of Form N–CSR.

[1192] Proposed rule 6–03(m)(1) of Regulation S–X.

[1193] Proposed rule 6–03(m)(2) of Regulation S–X.

[1194] Proposed rule 6–03(m)(3) of Regulation S–X.

[1195] Proposed rule 6–03(m)(5) of Regulation S–X.

[1196] Proposed rule 6–03(m)(4) of Regulation S–X.

[1197] *See* Item 19(i)(1) of Form N–1A; Item 21(j)(i) of Form N–3; Item 12(a) of Form N–CSR. The disclosure need not be presented in a tabular format.

SECURITIES LENDING ACTIVITIES

Gross income from securities lending activities	$ ____________
Fees and/or compensation for securities lending activities and related services	
Fees paid to securities lending agent from a revenue split	$ ____________
Fees paid for any cash collateral management service (including fees deducted from a pooled cash collateral reinvestment vehicle) that are not included in the revenue split	$ ____________
Administrative fees not included in revenue split	$ ____________
Indemnification fee not included in revenue split	$ ____________
Rebate (paid to borrower)	$ ____________
Other fees not included in revenue split (specify)	$ ____________
Aggregate fees/compensation for securities lending activities	$ ____________
Net income from securities lending activities	$ ____________

Table 1

The modifications from the proposed requirements are designed to, among other things, enhance comparability of the disclosed information and potentially ameliorate some concerns commenters expressed about the proposed required public disclosure of the terms governing compensation of the securities lending agent. Several commenters expressed concern that the proposed disclosure requirements could yield information that would suggest, inaptly, that fees and expenses related to securities lending activities among funds are readily compared and contrasted.[1198] Specifically, one commenter highlighted that information provided under the proposed requirements might not be comparable due to the subjectivity of related inputs and assumptions.[1199] Another commenter, however, suggested that we could facilitate comparability by specifying the fees for particular services that must be disclosed.[1200] We have considered these commenters' views and suggestions and have been persuaded to specify in the final rules which specific fees should be disclosed and what those fees should include rather than requiring, as proposed, disclosure of all fees and/or compensation paid for securities lending and related services *without* specifying which fees should be disclosed.[1201] We believe that these modifications will enhance comparability of the disclosed fees and compensation. The list of specific fees we are enumerating has been adapted from the list of securities lending payments about which reporting will be required by Form N–CEN, which, as discussed above, we are adopting as proposed.[1202] We have determined that, in specifying the specific categories of fees that are required to be disclosed, it is appropriate to adapt the list of fees from proposed Form N–CEN because consistency between the two lists will allow for better comparability of information from reports on Form N–CEN and disclosures in funds' Statements of Additional Information and, with respect to closed-end funds, reports on Form N–CSR.

The comparability of the disclosed fee and expense information may also depend on the nature of the services provided to a particular fund in connection with its securities lending activities. To that end, we proposed a disclosure requirement for a description of services included in the fund's arrangement with its securities lending agent.[1203] One commenter suggested robust disclosure of the services provided by the securities lending agent and provided several examples of the types of services that should be disclosed to improve comparability.[1204] The commenter stated that it had observed a lack of uniformity in the package of services performed by securities lending agents, which can hinder understanding of securities lending fees.[1205] We agree with the commenter that enhanced and more comparable disclosure of services provided can help users of the information to better understand the particular services provided by

[1198] *See* MFS Comment Letter; PwC Comment Letter.

[1199] *See* MFS Comment Letter. The commenter did not provide examples of specific subjective inputs and assumptions in connection with the terms of securities lending expenses.

[1200] *See* Fidelity Comment Letter.

[1201] Item 19(i)(1)(ii) of Form N–1A (requiring disclosure of all fees and/or compensation for each of the following securities lending activities and related services: Any share of revenue generated by the securities lending program paid to the securities lending agent or agents—the ''revenue split''; fees paid for cash collateral management services—including fees deducted from a pooled cash collateral reinvestment vehicle—that are not included in the revenue split; administrative fees that are not included in the revenue split; fees for indemnification that are not included in the revenue split; rebates paid to borrowers; and any other fees relating to the securities lending program that are not included in the revenue split, including a description of those fees); Item 21(j)(i)(B) of Form N–3 (same); Item 12(a)(2) of Form N–CSR (same). If a fee for a service is included in the revenue split, state that the fee is ''included in the revenue split.'' Instruction to Item 19(i)(1) of Form N–1A; Instruction to Item 21(j)(i) of Form N–3 (same); Instruction (a) to Item 12 of Form N–CSR (same).

[1202] *See* Item 30.e of proposed Form N–CEN; Item C.6.e of Form N–CEN; *supra* section II.D.4.c.iii.

[1203] Proposed rule 6–03(m)(4) of Regulation S–X.

[1204] *See* BlackRock Directors Comment Letter (suggesting such a requirement in the context of reports on Form N–CEN).

[1205] *Id.*

securities lending agents for the aggregate fees they were paid over the reporting period. Accordingly, to further enhance the comparability of the disclosed information and allow users to better assess fee and expense information, we have determined to specify that this information should be provided on the basis of the services actually provided to the fund in its most recent fiscal year. Some examples of the types of services that could be enumerated include, as applicable, locating borrowers, monitoring daily the value of the loaned securities and collateral, requiring additional collateral as necessary, cash collateral management, qualified dividend management, negotiation of loan terms, selection of securities to be loaned, recordkeeping and account servicing, monitoring dividend activity and material proxy votes relating to loaned securities, and arranging for return of loaned securities to the fund at loan termination.[1206]

Another commenter expressed concerns that the proposed fee and expense information could be used to evaluate the terms of a fund's lending arrangements and could, without access to additional information, result in potentially inappropriate conclusions that a fund negotiated its arrangements poorly or was otherwise disadvantaged in its negotiations.[1207] That commenter noted that the revenue split can depend on numerous factors, including the range, amount, and attractiveness of the securities a fund complex as a whole may make available for loan.[1208] Two commenters suggested eliminating the proposed requirement for disclosure of borrower rebates, reasoning that they are primarily a function of prevailing short-term interest rates.[1209] However, we continue to believe that it is appropriate to require disclosure of borrower rebates, because, irrespective of how they may be determined in particular cases, they are nonetheless an expense of securities lending. One commenter argued that a fund board wishing to evaluate the fund's securities lending program would have access to more detailed analyses than could be practically included in the fund's financial statements.[1210] Conversely, another commenter stated that uniform and clear information requirements would have the benefit of empowering more effective evaluation and comparison of securities lending services.[1211] While, as commenters suggested, a thorough evaluation of a fund's securities lending activities, such as an evaluation by that fund's board, may appropriately include information beyond the scope of the disclosure requirements we are adopting today, we believe that these new requirements will nonetheless enhance comparability and allow investors to better understand the expenses associated with securities lending activities. We also note that today's amendments are not meant to circumscribe the factors to be rightfully considered in such an evaluation.

Commenters also expressed concerns with the proposed requirements based on the currently nonpublic character of some of the information that would be required to be disclosed publicly, particularly the proposed requirement to disclose the terms governing compensation of the securities lending agent.[1212] Commenters argued that some funds currently enjoy privately negotiated competitive advantages with securities lending services or counterparties that could be jeopardized should their arrangements with their securities lending agents be made public.[1213] We continue to believe, however, that the required fee information will allow investors to better understand the expenses associated with securities lending activities and have therefore determined to adopt these modified disclosure requirements with modifications to address commenters' concerns. We believe that the modifications to the proposed requirements that we are making today eliminate the disclosures from the proposed requirements that some commenters indicated could be the most sensitive—specifically, the terms of the revenue split and the terms governing the compensation of the securities lending agent more generally—while retaining the required information that we think will be most useful to investors in understanding the expenses associated with fund securities lending activities.

In particular, some commenters suggested that, rather than requiring disclosure of the terms governing the compensation of the securities lending agent, as we proposed,[1214] we consider instead requiring disclosure of backward-looking actual compensation levels.[1215] One of these commenters argued that, because there are a variety of fee arrangements in the marketplace, such an alternative disclosure requirement may provide a clearer, more concise view of each party's compensation.[1216] We have been persuaded by these commenters' suggestions that backward-looking dollar-based requirements would yield clearer disclosure than would the proposed requirements and may also enhance disclosure comparability across funds for investors and reduce preparation complexity for funds and thus have modified the requirements accordingly.[1217] This dollar-based requirement would also eliminate the requirement that potentially sensitive negotiated contractual terms be disclosed, while nonetheless allowing investors to better understand the expenses associated with securities lending activities. A commenter also counseled against placing undue emphasis on the securities lending agent's revenue split at the expense of other securities lending fees and expenses,[1218] and we believe that the schedule of fees and expenses we are requiring to be disclosed places an appropriate level of emphasis on that figure situated among the other required fee and expense disclosures.[1219]

We also proposed to require disclosure of gross income from securities lending, including income from cash collateral reinvestment,[1220] as well as net income.[1221] We did not receive comments specific to these proposed requirements. We are adopting the proposed requirement to disclose gross income from securities lending activities. Moreover, as further clarification about the types of income that could be included in this total, we

[1206] Item 19(i)(2) of Form N–1A (requiring disclosure of the services provided to the fund by the securities lending agent); Item 21(j)(ii) of Form N–3 (same); Item 12(b) of Form N–CSR (same).

[1207] PwC Comment Letter (particularly with respect to the proposed terms of compensation disclosure requirement); *see also* RMA Comment Letter (concerning borrower rebates).

[1208] PwC Comment Letter.

[1209] RMA Comment Letter; State Street Comment Letter.

[1210] PwC Comment Letter.

[1211] *See* BlackRock Comment Letter.

[1212] *See* AICPA Comment Letter (particularly concerned with respect to the terms governing the compensation of the securities lending agent); Fidelity Comment Letter (particularly concerned with respect to the revenue split); ICI Comment Letter; Invesco Comment Letter; MFS Comment Letter; SIFMA Comment Letter I; Simpson Thacher Comment Letter (particularly concerned with respect to the revenue split); Wells Fargo Comment Letter.

[1213] *See* AICPA Comment Letter; Fidelity Comment Letter; ICI Comment Letter; Invesco Comment Letter; MFS Comment Letter; SIFMA Comment Letter I; Simpson Thacher Comment Letter; Wells Fargo Comment Letter.

[1214] *See* proposed rule 6–03(m)(4) of Regulation S–X.

[1215] *See* RMA Comment Letter (recommending that funds report a calculated split based on a fund's actual net lending income and fees paid during the reporting period); State Street Comment Letter.

[1216] State Street Comment Letter.

[1217] Item 19(i)(1)(ii) of Form N–1A; Item 21(j)(i)(B) of Form N–3; Item 12(a)(1) of Form N–CSR.

[1218] *See* Fidelity Comment Letter.

[1219] *See supra* Table 1.

[1220] Proposed rule 6–03(m)(1) of Regulation S–X.

[1221] Proposed rule 6–03(m)(3) of Regulation S–X.

note that—in addition to income from cash collateral reinvestment—disclosed gross income may also include negative rebates (*i.e.,* those paid by the borrower to the lender), loan fees paid by borrowers when collateral is noncash, management fees from a pooled cash collateral reinvestment vehicle that are deducted from the vehicle's assets before income is distributed, and any other income.[1222] We are adopting the proposed requirement to disclose net income and clarifying that the reported figure should be equal to the difference between gross income and aggregate fees/compensation.[1223]

3. Required Disclosures of Monthly Average Value on Loan

We also proposed to require disclosure of the monthly average of the value of portfolio securities on loan.[1224] As discussed above, we have determined to adopt a similar requirement in Form N–CEN where it will be available in a structured data format and are not including it in the amendments to Forms N–1A, N–3, and N–CSR.[1225]

G. Technical and Conforming Amendments

As proposed, we are also adopting technical and conforming amendments to various rules and forms. As discussed above, we are rescinding Form N–Q and adopting new Form N–PORT. In order to implement this change, we are revising Forms N–1A, N–2, and N–3 to refer to the availability of portfolio holdings schedules attached to reports on Form N–PORT and posted on fund Web sites rather than on reports on Form N–Q.[1226] In addition, we are rescinding 17 CFR 249.332 and revising the following rules to remove references to Form N–Q: 17 CFR 232.401, 17 CFR 270.8b–33, 17 CFR 270.30a–2, 17 CFR 270.30a–3, and 17 CFR 270.30d–1.

We are also rescinding Form N–SAR and replacing it with new Form N–CEN. In order to implement this change, we are revising the following rules and sections to remove references to Form N–SAR and replacing them with references to Form N–CEN: 17 CFR 232.301, 17 CFR 240.10A–1, 17 CFR 240.12b–25, 17 CFR 249.322, 17 CFR 249.330, 17 CFR 270.8b–16, 270.30d–1, 17 CFR 274.101, and Form N–8F.[1227]

Currently, reports on Form N–SAR are filed semi-annually by management investment companies as required by 17 CFR 270.30b1–1, and annually by UITs as required by 17 CFR 270.30a–1. Because we are requiring reports on Form N–CEN to be filed annually by all registered investment companies, we are rescinding 17 CFR 270.30b1–1 and revising 17 CFR 270.30a–1 to require all registered investment companies to file reports on Form N–CEN. We are also revising the following rules to remove references to 17 CFR 270.30b1–1 and add references to revised rule 17 CFR 270.30a–1: 17 CFR 240.13a–10, 17 CFR 240.13a–11, 17 CFR 240.13a–13, 17 CFR 240.13a–16, 17 CFR 240.15d–10, 17 CFR 240.15d–11, 17 CFR 240.15d–13, and 17 CFR 240.15d–16.

In addition, as a result of the proposed new annual reporting requirement that would apply to all registered investment companies, we are rescinding 17 CFR 270.30b1–2—which currently permits wholly-owned management investment company subsidiaries of management investment companies to not file Form N–SAR under certain circumstances—and adopting new rule 17 CFR 270.30a–4—which will permit wholly-owned management investment company subsidiaries of management investment companies to not file Form N–CEN under those same circumstances. We are also amending 17 CFR 200.800 to display control numbers assigned to information collection requirements for Forms N–PORT and N–CEN by the Office of Management and Budget pursuant to the Paperwork Reduction Act. As discussed further below, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.[1228]

Our amendments to Regulation S–X will, among other things, require management investment companies to report new schedules for certain derivatives holdings.[1229] To implement these changes, we are renumbering the sections for schedules required to be reported by management investment companies and renumbering the list of schedules provided in 17 CFR 210.6–10, which outlines the schedules to be reported by investment companies.[1230] We are also adopting conforming changes to references to Regulation S–X in the following forms: Form N–1A, Form N–2, Form N–3, and Form N–14.[1231]

We are also amending Form N–CSR to revise instructions addressing how disclosures and certifications as to the effectiveness and changes in the registrant's internal control over financial reporting should be handled during the transition period when certifications for funds' portfolio holdings for their first and third fiscal quarters will no longer be provided on Form N–Q but instead will provided on Form N–CSR.[1232] In the Proposing Release we proposed deleting these instructions, but we are revising the instructions to clarify how these disclosures and certifications shall be handled with regards to smaller entities

[1222] Item 19(i)(1)(i) of Form N–1A; Item 21(j)(i)(A) of Form N–3 (same); Item 12(a)(1) of Form N–CSR. Gross income for purposes of this disclosure generally should include indirect fees paid for cash collateral management services—*i.e.,* management services provided to a pooled investment vehicle in which cash collateral is invested. Those fees are indirect because they are taken from the pooled assets before any income is distributed to the lending fund. In order for the net income disclosure from securities lending to sum to the net income for securities lending reported at period end, we believe that indirect fees for cash collateral management generally should be added to the gross income from securities lending in the Statement of Additional Information or, with respect to closed-end funds, in reports on Form N–CSR.

[1223] Item 19(i)(1)(iv) of Form N–1A; Item 21(j)(i)(D) of Form N–3; Item 12(a)(4) of Form N–CSR.

[1224] *See* proposed rule 6–03(m)(6) of Regulation S–X.

[1225] *See supra* footnotes 969–972 and accompanying text.

[1226] *See* Instruction 3(b) to Item 16(f) of Form N–1A; Instruction 4 to Item 27(d)(1) of Form N–1A; Instruction 6.b to Item 24 of Form N–2; Instruction 6(ii) to Item 28(a) of Form N–3; Instruction 3(b) to Item 19(e)(ii) of Form N–3.

[1227] Although we are deleting references to Form N–SAR in 17 CFR 232.301, we are not replacing them with references to Form N–CEN because the references in that section relate to specific portions of the EDGAR Filer Manual that would not be relevant to Form N–CEN.

[1228] *See infra* section IV.

[1229] Our amendments require new schedules to be filed to report open futures contracts, open forward foreign currency contracts, and open swap contracts. *See* new rules 12–13A–C of Regulation S–X.

[1230] Among other things, our amendments will renumber the CFR sections for open option contracts and the summary schedule of investments in unaffiliated issuers from 17 CFR 210.12–12B and 17 CFR 210.12–12C to 17 CFR 210.12–13 and 17 CFR 210.12–B, respectively. These amendments group the schedule for open option contracts written together with the new schedules for open futures contracts, open forward foreign currency contracts, and open swap contracts, and list the summary schedule sequentially after the investments in securities of unaffiliated issuers. We are also amending 17 CFR 210.6–10 to, among other things, add new schedules V, VI, and VII for open futures contracts, open forward foreign currency contracts, and open swap contracts, respectively, and renumber schedule II for investments other than securities and schedule VI for summary of investments in securities of unaffiliated issuers as schedules VIII and IX, respectively. *See* amended rule 6–10 of Regulation S–X (listing the schedules required to be filed by management investment companies, UITs, and face-amount certificate companies).

[1231] *See* Item 27(b)(1) of Form N–1A (reference to schedule VI changed to schedule IX and reference to schedule I are corrected to cite to the appropriate CFR section); Instruction 7 to Item 24 of Form N–2 (we are updating references to schedule VI); Instruction 7(i) and (ii) to Item 28(a) of Form N–3 (we are updating references to schedule VI).

[1232] Item 11 and Item 12 of Form N–CSR.

as opposed to larger entities during the transition period.

We are also removing and reserving paragraph (a) of 17 CFR 232.105, which currently requires electronic filers to submit Forms N–SAR and 13F in ASCII. We are rescinding Form N–SAR, and Form 13F has been submitted by electronic filers in XML, rather than ASCII, since 2013.[1233] Although we also proposed to revise the section heading of 17 CFR 232.105 and redesignate paragraphs (b) and (c) as (a) and (b), respectively, upon further consideration we believe those changes are unnecessary at this time.

We received no comments on these technical and conforming amendments, and are adopting them substantially as proposed, as discussed herein.

H. Compliance Dates

We are adopting the following compliance dates for our amendments, as set forth below.

1. Form N–PORT, Rescission of Form N–Q, and Amendments to the Certification Requirements of Form N–CSR

As proposed, given the nature and frequency of filings on Form N–PORT, the Commission is providing a tiered set of compliance dates based on asset size. Specifically, for larger entities—namely, funds that together with other investment companies in the same ''group of related investment companies'' [1234] have net assets of $1 billion or more as of the end of the most recent fiscal year of the fund—we are adopting a compliance date of June 1, 2018. This will result in larger funds filing their first reports on Form N–PORT, reflecting data as of June 30, no later than July 30, and will provide those funds with a compliance period of at least 18 months, consistent with our proposal. For these entities, we expect that this period of time will provide an adequate period of time for funds, intermediaries, and other service providers to conduct the requisite operational changes to their systems and to establish internal processes to prepare, validate, and file reports on new Form N–PORT with the Commission.[1235]

For smaller entities (*i.e.,* funds that together with other investment companies in the same ''group of related investment companies'' have net assets of less than $1 billion as of the end of the most recent fiscal year of the fund),[1236] the compliance date will be June 1, 2019. This will provide smaller entities an extra 12 months, as proposed, to comply with the new reporting requirements. We believe that smaller groups will benefit from this extra time to comply with the filing requirements for Form N–PORT and will potentially benefit from the lessons learned by larger investment companies and groups of investment companies during the adoption period for Form N–PORT.

In the Proposing Release, we stated that we intended to rescind Form N–Q and require implementation of the amendments to the certification requirements of Form N–CSR within a timing that would be consistent with this adoption. We received no comments on this aspect of the proposal. Therefore, consistent with the timing for the implementation of reporting requirements for Form N–PORT, we are also rescinding Form N–Q (referenced in 17 CFR 274.130) and implementing the amendments to the certification requirements of Form N–CSR (referenced in 17 CFR 274.128) with approximately the same time frame. However, we are delaying the rescission of Form N–Q by two additional months to allow funds sufficient time to satisfy Form N–Q's 60-day filing requirements with regard to their final filing on Form N–Q for the reporting period preceding their first filing on Form N–PORT. Thus, the compliance dates for the amendments to the certification requirements of Form N–CSR will be June 1, 2018 for larger entities, and June 1, 2019 (12 months later) for smaller entities. Form N–Q and related rules referencing Form N–Q will be rescinded two months later, on August 1, 2019. In addition, as discussed below, the compliance date for reporting a change in independent public accountant on Form N–CSR will be consistent with the compliance date for other information reported on Form N–CEN.[1237]

We understand that certain changes to issuers' and market participants' systems may not be able to occur until the final technical requirements are published in the EDGAR Filer Manual and EDGAR Technical Specifications documents. In order to provide issuers and other filers time to make adjustments to their systems, we anticipate making a draft of the EDGAR Technical Specifications documents available in advance. We believe that test submissions may assist both the Commission and issuers with addressing unknown and unforeseeable issues that may arise with the reporting of information on Form N–PORT. We will permit funds to file test submissions during a trial period.

Additionally, we have determined to maintain as nonpublic all reports filed on Form N–PORT for the first six months following June 1, 2018. We believe that, separate from the voluntary trial, having a time period where all funds are required to file reports on Form N–PORT with the Commission but not have those reports disclosed publicly will allow funds and the Commission to make adjustments to fine-tune the technical specifications and data validation processes. We believe that this process can ultimately improve the data that is reported to the Commission and, as required disclosed to the public. Accordingly, we find that it is neither necessary nor appropriate in the public interest or for the protection of investors to make reports filed on Form N–PORT during the first six months following the compliance date publicly available.[1238] However, portfolio information attached as

[1233] *See* SEC, Announcement: Notice to EDGAR Form 13F Filers (Mar. 29, 2013), *available at http://www.sec.gov/divisions/investment/imannouncements/notice-form-13f-im.htm* (requiring funds to file Form 13F according to EDGAR XML Technical Specifications beginning on April 29, 2013).

[1234] For these purposes, the threshold is based on the definition of ''group of related investment companies,'' as such term is defined in rule 0–10 under the Investment Company Act [17 CFR 270.0–10]. Rule 0–10 defines the term as ''two or more management companies (including series thereof) that: (i) Hold themselves out to investors as related companies for purposes of investment and investor services; and (ii) Either: (A) Have a common investment adviser or have investment advisers that are affiliated persons of each other; or (B) Have a common administrator; and [. . .] In the case of a unit investment trust, the term group of related investment companies shall mean two or more unit investment trusts (including series thereof) that have a common sponsor.'' We believe that this broad definition will encompass most types of fund complexes and therefore is an appropriate definition for compliance date purposes.

[1235] We believe that this compliance period for larger groups of investment companies is an adequate amount of time for funds to implement new Form N–PORT and make the necessary system and operational changes. We adopted a nine month compliance period when we first required money market funds to report their portfolio holdings to the Commission on a monthly basis on Form N–MFP. Based upon our Form N–MFP compliance experience, and the larger number of non-money market fund filers, we believe that doubling the Form N–MFP compliance period to eighteen months for filing reports on Forms N–PORT is appropriate. *See* Money Market Fund Reform 2010 Release, *supra* footnote 447, at 10087.

[1236] Based on staff analysis of data obtained from Morningstar Direct, as of June 30, 2016, we estimate that a $1 billion assets threshold would provide an extended compliance period to more than 67% of fund groups, but only 0.6% of all fund assets. We therefore believe that the $1 billion threshold will appropriately balance the need to provide smaller groups of investment companies with more time to prepare for the initial filing of reports on Form N–PORT, while still including the vast majority of fund assets in the initial compliance period.

[1237] *See infra* section II.H.2.

[1238] *See* section 45(a) of the Investment Company Act.

exhibits to Form N–PORT for the first and third quarters of a fund's fiscal year will still be made public during this period, to ensure that information about funds' portfolio holdings continues to be publicly available to investors and other users during the six month period when reports on Form N–PORT will not be made publicly available.[1239]

One commenter did not explicitly address compliance dates for Form N–PORT, but suggested that the compliance period for Regulation S–X be changed to 18 months so that Form N–PORT and the amendments to Regulation S–X would have the same compliance date.[1240] Other commenters suggested extending the compliance period for Form N–PORT for all funds, including specific recommendations for 24 months, 30 months, or 36 months after the later of the effective date for this rulemaking or the adoption of amendments requiring funds to report liquidity information on Form N–PORT.[1241]

We are adopting an initial compliance date for Form N–PORT of June 1, 2018, which is consistent with the 18-month compliance period we proposed. As discussed above, we anticipate that the information that will be reported on Form N–PORT will enable us to further our mission to protect investors by assisting us in carrying out our regulatory responsibilities related to the asset management industry. We believe that it is important for the Commission to obtain and benefit from such information as soon as it is reasonably possible for this information to be reported. Although several commenters recommended extending the compliance period in order to update reporting systems,[1242] based in part upon our experience with Form N–MFP reporting implementation, we continue to believe that 18 months for larger entities and 30 months for smaller entities will provide sufficient time for funds and their service providers to prepare to file reports on Form N–PORT.

Separately, as discussed above, our adoption includes numerous modifications from or clarifications to the proposal that address concerns raised by commenters and that are intended, in part, to decrease reporting and implementation burdens relative to the proposal. For example, we have added an instruction to Form N–PORT specifying that funds must report portfolio information on the same basis used in computing NAV, which is generally a T + 1 basis, rather than on a T + 0 basis, which is currently used for financial statement reporting. Several commenters asked for this clarification, as filing on a T + 0 basis would have required time-intensive conversion of portfolio transactions normally recorded on a T+1 basis.[1243] We are also permitting funds to attach Regulation S–X compliant portfolio holdings schedules to Form N–PORT within 60 days after the end of the first and third fiscal quarters as opposed to our proposed 30 days, thus allowing funds to focus on preparing their Form N–PORT filings as opposed to also preparing their Regulation S–X compliant portfolio holdings schedules simultaneously.[1244] More generally, we are permitting a fund to generally use its own methodology or the methodology of its service provider, so long as the methodology is consistently applied and is consistent with the way the fund reports internally and to current and prospective investors, which should help circumvent operational challenges that would have arisen if firms had attempted to standardize reporting of certain non-standardized information such as country of risk for each portfolio holding.[1245]

Several commenters suggested that the Commission should provide for a phase-in period based on a fund's fiscal year-end, such that the Commission would require each fund to first begin filing its Form N–PORT as of its next fiscal year following the compliance date.[1246] We decline to adopt this suggestion. A rolling compliance period based on fiscal year would mean that some funds would be filing reports on Form N–PORT while other funds would be filing reports on Form N–Q for the same reporting period, which would delay the Commission and other users from obtaining complete information about the industry on Form N–PORT for up to a year. Commission staff believes that this would diminish the value of the information reported on Form N–PORT in terms of assessing industry trends, identifying outliers, and monitoring industry developments, because only a portion of the industry would be filing reports on Form N–PORT each month in a structured data format. This would also create complexities for investors who might not understand why some of their funds would be reporting on one form while other funds would be reporting on a different form, and would diminish the ability of investors to compare the information reported by one fund with information reported by another fund if each fund reported information on a different form. While our staggered compliance approach will also result in some funds reporting on Form N–PORT while others are still reporting on Form N–Q, the difference will be less significant than with a rolling compliance date because under our approach only smaller funds representing a relatively small proportion of assets will continue to use Form N–Q after the initial compliance date.

One commenter suggested that the Commission should consider limiting liability for Form N–PORT filings for a transition period, similar to what was done with earlier structured data reporting rules.[1247] We decline to adopt this suggestion. In the prior structured data reporting rules, filers were required to report the same information in both structured and non-structured formats, with limited liability for the information reported in a structured format and full liability for that same information when reported in a non-structured format. In this case, the information will be reported on Form N–PORT in only a structured data format.

One commenter suggested raising the asset threshold for determining the larger entities that would be required to comply with Form N–PORT filing

[1239] *See supra* section II.A.2.j (discussing exhibits to Form N–PORT).

[1240] *See* State Street Comment Letter (stating that ''[m]any of the changes to disclosures for derivatives are aligned with the information required within Form N–PORT and will require significant enhancements to systems'').

[1241] *See, e.g.,* Dreyfus Comment Letter (compliance date of 24 months after the effective date); SIFMA Comment Letter I (later of 24 months following adoption or six months following publication of the final XML data structure for Form N–PORT); Fidelity Comment Letter (30 months after the effective date); ICI Comment Letter (30 months after the effective date of Form N–PORT or the requirement to report liquidity information on Form N–PORT); Oppenheimer Comment Letter (30 months after the effective date); Pioneer Comment Letter (36 months after the effective date).

[1242] *See, e.g.,* Fidelity Comment Letter; Vanguard Comment Letter; Pioneer Comment Letter; and Invesco Comment Letter.

[1243] *See supra* footnotes 74–76 and accompanying text.

[1244] *See supra* footnote 438 and accompanying and following text.

[1245] *See supra* footnote 79 and accompanying and following text.

[1246] *See* ICI Comment Letter (recommending a rolling compliance period, with each fund not required to file Form N–PORT until the beginning of its next fiscal year following 30 months after the effective date); Invesco Comment Letter (same, except each fund not required to file Form N–PORT until the beginning of its next fiscal year following 36 months after the effective date).

[1247] *See* Simpson Thacher Comment Letter (for a two-year transition period, structured data filings remained subject to standard antifraud provisions under federal securities laws, but were not subject to section 34(b) of the Investment Company Act of 1940 or section 18 of the Securities Exchange Act of 1934). *See also* Interactive Data to Improve Financial Reporting, Investment Company Act Release No. 28609 (Jan. 30, 2009) [74 FR 6776 (Feb. 10, 2009)].

requirements following an 18 month compliance period, as opposed to 30 months for smaller entities that fell below the asset threshold.[1248] As discussed above, we estimate that our proposed $1 billion assets threshold will provide an extended compliance period to more than 67% of the fund groups, but only 0.6% of all fund assets, and therefore believe that the $1 billion threshold will appropriately balance the need to provide smaller groups of investment companies with more time to prepare for the initial filing of reports on Form N–PORT, while still including the vast majority of fund assets in the initial compliance period.[1249]

2. Form N–CEN, Rescission of Form N–SAR, and Amendments to the Exhibit Requirements of Form N–CSR

We are adopting a compliance date of June 1, 2018 to comply with the new Form N–CEN reporting requirements. We expect that this compliance period, consistent with the 18 month compliance period that we proposed, will provide an adequate period of time for funds, intermediaries, and other service providers to conduct the requisite operational changes to their systems and to establish internal processes to prepare, validate, and file reports on Form N–CEN with the Commission. We are adopting the same compliance date for the related amendments to other rules and forms we are adopting today, including the rescission of Form N–SAR and related rules referencing Form N–SAR.[1250]

We also are adopting a compliance date of June 1, 2018 to comply with the modified reporting requirement for a registrant to file as an exhibit to Form N–CSR the letter reporting a change in independent registered public accountants. This exhibit was already required to be reported semi-annually on Form N–SAR, and as such, we do not expect that registrants will require significant amounts of time to modify systems or establish internal processes to prepare exhibit filings on Form N–CSR in accordance with our amendments.

Unlike Form N–PORT, we are not providing a tiered compliance date based on asset size. We believe that it is less likely that smaller fund complexes will need additional time to comply with the requirements to file Form N–CEN because the requirements are similar to the current requirements to file Form N–SAR, and we expect that filers will prefer the updated, more efficient filing format of Form N–CEN. We are therefore requiring all funds, regardless of size, to file reports on Form N–CEN with the same compliance period.

Furthermore, unlike Form N–PORT, we are not keeping reports filed during a phase in period after the compliance date nonpublic. Much of the information that will be filed on Form N–CEN is currently already reported by funds on Form N–SAR, and thus funds should already have processes and procedures in place to reduce the risk of inadvertent errors. In addition, filings on Form N–CEN are not expected to be as technically complex nor present comparable challenges in terms of reporting and data validation as filings on Form N–PORT. However, as with Form N–PORT, we anticipate allowing funds to file test submissions on Form N–CEN on a voluntary basis for a period of time before the compliance date.

Some commenters suggested that the compliance period be extended to the later of 30 months after the adoption of Form N–CEN, or 18 months after the effective date of amendments requiring funds to report liquidity information on Form N–CEN.[1251] We decline to adopt these suggestions. As discussed above, much of the information that will be reported on Form N–CEN is currently already reported by funds on Form N–SAR, and was reported by funds pursuant to a six-month compliance period upon our adoption of Form N–SAR.[1252] One commenter also estimated in the Form N–PORT context that implementing processes to report structured information in an XML format would take six months following publication of the final XML data structure.[1253] We therefore continue to believe, based in part upon this comment and also our prior experience with implementation of reporting requirements for Form N–SAR, that 18 months is an appropriate compliance period for Form N–CEN.

3. Regulation S–X, Statement of Additional Information, and Related Amendments

As discussed above, our amendments to Regulation S–X are largely consistent with existing fund disclosure practices. As such, we do not expect that funds, intermediaries, or service providers will require significant amounts of time to modify systems or establish internal processes to prepare financial statements in accordance with our proposed amendments to Regulation S–X. Accordingly, we are adopting a compliance date for our amendments to Regulation S–X of August 1, 2017. This is consistent with our proposed compliance period of eight months. The same compliance date will apply to conforming amendments related to our amendments to Regulation S–X, including the related amendments to the Statement of Additional Information (and Form N–CSR for closed-end funds) we are adopting today.

One commenter supported the proposed compliance date for the amendments to Regulation to S–X, although the commenter suggested that implementation be required for each fund with its next fiscal year end following the proposed compliance date.[1254] However, the commenter's rationale for a rolling compliance date was not that funds needed more time to comply, but rather that enhanced disclosure pursuant to the amendments to Regulation S–X should be initially provided over an entire fiscal year, as opposed to just a portion of the first fiscal year during which the amendments become effective.

Many other commenters requested that the compliance date be extended, with four commenters suggesting a compliance period of 18 months after the effective date of the amendments, one commenter recommending 24 months, and another commenter recommending 36 months.[1255] Commenters supported their requests

[1248] *See* Simpson Thacher Comment Letter.

[1249] *See supra* footnote 1236.

[1250] We similarly are rescinding Form N–SAR (referenced in 17 CFR 274.101) with a timing that is consistent with this adoption.

[1251] *See, e.g.,* Fidelity Comment Letter (suggesting a compliance date of 30 months after the adoption of Form N–CEN); MFS Comment Letter (same); CAI Comment Letter (same); IDC Comment Letter (same); Comment Letter of David W. Blass, General Counsel, Investment Company Institute (Jan. 13, 2016) (suggesting the later of 30 months after the adoption of Form N–CEN or 18 months after the adoption of amendments requiring funds to report liquidity information on Form N–CEN).

[1252] *See* Form N–SAR; Temporary Suspension of Quarterly Reporting Obligations of Certain Registered Investment Companies Pending Receipt of Comments on Proposed Final Action, Investment Company Act Release No. 14299 (Jan. 4, 1985) [50 FR 1442 (Jan. 11, 1985)].

[1253] *See* SIFMA Comment Letter I (estimating how long it would take to implement processes to report structured information in an XML format for Form N–PORT).

[1254] *See* Wells Fargo Comment Letter.

[1255] *See* Fidelity Comment Letter (recommending a compliance date of 18 months after the effective date); Oppenheimer Comment Letter (same); State Street Comment Letter (same); MFS Comment Letter (same, although with implementation on a rolling basis based on the fund's fiscal year end); SIFMA Comment Letter I (recommending the compliance date for the amendments to Regulation S–X be the same as SIFMA's recommended compliance date for Form N–PORT, namely 24 months after the effective date or six months after publication of the final XML data structure for Form N–PORT); Invesco Comment Letter (recommending 36 months, after the effective date with implementation on a rolling basis based on the fund's fiscal year end).

for a longer compliance date by asserting that the information that will be reported pursuant to the amendments to Regulation S–X overlaps with the information that will be reported on Form N–PORT, and thus the compliance date for Regulation S–X should be identical to the compliance date for Form N–PORT.[1256]

We decline to adopt these suggestions. Although some of the information that will be reported pursuant to the amendments to Regulation S–X overlaps with the information that will be reported on Form N–PORT, many of the amendments to Regulation S–X are unrelated to what will be reported in Form N–PORT. More significantly, as discussed above, our amendments to Regulation S–X are generally consistent with existing disclosure practices of many funds. As such, we do not expect that funds, intermediaries, or service providers will require significant amounts of time to modify systems or establish internal processes to prepare financial statements in accordance with our final amendments to Regulation S–X.

Additionally, some of the amendments we are adopting to Form N–CEN and the Statement of Additional Information (and Form N–CSR for closed-end funds) were originally proposed as part of our amendments to Regulation S–X, and we received no objections to our proposed timeframe for compliance for those portions of the amendments to Regulation S–X. Furthermore, the amendments to the Statement of Additional Information and Form N–CSR, like the amendments to Regulation S–X, do not entail the complications of having to develop and test an XML schema or EDGAR validation behaviors, as is the case for our reporting requirements regarding information that will be reported on Form N–PORT and Form N–CEN.

III. Economic Analysis

A. Introduction

The Commission is sensitive to the economic effects, including the benefits and costs and the effects on efficiency, competition, and capital formation that will result from the adopted changes to the current reporting regime. Changes to the current reporting regime include new Form N–PORT, the rescission of Form N–Q, amendments to the certification and exhibit filing requirements for Form N–CSR, amendments to Regulation S–X, new Form N–CEN, and the rescission of Form N–SAR. The economic effects of the adopted changes are discussed below.

The Commission is modernizing the content and format requirements of reports and disclosures by funds, and the manner in which information is filed with the Commission and disclosed to the public. The amendments are designed to enhance the Commission's ability to effectively oversee and monitor the activities of investment companies in order to better carry out its regulatory functions and to aid investors and other market participants to better assess the benefits, costs, and risks of investing in different fund products. In summary, and as discussed in greater detail in section II above, the Commission is adopting the following changes to its rules and forms:

- We are requiring registered management investment companies and ETFs organized as UITs, other than money market funds and SBICs, to report monthly portfolio information in a structured data format on a new form, Form N–PORT.
- We are rescinding Form N–Q. We are also lengthening the look-back for Sarbanes-Oxley certifications on Form N–CSR to six months to cover the gap in certification coverage that would otherwise occur once Form N–Q is rescinded.
- We are revising Regulation S–X to require new, standardized enhanced disclosures regarding fund holdings in derivatives instruments; update the disclosures for other investments; and amend the rules regarding the general form and content of fund financial statements.
- We are rescinding Form N–SAR and replacing it with new Form N–CEN, which will require the annual reporting of similar and additional census information in an updated, structured data format.
- We are adopting amendments to Forms N–1A, N–3, and N–CSR (for closed-end funds) to require certain disclosures in fund Statements of Additional Information regarding securities lending activities.

The current disclosure of information by funds serves as the baseline against which the costs and benefits as well as the impact on efficiency, competition, and capital formation are discussed. The baseline includes the current set of requirements for funds to file reports on Forms N–CSR, N–Q, and N–SAR with the Commission and the content of such reports, including Regulation S–X, and in particular, its schedule of investments. The baseline also includes guidance from Commission staff and other industry groups that have established industry practices for the disclosure of a fund's schedule of investments and financial statements. Lastly, the baseline includes the current practice of some funds to voluntarily disclose additional information, and the requirement that actively managed ETFs, and many index ETFs, disclose their portfolios on a daily basis. For example, some funds disclose monthly or quarterly portfolio investment information on their Web sites or to third-party information providers, and disclose additional information (*e.g.,* particular information on derivative positions) in fund financial statements that is not currently required under Regulation S–X. The parties that will be affected by the new rules, forms, and amendments are funds that have registered or will register with the Commission; the Commission; and other current and future users of fund information including investors, third-party information providers, and other potential users; and other market participants that could be affected by the change in fund disclosures.

We discuss separately below the economic effects of each of the following new rules, forms, and amendments: The introduction of Form N–PORT, the rescission of Form N–Q, the amendments to Form N–CSR, the amendments to Regulation S–X, the introduction of Form N–CEN, the rescission of Form N–SAR, and the amendments to multiple registration statement forms. We identify for each of the new rules, forms, and amendments the baseline from which the economic effects will be discussed and the parties most likely to be affected.

As noted above, the assets of registered investment companies exceeded $18 trillion at year-end 2015, having grown from about $5.8 trillion at the end of 1998.[1257] In addition, approximately 93 million individuals own shares of registered investment companies, representing 55 million or 44% of U.S. households.[1258] Among investment companies, we estimate that, as of December 2015, there were 3,113 active investment companies registered with the Commission, of which 1,642 were open-end funds, 750 were closed-end funds (including 1 SBIC), and 721 were UITs (including 5 exchange-traded funds).[1259] We further estimate that those registered investment companies included 17,052 funds or series thereof, of which 1,594 were exchange-traded funds (including eight organized as

[1256] *See* SIFMA Comment Letter I; State Street Comment Letter.

[1257] *See supra* footnote 4.

[1258] *See id.*

[1259] Based on data obtained from registrants' filings with the Commission on Form N–SAR.

UITs), 5,188 were UITs, 750 were closed-end funds, 481 were money market funds, and 9,039 were other mutual funds. The following table summarizes the entities likely to be affected by the new forms, rescissions, and amendments.

AFFECTED PARTIES

		FUNDS			UITS	
		MONEY MARKET FUNDS	SBICs	OTHER FUNDS	ETFs	OTHER UITs
CURRENT	FORM N-SAR	✓	✓	✓	✓	✓
	FORM N-CSR	✓	✓	✓		
	FORM N-Q	✓		✓		
AS ADOPTED	FORM N-PORT			✓	✓	
	FORM N-CEN	✓	✓	✓	✓	✓
	FORM N-CSR	✓	✓	✓		
	FORM N-SAR	RESCINDED				
	FORM N-Q	RESCINDED				

Figure 3

The Commission relies on information included in reports filed by funds to monitor trends, identify risks, inform policy and rulemaking, and assist Commission staff in examination and enforcement efforts of the asset management industry. An essential factor to the Commission's ability to carry out its regulatory functions is regular, timely information about portfolio holdings and general, census information about funds. In general, the new rules, forms, and amendments will modernize the fund reporting regime and, among other effects, will result in an increased transparency of fund portfolios and investment practices. The increased transparency will improve the ability of the Commission to fulfill its regulatory functions. These functions include the development of policy and guidance, the staff's review of fund registration statements and disclosures, and the Commission's examination and enforcement programs. We believe that the increase in transparency will also improve the ability of investors to select funds for investment, and therefore improve their ability to allocate capital across funds and other investments to more closely reflect their investment risk preferences. We also believe that the increase in transparency will enhance competition among funds to attract investors.

At the outset, the Commission notes that, where possible, it has sought to quantify the costs, benefits, and effects on efficiency, competition, and capital formation expected to result from each of the new rules, forms, and amendments and its reasonable alternatives. As discussed in further detail below, in many cases the Commission is unable to quantify the economic effects because it lacks the information necessary to provide a reasonable estimate.

The economic effects depend upon a number of factors that we cannot estimate or quantify. Factors include the extent to which investor protection would increase along with the ability of the Commission to oversee the fund industry; the amount of new information that would become available as a result of requiring such information in regulatory filings (as opposed to information that is provided voluntarily); the change in the availability of fund information to all investors, institutional and individual; and the extent to which investors are able to use the information to make more informed investment decisions either through direct use or through third-party service providers. Therefore, much of the discussion below is qualitative in nature although we describe where possible the direction of these effects.

In the Proposing Release, we requested general comment on the feasible alternatives to the information we proposed to require funds to report that would minimize the reporting burdens on funds while maintaining the anticipated benefits of the reporting and disclosure, as well as the utility of the information proposed to be included in reports to the Commission, investors, and the public in relation to the costs to funds of providing the reports.[1260] In adopting today's rules, forms, and amendments, we considered, among other things, such alternatives, utility, and costs.

B. Form N–PORT, Rescission of Form N–Q, and Amendments to Form N–CSR

1. Introduction and Economic Baseline

Form N–PORT will require registered management investment companies and ETFs organized as UITs, other than money market funds and SBICs, to report portfolio investment information to the Commission on a monthly basis. As discussed, only information reported for the last month of each fiscal quarter will be made available to the public in order to minimize potential costs associated with making the information public, including front-running or reverse engineering of a fund's investment strategies. Reports will be filed in a structured data format using XML to allow for easier aggregation and manipulation of the data. As discussed above, we are also rescinding Form N–Q but requiring that funds attach their complete portfolio holdings to Form N–PORT for the first and third fiscal quarters in accordance with Regulation S–X. We are also amending the form of certification in Form N–CSR to require each certifying officer to state that he or she has disclosed in the report any change in the registrant's internal control over financial reporting that occurred during the most recent fiscal half-year to fill the gap in certification coverage that would otherwise occur once Form N–Q is rescinded.[1261] As discussed above, we also are moving the management's statement regarding a change in accountant, which originally was an exhibit filed on Form N–SAR and was proposed as an attachment to Form N–CEN, to an exhibit to Form N–CSR.[1262] In addition, as discussed above, we are adopting amendments to require closed-end funds to report on Form N–CSR certain disclosures regarding securities lending activities.[1263]

The current set of requirements under which registered management investment companies (other than money market funds and SBICs) and ETFs organized as UITs publicly report their complete portfolio investments to the Commission on a quarterly basis and certain other information on a semi-annual basis,[1264] as well as the current practice of some investment companies to voluntarily disclose portfolio investment information either on their Web sites or to third-party information providers on a more frequent basis, is the baseline from which we will discuss the economic effects of new Form N–PORT.[1265] The parties that could be affected by the introduction of Form N–PORT are registered management investment companies (other than money market funds and SBICs) and ETFs organized as UITs, that have registered or will register with the Commission; the Commission; and other current and future users of investment company portfolio investment information including investors, third-party information providers, and other interested potential users; and other market participants that could be affected by the change in fund disclosure of portfolio investment information.

Currently, the Commission requires registered management investment companies (other than money market funds and SBICs) to report their complete portfolio investments to the Commission on a quarterly basis.[1266] These funds are required to provide this information in reports on Form N–Q as of the end of the first and third fiscal quarters of each year[1267] and in reports on Form N–CSR as of the end of the second and fourth fiscal quarters of each year.[1268] Both forms require that the reported schedule of portfolio investments conform to the requirements of Regulation S–X, and the schedule for the close of the fiscal year must be audited (but those schedules for the other three fiscal quarters need not be).[1269] These reports are generally required to be filed on the EDGAR system and are made publicly available upon receipt.[1270] Reports on Form N–CSR may be filed up to 70 days after the end of the reporting period,[1271] and reports on Form N–Q may be filed up to 60 days after the end of the reporting period.

Forms N–CSR and N–Q are required to be filed in HTML or ASCII/SGML format.[1272] In order to prepare reports in HTML and ASCII/SGML, reporting persons generally need to reformat information from the way the information is stored for normal business use.[1273] The resulting format, when rendered in an end user's Web browser, is comprehensible to a human reader, but it is not suitable for automated processing. These formats do not allow the Commission or other interested data users to combine information from more than one report in an automated way to, for example, construct a database of fund portfolio positions without additional formatting.

We received no comments that specifically addressed the baseline described in the Proposing Release. We believe that the economic effects from the introduction of new Form N–PORT will largely result from the disclosure of portfolio investment information in a structured data format, as well as the additional information that investment companies will report relative to current reporting practices. We also believe that the economic effects will depend on the extent to which the portfolios and investment activities of investment

[1260] *See* Proposing Release, *supra* footnote 7, at nn. 160–161.

[1261] Amended Item 11(b) of Form N–CSR; amended paragraph 4(d) of certification exhibit of Item 11(a)(2) of Form N–CSR.

[1262] Item 12(a)(4) of Form N–CSR; *see also supra* section II.D.4.b.

[1263] *See* Item 12 of Form N–CSR; *see also supra* footnote 1181 and accompanying text and section II.F.

[1264] Form N–PORT will also require information that is currently being reported on Form N–SAR such as information on fund flows, assets, and liabilities. The current requirement to report this information as part of Form N–SAR is also part of this baseline.

The baseline also includes the current obligation of Form N–Q filers to make certifications regarding (1) the accuracy of the portfolio holdings information reported on that form, and (2) the fund's disclosure controls and procedures and internal control over financial reporting.

[1265] Additionally, many funds currently provide information concerning derivatives investments, similar to the requirements we are adopting in our amendments to Regulation S–X. *See* discussion *supra* section II.C.2.

[1266] *See* General Instruction A to Form N–CSR; Item 6 of Form N–CSR; General Instruction A to Form N–Q; Quarterly Portfolio Holdings Adopting Release, *supra* footnote 421.

[1267] Item 1 of Form N–Q.

[1268] Item 6 of Form N–CSR.

[1269] Instruction to Item 6(a) of Form N–CSR; Item 1 of Form N–Q.

[1270] *See* rule 101(a)(i) of Regulation S–T [17 CFR 232.101(a)(i)].

[1271] Form N–CSR must be filed within 10 days after the shareholder report is sent to shareholders, and the shareholder report must be sent within 60 days after the end of the reporting period. Rule 30b2–1(a); rule 30e–1(c).

[1272] *See* rule 301 of Regulation S–T; EDGAR Filer Manual (Volume II) version 27 (June 2014), at 5–1.

[1273] In so doing, reporting persons typically strip out incompatible metadata (*i.e.,* syntax that is not part of the HTML or ASCII/SGML specification) that their business systems use to ascribe meaning to the stored data items and to represent the relationships among different data items.

companies become more transparent as a result of the increase in the amount and availability of portfolio investment information, and the ability of Commission staff, investors, and others to utilize the information. The current reporting requirements for investment companies, however, limit the ability of Commission staff to evaluate the potential economic effects. For example, the non-structured data format of reported portfolio investment information and the lack of standardized reporting requirements for certain types of portfolio investments all reduce the ability of Commission staff to aggregate information across the fund industry and to evaluate the economic effects of the regulatory changes.

The new rules, forms, and amendments will increase the amount of portfolio investment information available for some investment companies more so than others. For example, investment companies that utilize derivatives as part of their investment strategy, or that otherwise engage in alternative strategies, will provide more information about their businesses than other investment companies. Information from Form N–SAR provides some indication as to the current use of derivatives by investment companies. Form N–SAR requires investment companies to identify permitted investment policies, and if permitted, investment policies engaged in during the reporting period. As of the second half of 2015, on average 76.5% of investment companies reported as permitted investment policies involving the writing or investing in options or futures, and on average 5.3% of investment companies reported engaging in each one of these policies during the report period.[1274] In addition, the total net assets of alternative funds from which more information would become available were as of year-end 2015 approximately $219 billion or 1.3% of the total net assets of the mutual fund market.[1275] Although the percentage of net assets of alternative funds relative to the mutual fund market is currently small, the percentage of flows to alternative funds was 11.9% in 2013, 4.0% in 2014, and 6.1% in 2015.[1276]

Information from a White Paper prepared by staff in the Division of Economic and Risk Analysis also describes current fund use of derivatives.[1277] For example, based on data from Morningstar, the number of funds that can be categorized as engaging in alternative investment strategies increased from 2010 to 2014 at an annual rate of 17%, whereas the total number of all funds increased at an average annual rate of 8%.[1278] In addition, based on a random sample of funds drawn from Form N–CSR filings, 32% of funds held one or more derivatives, and the average aggregate exposure from derivatives, financial commitment transactions and other senior securities was 23% of net asset value. Evidence from the random sample also indicates that funds engaging in alternative investment strategies tended to use derivatives more often than other fund types, which the White Paper described collectively as ''Traditional'' mutual funds.

2. Benefits

As discussed, Form N–PORT will improve the information that registered management investment companies and ETFs organized as UITs (other than money market funds and SBICs) disclose to the Commission. The increase in the reporting frequency, the update to the structure of the information that reporting funds will disclose, and the additional information that reporting funds do not currently disclose, discussed in further detail below, will improve the ability of the Commission to understand, analyze, and monitor the fund industry. We believe that the information we receive on these reports will facilitate the oversight of reporting funds and will assist the Commission, as the primary regulator of such funds, to better effectuate its mission to protect investors, maintain fair, orderly and efficient markets, and facilitate capital formation, through better informed policy decisions, more specific guidance and comments in the disclosure review process, and more targeted examination and enforcement efforts.

To the extent that monthly portfolio investment information is not currently available, the requirement that funds make available monthly portfolio investment information to the Commission on Form N–PORT will improve the ability of the Commission to oversee reporting funds by increasing the timeliness of the information available, and by providing a larger number of data points. The expanded reporting also will increase the ability of Commission staff to identify trends in investment strategies and fund products as well as industry outliers.[1279] As discussed above, the quarterly portfolio reports that the Commission currently receives on Forms N–Q and N–CSR can become stale due to changes in the holdings of portfolio securities or fluctuations in the values of the portfolio's investments. Requiring monthly filings on Form N–PORT will increase the timeliness of the information the Commission receives from funds. More timely portfolio investment information will improve the ability of Commission staff to oversee the fund industry by monitoring industry trends, informing policy and rulemaking, identifying risks, and assisting Commission staff in examination and enforcement efforts.

The ability of Commission staff to effectively use the information reported

[1274] *See* Item 70 of Form N–SAR for a list of permitted investment policies, and if permitted, the investment policies engaged in during the reporting period. The percentages are calculated from the percentage of funds that report affirmatively to either of the two parts for Items 70.B though 70.I. There is little difference in the proportion of investment companies that reported as permitted the investment practices relating to Items 70.B through 70.I. The greatest proportion of funds reported engaging in writing or investing in stock index futures (14.0%) and engaging in writing or investing in interest rate futures (12.5%), and the smallest proportion of funds reported engaging in writing or investing in other commodity futures (1.6%) and engaging in writing or investing in options on stock index futures (0.7%). Aggregate condensed balance sheet information reported on Form N–SAR indicates that funds held $3.4 billion in options on equities and options on all futures (Item 74.G and Item 74.H) or 0.018% of net assets from the second half of 2015. Aggregate condensed balance sheet information reported on Form N–SAR from the second half of 2015 also indicates that funds had $54.1 billion in short sales (Item 74.R.(2)) and $3.8 billion in written options (Item 74.R.(3)), or 0.291% and 0.020% of net assets, respectively. The estimates are approximate.

[1275] *See supra* footnote 39. These statistics were obtained from staff analysis of Morningstar Direct data, and are based on fund categories as defined by Morningstar.

[1276] *See id.*

[1277] *See* White Paper entitled ''Use of Derivatives by Investment Companies,'' which was prepared by staff in the Division of Economic and Risk Analysis and was placed in the comment file for the Use of Derivatives by Registered Investment Companies and Business Development Companies, Investment Company Release No. 31933 (Dec. 11, 2015) [80 FR 80883 (Dec. 28, 2015)]. Daniel Deli, *et al., Use of Derivatives by Registered Investment Companies,* Division of Economic and Risk Analysis (2015) (''DERA White Paper''), *available at http://www.sec.gov/dera/staff-papers/white-papers/derivatives12-2015.pdf.*

[1278] In 2010, 591 of the 8,577 sample funds were defined as engaging in alternative investment strategies, and in 2014 1,125 of the 11,573 sample funds were defined as engaging in alternative investment strategies.

[1279] *See, e.g., supra* section II. Although likely not a significant effect, the increase in the frequency of portfolio investment disclosure to the Commission could also reduce the ability of investment companies to alter or ''window-dress'' portfolio investments in an attempt to disguise investment strategies and risk profiles. To the extent that managers may window-dress to affect public perception, managerial incentives for doing so would not change because the frequency of public disclosure of portfolio investment information would remain the same. *See, e.g.,* Vikas Agarwal, Gerald D. Gay, and Leng Ling, *Window Dressing in Mutual Funds,* Rev. of Fin. Stud., Vol. 27(11), 3133–3170 (2014).

in Form N–PORT depends on the ability of staff to compile and aggregate information into a single database that can then be used to conduct industry-wide analyses. Otherwise, the information would only improve the ability of staff to analyze a single or a small number of funds at any one time. Several commenters agreed that the structuring of the information will improve the ability of the Commission to compile and aggregate information across all reporting funds, and to analyze individual funds or a group of funds, and will increase the overall efficiency of staff to analyze the information.[1280] For example, the ability to compare portfolio investment information across reporting funds or for a single fund across report dates will improve the ability of the Commission to identify funds for examination and to identify trends in the fund industry. The Commission is requiring that filers disclose information using the Commission's XML schema. Based on the comments received and the Commission's experience, the Commission believes that requiring the information to be disclosed in an XML format will facilitate enhanced search capabilities, and statistical and comparative analyses across filings. With the data structured in XML, the Commission and the public can immediately download the information directly into databases and analyze it using various software packages. This enhances both the Commission's and the public's abilities to conduct large-scale analysis and immediate comparison across funds and date ranges.

The usefulness of structured data depends on the care with which filers report the data. If filers were to report data that did not conform to the Commission's XML schema, data quality would be diminished and would impair the Commission's and the public's ability to aggregate, compare, and analyze the data. As a result, the Commission's XML schema also incorporates certain validations to help ensure consistent formatting among all filings, in other words, to help ensure data quality. Validations are restrictions placed on the formatting for each data element so that comparable data is presented comparably. However, these formatting validations are not designed to ensure the underlying accuracy of the data; they can only help ensure data quality. These validations cannot exist in the current reporting formats for Form N–CSR and Form N–Q.

XML is an open standard [1281] that is maintained by an organization other than the Commission and undergoes constant review. As updates to XML or industry practice develop, the Commission's XML schema will also be updated to reflect those developments, with the outdated version of the schema replaced in order to maintain data quality and consistency.

As we discussed above in section II.A.3, we considered, as several commenters suggested, alternative formats to XML, such as XBRL.[1282] While the XBRL format allows funds to capture the rich complexity of financial information presented in accordance with GAAP, we believe that XML is more appropriate for the reporting requirements that we are adopting. Form N–PORT, as well as Form N–CEN, as adopted, will contain a set of relatively simple characteristics of the fund's portfolio- and position-level data, such as fund and class identifying information that is more suited for XML. While XBRL has more enhanced validation features, the simpler reporting elements on Form N–PORT and Form N–CEN do not require those enhanced features to ensure similar levels of formatting consistency.

In light of the benefits of structured data, we acknowledge that Form N–PORT duplicates some information filed in other forms, while also requiring funds to report information that is not currently required to be reported to the Commission, including portfolio- and position-level risk metrics and additional information describing debt securities and derivatives, securities lending activities, repurchase and reverse repurchase agreements, the pricing of securities, and fund flows and returns. Requesting data in a structured format may promote additional efficiency among investment companies to the extent that the new, standardized reporting requirements facilitate more automated report assembly, validation, and review processes for the disclosure and transmission of filings. Furthermore, filing this information in an XML format will allow the Commission staff to more efficiently review and analyze data for industry trends, and to better understand the risks of a particular fund (in the context of the fund's investment strategy), a group of funds, and the fund industry by being able to conduct large-scale analysis more easily, which will help in identifying outliers or trends that could warrant further investigation in a more immediate fashion.[1283]

The requirement to report portfolio- and position-level risk metrics will provide Commission staff with a set of quantitative measurements that provide information about the risk exposures of a fund. The risk metrics will improve the ability of Commission staff to efficiently analyze information for all reporting funds based on exposure to certain risks, and to determine whether additional guidance or policy measures are appropriate to improve disclosures. We are requiring funds to report risk measures, rather than the raw inputs used to calculate risk measures, because the calculation of position-level measures of risk for some derivatives, including derivatives with unique or complicated payoff structures, sometimes requires time-intensive computational methods or additional information that Form N–PORT will not require.[1284] While the Commission would retain greater flexibility if funds were required to report substantially more detailed information regarding raw inputs on Form N–PORT,[1285] it could be difficult for the Commission to efficiently calculate these same measures and funds would incur an

[1280] *See, e.g.,* ICI Comment Letter (''Receiving this information in XML format will facilitate the Commission's ability to efficiently analyze fund portfolio information on a regular basis.''); Morningstar Comment Letter; *but see* Federated Comment Letter.

[1281] The term ''open standard'' is generally applied to technological specifications that are widely available to the public, royalty-free, at no cost.

[1282] *See, e.g.,* XBRL US Comment Letter; Deloitte Comment Letter; *but see* Morningstar Comment Letter (''Extensible Business Reporting Language has had very limited success, and certain aspects of the standard are too lenient for regular data validation.'').

[1283] *See supra* section II.A.2.c. *See also, e.g.,* BlackRock Comment Letter (''Importantly, the greater depth and frequency of information requested by the Commission will help the Commission better identify and monitor emerging risks associated with specific RICs or categories of RICs as well as asset management activities.''); Wells Fargo Comment Letter (''we believe that the enhanced disclosure requirements of the Proposals represent appropriate valuable information for the Commission to have in order to assess trends in risks, for example, across the mutual fund industry.''); CFA Comment Letter (supporting transparency of derivatives holdings); Morningstar Comment Letter. *See also* ICI Comment Letter (''Much of the additional information the SEC proposes to collect can enhance its ability to monitor and oversee the fund industry.''). *But see* Federated Comment Letter (''A majority of the Commission's proposed amendments to Form N–1A, N–PORT, and N–CEN would require a large effort from funds while offering data that is, at best, of little utility, and, at worst, misleading. Many of these deficiencies relate to flaws inherent in a security-level disclosure scheme.'').

[1284] One commenter stated that the Commission should not require that funds report risk sensitivity measures, and instead calculate the risk sensitivity measures using raw inputs (Vanguard Comment Letter). The commenter noted that the Commission would therefore be able to calculate the measures consistently and in doing so draw ''apples-to-apples'' comparisons.

[1285] *See id.*

increase in reporting costs. We recognize that requiring funds to report these risk measures increases reporting burdens, but as discussed above, based on staff experience and outreach, we understand that most funds currently calculate risk measures for such securities and hence do not believe that the burden is significant.

The requirement for investment companies to provide risk metrics at the position-level and at the portfolio-level will improve the ability of staff to efficiently identify the risk exposures of funds regardless of the types of investments held or that could be introduced to the marketplace. The portfolio-level measures of risk will also improve the ability of staff to efficiently identify interest rate and credit spread exposures at the fund level and conduct analyses without first aggregating position-level measures. Also, staff could use the risk measures in combination to conduct additional analyses. For example, Commission staff can use the two measures of interest rate duration (*i.e.,* DV01 and DV100) to generate a proxy for interest rate convexity.

We have, however, made certain modifications to the proposed reporting requirements regarding the reporting of risk metrics in response to comments received. For example, as discussed in detail above, we are requiring the reporting of fewer key rates to reduce the reporting burden for funds, adopting a 1% *de minimis* threshold for reporting risk metrics for each currency to which the fund is exposed, and raising the threshold for fixed income allocation for risk reporting from 20% to 25% to align the reporting requirement with current disclosures required in the prospectus. To the extent that adopting a *de minimis* amount for reporting risk metrics for each currency will prevent the Commission, investors, and other users from seeing an exhaustive view of fund's currency risk exposures, there could be a reduction in the informational benefit to the Commission, investors, and other users relative to the proposal. However, relative to the baseline, we believe the economic effects of the disclosure of currency risk metrics are substantially similar with or without the adoption of a *de minimis.* Similarly, there could be a reduction in the informational benefit to the Commission, investors, and other users relative to the proposal to the extent that certain funds that would have had to report risk metrics under the 20% threshold do not have to report them under the 25% threshold, although we again believe that such a change will not significantly impact the benefits of this disclosure relative to the baseline because it is unlikely that funds that make investments in debt instruments as a significant part of their investment strategy have less than 25% of their NAV invested in such instruments. We believe, however, that such modifications are appropriate in light of the lower reporting burden for funds. Conversely, the Commission is adding a requirement to report DV100 in addition to DV01 to provide information about larger changes in interest rates, as well as information about nonparallel shifts in the yield curve. While funds will have an increased reporting cost to report DV100 in addition to DV01 relative to the proposal, as DV100 is a standard measure of interest rate sensitivity and a common measure of duration we do not believe the cost to funds relative to the baseline will change. Furthermore, we believe that this modification will provide the Commission with the ability to analyze data about larger shifts in the yield curve, as well as changes in the shape of the yield curve. Similarly, while funds will have a decreased reporting cost in light of our modification to require the reporting of fewer key rates, we do not believe that the decrease in information collected by the Commission will substantially affect our ability to analyze how debt portfolios will react to different interest rate changes and credit spreads along the Treasury curve, given that the rates at which funds will report these metrics are, in general, largely representative of bond funds' overall exposures.

Form N–PORT will require reporting funds to provide the contractual terms for debt securities and many of the more common derivatives including options, futures, forwards, and swaps; the reference instrument for convertible debt securities and derivatives; and information describing the size of the position. This information will provide Commission staff the ability to identify funds with interest rate risk exposure or exposure to other risks such as those pertaining to a company, industry, or region.

As discussed, for securities lending activities and reverse repurchase agreements, Form N–PORT will require counterparty identification information, contractual terms, and information describing the collateral and reinvestment of the collateral. The additional information could improve the ability of Commission staff to assess fund compliance with the conditions that they must meet to engage in securities lending, as well as better analyze the extent to which funds are exposed to the creditworthiness of counterparties, the loss of principal of the reinvested collateral, and leverage creation through the reinvestment of collateral.

Form N–PORT will also require additional identification information regarding the reporting fund, the issuers of the fund's portfolio investments, and the investments themselves, including the reference instruments for convertible debt securities and derivatives investments. The adopting release differs from the proposal with respect to the treatment of reference assets that are custom baskets or nonpublic indexes of securities in that for those that represent more than 1%, but less than 5%, of the fund's NAV, funds will be required to disclose the top 50 components of the basket and, in addition, those components that exceed 1% of the notional value of the index. For nonpublic indexes or custom baskets that represent greater than 5% of the fund's NAV, all components will be required to be disclosed. For nonpublic custom baskets or indexes that represent less than 1% of the fund's NAV, no disclosure is required. Although this modification will provide the Commission, investors, and other users with less than complete transparency into any such derivative investment that represents between 1% and 5% of a fund's NAV, given that this modification will still allow the Commission to collect information on a large portion of the significant reference assets for these investments, we do not believe this change will significantly impact the benefits derived relative to those discussed in the proposal. The additional identification information will benefit the Commission by improving the ability of staff to link the information from Form N–PORT to information from other sources that identify market participants and investments using these same identifiers, such as Form N–CEN. The additional identification information will improve upon the current requirement for funds to provide just the issuer name, and as such will aid the Commission in identifying both the issuers of fund portfolio investments and the investments themselves. As a result, Commission staff will be better able to identify and compare funds that have exposures to particular investments or issuers regardless of the whether the exposure is direct or indirect such as through a derivative security.

Investors, third-party information providers, and other potential users will also experience benefits from the introduction of Form N–PORT.[1286] While the frequency of the public disclosure of portfolio information will not change, we believe that the structured data format of this information will allow investors and other potential users to more efficiently analyze portfolio investment information. Investors and other potential users will also have disclosure of additional information that is currently not included in the schedule of investments reported on Form N–Q and Form N–CSR. The structure of the information, as well as the additional information, will increase the transparency of a fund's investment strategies and improve the ability of investors and other potential users to more efficiently identify its risk exposures.

Form N–PORT will benefit investors, to the extent that they use the information, to better differentiate investment companies based on their investment strategies and other activities. For example, investors will be able to more efficiently identify funds that use derivatives and the extent to which they use derivatives as part of their investment strategies.[1287] In general, we expect that institutional investors and other market participants will directly use the information from Form N–PORT more so than individual investors. For individual investors who choose not to access the data in an XML format, those investors can access similar information through the additional disclosure requirements in an unstructured format for investment companies, including the requirement for investment companies to attach to Form N–PORT complete portfolio holdings in accordance with Regulation S–X for the first and third fiscal quarters.[1288] Investors, and in particular individual investors, could also indirectly benefit from the information in Form N–PORT to the extent that third-party information providers and other interested parties obtain, aggregate, provide, and report on the information. Investors could also indirectly benefit from the information in Form N–PORT to the extent that other entities, including investment advisers and broker-dealers, utilize the information to help investors make more informed investment decisions.

We received a number of comments supporting quarterly public disclosure of Form N–PORT, but requesting that certain information items be kept nonpublic.[1289] In response to these comments, and in contrast to the proposing release, three items reported on Form N–PORT will be kept nonpublic: Delta, country of risk, and the explanatory notes related to delta and country of risk. Given that the Commission will still collect this information, we do not believe there will be a significant economic impact relative to the Proposing Release due to keeping these data items nonpublic, as the Commission is the primary user of these data elements. A discussion of the issue of public versus nonpublic data can be found in section II.A.4.

One clarifying change that has been made from the proposing release in response to commenters is the addition of an instruction that funds may use their own methodologies in General Instruction G. General Instruction G now provides that funds may respond to Form N–PORT using their own internal methodologies and the conventions of their service providers, provided the information is consistent with information that they report internally and to current and prospective investors, and the Fund's methodologies and conventions are consistently applied and the Fund's responses are consistent with any instructions or other guidance relating to the Form. To the extent this instruction decreases the comparability of the data collected, there could be some reduction in benefit relative to the proposal, although funds will likely benefit from the decreased reporting burden associated with explicitly allowing them to rely on their existing practices.

The portfolio investment information that investment companies report to the Commission is informative in describing the investment strategy funds implement,[1290] and investors could use the information to select funds based on security selection, industry focus, level of diversification, and the use of leverage and derivatives.[1291] We believe that an increase in the ability of investors to differentiate investment companies could allow investors to allocate capital across reporting funds more in line with their risk preferences and increase the competition among funds for investor capital. In addition, by improving the ability of investors to understand the risks of investments and hence their ability to allocate capital across funds and other investments more efficiently, we believe that the introduction of Form N–PORT could also promote capital formation.

Rescission of Form N–Q, along with its certifications of the accuracy of the portfolio schedules reported for each fund's first and third fiscal quarters, may result in some cost savings by funds in terms of administrative or filing costs. However, we expect any such savings, if any, to be minimal, because each fund will still be required to file portfolio schedules prepared in accordance with §§ 210.12–12 to 12–14 of Regulation S–X for the fund's first and third fiscal quarters, by attaching those schedules as attachments to its reports on Form N–PORT for those reporting periods.

3. Costs

Form N–PORT will require registered management investment companies and ETFs organized as UITs, other than money market funds and SBICs, to incur one-time and ongoing costs to comply with the new filing requirements. Funds will incur additional ongoing costs to report portfolio investment information on a monthly basis on Form N–PORT instead of a quarterly basis as currently reported on Forms N–Q and N–CSR. Funds that voluntarily provide information to third-party information providers and on fund Web sites, including monthly portfolio investments, and additional information in fund financial statements, including additional information regarding derivatives similar to the requirements that we are adopting today, will bear

[1286] *See also* Morningstar Comment Letter (stating that modern electronic reporting should apply to all registered investment companies, as investors use open-end funds, ETFs, closed-end funds, and UITs as ''tools to build portfolios.'').

[1287] Form N–PORT will also eliminate the reporting gap between money market funds, which report portfolio investment information in an XML format on Form N–MFP, and funds engaging in similar investment strategies such as ultra-short bond funds, which will be required to file reports on Form N–PORT.

[1288] *See* discussion *supra* section II.A.2.j.

[1289] *See, e.g.,* ICI Comment Letter (portfolio risk metrics, delta, liquidity determinations, country of risk and derivatives financing rates should be kept non-public); BlackRock Comment Letter (risk metrics); Invesco Comment Letter (portfolio level risk metrics, derivatives information, illiquidity determinations, and securities lending information should remain non-public); Oppenheimer Comment Letter (risk metrics, illiquidity determinations, country of risk determinations, derivatives payment terms (including financing rates), and securities lending fees and revenue sharing splits should be kept non-public).

[1290] Academic research indicates that the portfolio investment information funds provide to the Commission, such as on Form N–CSR and Form N–Q, has value even though the information is publicly available only after a time-lag. *See infra* footnotes 1307–1314. Just as investors can use the information to front-run, predatory trade, or copycat/reverse engineer of the trading strategy of a reporting fund, investors of funds can also use the information to identify funds for investment.

[1291] Empirical research shows that fund flows are sensitive to many factors including past fund performance and investor search costs. *See, e.g.,* Erik R. Sirri & Peter Tufano, *Costly Search and Mutual Fund Flows,* 53 J. of Fin., 1589 (1998); Zoran Ivković & Scott Weisbenner, *Individual Investor Mutual Fund Flows,* 92 J. of Fin. Econ., 223 (2009); George D. Cashman, *Convenience in the Mutual Fund Industry,* 18 J. of Corp. Fin., 1326 (2012).

fewer costs than those funds that do not.[1292] The Commission is aware that even funds that do so report will nonetheless likely incur additional costs on reports on Form N–PORT than on voluntary submissions, such as validation and signoff processes, given that reports on Form N–PORT will be a required regulatory filing and will require different data than the funds are currently providing to third-party information providers. However, over time, the filings could become highly automated and could involve fewer costs.[1293]

Funds will incur costs to file reports on Form N–PORT in a structured data format. Based on staff experience with other XML filings, however, these costs are expected to be minimal given the technology that will be used to structure the data.[1294] XML is a widely used data format, and based on the Commission's understanding of current practices, most reporting persons and third party service providers have systems already in place to report schedules of investments and other information. Systems should be able to accommodate XML data without significant costs, and large-scale changes will likely not be necessary to output structured data files. In an effort to reduce some of the potential burdens on smaller entities, we are extending the compliance period to begin filing reports on Form N–PORT to thirty months after the effective date for groups of funds with assets under $1 billion.[1295] The additional time could increase the ability of these investment companies to comply with the filing requirements by providing more time for system and operation changes and from observing larger fund groups.

Form N–PORT will also require the disclosure of certain information that is not currently required by the Commission. To the extent that the new form will require information to be reported that is not currently contained in fund accounting or financial reporting systems, funds will bear one-time costs to update systems to adhere to the new filing requirements. The one-time costs will depend on the extent to which investment companies currently report the information required to be disclosed. The one-time costs will also depend on whether and to what extent an investment company would need to implement new systems and to integrate information maintained in separate internal systems or by third parties to comply with the new requirements. For example, based on staff outreach to funds, we believe that funds will incur systems or licensing costs to obtain a software solution or to retain a service provider in order to report data on risk metrics, as risk metrics are not currently required to be reported on the fund financial statements. Our experience with and outreach to funds indicates that the types of systems funds use for warehousing and aggregating data, including data on risk metrics, varies widely.

In some instances, such as in the case of increased disclosures regarding derivatives investments and information concerning the pricing of investments, the Commission is requiring parallel disclosures in the fund's schedule of investments prepared pursuant to Regulation S–X; accordingly, we expect funds will generally incur one set of costs to adhere to the reporting of new information on Form N–PORT and in its schedule of investments. For other information, such as the reporting of particular asset classifications, identification of investments and reference instruments, and risk measures, the information will be disclosed on Form N–PORT only.

The Commission is sensitive to the costs that funds will incur to prepare, review, and file reports on Form N–PORT. Relative to the proposal, the Commission is making modifications to these final rules that should reduce the burden on investment companies to file reports on Form N–PORT. In particular, and in response to commenters,[1296] we have raised the threshold for requiring reporting of portfolio level risk metrics and are providing a *de minimis* for requiring reporting of risk metrics for currency exposures. We are also modifying the requirements with respect to reference assets that are custom baskets or nonpublic indexes of securities so that for such investments that constitute more than 1%, but less than 5% of the fund's NAV, funds will be required to report only the top 50 components of the basket and, in addition, those components that represent more than 1% of the notional value of the index. We believe this will result in a decreased burden for filers relative to the proposal. In addition, and as requested by commenters, funds will report portfolio information on Form N–PORT on the same basis they use in NAV calculations under rule 2a–4 (generally a T+1 basis), which will alleviate the need of the majority of funds to alter reporting systems to report on a T+0 basis.[1297] Although we did not specify the appropriate basis for reporting in the proposing release, commenters suggested that reporting on the same basis used in NAV calculations (generally a T+1 basis) was preferable to T+0, and we are sensitive to their concerns. Finally, we are adopting a new General Instruction G that clarifies that in reporting information on Form N–PORT, the fund may respond using its own internal methodologies and the conventions of its service providers, provided the information is consistent with information that they report internally and to current and prospective investors, and the fund's methodologies and conventions are consistent with any instructions or other guidance relating to the Form. We believe that this alteration eases the reporting burden on funds by allowing them to rely on their existing practices and could result in a cost savings for filers relative to the proposal as it makes clear that they do not have to alter systems or methodology for reporting information items on Form N–PORT.

To the extent possible, we have attempted to quantify these costs. Based on updated industry statistics, we estimate that 11,382 funds will file Form N–PORT.[1298] As discussed below, we estimate that these funds will incur certain costs associated with preparing, reviewing, and filing reports on Form N–PORT.[1299] Assuming that 35% of

[1292] Monthly portfolio investment information is available for approximately 42% of funds covered by The CRSP Survivor-Bias-Free US Mutual Fund Database as of the fourth quarter of 2015. The database covers more than 10,000 open-ended mutual funds during this time period. This estimate suggests that a large proportion of funds already report monthly portfolio investment information, although it is unclear whether monthly information is reported following each month or if information relating to several months is periodically reported at a later date. Calculated based on data from The CRSP Survivor-Bias-Free US Mutual Fund Database © 2015 Center for Research in Security Prices (CRSP®), The University of Chicago Booth School of Business. One commenter also cited the proportion of funds that are currently reporting monthly portfolio investment information, 6,500 of 12,000 portfolios, as well as the proportion of funds that report portfolio investment monthly information within 45 days, 6,200 of 6,500. Morningstar Comment Letter.

[1293] Costs related to such processes are included in the estimate below of the paperwork costs related to Form N–PORT, discussed below.

[1294] *See, e.g.,* Form PF Adopting Release, *supra* footnote 80, at text following n. 357 (discussing the costs to advisers to private funds of filing Form PF in XML format); Money Market Fund Reform 2010 Release, *supra* footnote 447, at nn. 341–344 and accompanying text (discussing the costs to money market funds of filing reports on Form N–MFP in XML format).

[1295] *See supra* section II.H.1.

[1296] *See, e.g.,* Oppenheimer Comment Letter; MFS Comment Letter; Wells Fargo Comment Letter.

[1297] Fidelity Comment Letter (requesting that funds be permitted to report on a T+1 basis); MFS Comment Letter (same); Pioneer Comment (same); Invesco Comment Letter (same).

[1298] *See infra* footnote 1495 (explaining calculation of 11,382 funds).

[1299] *See infra* section V.A.1. Commenters questioned the estimates in the proposal relating to the paperwork costs associated with preparing, funds (3,984 funds) will choose to license a software solution to file reports on Form N–PORT, we estimate costs to funds choosing this option of $56,682 per fund for the first year[1300] with annual ongoing costs of $47,465 per fund.[1301] We further assume that 65% of funds (7,398 funds) will choose to retain a third-party service provider to provide data aggregation and validation services as part of the preparation and filing of reports on Form N–PORT, and we estimate costs to funds choosing this option of $55,492 per fund for the first year[1302] with annual ongoing costs of $39,214 per fund.[1303] In total, we estimate that funds will incur initial costs of $636,350,904 and ongoing annual costs of $479,205,732.[1304]

Although there will be no change to the frequency or time-lag for which investment company security position information is publicly disclosed, the increase in the amount of publicly available information and the greater ability to analyze the information as a result of its structure may facilitate activities such as ''front-running,'' ''predatory trading,'' and ''copycatting/reverse engineering of trading strategies'' by other investors.[1305] Investors that trade ahead of funds could reduce the profitability of funds by increasing the prices at which funds purchase securities and by decreasing the prices at which funds sell securities. These activities can reduce the returns to shareholders who invest in actively managed funds, making actively managed funds less attractive investment options.[1306] Portfolio investment information, along with flow information, can also create opportunities for other market participants to front-run the sales of funds that experience large outflows and the purchases of funds that experience large inflows,[1307] or create opportunities for other market participants to engage in predatory trading that could further hinder fund ability to unwind positions.[1308] For example, Form N–PORT will result in the disclosure of additional information, such as pertaining to derivatives and securities lending activities, which could more clearly reveal the investment strategy of reporting funds and their risk exposures.[1309] We note, however, that much, though not all, of the information that Form N–PORT requires is already reported by funds on Form N–CSR and Form N–Q.[1310] The structured data format of portfolio investments disclosure could improve the ability of other investors to obtain and aggregate the data, and identify specific funds to front-run or trade in a predatory manner. These activities could reduce the profitability from developing new investment strategies, and therefore could reduce innovation and adversely impact competition in the fund industry.

A trading strategy that follows the publicly reported holdings of actively managed funds can also earn similar if not higher after expense returns.[1311] An implication of this observation is that the public disclosure of portfolio investment information could induce free-riding by investors that use the information and reduce the potential benefit from developing new investment strategies and engaging in proprietary market research. The effect of free-riding would reduce the ability of investment companies with longer investment horizons to benefit from researching investment opportunities and developing new strategies more so than investment companies with shorter investment horizons because of the increased likelihood that the disclosed portfolio investment information would reveal their long-term investment strategies.[1312]

A comparison can be made between the economic effects from the introduction of Form N–PORT and the economic effects from the introduction of Form N–Q in May 2004 which increased the reporting frequency of portfolio investment information to the Commission from semiannual to quarterly. The introduction of Form N–Q resulted in an increase in the amount

---

reviewing, and filing reports on Form N–PORT. *See* Invesco Comment Letter; Simpson Thacher Comment Letter. These comments are discussed *infra* section IV.A.1.

1300 *See infra* footnotes 1473–1476, 1486, 1494 and accompanying text. This estimate is based upon the following calculations: $56,682 = $4,805 in external costs + $51,876.50 in internal costs ($51,876.50 = (15 hours × $308/hour for a senior programmer) + (38.5 hours × $317/hour for a senior database administrator) + (30 hours × $271/hour for a financial reporting manager) + (30 hours × $201/hour for a senior accountant) + (30 hours × $160/hour for an intermediate accountant) + (30 hours × $306/hour for a senior portfolio manager) + (24 hours × $288/hour for a compliance manager)). The hourly wage figures in this and subsequent footnotes are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

1301 *See infra* footnotes 1477, 1486 and accompanying text. This estimate is based upon the following calculations: $47,465 = $4,805 in external costs + $42,660 in internal costs ($42,660 = (30 hours × $271/hour for a financial reporting manager) + (30 hours × $201/hour for a senior accountant) + (30 hours × $160/hour for an intermediate accountant) + (30 hours × $306/hour for a senior portfolio manager) + (24 hours × $288/hour for a compliance manager) + (24 hours × $317/hour for a senior database administrator)).

1302 *See infra* footnotes 1480–1482, 1487, 1494 and accompanying text. This estimate is based upon the following calculations: $55,492 = $11,440 in external costs + $44,051.50 in internal costs ($44,051.50 = (30 hours × $308/hour for a senior programmer) + (46 hours × $317/hour for a senior database administrator) + (16.5 hours × $271/hour for a financial reporting manager) + (16.5 hours × $201/hour for a senior accountant) + (16.5 hours × $160/hour for an intermediate accountant) + (16.5 hours × $306/hour for a senior portfolio manager) + (16.5 hours × $288/hour for a compliance manager)).

1303 *See infra* footnotes 1483, 1487 and accompanying text. This estimate is based upon the following calculations: $39,214 = $11,440 in external costs + $27,774 in internal costs ($27,774 = (18 hours × $271/hour for a financial reporting manager) + (18 hours × $201/hour for a senior accountant) + (18 hours × $160/hour for an intermediate accountant) + (18 hours × $306/hour for a senior portfolio manager) + (18 hours × $288/hour for a compliance manager) + (18 hours × $317/hour for a senior database administrator)).

1304 These estimates are based upon the following calculations: $636,350,904 = (3,984 funds × $56,682 per fund) + (7,398 funds × $55,492 per fund). $479,205,732 = (3,984 funds × $47,465 per fund) + (7,398 funds × $39,214 per fund).

1305 One commenter questioned the potential impact of monthly public disclosure of Form N–PORT on the ability of other investors to engage in predatory trading or copycatting activities citing to the large proportion of funds that currently report monthly portfolio investment information (Morningstar Comment Letter). Although a large percentage of funds report monthly portfolio investment information, a large percentage of funds currently do not. *See supra* footnote 1292. The incentives of funds to report portfolio investment information on a more frequent basis is dependent on many factors including their perception of the impact of more frequent public disclosure on future returns. Other commenters expressed concern that the increase in the amount of publicly available information and the greater ability to analyze the information as a result of its structure would increase front-running, predatory trading, and copycatting/reverse engineering of trading strategies by other investors and suggested that reports filed on Form N–PORT be made non-public (Schwab Comment Letter; T. Rowe Price Comment Letter). Another commenter recommended the quarterly reporting of monthly information to reduce these concerns (Dodge & Cox Comment Letter).

1306 *See, e.g.,* Potential Effects of More Frequent Disclosure, *supra* footnote 490.

1307 *See, e.g.,* Joshua Coval & Erik Stafford, *Asset Fire Sales (and Purchases) in Equity Markets,* 86 J. of Fin. Econ., 479 (2007).

1308 *See, e.g.,* Markus K. Brunnermeier & Lasse Heje Pedersen, *Predatory Trading,* 60 J. of Fin. 1825 (2005).

1309 *See, e.g.,* Simpson Thacher Comment Letter (''We further note that public disclosure of detailed information about each derivatives position will provide competitors of funds significantly enhances ability to reverse-engineer strategies.''); Pioneer Comment Letter.

1310 *See supra* footnote 27 and accompanying text.

1311 *See, e.g.,* Mary Margaret Frank, *et al., Copycat Funds: Information Disclosure Regulation and the Returns to Active Management in the Mutual Fund Industry,* 47 J. Law and Econ. 515 (2004).

1312 *See, e.g.,* Vikas Agarwal, *et al., Mandatory Portfolio Disclosure, Stock Liquidity, and Mutual Fund Performance,* 70 J. of Fin. Econ. 2733 (Dec. 2015) (''Agarwal *et al.*''), *available at http://onlinelibrary.wiley.com/doi/10.1111/jofi.12245/pdf*; Marno Verbeek & Yu Wang, *Better than the Original? The Relative Success of Copycat Funds,* 37 J. of Bank. & Fin., 3454 (2013) (''Verbeek & Wang'').

of information that could have been acted upon by other investors. For example, studies suggest that the ability of copycat funds to outperform actively managed funds increased after the introduction of Form N–Q,[1313] and additional studies suggest that the performance of those funds with better previous performance or that invest in low-information stocks decreased following the introduction of Form N–Q.[1314] The increase in the frequency of portfolio investment information as a result of Form N–Q resulted in an increase in the amount of portfolio investment information available. Although Form N–PORT will not increase the frequency of public disclosure, Form N–PORT will increase the amount of portfolio investment information available. In addition, Form N–PORT, unlike Form N–Q, will also increase the accessibility of the information as a result of its structured data format. By maintaining the status quo with respect to the frequency and timing of the disclosure of publicly available portfolio information, we aim to mitigate added costs while allowing the Commission, the fund industry, and the marketplace to assess the impact of the structured, more detailed data reported on Form N–PORT, and the extent to which these changes might affect the likelihood of predatory trading. The additional information and the structure of the information that is required under Form N–PORT, however, could improve the ability of investors to obtain, aggregate, and analyze all fund investments. Thus, Form N–PORT could negatively affect actively managed funds by increasing the ability of other investors to front-run, predatory trade, and copycat/reverse engineer trading strategies, and in particular those funds that would have more additional information disclosed, such as funds that use derivatives as part of their investment strategies.[1315] We believe, however, that even though the reported information will be more easily and efficiently accessed and aggregated given the nature of structured data, the contribution of structured data to front-running, predatory trading, and reverse-engineering will be minimal compared to the baseline given that funds currently have a quarterly public reporting frequency with a 60-day reporting delay. The Commission has considered the needs of the Commission, investors, and other users of portfolio investment information and the potential that other investors may use the information to the detriment of the reporting funds.

Form N–PORT will require the disclosure of information that is currently nonpublic and could result in additional or other costs to funds and to market participants. For example, we proposed that Form N–PORT would require a fund to report the identities and weights of all of the individual components in custom baskets or indexes comprising the reference instruments underlying the fund's derivative investments, as well as each component that represents more than one percent of the reference asset based on the notional value of the derivatives, unless the reference instrument is an index or custom basket whose components are publicly available on a Web site and are updated on that Web site no less frequently than quarterly, or the notional amount of the derivative represents 1% or less of the net asset value of the fund.[1316] Commenters informed us that index providers assert intellectual property rights to many indexes or custom baskets used as reference instruments in derivative investments to index providers, and are subject to licensing agreements between the index provider and the fund.[1317] As further noted by commenters, we acknowledge that disclosing the components of a nonpublic index or custom basket could result in costs to both the index provider, whose indexing strategy could be imitated, and the fund, whose investments could be front-run.[1318] Moreover, as stated by commenters, disclosing the underlying components of such an index or custom basket could subject the fund to one-time costs associated with renegotiating licensing agreements and the ongoing payment of fees in order to obtain the rights to disclose the components of the index or custom basket.[1319] Additionally, the increased transparency in nonpublic indexes and custom baskets could ultimately decrease the incentives of index providers to license the use of such indexes or custom baskets to funds as well as fund demand for securities products that incorporate these indexes. We are unable to quantify the extent to which these reporting requirements could affect the costs associated with licensing agreements, fees, and incentives.

Although our determination to keep certain items nonpublic was based on factors other than competitive concerns,[1320] by keeping delta and country of risk nonpublic relative to the proposal, as recommended by commenters, potential costs of disclosing previously nonpublic information may have been mitigated as well. We recognize that Form N–PORT, as well as the amendments to regulation S–X, will require funds to report certain information regarding fees and financing terms for certain derivatives contracts, particularly OTC swaps, which are not currently required to be publicly disclosed.[1321] As asserted by commenters, the increased transparency could increase the competition among swap and security-based swap dealers to offer favorable fees and financing terms, as the fees and financing terms offered to one fund would be known to other funds negotiating the terms of such contracts.[1322] There is a possibility, however, that counterparties may choose not to transact with funds as a consequence of this disclosure, in which funds would have fewer potential counterparties to work with and the fees paid by funds would likely rise.

Form N–PORT also requires funds to disclose the variable financing rates for swaps that pay or receive financing payments.[1323] Some commenters noted that variable financing rates for swap contracts are commercial terms of a deal that are negotiated between the fund and the counterparty to the swap.[1324] Disclosure of favorable variable

[1313] *See* Verbeek & Wang, *supra* footnote 1312.

[1314] *See* Agarwal *et al., supra* footnote 1312. Low information stocks include stocks with smaller market capitalization, less liquidity, and less analyst coverage. The authors also observed that the liquidity of stocks with higher fund ownership increased following the introduction of Form N–Q. Although the increase in liquidity will benefit investors by reducing trading costs, this benefit stems as a result of the costly disclosure of potential investment opportunities.

[1315] *See supra* footnote 1314 and accompanying text.

[1316] *See supra* footnote 355 and accompanying text.

[1317] *See* MSCI Comment Letter; SIFMA Comment Letter I; ICI Comment Letter.

[1318] *See, e.g.,* SIFMA Comment Letter I; *see also* Antti Petajisto, *The Index Premium and its Hidden Cost for Index Funds,* 18 J. of Empirical Fin. 271 (2011). Petajisto analysis suggests that mechanically induced demand changes to demand, such as index fund rebalancing, can result in price effects. If predictable, then other investors could take advantage of the changes to the proprietary indexes by front-running future trades.

[1319] *See* ICI Comment Letter. The Commission does not have information available to provide a reliable estimate of the increased costs of such licensing agreements because funds are currently not required to disclose the agreements or the components of the index or custom basket.

[1320] *See generally supra* section II.A.

[1321] *See, e.g.,* MFS Comment Letter; Invesco Comment Letter; ICI Comment Letter.

[1322] *See, e.g.,* MFS Comment Letter; Invesco Comment Letter.

[1323] *See* Item C.11.f.i. of Form N–PORT.

[1324] *See, e.g.,* MFS Comment Letter; Invesco Comment Letter; and ICI Comment Letter (public benefit of disclosure does not outweigh potential competitive harm).

financing rates could result in costs to the fund in the form of less favorable variable financing rates for future transactions, but may also improve the ability of other funds to negotiate more favorable terms. However, the increased transparency could increase the competition among swap and security-based swap dealers to offer favorable fees and financing terms thereby decreasing the fees paid by funds. Counterparties could also choose not to transact with funds as a consequence of this disclosure, in which case competition for counterparties would increase and the fees paid by funds would rise.

Finally, some commenters noted that reporting of distressed debt issued by private companies could affect the private company's relationship with the fund. For example, one commenter argued that the public disclosure of default, arrears, or deferred coupon payments raises competitive concerns when a debt security is issued by a borrower that is a private company, as private borrowers may avoid registered funds in order to limit public disclosure if the company becomes distressed.[1325] The commenter noted that public disclosure that a borrower is or may be financially distressed could increase prepayment risk and be disruptive to the fund's or adviser's relationship with the borrower.[1326] Moreover, this disclosure could also harm private issuers by disclosing their financial distress to vendors and key employees and customers.[1327] While we recognize that the disclosure of a private issuer in distress could result in costs for the issuer in the forms discussed above (*e.g.* a potentially negative impact on existing outside relationships or a decrease in prospective future borrowers), we believe that it is important that Commission staff have access to information relating to fund investments that are in default or arrears in order to monitor individual fund and industry risk. Moreover, funds investors will benefit from the transparency into the financial health of the fund's investments which will allow them to make more fully informed decisions regarding their investment. Moreover, default or arrears relating to a fund's investments in private issuer debt are already publicly available on a fund's quarterly financial statements, further mitigating any potential new costs to the fund or its private counterparties.[1328]

As discussed, we expect that institutional investors and other market participants will directly use the information from Form N–PORT more so than individual investors as a result of the format and associated readability.[1329] To the extent that third-party information providers obtain and present the information in a format that individual investors could understand, then individual investors will also benefit from the information that funds report on Form N–PORT. We recognize that some commenters were concerned that individual investors may misinterpret the portfolio investment information that funds report on Form N–PORT, possibly including portfolio and position level risk metrics, country of risk and portfolio return information. As discussed above, we have determined to keep position-level reporting of delta and of country of risk nonpublic.[1330] Regarding the other information, however, while there is some possibility of misinterpretation, we believe investors could benefit from the information and, accordingly determined that the disclosure of such information is appropriate and in the public's interest.

For funds that invest in debt instruments or derivatives we are modifying our requirements from the proposing release in several ways that may affect the costs borne by affected filers. For example, as discussed in detail above, we are requiring the reporting of fewer key rates in order to reduce the reporting burden for funds, adding *de minimis* for reporting such metrics for certain currencies, and raising the threshold for fixed income allocation for risk reporting from 20% to 25% to align the reporting requirement with current disclosures required in the prospectus, which could reduce the number of funds that must report such metrics. We are also requiring filers to report DV100 in addition to DV01, which will result in an additional reporting cost relative to the proposal; however, we believe that the extent of such reporting costs will be mitigated because DV100 is among the most common measures of interest rate sensitivity and that it will not be costly to report. Similarly, we are adding the requirement to report net realized gain (or losses) and net change in unrealized appreciation (or depreciation) attributable to derivatives by derivative instrument, in addition to by asset category as proposed, which will add an incremental cost relative to the proposal; however, as discussed above, we understand from commenters that funds already keep this information by derivative instrument type, which should mitigate the incremental increase in cost relative to the proposal.[1331]

As discussed above, although Form N–Q would be rescinded, it would also require funds to file portfolio schedules prepared in accordance with §§ 210.12–12 to 12–14 of Regulation S–X for the fund's first and third fiscal quarters, by attaching those schedules to its reports on Form N–PORT for those reporting periods. The schedules attached to Form N–PORT would be largely identical to the information currently reported on Form N–Q to ensure that such information continues to be presented using the form and content which investors are accustomed to viewing in reports on Form N–Q, and we have modified this requirement from the Proposing Release to allow funds 60 days from the end of the reporting period to file this attachment, as opposed to 30 days as proposed. This should lower the burden of preparing such attachments relative to the proposal, without any change in benefit, as the attachment is intended for investors and quarter-end Form N–PORT filings are made public 60 days after the end of the reporting period.

Rescission of Form N–Q would eliminate certifications of the accuracy of the portfolio schedules reported for the first and third fiscal quarters. Rescission would also result in funds certifying their disclosure controls and procedures and internal control over financial reporting semi-annually (at the end of the second and fourth quarters) rather than quarterly. To the extent that such certifications improve the accuracy of the data reported, removing such certifications could have negative effects on the quality of the data reported. Likewise, if the reduced frequency of the certifications affects the process by which controls and procedures are assessed, requiring such certifications semi-annually rather than quarterly could reduce the effectiveness of the fund's disclosure controls and

[1325] *See* Simpson Thacher Comment Letter.

[1326] *See id.*

[1327] *See id.*

[1328] *See* rule 12–12, n. 5 of Regulation S–X.

[1329] As discussed in section I.B.1., while we do not anticipate that many individual investors will analyze data using Form N–PORT, we believe that individual investors will benefit indirectly from the information collected on reports on Form N PORT, through enhanced Commission monitoring and oversight of the fund industry and through analyses prepared by third-party service providers and other parties, such as industry observers and academics.

[1330] *See, e.g.,* IDC Comment Letter (warning of possible investor confusion from public disclosure of risk metrics); SIFMA Comment Letter I (same); Invesco Comment Letter (same); Schwab Comment Letter (same); ICI Comment Letter (same); CRMC Comment Letter (warning of possible investor confusion from public disclosure of portfolio return information); SIFMA Comment Letter I (same).

[1331] *See supra* section II.A.2.e.

procedures and internal control over financial reporting. However, we expect such effects, if any, to be minimal because certifying officers would continue to certify portfolio holdings for the fund's second and fourth fiscal quarters and would further provide semi-annual certifications concerning disclosure controls and procedures and internal control over financial reporting that would cover the entire year.

Lastly, registrants also will be required to file the management's statement regarding a change in independent public accountant as an exhibit to reports on Form N–CSR. This exhibit filing requirement originated in Form N–SAR. Commission staff believes that moving this reporting requirement from Form N–SAR to Form N–CSR does not have new economic implications from the proposal. We have, however, attributed an annual burden of an additional one-tenth of an hour per registrant [1332] and approximately an additional $32.40 per registrant [1333] in reporting paperwork costs to Form N–CSR as a result of the modification.

4. Alternatives

The Commission has explored other ways to modernize and improve the utility and the quality of the portfolio investment information that funds provide to the Commission and to investors.[1334] Commission staff examined how portfolio investment information reported to the Commission could be improved to assist the Commission in its rulemaking, inspection, examination, policymaking, and risk-monitoring functions, and how technology could be used to facilitate those ends. Commission staff also examined enhancements that would benefit investors and other potential users of this information, including updating the reporting obligations of funds to keep pace with the changes in the fund industry. We have considered many alternatives to the individual elements contained in this release, and those alternatives are discussed above in the sections pertinent to the major components of this rulemaking.[1335] Alternatives to the filing of Form N–PORT and the disclosure of portfolio investment information relate to the timing and frequency of the reports, the public disclosure of the information, and the information that Form N–PORT would request.

Funds will file reports on Form N–PORT no later than 30 days after the close of each month. The monthly reporting and the 30-day reporting lag will increase the timeliness of the information and improve the ability of the Commission to oversee investment companies. Alternatives include extending the filing period from thirty days, as recommended by many commenters, or shortening the filing period, which no commenters specifically recommended,[1336] and to require the filing of monthly portfolio investment information at a quarterly frequency, as recommended by another commenter.[1337] While a shorter filing period would provide more timely information to the Commission, it would also increase the burden on funds that need time to collect, verify, and report the required information to the Commission. Conversely, a longer filing period or a decrease in the frequency in which funds provide monthly information would give funds more time to report the information and may decrease the potential costs from front-running, predatory trading, and copycatting/reverse engineering of trading strategies by other investors,[1338] but may also decrease the ability of the Commission to oversee investment companies and to identify risks a fund is facing, particularly during times of market stress, as the information is more likely to be stale or outdated. As discussed above in section II.A.3, we believe that the monthly reporting of Form N–PORT with a 30-day filing period appropriately balances the staff's need for timely information against the appropriate amount of time for funds to collect, verify, and report information to the Commission.

As discussed above in section II.A.2.a and in response to comments received, the final amendments now include an instruction that funds report portfolio information on Form N–PORT on the same basis used in calculating NAV under rule 2a–4 (generally a T+1 basis). Alternatives include requiring all funds to file reports on Form N–PORT on a T+0 basis or, providing the reporting fund the explicit option to file reports on Form N–PORT on either a T+0 basis or a T+1 basis, as recommended by a commenter.[1339] Although requiring funds to file reports on Form N–PORT on a T+0 basis would be consistent with the current filing requirements for Form N–CSR and Form N–Q and thus would result in information that is reported on a more consistent basis across reports, the shorter time to file Form N–PORT relative to Form N–CSR and Form N–Q could require funds to alter reporting systems and result in additional filing costs, as pointed out by several commenters.[1340] In addition, although providing funds the option to report on either a T+0 or a T+1 basis would eliminate the potential costs for all funds to alter systems to report on either a T+0 or a T+1 basis, providing funds the option to report on either a T+0 or a T+1 basis would result in information that is less comparable between funds.

Funds will have 18 to 30 months after the effective date to comply with the new reporting requirements for Form N–PORT. The compliance period varies with fund size, with smaller fund entities having an additional 12 months to comply with the new reporting requirements. An alternative would be to not allow for tiered compliance and require all investment companies to begin filing reports on Form N–PORT within 18 months. Other alternatives would be to extend the compliance period for all investment companies, as recommended by many commenters.[1341] As discussed above, we believe it is appropriate to tier the compliance period to provide the smaller fund complexes more time to make the system and internal process changes necessary to prepare reports on Form N–PORT. We also continue to believe that 18 months would provide an adequate period of time for larger fund entities,

[1332] *See infra* footnote1612 and accompanying text.

[1333] *See infra* footnote 1609 and accompanying text.

[1334] We discuss other alternatives to the adopted changes to the current regulatory regime in section III.F, below. Other alternatives include the information that funds will report on Form N–PORT relative to the information that funds will report on Form N–CEN, and alternative formats for structuring the data.

[1335] *See generally supra* section II.

[1336] *See, e.g.,* State Street Comment Letter (supporting a 30-day reporting lag, but requesting an additional 15 days for the first year of reporting); Morningstar Comment Letter (supporting a 30- or 45-day reporting lag); Vanguard Comment Letter (supporting a 45-day reporting lag); CRMC Comment Letter (supporting a 60-day reporting lag); Dechert Comment Letter (generally supporting a longer reporting period, or alternatively a longer compliance period to enable the systems necessary to produce accurate information to be developed and implemented).

[1337] *See, e,g.,* Dodge & Cox Comment Letter (supporting quarterly filings of monthly data).

[1338] *See, e.g.,* Dodge & Cox Comment Letter (advocating for quarterly filings of monthly data due, in part, to concerns regarding potential data breaches regarding monthly portfolio data); Morningstar Comment Letter (supporting public disclosure of portfolio investment information at the monthly frequency, citing to the large number of funds already reporting monthly portfolio investment information without significant delay as evidence of a lack of industry concern relating to front-running or copycatting).

[1339] SIFMA Comment Letter II.

[1340] *See, e.g.,* Fidelity Comment Letter; Pioneer Comment Letter; and Invesco Comment Letter.

[1341] *See, e.g.,* IDC Comment Letter; Dreyfus Comment Letter; Fidelity Comment Letter; Oppenheimer Comment Letter; Vanguard Comment Letter; MFS Comment Letter; Mutual Fund Directors Forum Comment Letter; ICI Comment Letter; and SIFMA Comment Letter I.

intermediaries, and other service providers to update systems to conduct the requisite operational changes to their systems and to establish internal processes to prepare, validate, and file reports on Form N–PORT with the Commission. Nonetheless, as discussed above, we intend to keep the first six months of filings reported on Form N–PORT after the compliance date nonpublic, to allow funds and the Commission to refine the technical specifications and data validation processes.[1342]

Another alternative for tiered compliance would be to set the threshold at a level different than $1 billion. A higher threshold, such as $20 billion, as recommended by one commenter,[1343] would increase the number of entities that could benefit from the additional time to update systems to adhere to the additional filing requirements, but would also decrease the amount of portfolio investment information that would be available to the Commission, investors, and other interested parties in a structured data format. A lower threshold, on the other hand, would have the opposite effects. As discussed above, the Commission believes that a $1 billion threshold for tiered compliance will address the need for structured portfolio investment information while providing smaller entities in most need of additional time a better opportunity to update systems.

The information that funds report on Form N–PORT for the last month of each fiscal quarter will be made publicly available (with the exception of delta, country of risk, and associated explanatory notes) 60 days after month-end (thirty days after the filing deadline). Additional alternatives include making more of the portfolio and other information reported on the form either nonpublic or public, including making all or none of the information reported on Form N–PORT each month publicly available, as discussed above in section II.A.3.[1344]

In response to comments received we have removed delta, country of risk, and the associated explanatory notes from the public reporting requirements, but we believe that making more of the portfolio and other information reported on Form N–PORT nonpublic would reduce the amount of information investors have access to when making investment decisions. However, as discussed above, making more of the portfolio and other information reported on the form public, including making all of the information reported on Form N–PORT each month publicly available, could increase the risk of front-running, predatory trading, and copycatting/reverse engineering of trading strategies by other investors, as well as the public disclosure of proprietary or sensitive information.[1345] We believe that making the vast majority of items reported on Form N–PORT public, as well as keeping eight of the twelve months of data collected by the Commission on Form N–PORT nonpublic, balances the public's need for and the usefulness of the information without unnecessarily subjecting funds to potentially harmful trading strategies by other market participants.

Form N–PORT will require funds to report additional portfolio investment information relative to what is currently reported in Form N–CSR and Form N–Q. Alternatives include not requiring some of this additional information, or requiring information in addition to what will be required to be reported as currently adopted. Other alternatives would be to request information that is more granular, information that is more aggregate, and information that is more consistent with other current regulatory forms or that substitutes compliance with other current regulatory regimes.[1346] Although we recognize that there are various alternative reporting requirements imposed in other contexts and by other regulators, the reporting requirements imposed by Form N–PORT have been designed specifically to meet the Commission's regulatory needs with regards to monitoring and oversight of registered funds. As discussed above, the information reported on Form N–PORT will increase the ability of Commission staff to better understand the risks of a particular fund, a group of funds, and the fund industry. Investors, third-party information providers, and other potential users will also experience benefits from the introduction of Form N–PORT. For example, to the extent that investors use the information, Form N–PORT will improve the ability of investors to differentiate funds based on their investment strategies and other activities. Although the new information that will be reported on Form N–PORT could increase the initial and ongoing reporting costs for investment companies, and could increase the likelihood of front-running, predatory trading, and copycatting/reverse-engineering by other investors, the Commission continues to believe that the information is important to fully describe a fund's investments. The Commission also believes that the reporting requirements of Form N–PORT are appropriate given each filer's status as a registered investment company with the Commission and not as a private fund.[1347]

As discussed above, the Commission is requiring funds to report risk metrics at the portfolio and position level on Form N–PORT. In response to commenters' suggestions, we are now requiring the disclosure of measures of duration for a smaller number of key interest rates than we had originally proposed. However, an alternative would be to request those key rates detailed in the proposing release, or even additional measures. As discussed above, we believe that the number of key rates that we are adopting today will provide us with sufficient information and flexibility while also reducing the reporting burden. Other alternatives that would increase the reporting of risk-sensitivity measures include requiring funds to report additional portfolio level measures that describe the sensitivity of a reporting fund at additional basis point changes in interest rates and credit spreads, and a measure (or measures) of convexity, and include requiring funds to report additional position level measures such as vega, as requested by one commenter.[1348] Investment companies could also report fewer portfolio or position level risk-sensitivity measures, such as a single or total portfolio level measure of interest rate and credit spread duration, as recommended by some commenters,[1349] or instead report the underlying data to calculate the measures, as recommended by another commenter.[1350]

As discussed above and in response to commenters' suggestions, we have made

[1342] *See supra* section II.H.1.

[1343] Simpson Thacher Comment Letter.

[1344] Commenters had mixed views on the public disclosure of N–PORT information; those comments are discussed *supra* section II.A.3.

[1345] *See infra* section III.C.3.

[1346] One commenter suggested that the Commission should use the same interest rate and credit spread risk metrics as is required in Form PF (BlackRock Comment Letter). Another commenter suggested that the Commission and the CFTC should agree on and implement a substituted compliance regime (SIFMA Comment Letter I).

[1347] *See supra* footnote 485 and accompanying text.

[1348] *See* State Street Comment Letter (requesting that funds also be required to report credit spread, delta, duration, yield to maturity, option adjusted spread, exposure, delta-adjusted exposure, duration equivalents, foreign exchange sensitivity/risk, and vega).

[1349] *See* Simpson Thacher Comment Letter; Fidelity Comment Letter; Dreyfus Comment Letter; ICI Comment Letter; and Wells Fargo Comment Letter.

[1350] *See* Vanguard Comment Letter (suggesting that the Commission calculate risk metrics from information that funds report on Form N–PORT).

a modification from the proposed requirement to report only DV01 to now require filers to report both DV01 and DV100 on Form N–PORT. The Commission believes that DV100 is among the most common measures of interest rate sensitivity and that it will, in conjunction with DV01, provide more useful information about non-parallel shifts in the yield curve than smaller measures, such as DV25 and DV5, while not requiring filers that do not calculate convexity internally to begin doing so. However, while potentially useful, requiring all funds to report further additional portfolio- or position-level risk-sensitivity measures would increase the burden on all funds and not significantly improve the ability of Commission staff to monitor the funds in most market environments, and in particular for funds which do not extensively use derivatives as part of their investment strategy (while we are requiring funds to report DV100, we believe the marginal cost of reporting it is minimal because we understand that many funds likely already calculate it). Although the burden to investment companies to report risk metrics would decrease if fewer or no risk-sensitivity measures were required by the Commission, the staff believes that the benefits from requiring the measures that we are including in Form N–PORT today, including the ability of Commission staff to efficiently identify and size specific investment risks, justify the costs to investment companies to provide the information. Lastly, we believe that requiring funds to provide the risk measures would improve the ability of the Commission, investors, or other potential users to efficiently analyze the information rather than requiring funds to provide the inputs that might be necessary for interested parties to calculate these measures themselves,[1351] and would enhance the ability of Commission staff to efficiently identify risk exposures, especially during times of market stress.

Other alternatives to the reporting of portfolio level risk-sensitivity measures relate to the allocation thresholds for funds to report portfolio interest rate risk exposures and currency risk exposures. Given commenters' recommendations, we are raising the threshold for fixed income allocation for risk reporting from 20% to 25%, and providing a *de minimis* threshold for reporting currency risk of 1%. We could, however, require lower/higher thresholds that would result in more/fewer funds reporting interest rate or currency risk exposures, respectively. As discussed above, the Commission believes that the reporting thresholds for Form N–PORT provide Commission staff the ability to analyze interest rate and currency exposures while reducing reporting burdens and the potential that funds inadvertently trigger the reporting requirement when the exposures are not part of its principal investment strategy.

Form N–PORT will also require funds to report terms and conditions of each derivative investment that are important to understanding the payoff profile of the derivative, including the reference instrument.[1352] As discussed above, for reference instruments that are indexes or custom baskets of securities that are not publicly available, Form N–PORT will require funds to report all the components of the index or custom basket if the investment constitutes more than 5% of the fund's NAV, and the top 50 components of the index or custom basket and any components that represent more than 1% of the notional value of the index or custom basket if the investment represents more than1% but less than 5% of the fund's NAV. Alternatives would be for funds to report fewer or additional components of the underlying indexes or custom baskets.

Lastly, funds will no longer be required to file reports on Form N–Q. An alternative is for funds to continue reporting Form N–Q along with Form N–PORT at the end of first and third fiscal quarters. Commission staff believes, however, that the new reporting requirements for portfolio investment information, including the amendments to the certification requirements of Form N–CSR, would cause Form N–Q to become redundant if not outdated, and therefore impose costs on funds to file reports that would result in little benefit. Although requiring that certifying officers state that they have disclosed in the report any change in the registrant's internal control over financial reporting that occurred during the most recent fiscal half-year will increase the burden of filing Form N–CSR, these certifications will fill the gap in certification coverage regarding the registrant's internal control over financial reporting that would otherwise exist once Form N–Q is rescinded.

C. Amendments to Regulation S–X

1. Introduction and Economic Baseline

Regulation S–X prescribes the form and content required in financial statements. The amendments to Regulation S–X will require new disclosures regarding fund holdings in open futures contracts, open forward foreign currency contracts, and open swap contracts, and additional disclosures regarding fund holdings of written and purchased option contracts; update the disclosures for other investments with conforming amendments, as well as reorganize the order in which some investments are presented; and amend the rules regarding the general form and content of fund financial statements, including requiring prominent placement of investments in derivative investments in a fund's financial statements, rather than allowing such schedules to be placed in the notes to the financial statements.[1353]

The current set of requirements under Regulation S–X, as well as the current practice of many funds[1354] to voluntarily disclose additional portfolio investment information in fund financial statements and to follow industry guidance and other industry practices, is the baseline from which we discuss the economic effects of amendments to Regulation S–X.[1355] The parties that could be affected by the amendments to Regulation S–X include funds that file or will file reports with the Commission and update or will update registration statements on file with the Commission, the Commission, current and future investors of investment companies, and other market participants that could be affected by the increase in the disclosure of portfolio investment information. We did not receive any specific comments on the proposed

[1351] *See supra* section II.A.2.g.iv.

[1352] We are requiring similar information on a fund's schedule of investments. *See supra* section II.A.2.g.iv.

[1353] *See supra* section II.C. As discussed above, rule 12–13 of Regulation S–X requires limited generic information on the fund's investments other than securities. To address issues of inconsistent disclosures and lack of transparency, the amendments will have a consistent presentation of a fund's disclosures of open futures contacts, foreign currency forward contracts, and swaps. In addition, while many of the amendments to Regulation S–X are similar to the proposed disclosures in Form N–PORT (*e.g.,* enhanced derivatives disclosures), the amendments to Regulation S–X will be in an unstructured but consistently presented format (as opposed to Form N–PORT's structured data).

[1354] As we discussed *supra* footnote 524, while "funds" are defined in the preamble as registered investment companies other than face-amount certificate companies and any separate series thereof—*i.e.,* management companies and UITs, we note that our amendments to Regulation S–X apply to both registered investment companies and BDCs. *See supra* footnotes 699 and 700. Therefore, when discussing fund reporting requirements in the context of our amendments to Regulation S–X, we are also including changes to the reporting requirements for BDCs.

[1355] *See* discussion *supra* section II.C.1.

economic baseline for the amendments to Regulation S–X.

Previously, Regulation S–X did not prescribe specific information to be disclosed for many investments in derivatives, which could result in inconsistent reporting between funds and reduced transparency of the information reported, and in some cases could result in insufficient information concerning the terms and underlying reference assets of derivatives to allow investors to understand the investment.

We expect that many of the economic effects from the amendments to Regulation S–X will largely result from an increase in investor ability to make investment decisions dependent on the more transparent disclosure in financial statements, as noted by commenters.[1356] As discussed above, the total economic effects will depend on the extent to which the portfolios and investment practices of all investment companies become more transparent, and the ability of investors, and in particular individual investors, to utilize financial statements to compare funds and to make investment decisions. The economic effects will also depend on the extent to which investment companies already voluntarily provide disclosures that will be required by the amendments, and the extent to which the amendments to Regulation S–X standardize financial statements across funds. As a result of these factors, some of which are difficult to quantify or unquantifiable, the discussion below is largely qualitative although certain one-time and ongoing costs associated with the amendments are quantified below.

2. Benefits

The amendments to Regulation S–X will benefit investors by updating the information funds disclose in the financial statements of registration statements and shareholder reports. Several commenters noted that the amendments will benefit investors through increased transparency and comparability of fund financial statements, particularly for individual investors that we would not expect to use the information in Form N–PORT because of its structured data format.[1357] In particular, the additional information that Regulation S–X will require for open option contracts both written and purchased, open futures contracts, open forward foreign currency contracts, open swap contracts, and other investments will increase the transparency of the fund's portfolio investments and risk exposures.[1358]

Other amendments will also improve the transparency into the fund's investments. For example, we are requiring funds to identify each investment whose value was determined using significant unobservable inputs.[1359] Likewise, we are requiring that funds separately identify restricted investments.[1360] In addition, in a modification from the proposal, we are now including a requirement that should benefit investors and other users of the information by providing more transparency to a fund's investments in debt securities, and in particular variable rate securities. As discussed more fully below and in section II.C.3, in light of comments we received and in order to give investors both the ability to understand the investment's current return (through end-period rate) and to better understand how interest rate changes could affect the investment's future returns, we are adopting an instruction that would require a fund, for its investments in variable rate securities, to both describe the referenced rate and spread and provide the end of period interest rate for each investment, or include disclosure of each referenced rate at the end of the period.[1361]

In a change from the proposal and Form N–PORT, we are requiring funds to separately list the top 50 components and the components that represent more than 1% of the notional value of the referenced assets underlying swap and option contracts, rather than separately listing every component. We believe that this alteration benefits investors by making it easy for them to understand and evaluate the specific risk exposures of a fund from certain swap and option contracts, while simultaneously reducing the reporting burden for funds.

We believe that the changes to the form and content of financial statements in Article 6 of Regulation S–X will similarly benefit investors, particularly individual investors who in general may not have the tools and resources possessed by institutional investors, through greater transparency in a fund's financial statements. For example, we are requiring funds to disclose their investments in derivatives in the financial statements, as opposed to in the notes to the financial statements.[1362] To the extent funds do not do this already, we believe, and commenters agreed, that more prominent placement of investments in derivatives in the financial statements (immediately following the schedules for investments in securities of unaffiliated investors and securities sold short), will benefit investors through increased visibility of fund investments in derivatives and comparability between funds.[1363] Likewise, we are eliminating the financial statement disclosure of ''Total investments'' on the balance sheet under ''Assets''.[1364] As we discuss in more detail in section II.C.6, recognizing that funds could present investments in derivatives under both assets and liabilities on the balance sheet, eliminating this disclosure will benefit investors by providing a more complete representation of the effect of these investments on a balance sheet.[1365] Other parties that will be affected by the amendments to Regulation S–X include the Commission and other market participants that would use shareholder reports and registration statements to obtain fund information. Although the amendments to Regulation S–X will primarily benefit investors and particularly individual investors, the Commission and other market participants could use the information reported in a fund's financial statements, and would benefit from an increase in transparency into a fund's financial statements. For example, Commission staff could utilize the information in a fund's financial statements during examinations.

Commission staff believes that a large number of funds currently adhere to industry practices from which the amendments to Regulation S–X are derived. The amendments to Regulation S–X, therefore, will effectively standardize the information that all funds disclose on financial statements, and make the schedule of investments and financial statement disclosures consistent and thus more comparable

[1356] *See, e.g.,* PwC Comment Letter (''We believe that the Proposed Rule will generally provide investors with greater access to information relating to their investments and investment advisors.''); Deloitte Comment Letter.

[1357] *See* PwC Comment Letter; EY Comment Letter.

[1358] *See, e.g.,* EY Comment Letter and Morningstar Comment Letter for statements in support of these ideas, and MFS Comment Letter and ICI Comment Letter for statements against, as well as the discussion in Section II.C.2.

[1359] *See, e.g.,* rule 12–13, n. 7 of Regulation S–X; *see also* rules 12–13A, n. 5; 12–13B, n. 3; 12–13C, n. 6; and 12–13D, n. 7 of Regulation S–X.

[1360] *See* rule 12–13, n. 6 of Regulation S–X; *see also* rules 12–13A, n. 4; 12–13B, n. 2; 12–13C, n. 5; and 12–13D, n. 6 of Regulation S–X.

[1361] *See* rules 12–12, n. 4 and 12–12B, n. 3 of Regulation S–X.

[1362] *See* rule 6–10(a) of Regulation S–X; *see also* discussion *supra* section II.C.6; *see also* ICI Comment Letter (supporting the requirement to present derivatives schedules in the fund's financial statements).

[1363] *See* State Street Comment Letter; ICI Comment Letter.

[1364] *See* rule 6–04 of Regulation S–X; *see also* discussion *supra* section II.C.6.

[1365] *See id.*

across funds, as noted by commenters.[1366] Similar to new Form N–PORT, the amendments to Regulation S–X, to the extent that they increase the transparency and consistency of shareholder reports across funds, could improve the ability of investors, particularly individual investors, to differentiate investment companies and make investment decisions either by themselves or by way of third-party information providers. An increase in the ability of investors to differentiate investment companies and allocate capital across reporting funds closer to their risk preferences will increase the competition among funds for investor capital. In addition, by improving the ability of investors to understand investment risks and hence their ability to allocate capital across funds and other investments more efficiently, we also believe that the introduction of Form N–PORT could also promote capital formation.

3. Costs

We believe that registrants on average will likely incur minimal costs from our amendments to Regulation S–X because, as discussed above, based upon staff experience, we believe that a majority of funds are already providing the information that will be required by the amendments to Regulation S–X in their financial statements.[1367] The costs to a fund of complying with the new rules will depend upon the extent to which funds are already making such disclosures currently.[1368] As discussed above, the Commission will require parallel disclosures in Form N–PORT, and funds will incur one set of costs, both one-time and ongoing, to obtain the information that will be disclosed in Form N–PORT and in financial statements. In addition, other costs that relate to the disclosure of portfolio investment information, including the ability of other investors to front-run, trade predatorily, and copycat/reverse engineer trading strategies of funds, will primarily relate to Form N–PORT because of the additional ability of other interested third-parties and market participants to efficiently obtain, aggregate, and analyze the information as a result of its structured data format as compared to the non-structured data format of portfolio investment information reported in financial statements.

For example, as discussed above in section II.C.2.a, in response to commenters' concerns relating to the burdens associated with our proposed requirement that funds list all components underlying a nonpublic index or custom basket,[1369] we are instead requiring funds to separately list the top 50 components and the components that represent more than 1% of the notional value of the referenced assets underlying swap [1370] and option contracts.[1371] Commenters noted, and we agree, that the potential volume of all of the components underlying nonpublic indexes and custom baskets were disclosed would make the fund's financial statements difficult to understand.[1372] Thus requiring funds to report only the most significant components could benefit investors by making it easier for them to understand and evaluate the specific risk exposures of a fund from certain swap and option contracts.[1373] Moreover, limiting the reporting of nonpublic indexes and custom baskets will reduce fund auditing costs by eliminating the burdens of requiring an auditor to verify every component of a nonpublic index, which could potentially include thousands of investments.

We further believe this change provides the necessary benefit without being unduly burdensome. We understand that index providers might assert intellectual property rights to certain indexes, and these may be subject to licensing agreements between the index provider and the fund.[1374] Disclosing the underlying components of an index could subject the fund to costs associated with negotiating or renegotiating licensing agreements in order to publicly disclose the components of the index.[1375] The Commission does not have information available to provide a reliable estimate of the increased costs of licensing agreements because funds currently are not required to disclose the agreements or the components of the index. In addition, disclosing the components of a nonpublic index may include costs to both the index provider, whose indexing strategy could be reverse-engineered, and the fund, whose rebalancing trades could be front-run.[1376] Finally, the possibility exists that index providers will refuse to permit disclosure and the funds might not be able to use such indexes any longer. This could potentially drive up competition for index providers, in turn raising costs for funds. Requiring the disclosure of only those proprietary components that meet a materiality threshold could help alleviate some of these costs and concerns. However, the underlying components would be more accessible in Form N–PORT as a result of its structured data format as compared to the non-structured data format of the information in financial statements, so we believe that the costs of disclosing the information will therefore primarily relate to Form N–PORT, and reporting of components will be more comprehensive in Form N–PORT, as discussed in greater detail above.

As another example, the amendments include an instruction to disclose the variable financing rates for swaps that pay or receive financing payments.[1377] It is our understanding that variable financing rates for swap contracts are often commercial terms of a deal that are negotiated between the fund and the counterparty to the swap.[1378] Disclosure of favorable variable financing rates could result in costs to the fund in the form of less favorable variable financing rates for future transactions, but may also improve the ability of other funds to negotiate more favorable terms. Similar to the introduction of Form N–PORT, the increased transparency could increase the competition among swap and security-based swap dealers to offer favorable fees and financing terms thereby decreasing the fees paid by funds. Counterparties could also, however, choose not to transact with funds as a consequence of this disclosure, in which case competition for counterparties would increase and the fees paid by funds would rise. As with the disclosure of the components of an index, we believe that the majority of the costs associated with disclosures of variable financing rates, including the increase in competition for favorable fees and terms, will instead derive from

[1366] *See, e.g.,* EY Comment Letter.

[1367] In order to reduce burdens on funds, we also endeavored, where appropriate, to require consistent derivatives holdings disclosures between Form N–PORT and Regulation S–X.

[1368] Moreover, as we discussed above in section III.C.1, we expect minimal audit costs as a result of our amendments to Regulation S–X because many funds are already voluntarily providing this information in their audited financial statements.

[1369] *See, e.g.,* PwC Comment Letter; Oppenheimer Comment Letter; ICI Comment Letter; and AICPA Comment Letter.

[1370] *See* rule 12–13C, n. 3 of Regulation S–X; *see also* discussion *supra* section II.C.2.d.

[1371] *See* rule 12–13, n. 3 of Regulation S–X; *see also* discussion *supra* section II.C.2.a.

[1372] *See* AICPA Comment Letter; and PwC Comment Letter.

[1373] *Id.*

[1374] *See* discussion *supra* sections II.A.2.g.iv and II.C.2.a.

[1375] *See id.*

[1376] *See id.*

[1377] *See* rule 12–13C, n. 3 of Regulation S–X.

[1378] *See, e.g.,* MFS Comment Letter; Invesco Comment Letter; and ICI Comment Letter (public benefit of disclosure does not outweigh potential competitive harm).

the similar requirements in Form N–PORT.[1379]

In response to commenters concerns, we also made changes from the proposal to eliminate several disclosures. For example, we are amending our proposed instruction which would require funds to categorize the schedule by type of investment, the related industry, *and* the related country or geographic region.[1380] We agreed with commenters that requiring categorization of both the industry *and* geographic region (as opposed to categorizing one) would add considerable length to the schedule of investments, which could ultimately undermine the schedule's usefulness to investors.[1381] In the interest of reducing burdens for investors and making financial statements easier to review, we are not adopting this proposed requirement.

We similarly determined to eliminate an instruction in Regulation S–X requiring funds to include tax basis disclosures. As discussed above in section II.C.4, this instruction is contained in current rules 12–12, 12–12C, and 12–13 and we proposed to extend the instruction to proposed rules 12–12A, 12–13A, 12–13B, 12–13C, and 12–13D. We were, however, persuaded by commenters that this disclosure of tax basis by investment type would not provide meaningful disclosure to investors, while increasing the volume and complexity of financial statements.[1382] In the interest of reducing burdens to both investors and funds, while making financial statements easier for investors to understand, we are eliminating the tax basis instruction from the current rules and not adopting it for the other rules.

We also proposed to require funds to identify illiquid investments.[1383] We received several comments noting that, among other things, this disclosure would be difficult and costly to audit, as auditors would be required to determine the validity of the fund's liquidity determinations for each investment.[1384] We were persuaded by comments relating to the costs of auditing liquidity disclosures and, as discussed further in the Liquidity Adopting Release we are adopting concurrently, also believe that such position-level information regarding liquidity is better suited for nonpublic reporting to the Commission in Form N–PORT.

Finally, in order to provide more transparency to a fund's investments in debt securities, we had proposed an instruction requiring a fund to disclose, for its investment in variable rate securities, the referenced rate and spread.[1385] We received several comments supporting our proposal to provide the reference rate and spread for variable rate securities, reasoning that the disclosure of the components of the variable rate would be easier for investors and other interested parties to determine the investment's current rate at any given time (as opposed to the rate at the end of the reporting period).[1386] However, another commenter suggested that the end-period interest rate is the most appropriate variable rate security disclosure for shareholders.[1387] As discussed more fully in section II.C.3, in order to give investors both the ability to understand the investment's current return (through end-period rate) and to better understand how interest rate changes could affect the investment's future returns, we have made a change to the proposed instruction so that it now requires a fund to both describe the reference rate and spread and provide the end of period interest rate for each investment, or include disclosure of each reference rate at the end of the period.[1388] Requiring a fund to disclose both the period-end rate and reference rate and spread will necessarily add costs relating to a fund's financial statement and auditing costs, albeit, we expect that cost to be minimal because these pieces of information are generally not difficult to obtain and verify as, based on staff experience, we believe that this information is currently collected by funds and commonly available in a fund's accounting system.

Funds will incur one-time and ongoing costs to comply with the amendments to Regulation S–X in addition to the costs attributable to new Form N–PORT. For the amendments to Regulation S–X, funds will incur one-time and ongoing costs to obtain the additional information that will be disclosed on shareholder reports and registration statements, and that will also not be disclosed on Form N–PORT; and funds will also incur one-time costs to format for presentation all additional information that will be reported in financial statements. In addition, we will require funds, to the extent they do not already do so, to present the schedules associated with rules 12–13 through 12–13D and 12–14 in the financial statements, as opposed to in the notes to the financial statements.[1389] Funds that do not currently present their schedule of investments in this manner will incur a one-time cost of modifying the presentation of their financial statements to conform to the amendments.

Additionally, we proposed to add a new disclosure requirement that was designed to increase transparency into a fund's securities lending and cash collateral management activities.[1390] Some commenters expressed concerns relating to the location of the required disclosure in the fund's financial statements in particular.[1391] One commenter in particular noted that additional costs of auditing the disclosure of these fees ''would most likely outweigh any benefits of reporting this information.'' [1392] While we continue to believe that investors and other interested parties will benefit from disclosures relating to a fund's securities lending and cash collateral management activities, after consideration of the issues raised by commenters, including the added auditing costs that funds would incur, we determined that it is more appropriate to require these disclosures be made in a fund's Statement of Additional Information (or, with respect to closed-end funds, a fund's reports on Form N–CSR) rather than to require their inclusion in its financial statements.[1393]

To the extent possible, we have attempted to quantify these costs. As discussed below in section IV.C, we estimate that management investment companies will incur certain one-time additional paperwork and other costs

[1379] *See* Item C.11.f.i of Form N–PORT; *see also* discussion *supra* section II.A.2.g.iv.

[1380] *See supra* section II.C.3.

[1381] *See* Oppenheimer Comment Letter; State Street Comment Letter; Vanguard Comment Letter; MFS Comment Letter; and BlackRock Comment Letter.

[1382] *See, e.g.* PwC Comment Letter; EY Comment Letter; CRMC Comment Letter; State Street Comment Letter; and MFS Comment Letter.

[1383] *See supra* section II.C.4.

[1384] *See, e.g.,* PwC Comment Letter; ICI Comment Letter; and AICPA Comment Letter.

[1385] *See* proposed rule 12–12, n. 4; *see also supra* section II.C.3.

[1386] *See* State Street Comment Letter; *see also* Morningstar Comment Letter (Disclosure would allow investors to identify when cash flows associated with a fund's returns are fixed or variable).

[1387] *See* Wells Fargo Comment Letter.

[1388] *See* rules 12–12, n. 4 and 12–12B, n. 3 of Regulation S–X.

[1389] *See* rule 6–10 of Regulation S–X; *see also* discussion *supra* section II.C.6.

[1390] *See* proposed rule 6.03(m) of Regulation S–X; *see also supra* section II.C.6.

[1391] *See* Deloitte Comment Letter (noting that indirect fees ''are typically a management's estimate that is imprecise''); EY Comment Letter (stating that ''the proposed disclosures would result in the presentation of detailed information with varying degrees of usefulness that could detract from other material information presented in the financial statements'' and recommending that ''the Commission use other reporting mechanisms more suited for that purpose'').

[1392] *See* Deloitte Comment Letter.

[1393] *See supra* section II.F.

associated with preparing, reviewing, and filing semi-annual reports in accordance with the amendments to Regulation S–X in the amount of approximately $1,911 per fund [1394] and $22,662,549 in the aggregate.[1395] We similarly estimate that management investment companies will incur certain ongoing paperwork and other costs associated with preparing, reviewing, and filing semi-annual reports in accordance with our amendments to Regulation S–X in the amount of approximately $683 per fund [1396] and $8,099,697 in the aggregate.[1397] Likewise, we estimate that UITs will incur certain one-time additional paperwork and other costs associated with preparing, reviewing, and filing semi-annual reports in accordance with the amendments to Regulation S–X in the amount of approximately $1,911 per fund [1398] and $1,377,831 in the aggregate.[1399] We similarly estimate that UITs will incur certain ongoing paperwork and other costs associated with preparing, reviewing, and filing semi-annual reports in accordance with the amendments to Regulation S–X in the amount of approximately $683 per UIT [1400] and $492,443 in the aggregate.[1401]

4. Alternatives

The Commission has also explored other ways to modernize and improve the utility, quality, and consistency of the information that funds report to the Commission and to investors in the financial statements required in shareholder reports and other registration statements. Commission staff examined how the information funds provide to the Commission and to investors could be made more informative and more consistent across funds. Alternatives to the amendments to Regulation S–X relate to the compliance period to adhere to the new amendments and to the information that funds report in the financial statements.

Funds will have 8 months after the effective date to comply with the amendments to Regulation S–X. An alternative would be to extend the compliance period, as suggested by several commenters.[1402] We believe, however, that most entities would not need additional time to modify systems to adhere to the amendments to Regulation S–X because, with the exception of the disclosure of index components, the proposed amendments are largely consistent with current fund disclosure practices. As such, we do not expect that funds, intermediaries, or service providers will require significant amounts of time to modify systems or establish internal processes to prepare financial statements in accordance with our final amendments to Regulation S–X. Another alternative would be to provide a tiered compliance period to provide smaller fund complexes more time, as we do for Form N–PORT. However, we do not believe that smaller entities would relatively benefit from additional time, since while fixed costs in general are proportionately higher for smaller entities, the amendments to Regulation S–X do not add additional fixed costs, but rather the amendments are largely consistent with current disclosure practices. Extending the compliance period for all entities or for smaller entities, however, would delay the benefits to investors (and to the Commission and to other market participants) from the increased transparency and standardization of shareholder reports and other financial statements.

The amendments to Regulation S–X will update the information funds disclose in financial statements. Alternatives to the amendments to Regulation S–X include the disclosures of different information. For example, the amendments to Regulation S–X will require funds to report information describing derivative contracts including, in some instances, the components of reference indexes that surpass certain materiality thresholds. As alternatives, we could require funds to only disclose a brief description of the index, require a different threshold for identifying the components of the swap or options contract, or require the reporting of all components. Although the alternatives that would increase the reporting of the components of reference indexes would increase the transparency for investors into the assets underlying a swap or options contract including the underlying risks of the fund, these alternatives would increase the costs of funds to report the information. However, although the alternatives that would decrease the reporting of the components of reference indexes would decrease the costs to funds to report the information, these alternatives would decrease the ability of investors to understand fund portfolio investments. We believe that the amendments to Regulation S–X adopted today provide investors with sufficient information to broadly understand funds' investments without unduly burdening funds.

Amendments to Regulation S–X will also not require funds to report information describing their securities lending activities in the financial statements, as proposed, but will instead require funds to report the information in the Statement of Additional Information (or, for closed-end funds, their reports on Form N–CSR). An alternative, similar to proposed rule 6.03(m), would be for funds to report information describing their securities lending activities as part of the financial statements. However, the requirement that securities lending information would be disclosed as part of financial statements would increase the costs to audit and report the information.[1403] Another alternative

[1394] *See infra* footnote 1562 and accompanying text. The estimate is based upon the following calculations: ($1,911 = ($560 = 3.5 hours × $160/hour for an Intermediate Accountant) + ($1,351 = 3.5 hours × $386/hour for an Attorney)). The hourly wage figures in this and subsequent footnotes are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

[1395] *See id.* These estimates are based upon the following calculations: $22,662,549 = (11,859 funds × $1,911 per fund).

[1396] *See id.* The estimate is based upon the following calculations: ($683 = ($200 = 1.25 hours × $160/hour for an Intermediate Accountant) + ($483 = 1.25 hours × $386/hour for an Attorney). The hourly wage figures in this and subsequent footnotes are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

[1397] *See id.* These estimates are based upon the following calculations: $8,099,697 = (11,859 funds × $683 per fund).

[1398] *See infra* footnote 1577 and accompanying text. The estimate is based upon the following calculations: ($1,911 = ($560 = 3.5 hours × $160/hour for an Intermediate Accountant) + ($1,351= 3.5 hours × $386/hour for an Attorney)). The hourly wage figures in this and subsequent footnotes are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

[1399] *See id.* These estimates are based upon the following calculations: $1,377,831 = (721 UITs × $1,911per UIT).

[1400] *See id.* The estimate is based upon the following calculations: ($683 = ($200 = 1.25 hours × $160/hour for an Intermediate Accountant) + ($483 = 1.25 hours × $386/hour for an Attorney). The hourly wage figures in this and subsequent footnotes are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

[1401] *See id.* These estimates are based upon the following calculations: $492,443 = (721 UITs × $683 per UIT).

[1402] Fidelity Comment Letter; Oppenheimer Comment Letter; State Street Comment Letter; MFS Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I; and Wells Fargo Comment Letter.

[1403] Deloitte Comment Letter.

would be for funds to not provide the information altogether. However, we believe that the information is important to investors, the Commission, and other interested parties to understand the economic implications of a fund's securities lending activities. To the extent that investors utilize this information or that it benefits the Commission, we believe that the Statement of Additional Information (or, for closed-end funds, reports on Form N–CSR) is an appropriate place to disclose this information.

Similarly, amendments to Regulation S–X will also not require funds in their financial statements to identify illiquid securities, as was initially proposed. An alternative is to adopt the proposed approach and require funds in their financial statements to identify illiquid securities. The disclosure of the liquidity of securities on financial statements, however, could increase the costs to audit financial statements.[1404] In addition, some commenters asserted the disclosure of security liquidity could cause investors, and in particular individual investors, to misinterpret the information as objective.[1405] As discussed in the Liquidity Adopting Release, we are adopting portfolio-level liquidity reporting on Form N–PORT which we believe mitigates many of the commenters' concerns and is a more appropriate method of public reporting.[1406] Accordingly, we are not adopting the proposed instructions in Regulation S–X relating to the liquidity of investments.

Lastly, amendments to Regulation S–X will include instructions to funds to make a separate disclosure for income from non-cash dividends and payment-in-kind interest on the statement of operations. Funds will report income from payment-in-kind interest or non-cash dividends only if the income exceeds 5 percent of the fund's investment income, as suggested by commenters who requested a materiality threshold, which is consistent with the other income disclosures under rule 6–07.1.[1407] An alternative, similar to the proposal, would be for funds to make a separate disclosure for all income from payment-in-kind interest or non-cash dividends regardless of the amount.

D. Form N–CEN and Rescission of Form N–SAR

1. Introduction and Economic Baseline

Form N–CEN requires funds to report census information to the Commission on an annual basis. Although Form N–CEN includes many of the same data elements as the current census-type reporting form, Form N–SAR, it replaces items that are outdated or no longer informative with items of greater importance for the oversight and examination of investment companies, and eliminates certain items that are also reported to the Commission in other forms. Investment companies will file reports on Form N–CEN in a structured, XML format to allow for easier aggregation and manipulation of the data. Form N–SAR will be rescinded.

The current set of requirements for funds to file reports on Form N–SAR is the baseline from which we discuss the economic effects of Form N–CEN.[1408] The parties that could be affected by the introduction of Form N–CEN and the rescission of Form N–SAR include funds that currently file reports on Form N–SAR and funds that will file reports on Form N–CEN; the Commission; and, other current and future users of fund census information including investors, third-party information providers, and other interested potential users.

At the time it was adopted, Form N–SAR was intended to reduce reporting burdens and better align the information reported with the characteristics of the fund industry. As the fund industry has developed, including the development of new products, so has the need to update the information the Commission requires in order to improve its ability to monitor the compliance and risks of reporting funds. The format in which information is reported in Form N–SAR is also outdated, which reduces the ability of Commission staff to obtain and aggregate the information. Likewise, the technology in which Form N–SAR is filed does not allow for certain validation checks, reducing the data quality of the information (*e.g.,* the Form N–SAR application is unable to check related fields for arithmetic consistency) and therefore the ability of Commission staff to compare the information across funds is constrained.

The economic effects from the introduction of new Form N–CEN and the rescission of Form N–SAR will largely result from an update to the format of the information reported, as well as the update to the census information that investment companies will report. The economic effects will therefore depend on the extent to which investment companies become more transparent, and the ability of Commission staff and investors to utilize the updated disclosures. Form N–CEN requires census information about the fund industry reported in a structured data format. However, while Form N–SAR information is also reported in a structured data format, Form N–CEN information will be reported in XML format, a much more modern and useful data format, and one that allows for more efficient data collection than does the baseline format, aggregation, manipulation, and rendering. Therefore, although the introduction of Form N–CEN will increase the transparency of the fund industry by making the information reported therein more readily available, more easily shared or retrieved, and more relevant, we cannot quantify the significance of its economic implications.

2. Benefits

The Commission is rescinding Form N–SAR and replacing it with new Form N–CEN to improve the quality and the utility of the information investment companies report to the Commission. The improvement in the quality and utility of the information will allow Commission staff to better understand industry trends, inform policy, and assist with the Commission's examination program.

Similar to Form N–PORT, the ability of the Commission to most effectively use the information is dependent on the ability of staff to compile and aggregate the information into a single database. The structuring of the information in an XML format will improve the ability and efficiency of Commission staff to obtain and analyze the information. An improved structured data format could also promote additional efficiency to the extent that the new standardized reporting requirements encourage more automated report assembly, validation, and review processes for the disclosure and transmission of information.[1409] In

[1404] Deloitte Comment Letter; ICI Comment Letter; and AICPA Comment Letter.

[1405] PwC Comment Letter; Oppenheimer Comment Letter; MFS Comment Letter; Deloitte Comment Letter; Invesco Comment Letter; Schwab Comment Letter; ICI Comment Letter; and AICPA Comment Letter.

[1406] *See* discussion in section II.C.4.

[1407] Several commenters suggested the materiality threshold including MFS Comment Letter; PwC Comment Letter; State Street Comment Letter; ICI Comment Letter; and AICPA Comment Letter; *see also* section II.C.6.

[1408] Management companies must file reports on Form N–SAR semi-annually, and UITs must file reports on Form N–SAR annually. *See* current rule 30b1–1 for management companies, and *see* current rule 30a–1 for UITs.

[1409] *See, e.g.,* CFA Comment Letter (noting that requiring information to be reported through a structured data format will allow better collection and analysis of information); *see also* XBRL US Comment Letter (expressing the belief that a structured data format will make data computer-

Continued

ways similar to those discussed above in relation to Form N–PORT, an XML format also improves the quality of census information obtained by the Commission by providing constraints as to how information can be provided and by allowing for built-in validation.[1410]

Form N–CEN also modernizes the census information that funds provide and increases its utility to Commission staff, investors, and other interested parties by reflecting the changes to the fund industry in a structured data format. The Commission will use the information in Form N–CEN to improve its understanding of fund industry trends and practices, and assist with the Commission's examination program. Commission staff has identified specific information that could improve its ability to effectively oversee funds.

Along with the other information, Form N–CEN adds new requirements for information specifically relating to the ETF primary markets, including more detailed information on authorized participants and creation unit requirements.[1411] We believe that the additional information on ETFs will allow the Commission to better understand and assess the ETF market and also inform the public about certain characteristics of the ETF primary markets.[1412] Additionally, Form N–CEN, like Form N–SAR, has particular sections for closed-end funds, SBICs, and UITs in order to obtain information about the particular characteristics of these entities to assist our staff in monitoring the activities of these funds and preparing for examinations.

Form N–CEN also adds new requirements for information relating to a management company's securities lending activities, including information concerning the management company's securities lending agents and cash collateral managers.[1413] We are also requiring the monthly average value of securities on loan, the net income from securities lending, and the monthly average net assets in the fund.[1414] Together with the requirements on securities lending activities in Form N–PORT and in fund Statements of Additional Information,[1415] this information will benefit the Commission's oversight abilities and, potentially, future policymaking concerning securities lending. Moreover, we believe that this information could inform investors and other interested parties about the use of and potential risks associated with a management company's securities lending activities.[1416]

We expect funds will also benefit from replacing Form N–SAR with Form N–CEN through reduced expenses. First, we estimate that Form N–CEN has a lower cost per filing than Form N–SAR, as a result of filing in an XML format, as opposed to the outdated format of Form N–SAR, and the elimination of certain items on Form N–SAR that funds will not report on Form N–CEN. Second, funds that are management companies will experience a decrease in paperwork-related expenses from the decrease in the reporting frequency of census information from semi-annual to annual.[1417] As discussed in detail below, we estimate that paperwork expenses associated with reporting on Form N–CEN will be, in the aggregate, about $14.6 million each year.[1418] By contrast, we estimate that paperwork expenses associated with reporting on Form N–SAR are about $25.5 million each year.[1419] Accordingly, we estimate, on net, annual paperwork expense savings to funds associated with the adoption of Form N–CEN and rescission of Form N–SAR will be about $10.9 million.[1420] We recognize that these ongoing annual expense savings will be partially offset by one-time expenses in the first year to file reports on Form N–CEN. We estimate that these expenses would be, in the aggregate, about $20.2

readable, consistent and comparable across different reporting entities).

1410 *See, e.g.,* Morningstar Comment Letter (noting that the XML format will reduce the amount of defective reporting currently possible in Form N–SAR); *see also* XBRL US Comment Letter (while specifically recommending an XBRL structured format, noting that checking the validity of data may still be required but, with structured data, the process can be automated, thereby reducing costs and at the same time increasing the consistency of the data produced).

1411 *See* discussion *supra* section II.D.4.e.

1412 Some commenters supported the inclusion of ETF-specific information in Form N–CEN. *See supra* footnote 1061 and accompanying text; *but see infra* footnote 1429 and accompanying text.

1413 *See* Item C.6 of Form N–CEN.; *see also* discussion *supra* section II.D.4.c.iii.

1414 The monthly average value of securities on loan and the net income from securities lending are being moved from Form S–X to Form N–CEN, while the monthly average net assets is a newly reported value, and while not specifically related to securities lending activity, it will facilitate the use of the monthly average value of securities on loan.

1415 *See supra* section II.A.2.d; section II.A.2.g.v; and section II.F.

1416 Some commenters expressed general support for reporting securities lending information on Form N–CEN; some commenters expressed certain concerns about particular proposed requirements and we have modified the securities lending requirements in certain respects after consideration of commenters' views. *See supra* section II.D.4.c.iii.

1417 See *supra* notes 768–769 and accompanying text for a discussion of commenters' views on the filing frequency. *See also* ICI Comment Letter (stating that reporting this data on an annual, rather than a semi-annual basis, would significantly lessen reporting burdens for funds).

1418 Below, we estimate that 3,113 funds will file reports on Form N–CEN each year. *See infra* footnote 1532. Below, we estimate that funds will, on average, incur 12.37 burden hours per fund per year to comply with the reporting requirements of Form N–CEN. *See infra* footnote 1532 and accompanying text. Therefore, in the aggregate, we estimate that such funds would incur about 38,508 burden hours to comply with these requirements. This estimate is based on the following calculation: 3,113 funds × 12.37 hours per fund per year = 38,508 hours per year. The Commission estimates the wage rate associated with these burden hours based on salary information for the securities industry compiled by the Securities Industry and Financial Markets Association. The estimated wage figure is based on published rates for senior programmers and compliance attorneys, modified to account for an 1,800-hour work year; multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead; and adjusted to account for the effects of inflation, yielding effective hourly rates of $308 and $340, respectively. *See* Securities Industry and Financial Markets Association, Report on Management & Professional Earnings in the Securities Industry 2013. We estimate that senior programmers and compliance attorneys would divide their time equally, yielding an estimated hourly wage of $324. ($308 per hour for senior programmers + $340 per hour for compliance attorneys) ÷ 2 = $324 per hour. Based on the Commission's estimate of 38,508 burden hours per year and the estimated wage rate of $324 per hour, the total annual paperwork expenses for funds associated with the internal hour burden imposed by the reporting requirements of Form N–CEN are about $12,476,592. This estimate is based upon the following calculation: 38,508 hours per year × $324 per hour = $12,476,592. Below, we also estimate that funds will incur aggregate annual external costs of $2,088,176 to comply with the requirements of Form N–CEN. *See infra* footnote 1538 and accompanying text. Thus the total estimated annual paperwork expenses associated with the reporting requirements of Form N–CEN are $14,564,768. This estimate is based upon the following calculation: $12,476,592 associated with internal burden + $2,088,176 external cost burden = $14,564,768.

1419 Below, we estimate that, in the aggregate, funds currently incur about 78,561 burden hours to comply with the requirements of Form N–SAR. *See infra* footnote 1541 and accompanying text. The Commission estimates the wage rate associated with these burden hours based on salary information for the securities industry compiled by the Securities Industry and Financial Markets Association. The estimated wage figure is based on published rates for senior programmers and compliance attorneys, modified to account for an 1,800-hour work year; multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead; and adjusted to account for the effects of inflation, yielding effective hourly rates of $308 and $340, respectively. *See* Securities Industry and Financial Markets Association, Report on Management & Professional Earnings in the Securities Industry 2013. We estimate that senior programmers and compliance attorneys would divide their time equally, yielding an estimated hourly wage of $324. ($308 per hour for senior programmers + $340 per hour for compliance attorneys) ÷ 2 = $324 per hour. Based on the Commission's estimate of 78,561 burden hours and the estimated wage rate of $324 per hour, the total annual paperwork expenses for funds associated with the internal hour burden imposed by the reporting requirements of Form N–SAR are about $25,453,764. This estimate is based upon the following calculation: 78,561 hours per year × $324 per hour = $25,453,764.

1420 This estimate is based upon the following calculation: $25,453,764 in annual paperwork expenses associated with Form N–SAR − $14,564,768 in annual paperwork expenses associated with Form N–CEN = $10,888,996 in annual paperwork expenses.

million.[1421] As indicated by commenters, the 75-day period to file Form N–CEN will also benefit funds by staggering the reports that funds file with the Commission at the end of each fiscal year.[1422]

The rescission of Form N–SAR and the introduction of Form N–CEN, to the extent relevant, could provide benefits to investors, to third-party information providers, and to other potential users from an update to the census information that investment companies report and from an update to its structured data format. Similar to Form N–PORT, we expect that institutional investors and other market participants could use the information from Form N–CEN more so than individual investors. However, individual investors may indirectly benefit from the increase in information to the extent that it becomes available through third-party information providers, as these information providers will likely have the capabilities to efficiently collect the data from Form N–CEN and present it for investors in user-friendly format. For certain investors and other potential users that would obtain and use the information that funds report in Form N–CEN directly, the update to the structure of the information should improve their ability to efficiently aggregate the information across all investment companies given the difficulty associated with extracting information from reports on Form N–SAR, due to its idiosyncratic reporting format.[1423]

The changes to the reporting of census information, including the reporting of the information in a modern structured data format, could improve the ability of investors to differentiate investment companies and could therefore lead to an increase in competition among funds for investor capital. In addition, these changes could enhance the ability of investors to understand the investment risks and practices (for example, securities lending activities) of investment companies, and therefore could improve the ability of investors to efficiently allocate capital. Consequently, the reporting changes could promote capital formation.

3. Costs

As discussed above, we expect the new Form N–CEN will be less costly to file than Form N–SAR has been, because Form N–CEN will be filed annually while Form N–SAR is filed semi-annually.[1424] ETFs and closed-end funds, however, may have higher expenses in filing reports on Form N–CEN relative to other investment companies, as they will generally be required to provide more information than previously reported.[1425] There could also be costs as a result of the change in the frequency of disclosure of census information. For example, the Commission will receive census information on an annual instead of semi-annual basis, and therefore to the extent that the information changes intra-annually the information will be more dated than if the information was reported to the Commission on a semi-annual basis.[1426] As discussed above, we believe that the costs related to reducing the frequency of the information received on Form N–SAR are not significant as this information is unlikely to change frequently. Also, funds' reporting costs may be reduced by the elimination, in Form N–CEN, of certain items from Form N–SAR that are no longer needed by Commission staff or are outdated in their current form.[1427] In addition, as discussed above, we are moving the change in independent public accountant attachment proposed on Form N–CEN to Form N–CSR so that an accountant's letter regarding a change in accountant will become available to the public semi-annually rather than annually,[1428] which we expect will affect reporting and other costs only minimally. Additionally, we recognize that we are adding some additional information items from the proposal, such as average net assets and CRD numbers for directors, which will result in minor increases in reporting costs relative to the proposal.

As discussed above, some commenters objected to the inclusion of the requirement for each ETF to report the dollar value of the ETF shares that each authorized participant purchased and redeemed from the ETF during the reporting period, expressing concerns that reporting authorized participant activities on Form N–CEN could discourage authorized participants from participating in the ETF market, leading to further concentration in the authorized participant community or authorized participants moving their ETF-related trading activities to banks or ''clearing'' authorized participants.[1429] We expect that any effects of these reporting requirements on authorized participant participation in the ETF primary market will be minimal. We continue to believe, moreover, that collection of this additional information may allow the Commission staff to monitor how ETF purchase and redemption activity is distributed across authorized participants and, for example, the extent to which a particular ETF—or ETFs as a group—may be reliant on one or more particular authorized participants, and we believe that adopting the new reporting requirements is appropriate in light of these benefits notwithstanding the possibility that public availability of the information might affect the ETF primary markets in the manner those commenters suggest.

Form N–CEN could impose costs on investors and other potential users of the information to obtain the information from a new or additional source, including the information that

[1421] Below, we estimate that 3,113 funds will file reports on Form N–CEN each year. *See infra* footnote 1532. Below, we estimate that funds will, on average, incur 20 additional one-time burden hours per fund in the first year to comply with the reporting requirements of Form N–CEN. *See infra* footnote 1528 and accompanying text. Therefore, in the aggregate, we estimate that such funds would incur about 62,160 one-time burden hours to comply with these requirements. This estimate is based on the following calculation: 3,113 funds × 20 one-time burden hours per fund = 62,260 one-time hours. The Commission estimates the wage rate associated with these burden hours based on salary information for the securities industry compiled by the Securities Industry and Financial Markets Association. The estimated wage figure is based on published rates for senior programmers and compliance attorneys, modified to account for an 1,800-hour work year; multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead; and adjusted to account for the effects of inflation, yielding effective hourly rates of $308 and $340, respectively. *See* Securities Industry and Financial Markets Association, Report on Management & Professional Earnings in the Securities Industry 2013. We estimate that senior programmers and compliance attorneys would divide their time equally, yielding an estimated hourly wage of $324. ($308 per hour for senior programmers + $340 per hour for compliance attorneys) ÷ 2 = $324 per hour. Based on the Commission's estimate of 62,260 one-time burden hours and the estimated wage rate of $324 per hour, the total one-time paperwork expenses for funds associated with the internal hour burden imposed by the reporting requirements of Form N–CEN are about $20,172,240. This estimate is based on the following calculation: 60,260 one-time hours × $324 per hour = $20,172,240 one-time expenses.

[1422] CAI Comment Letter; T. Rowe Price Comment Letter; Invesco Comment Letter; and ICI Comment Letter.

[1423] *See, e.g.,* Morningstar Comment Letter (noting that the XML format will provide more accessible data to the public).

[1424] *See, e.g.,* Dreyfus Comment Letter (noting that the rescission of Form N–SAR and Form N–Q and replacement with Form N–CEN would result in a net reduction of 504 filings annually for the company).

[1425] See *supra* section II.D.4.e for a discussion of the ETF requirements.

[1426] However, as discussed *supra* footnote 770, this cost is mitigated, in part, by the fact that certain items from Form N–SAR that the Commission staff has deemed necessary on a more frequent basis are included instead in reports on Form N–PORT.

[1427] *See* discussion *supra* section II.D.5. One commenter did, however, suggest we reconsider the exclusion of several of these items. Comment Letter of Morningstar, Inc. (July 20, 2015).

[1428] *See supra* section II.D.4.b.

[1429] *See supra* footnote 1072 and accompanying text.

will not be included on Form N–CEN but would be available through other filings. The information that will not be included on Form N–CEN and that will not be available elsewhere will impose costs on investors and other potential users from a loss of information to the extent that the information is found to be useful.[1430] One commenter expressed concern that obtaining this information from various sources would reduce its availability to investors and other interested parties, but could be available through third-party information providers.[1431] We have attempted to mitigate the potential cost relating to the loss of information by eliminating only those items which are either available elsewhere, not frequently used by Commission staff, or provide minimal benefit relative to the burdens of reporting such information.

4. Alternatives

Similar to Form N–PORT, the Commission has explored other ways to modernize and improve the utility and the quality of the census information that funds provide to the Commission and to investors. Commission staff examined how census information reported to the Commission could be improved to assist the Commission in its oversight activities, as well as how the information could benefit investors and other potential users of the information. Alternatives to the filing of Form N–CEN and the reporting of census information relate to the timing and frequency of the reports, the public disclosure of the information, the information that Form N–PORT would request, and the rescission of Form N–SAR.

Unlike Form N–SAR, on which management companies file reports on a semi-annual basis, management companies will report information on Form N–CEN on an annual basis. An alternative to the annual reporting of census information in Form N–CEN is a semi-annual reporting of the information similar to Form N–SAR. However, as we discussed above, the census-type nature of the information that we will collect from funds in Form N–CEN should not change as frequently as, for example, portfolio holdings information.[1432] Requiring management companies to report census information semi-annually would therefore place a burden on funds without a commensurate increase in the value of the information received by the Commission.

We also considered alternatives to extend or shorten the filing period of Form N–CEN from 75 days. While a shorter filing period, such as 60 days (similar to the proposal) would provide more timely information to the Commission,[1433] it would also place a burden on funds that need time to collect, verify, and report the required information to the Commission. Several commenters supported extending the filing period to at least a 75-day period, arguing, among other things, that a longer time period would help stagger the filing deadline from other end-of-month filing requirements, ensure that all accounting-related questions could be addressed more completely, and allow the appropriate time needed to update systems to report information in an XML format.[1434] As discussed above, we have been persuaded by commenters to adopt a filing period of 75 days after the fiscal year-end (for management companies) and calendar year-end (for UITs). We believe that the 75-day filing period for Form N–CEN would appropriately balance the staff's need for timely information against the appropriate amount of time for funds to collect, verify, and report information to the Commission.

Funds will have 18 months after the effective date to comply with the new reporting requirements for Form N–CEN. An alternative would be to tier the compliance period, similar to the compliance period for Form N–PORT, dependent on entity size. However, as discussed above, we believe that it is less likely that smaller entities would need additional time to file Form N–CEN because the requirement to file Form N–CEN is similar to the current requirement to file Form N–SAR, and we expect that filers will prefer the updated, more efficient filing format of Form N–CEN.[1435] An additional alternative would be to extend the compliance period. Some commenters suggested that the compliance period be extended to the later of 30 months after adoption of Form N–CEN, or 18 months after the effective date of amendments requiring funds to report liquidity information on Form N–CEN.[1436] Given that much of the information that will be reported on Form N–CEN is currently already reported by funds on Form N–SAR, funds should already have processes and procedures in place to reduce the risk of inadvertent errors. In addition, filings on Form N–CEN are not expected to be as technically complex nor present comparable challenges in terms of reporting and data validation as filings on Form N–PORT. As such, we expect that eighteen months will provide an adequate period of time for funds, intermediaries, and other service providers to conduct the requisite operational changes to their systems and to establish internal processes to prepare, validate, and file reports on Form N–CEN with the Commission.

Funds will be required to report to the Commission information in Form N–CEN that will provide staff an ability to identify investment risks and engage in further outreach as necessary. Not requiring the information would substantially reduce the ability of the Commission to oversee the fund industry. In addition, the information reported on Form N–CEN could be important to investors to differentiate investment companies. An alternative to adopting Form N–CEN would be to revise Form N–SAR. The Commission believes, however, that the outdated technology associated with Form N–SAR requires the introduction of a new form in order to increase the benefits from the changes made to the reporting of census information. In addition, there were no commenters who explicitly stated that Form N–SAR should not be replaced by Form N–CEN.

The information that funds report on Form N–CEN will be made publicly available. Additional alternatives include making some or all of the

[1430] Some of the information that funds will no longer report on a census-form, such as loads paid to captive or unaffiliated brokers, has been found by interested third-parties, including researchers, to be important in their analysis of the fund industry. *See, e.g.,* Susan E. K. Christoffersen, Richard Evans & David K. Musto, *What do Consumers' Fund Flows Maximize? Evidence from Their Brokers' Incentives,* 68 J. of Fin. 201 (2013). *See* discussion *supra* section II.D.5.

[1431] *See, e.g.,* Morningstar Comment Letter.

[1432] Unlike Form N–SAR, Form N–CEN will not require funds report information relating to fee and expense information. Morningstar Comment Letter suggested semi-annual reporting of Form N–CEN should fee and expense information be required on Form N–CEN.

[1433] Several commenters supported the 60-day filing period (Carol Singer Comment Letter and State Street), other commenters supported a longer filing period (MFS Comment Letter; CAI Comment Letter; T. Rowe Price Comment Letter; Invesco Comment Letter; and ICI Comment Letter). One justification for a longer filing period provided by commenters is the time needed to update systems to report information in an XML format (MFS Comment Letter; Invesco Comment Letter; and ICI Comment Letter).

[1434] MFS Comment Letter; CAI Comment Letter; T. Rowe Price Comment Letter; Invesco Comment Letter; and ICI Comment Letter.

[1435] No commenters expressed an opinion specifically related to the filing format of N–CEN versus N–SAR.

[1436] *See, e.g.,* Fidelity Comment Letter (suggesting a compliance date of 30 months after the adoption of Form N–CEN); MFS Comment Letter (same); CAI Comment Letter (same); IDC Comment Letter (same); ICI Comment Letter (suggesting the later of 30 months after the adoption of Form N–CEN or 18 months after the adoption of amendments requiring funds to report liquidity information on Form N–CEN).

census information reported on the form nonpublic. Specific information that could be made nonpublic includes securities lending information,[1437] service provider information,[1438] and ETF authorized participant information.[1439] Making more information reported on Form N–CEN nonpublic would reduce the amount of information available to investors and therefore reduce the ability of investors to differentiate investment companies. For example, one commenter recommended that details concerning indemnification protection should be made nonpublic.[1440] Nonetheless, we continue to believe that public reporting is a necessary part of improving transparency regarding a fund's securities lending activities. Specifically, we believe that the information regarding indemnification provisions is relevant to investors evaluating the risks associated with securities lending and comparing those risks across funds.

One set of alternatives is to require funds to report additional information on Form N–CEN, including additional new information that is not currently reported on Form N–SAR.[1441] Another set of alternatives is to require funds to report less information on Form N–CEN. For example, commenters expressed concern about providing new information related to securities lending, service providers, and ETF authorized participants, and one alternative is to not require this information to be provided.[1442] One commenter, however, expressed concern about the exclusion from Form N–CEN of particular items on Form N–SAR.[1443] As discussed above, the adoption of Form N–CEN and the rescission of Form N–SAR will improve the quality and utility of the information investment companies report to the Commission. Although additional information could further increase the benefits of Form N–CEN to Commission staff, investors, and other interested parties, the benefits may not justify the initial and ongoing costs for investment companies to report the information because the Commission believes that the information we are requesting strikes an appropriate balance between the current information needs of Commission staff as well as the developments in the fund industry and the reduction of reporting burdens for registrants, particularly where information may be similarly disclosed or reported elsewhere.[1444]

E. Amendments to Forms Regarding Securities Lending Activities

1. Introduction and Economic Baseline

We are also adopting amendments to Forms N–1A and N–3 to require certain disclosures in fund Statements of Additional Information regarding securities lending activities, as well as amendments to Form N–CSR to require the same information from closed-end funds.[1445] We proposed that similar requirements be included in fund financial statements as part of the proposed amendments to Regulation S–X in order to allow investors to better understand the income generated from, as well as the expenses associated with, a fund's securities lending activities.[1446] Some commenters stated that some of the proposed requirements would yield estimates that may be costly to audit, and that lengthy disclosure concerning securities lending activity in a fund's financial statements could detract from other financial statement disclosures.[1447] After consideration of these issues raised by commenters, we are adopting these disclosure requirements as amendments to the fund registration forms (*viz.,* Forms N–1A and N–3) or, in the case of closed-end funds, as amendments to Form N–CSR, rather than as amendments to Regulation S–X.[1448]

The final rules will require funds to disclose gross and net income from securities lending activities, fees and compensation in total and broken out by enumerated types, and a description of the services provided to the fund by the securities lending agent. The quantitative disclosure requirements are discussed above in section II.F and also illustrated in Table 2 below.

[1437] Some commenters suggested that certain securities lending information be kept non-public, including information describing third-party lending arrangements (Fidelity Comment Letter).

[1438] Some commenters suggested that certain service provider information be kept non-public, including the identities of the pricing services used (Interactive Data Comment Letter) and the compensation and other fee and expense arrangements (IDC Comment Letter).

[1439] Some commenters suggested that disclosure of information on authorized participants could discourage APs from participating in the ETF market (Invesco Comment Letter and BlackRock Comment Letter), while others suggested that disclosure of the creation and redemption activity of each AP is not helpful and is confusing to investors (BlackRock Comment Letter). *See supra* footnote 1429 and accompanying text.

[1440] *See* Fidelity Comment Letter.

[1441] Morningstar Comment Letter expressed concern that some of the information that would have been eliminated under the proposal would decrease the availability of the information for investors and other interested parties.

[1442] *See, e.g.,* Fidelity Comment Letter; Interactive Data Comment Letter; and BlackRock Comment Letter; *supra* footnote 1429 and accompanying text.

[1443] Morningstar Comment Letter expressed concern that the exclusion of several Form N–SAR items would then require a manual aggregation of information that would put comprehensive analysis of the information out of reach for investors and fund boards unless they were using services from third-party providers that could aggregate such data.

[1444] *See, e.g., supra* footnotes 941, 968, 989, 1000–1003 and accompanying text.

[1445] *See* Item 19(i) of Form N–1A; Item 21(j) of Form N–3; Item 12 of Form N–CSR; *see also supra* section II.F.

[1446] The proposed requirements would have included disclosure in the fund's financial statements of (1) the gross income from securities lending, including income from cash collateral reinvestment; (2) the dollar amount of all fees and/or compensation paid by the fund for securities lending activities and related services, including borrower rebates and cash collateral management services; (3) the net income from securities lending activities; (4) the terms governing the compensation of the securities lending agent, including any revenue sharing split, with the related percentage split between the fund and the securities lending agent, and/or any fee-for-service, and a description of services included; (5) the details of any other fees paid directly or indirectly, including any fees paid directly by the fund for cash collateral management and any management fee deducted from a pooled investment vehicle in which cash collateral is invested; and (6) the monthly average of the value of portfolio securities on loan. *See* proposed rule 6–03(m) of Regulation S–X; Proposing Release, *supra* footnote 7, at 33624.

[1447] *See* Deloitte Comment Letter; EY Comment Letter.

[1448] *See* Item 19(i) of Form N–1A; Item 21(j) of Form N–3; Item 12 of Form N–CSR.

SECURITIES LENDING ACTIVITIES

Gross income from securities lending activities	$ ____________
Fees and/or compensation for securities lending activities and related services	
Fees paid to securities lending agent from a revenue split	$ ____________
Fees paid for any cash collateral management service (including fees deducted from a pooled cash collateral reinvestment vehicle)	$ ____________
Administrative fees not included in revenue split	$ ____________
Indemnification fee not included in revenue split	$ ____________
Rebate (paid to borrower)	$ ____________
Other fees not included in revenue split (specify)	$ ____________
Aggregate fees/compensation for securities lending activities	$ ____________
Net income from securities lending activities	$ ____________

Table 2

Modifications from the proposed rule include, for example, replacing the proposed requirement that funds disclose the terms governing the compensation of the securities lending agent—including any revenue split—with a requirement to report actual fees paid during the fund's prior fiscal year,[1449] because commenters persuaded us that backward-looking dollar-based requirements would yield clearer disclosure than would the proposed requirements and may also enhance disclosure comparability across funds for investors and reduce preparation complexity for funds. Additionally, as discussed above, while the proposed requirements would have included disclosure of all fees and/or compensation paid for securities lending and related services, we have determined that it is appropriate to clarify in the final rules the specific categories of fees and/or compensation that are required to be disclosed.[1450]

The current set of fund registration statement and reporting requirements under Forms N–1A, N–3, and N–CSR (for closed-end funds) is the baseline from which we discuss the economic effects of today's amendments. The parties that could be affected by these amendments include funds that file or will file or update registration statements with the Commission (and closed-end funds that file or will file reports on Form N–CSR), the Commission itself, current and future investors of investment companies, and other market participants that could be affected by the increase in the disclosure of fund securities lending activity information.

We expect that many of the economic effects from the amendments to Forms N–1A, N–3, and N–CSR will largely result from an increase in investor ability to make investment decisions dependent on the more transparent disclosure in fund Statements of Additional Information (or in Form N–CSR for closed-end funds), and the extent to which this transparency enhances the ability of the Commission to utilize the updated disclosures. As discussed above, the economic effects will depend on the extent to which the securities lending practices of all investment companies become more transparent, and the ability of investors—and, in particular, individual investors—to utilize Statements of Additional Information (and reports on Form N–CSR for closed-end funds) to compare funds and to make investment decisions. As a result of these factors, some of which are unquantifiable, the discussion below is largely qualitative.

2. Benefits

The amendments to Forms N–1A, and N–3, and N–CSR will benefit investors by enhancing the information funds disclose in the Statements of Additional Information (and reports on Form N–CSR for closed-end funds). We continue to believe that because net earnings from securities lending can contribute to the investment performance of a fund, the Commission, investors and others would benefit from the additional transparency of securities lending fees on the income from these activities. We further believe that the benefits of this additional transparency justify the potential unintended consequences, highlighted by commenters and discussed above, of public disclosure of certain information.[1451]

We have made modifications from the proposed requirements designed to, among other things, enhance comparability of the disclosed information and potentially ameliorate some concerns commenters expressed about the proposed required public disclosure of the terms governing compensation of the securities lending agent. A commenter suggested that we could facilitate comparability by specifying the fees for particular services that must be disclosed,[1452] and we agree. We believe that these clarifications will enhance comparability of the disclosed fees and compensation across funds, and indirectly benefit investors to the extent that other entities, including investment advisers and broker-dealers, utilize the

[1449] *Compare* proposed rule 6–03(m)(4) of Regulation S–X *with* Item 19(i)(1)(ii) of Form N–1A; Item 21(j)(i)(B) of Form N–3 (same); Item 12(a)(1) of Form N–CSR.

[1450] *Compare* proposed rule 6–03(m)(2) *with* Item 19(i)(1)(ii) of Form N–1A; Item 21(j)(i)(B) of Form N–3; and Item 12(a)(1) of Form N–CSR.

[1451] *See supra* footnotes 1212–1219 and accompanying text.

[1452] *See* Fidelity Comment Letter.

information to help investors make more informed investment decisions.

The comparability of the disclosed fee and expense information may also depend on the nature of the services provided to a particular fund in connection with its securities lending activities. Accordingly, to further enhance the comparability of the disclosed information and allow users to better assess fee and expense information, we have determined to specify that this information should be provided on the basis of the services actually provided to the fund in its most recent fiscal year and the discussion above provides some examples of the types of services that could be enumerated to illustrate such services.[1453]

As mentioned above, we are persuaded that backward-looking dollar-based requirements would yield clearer disclosure than would the proposed requirements and may also enhance disclosure comparability across funds for investors and reduce preparation complexity for funds. This change from the proposal allows investors and others to derive the informational benefit from the disclosure without any potentially sensitive negotiated contractual terms being made public.

3. Costs

We believe that registrants on average will likely incur minimal costs from our amendments to Forms N–1A and N–3, including certain paperwork and other expenses discussed below.[1454]

Several commenters expressed concern that the proposed disclosure requirements could yield information that would suggest, inaptly, that fees and expenses related to securities lending activities among funds are readily compared and contrasted.[1455] While there is the potential for investor confusion with any disclosure, we believe we have mitigated these concerns through changes that we are making from the proposal, such as switching from terms of compensation to backward-looking dollar based requirements and providing clarification in the final rules as to the types of fees and/or compensation that must be enumerated.

Another commenter expressed concerns that the proposed fee and expense information could be used to evaluate the terms of a fund's lending arrangements and could, without access to additional information, result in potentially inappropriate conclusions that a fund negotiated its arrangements poorly or was otherwise disadvantaged in its negotiations.[1456] That commenter noted that the revenue split can depend on numerous factors, including the range, amount, and attractiveness of the securities a fund complex as a whole may make available for loan.[1457] We believe that the modifications we have made from the proposal, discussed above in Section II.F.2, help ameliorate these concerns.

Commenters also expressed concerns with the proposed requirements based on the currently nonpublic character of some of the information that would be required to be disclosed publicly, particularly the proposed requirement to disclose the terms governing compensation of the securities lending agent.[1458] Commenters argued that some funds currently enjoy privately negotiated competitive advantages with securities lending services or counterparties that could be jeopardized should their arrangements with their securities lending agents be made public.[1459] First, we note that, as discussed herein, we have modified the rule from the proposal and are no longer requiring certain pieces of information be disclosed—specifically, the terms of the revenue split and the terms governing the compensation of the securities lending agent more generally. We acknowledge, as these commenters have asserted, that enhanced transparency into securities lending arrangements could put funds at a competitive disadvantage by affecting the relative negotiating posture of funds that procure securities lending services, or dissuade counterparties from engaging in securities lending altogether, which could drive up the costs of lending services for funds. We believe, however, that the modifications to the proposed requirements that we are making today eliminate the disclosures from the proposed requirements that some commenters indicated could be the most sensitive while retaining the required information that we think will be most useful to investors in understanding the expenses associated with fund securities lending activities. This dollar-based requirement would also eliminate the requirement that potentially sensitive negotiated contractual terms be disclosed.

As mentioned above, we are persuaded that backward-looking dollar-based requirements would yield clearer disclosure than would the proposed requirements, thus mitigating potential costs related to misinterpretation or a false sense of precision by investors. In addition, this switch from terms of compensation to backward-looking dollar-based requirements could yield a cost savings for filers by possibly reducing preparation complexity relative to the proposal.

We expect that funds would incur certain paperwork and other expenses in connection with the new requirements. For funds that file registration statements on Forms N–1A and N–3, as discussed in detail below, we estimate that these paperwork expenses would be, in the aggregate, about \$1.3 million each year.[1460] Funds

[1453] Item 19(i)(2) of Form N–1A (requiring disclosure of the services provided to the fund by the securities lending agent (for example and as applicable, locating borrowers, monitoring daily the value of the loaned securities and collateral, requiring additional collateral as necessary, cash collateral management, qualified dividend management, negotiation of loan terms, selection of securities to be loaned, recordkeeping and account servicing, monitoring dividend activity and material proxy votes relating to loaned securities, and arranging for return of loaned securities to the fund at loan termination)); Item 21(j)(ii) of Form N–3 (same); Item 12(b) of Form N–CSR (same).

[1454] *See infra* footnotes 1460–1461 and accompanying text. *See also supra* section III.B.3 for related cost analysis associated with amendments to Form N–CSR.

[1455] *See* MFS Comment Letter; PwC Comment Letter.

[1456] PwC Comment Letter (particularly with respect to the proposed terms of compensation disclosure requirement); *see also* RMA Comment Letter (concerning borrower rebates).

[1457] PwC Comment Letter.

[1458] *See* AICPA Comment Letter (particularly with respect to the terms governing the compensation of the securities lending agent); Fidelity Comment Letter (particularly with respect to the revenue split); ICI Comment Letter; Invesco Comment Letter; MFS Comment Letter; SIFMA Comment Letter I; Simpson Thacher Comment Letter (particularly with respect to the revenue split); Wells Fargo Comment Letter.

[1459] *See* AICPA Comment Letter; Fidelity Comment Letter; ICI Comment Letter; Invesco Comment Letter; MFS Comment Letter; SIFMA Comment Letter I; Simpson Thacher Comment Letter; Wells Fargo Comment Letter.

[1460] Below, we estimate that 9,502 and 16 funds per year could file registration statements on Forms N–1A and N–3, respectively. *See infra* text following footnote 1591. Below, we estimate that funds will, on average, incur 0.5 burden hours per fund per year to comply with the new registration statement requirements. *See id.* Therefore, in the aggregate, we estimate that such funds would incur about 5,038 burden hours to comply with these requirements. (9,502 funds + 16 funds) × 0.5 burden hours per fund per year = 4,759 burden hours per year. The Commission estimates the wage rate associated with these burden hours based on salary information for the securities industry compiled by the Securities Industry and Financial Markets Association. The estimated wage figure is based on published rates for intermediate accountants and attorneys, modified to account for an 1,800-hour work year; multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead; and adjusted to account for the effects of inflation, yielding effective hourly rates of \$160 and \$386, respectively. *See* Securities Industry and Financial Markets Association, Report on Management & Professional Earnings in the Securities Industry 2013. We estimate that intermediate accountants and attorneys would divide their time equally, yielding an estimated

Continued

would also incur initial one-time costs associated with establishing systems and procedures for compliance. We estimate that these expenses would be, in the aggregate, about $3.9 million.[1461] For closed-end funds that file annual reports on Form N–CSR, we estimate that the new requirements will increase the hour burden associated with the paperwork costs of Form N–CSR for closed-end funds by an additional 2 burden hours with an additional internal cost burden of $648 per fund in the first year,[1462] and an additional 0.5 hours with an additional internal cost burden of $162 per fund for filings in subsequent years.[1463]

4. Alternatives

The Commission has also explored other ways to modernize and improve the utility, quality, and consistency of the information that funds report to the Commission and to investors in the financial statements required in shareholder reports and other registration statements. Commission staff examined how the information funds provide to the Commission and to investors could be made more informative and more consistent across funds. Alternatives to the amendments to Forms N–1A, N–3, and N–CSR to require certain disclosures relate to information that funds report and the location in which the information is reported.

One alternative would be simply to not adopt any new securities lending disclosure amendments. We believe, however, that information regarding securities lending activities can provide investors with insights into fund activities, foster comparability across funds, and contribute to investors making informed investment decisions.

We are adopting amendments to Forms N–1A, N–3, and Form N–CSR to require certain disclosures regarding securities lending activities. Alternatively, we could require these disclosures to be made in the financial statements, in Form N–PORT, or in Form N–CEN. Given that our objective was to make this information available to investors and other users of the data, after consideration of comments we have decided that the Statement of Additional Information (and, with respect to closed-end funds, reports on Form N–CSR) is an appropriate place for funds to be required to disclose this information.

Finally, we could adopt different reporting requirements. For example, we could, as proposed, have required funds to disclose the terms of compensation in securities lending agreements rather than the backward-looking, dollar-based values. However, as discussed previously, commenters suggested, that doing so could result in the loss of privately negotiated competitive advantages or a decrease in the number of counterparties willing to participate in the securities lending market, and we believe that the requirements, as adopted eliminate the disclosures from the proposed requirements that commenters indicated could be the most sensitive while retaining the required information that we think will be most useful to investors in understanding the expenses associated with fund securities lending activities. Hence, we have decided against such an alternative.

F. Other Alternatives to the Reporting Requirements

The Commission has explored additional ways to modernize and improve the utility and the quality of the information that funds provide to the Commission and to investors. The Commission has considered many alternatives to the individual elements contained in new Form N–PORT, amendments to Regulation S–X, and new Form N–CEN; alternatives specific to each of the new reporting requirements are discussed above. The following discussion addresses other significant alternatives which involve aspects of fund reporting that pertain to more than one of the new reporting requirements.

The Commission considered the information that will be required on Form N–PORT as compared to the information on Form N–CEN. Commission staff considered the benefits to having the information more frequently updated as well as the cost to funds to report the information. Although the reporting of information on a more frequent basis imposes additional costs on funds, Commission staff believes the information that will be reported more frequently on Form N–PORT, relative to the annual reporting on Form N–CEN, is necessary for the Commission's oversight activities and could be important to other interested third-parties. Commission staff also considered the benefits of identification information to link information between forms and with other sources of information, with the costs to funds to obtain and report the identification information on the new forms.

The Commission is requiring that investment companies file Form N–PORT and Form N–CEN in an XML structured data format. One alternative is to not structure the information. As discussed, the ability of Commission staff, investors, third-party information providers, and other potential users to utilize the information is dependent on the efficiency with which the information investment companies provide can be compiled and aggregated. Commission staff believes that the affected parties would experience substantially less benefit from the reporting of investment company information if the information is not structured because of the time it would take to parse the information and the potential for errors in data due to the fact that unstructured data cannot be validated during the filing process. In addition, based on the Commission's understanding of current practices, it is likely that many investment companies and third party service providers have systems in place to accommodate the use of XML. Furthermore, based on our experiences with Forms N–MFP and PF, both of which require filers to report information in an XML format, we continue to believe that requiring funds to report information on Forms N–PORT and N–CEN in an XML format will provide the information that we seek in a timely and cost-effective manner. Therefore, requiring information in a format such as XML should impose minimal costs. The Commission will require funds to file certain attachments to their reports on Form N–PORT and Form N–CEN, and these attachments would not be required in a structured data format. The Commission believes that only marginal benefits would result from requiring funds to file these attachments in a structured, XML format due to the narrative format of the information provided.

hourly wage of $273 per hour. ($160 per hour for intermediate accountants + $386 per hour for attorneys) ÷ 2 = $273 per hour. Based on the Commission's estimate of 4,759 burden hours per year and the estimated wage rate of $273 per hour, the total annual paperwork expenses for funds associated with the new registration statement requirements are approximately $1,299,207. 4,759 hours per year × $273 per hour = $1,299,207 per year.

[1461] Below, we estimate that funds will, on average, incur 1.5 one-time burden hours in the first year to comply with the new registration statement requirements. *See infra* text following footnote 1591. Therefore, in the aggregate, we estimate that such funds will incur about 15,114 one-time burden hours to comply with these requirements. (9,502 funds + 16 funds) × 1.5 one-time burden hours = 14,277 one-time burden hours. Based on the Commission's estimate of 14,277 one-time burden hours and the estimated wage rate of $273 per hour, the total one-time paperwork expenses for funds associated with the new registration statement requirements are approximately $3,897,621. 14,277 one-time burden hours × $273 per hour = $3,897,621.

[1462] *See infra* footnote 1610 and accompanying text; *see also infra* section IV.D.7.

[1463] *See infra* footnote 1611 and accompanying text; *see also infra* section IV.D.7.

The technology used to structure the data could affect the benefits and costs associated with the adopted rules, and we have therefore considered alternative formats for structuring the data.[1464] Some commenters suggested XBRL, a tagged system that is based on XML and was created specifically for the purpose of reporting financial and business information,[1465] so as to leverage existing data definitions and reduce implementation costs.[1466] However, as noted earlier we believe that requiring funds to report information on Form N–PORT in XML will be both efficient and cost-effective for funds. Sending a data file from a sender to a recipient requires many conditions to be satisfied, and among those of crucial importance to regulatory data collection are compact transmission and efficient validation. XML Schema provides a widely used validation framework for XML, and is supported in all modern programming languages. The nature of the information we are collecting also lends itself to XML schema for almost all validation,[1467] and the arithmetic validations not supported natively in XML Schema are straightforwardly expressible in any number of languages. For this data set, the additional flexibility offered by a broader XML based framework such as XBRL incurs data volume and processing overhead with little incremental benefit; for example, the information funds will report will be as of a single reporting date, the units of measurement are predetermined or are constrained by the data type, and there is little value in customizing the content or presentation.

Finally, one commenter stated that we should not require funds to directly report information on their own behalf, but instead require other entities such as transfer agents and custodians to report information on behalf of funds.[1468] Given our expertise and experience in regulating, examining, and overseeing funds, including fund reporting, recordkeeping, and compliance, we continue to believe that obtaining such information directly from funds is appropriate.

IV. Paperwork Reduction Act

New forms Form N–CEN and Form N–PORT contain ''collections of information'' within the meaning of the Paperwork Reduction Act of 1995 (''PRA'').[1469] In addition, the amendments to Articles 6 and 12 of Regulation S–X will impact the collections of information under rules 30e–1 and 30e–2 of the Investment Company Act,[1470] and the amendments to Forms N–1A, N–2, N–3, N–4, N–6, and N–CSR under the Investment Company Act and Securities Act will impact the collections of information under those forms. Furthermore, implementation of new Forms N–PORT and N–CEN will coincide with rescission of Forms N–Q and N–SAR, thus eliminating the collections of information associated with those forms and impacting the collections of information under Form N–CSR.

The titles for the existing collections of information are: ''Form N–Q—Quarterly Schedule of Portfolio Holdings of Registered Management Investment Company'' (OMB Control No. 3235–0578);[1471] ''Form N–SAR under the Investment Company Act of 1940, Semi-Annual Report for Registered Investment Companies'' (OMB Control No. 3235–0330); Rule 30e–1 under the Investment Company Act of 1940, Reports to Stockholders of Management Companies'' (OMB Control No. 3235–0025); ''Rule 30e–2 pursuant to Section 30(e) of the Investment Company Act of 1940. Reports to Shareholders of Unit Investment Trusts'' (OMB Control No. 3235–0494); ''Form N–CSR under the Securities Exchange Act of 1934 and under the Investment Company Act of 1940, Certified Shareholder Report of Registered Management Investment Companies'' (OMB Control No. 3235–0570); ''Form N–1A under the Securities Act of 1933 and under the Investment Company Act of 1940, Registration Statement of Open-End Management Investment Companies'' (OMB Control No. 3235–0307); ''Form N–2 under the Investment Company Act of 1940 and Securities Act of 1933, Registration Statement of Closed-End Management Investment Companies'' (OMB Control No. 3235–0026); ''Form N–3 Under the Securities Act of 1933 and Under the Investment Company Act of 1940, Registration Statement of Separate Accounts Organized as Management Investment Companies'' (OMB Control No. 3235–0316); ''Form N–4 (17 CFR 239.17b) Under the Securities Act of 1933 and (17 CFR 274.11c) Under the Investment Company Act of 1940, Registration Statement of Separate Accounts Organized as Unit Investment Trusts'' (OMB Control No. 3235–0318); ''Form N–6 (17 CFR 239.17c) Under the Securities Act of 1933 and (17 CFR 274.11d) Under the Investment Company Act of 1940, Registration Statement of Separate Accounts Organized as Unit Investment Trusts that Offer Variable Life Insurance Policies'' (OMB Control No. 3235–0503). The titles for the new collections of information are: ''Form N–CEN Under the Investment Company Act, Annual Report for Registered Investment Companies'' (OMB Control No. 3235–0729 for N–CEN) and ''Form N–PORT Under the Investment Company Act, Monthly Portfolio Investments Report'' (OMB Control No. 3235–0730).

We published notice soliciting comments on the collection of information requirements in the Proposing Release and submitted the proposed collections of information to the Office of Management and Budget (''OMB'') for review in accordance with 44 U.S.C. 3507(d) and 5 CFR 1320.11. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number.

The Commission is adopting new forms Form N–CEN and Form N–PORT and amendments to Regulation S–X and the relevant registration forms, as well as the rescission of Forms N–Q and Form N–SAR, as part of a set of reporting and disclosure reforms. These

[1464] One commenter suggested a pre-formatted web portal or web form as well as the further development of inline structured data to ease reporting burdens (Schnase Comment Letter). We believe, however, that the volume of data for a fund to report on Form N–PORT would not lend itself to a manual entry approach, although we are considering the possibility of providing an online form for filers to use at their option for filing Form N–CEN, as we have with some other Commission Forms, such as Form 13F.

[1465] *See, e.g.,* XBRL US Comment Letter; Deloitte Comment Letter; *but see* Morningstar Comment Letter (''Extensible Business Reporting Language has had very limited success, and certain aspects of the standard are too lenient for regular data validation.'').

[1466] For example, public companies currently use XBRL taxonomies to file reports with the SEC, including investment companies that voluntarily file structured data on Form N–CSR.

[1467] Some commenters discussed the additional benefits from the types of validation that can be conducted with XBRL (XBRL US Comment Letter and AICPA Comment Letter).

[1468] *See* Federated Comment Letter (''It would also reduce the reporting burden on funds for the Commission to acquire information directly from custodians and transfer agents, which are proficient in maintaining and reporting portfolio holdings and other information.'').

[1469] 44 U.S.C. 3501 through 3521.

[1470] The paperwork burden from Regulation S–X is imposed by the rules and forms that relate to Regulation S–X and, thus, is reflected in the analysis of those rules and forms. To avoid a PRA inventory reflecting duplicative burdens and for administrative convenience, we have previously assigned a one-hour burden to Regulation S–X.

[1471] Currently, there is a collection of information associated with rule 30b1–5 under the Investment Company Act. *See* rule 30b1–5, 'Quarterly Report' Originally submitted and approved as Proposed Rule 30b1–4 under the Investment Company Act of 1940, 'Quarterly Report' '' (OMB Control No. 3235–0577). Rule 30b1–5 is the rule that requires certain funds to file Form N–Q. Among other things, we are rescinding Form N–Q and requiring certain funds to file Form N–PORT pursuant to new rule 30b1–9. With this in mind, we are discontinuing the information collection for rule 30b1–5.

reforms are designed to harness the benefits of advanced technology and to modernize the fund reporting regime in order to help investors and other market participants better assess different fund products and to assist the Commission in carrying out our regulatory functions. We discuss below the collection of information burdens associated with these reforms.

A. Portfolio Reporting

1. Form N–PORT

Certain funds will be required to file an electronic monthly report on Form N–PORT within thirty days after the end of each month. Form N–PORT is intended to improve transparency of information about funds' portfolio holdings and facilitate oversight of funds. The information required by Form N–PORT will be data-tagged in XML format. The respondents to Form N–PORT will be management investment companies (other than money market funds and small business investment companies) and UITs that operate as ETFs. Compliance with Form N–PORT will be mandatory for all such funds. Responses to the reporting requirements will be kept confidential for reports filed with respect to the first two months of each quarter; the third month of the quarter will not be kept confidential, but made public sixty days after the quarter end.

In the Proposing Release, we estimated that 10,710 funds [1472] would be required to file, on a monthly basis, a complete report on proposed Form N–PORT reporting certain information regarding the fund and its portfolio holdings. Based on our experience with other structured data filings, we estimated that funds would prepare and file their reports on proposed Form N–PORT by either (1) licensing a software solution and preparing and filing the reports in house, or (2) retaining a service provider to provide data aggregation, validation and/or filing services as part of the preparation and filing of reports on proposed Form N–PORT on behalf of the fund. We estimated that 35% of funds (3,749 funds) would license a software solution and file reports on proposed Form N–PORT in house.[1473] We further estimated that each fund that files reports on proposed Form N–PORT in house would require an average of approximately 44 burden hours to compile (including review of the information), tag, and electronically file a report on proposed Form N–PORT for the first time [1474] and an average of approximately 14 burden hours for subsequent filings.[1475] Therefore, we estimated the per fund average annual hour burden associated with proposed Form N–PORT for 3,749 fund filers would be 198 hours for the first year[1476] and 168 hours for each subsequent year.[1477] Amortized over three years, the average aggregate annual hour burden would be 178 hours per fund.[1478]

In the Proposing Release, we further estimated that 65% of funds (6,962 funds) would retain the services of a third party to provide data aggregation, validation and/or filing services as part of the preparation and filing of reports on proposed Form N–PORT on the fund's behalf.[1479] Because reports on Form N–PORT would be filed in a structured format and more frequently than current portfolio holdings reports (*i.e.,* Form N–CSR and Form N–Q), we anticipated that funds and their third-party service providers would move to automate the aggregation and validation process to the extent they do not already use an automated process for portfolio holdings reports. For these funds, we estimated that each fund would require an average of approximately 60 burden hours to compile and review the information with the service provider prior to electronically filing the report for the first time [1480] and an average of approximately 9 burden hours for subsequent filings.[1481] Therefore, we

[1472] This estimate includes 8,731 mutual funds (excluding money market funds), 1,411 ETFs and 568 closed-end funds and is based on ICI statistics as of December 31, 2014, *available at http://www.ici.org/research/stats.*

[1473] *See* Money Market Fund Reform 2014 Release, *supra* footnote 33, at 47945 (adopting amendments to Form N–MFP and noting that approximately 35% of money market funds that report information on Form N–MFP license a software solution from a third party that is used to assist the funds to prepare and file the required information).

[1474] We anticipated that these funds would use the same software that was used to generate reports on Form N–Q and that the software vendor offering the Form N–Q software would likely offer an update to that software to handle reports on Form N–PORT. Accordingly, we estimated the burden associated with information that is currently filed on Form N–Q and that would also be filed on Form N–PORT to generally be the same—10.5 hours per filing. With respect to new data that would be required by Form N–PORT that was not required by Form N–Q, we generally estimated that it would initially take up to 10 hours to connect the software to the new data points. However, because we understand risk metrics data may be located on a different system than portfolio holdings data and because current reporting requirements do not require funds to have a process in place for these two systems to work together, with respect to the new risk metrics data that would be required by Form N–PORT, we estimated that it would initially take up to 15 hours to connect the risk metrics data to the software and that, once connected, it would take 5 hours to program the risk metrics software to output the required data to the Form N–PORT software. Additionally, we added another 3.5 hours to our estimated initial burden to account for the increased amount of information that would be required to be reported on Form N–PORT, but that is not currently required by Form N–Q. *See infra* footnote 1475 (discussing the additional 30% burden added to the current Form N–Q estimate). We also noted that funds that are part of a larger fund complex may realize certain economies of scale when preparing and filing reports on proposed Form N–PORT. For purposes of our analysis, however, we took a conservative approach and did not account for such potential economies of scale.

[1475] We anticipated that most of the burden associated with licensing a software solution, as discussed above, would be a one-time burden. Accordingly, we estimated approximately 14 hours per fund for subsequent filings. This estimate is based on the 10.5 hours currently estimated for filings on Form N–Q, plus 30% to account for the amount of additional information that would be required to be filed on Form N–PORT. Additionally, because we believe that the required information is generally maintained by funds pursuant to other regulatory requirements or in the ordinary course of business, for the purposes of our analysis, we did not ascribe any time to collecting the required information. *See also supra* footnote 1474 (noting that our estimates do not account for economies of scale).

[1476] The estimate is based on the following calculation: (1 filing × 44 hours) + (11 filings × 14 hours) = 198 burden hours in the first year.

[1477] This estimate is based on the following calculation: 12 filings × 14 hours = 168 burden hours in each subsequent year.

[1478] The estimate is based on the following calculation: (198 + (168 × 2))/3 = 178.

[1479] *See* Money Market Fund Reform 2014 Release, *supra* footnote 33, at 47945 (adopting amendments to Form N–MFP and noting that approximately 65% of money market funds that report information on Form N–MFP retain the services of a third party to provide data aggregation and validation services as part of the preparation and filing of reports on Form N–MFP).

[1480] In order to be able to automate the process of communicating data to a third-party service provider so that it can be reported on Form N–PORT, we estimated that it would initially take a fund 60 hours to either procure software and integrate it into its systems or, alternatively, to write its own software. For those funds that already have an automated portfolio reporting process in place, we estimated that they would initially incur the same burden as those funds that license a software solution and file reports on proposed Form N–PORT in house. For these latter funds, however, we used the higher burden hours estimated for using a third party service provider in order to be conservative in our estimates because we lacked data on the number of funds that currently have an automated portfolio reporting process in place. *See supra* footnote 1474 (discussing the burdens associated with licensing a software solution and filing reports on proposed Form N–PORT in house); *see also supra* footnote 1474 (noting that our estimates did not account for economies of scale).

[1481] We anticipated that most of the burden associated with third-party aggregation and validation would be the result of creating an automated process, as discussed above, and thus would be a one-time burden. Accordingly, we estimated approximately 9 hours per fund for subsequent filings. This estimate was based on the 10.5 hours currently estimated for filings on Form N–Q, plus 30% to account for the amount of additional information that would be required to be filed on Form N–PORT, and subtracting 5 hours in recognition of the use of a third-party service provider to assist in the preparation and filing of reports on the form. Additionally, because we believe that the required information is generally maintained by funds pursuant to other regulatory requirements or in the ordinary course of business, estimated the per fund average annual hour burden associated with proposed Form N–PORT for 6,962 funds would be 159 hours for the first year [1482] and 108 hours for each subsequent year.[1483] Amortized over three years, the average aggregate annual hour burden would be 125 hours per fund.[1484]

In sum, we estimated that filing reports on proposed Form N–PORT would impose an average total annual hour burden of 1,537,572 on applicable funds.[1485]

In the Proposing Release, we noted that in addition to the costs associated with the hour burdens discussed above, funds would also incur other external costs in connection with reports on proposed Form N–PORT. Based on our experience with other structured data filings, we estimated that funds that would file reports on proposed Form N–PORT in house would license a third-party software solution to assist in filing their reports at an average cost of $4,805 per fund per year.[1486] In addition, we estimated that funds that would use a service provider to prepare and file reports on proposed Form N–PORT would pay an average fee of $11,440 per fund per year for the services of that third-party provider.[1487] In sum, we estimated that all applicable funds would incur on average, in the aggregate, external annual costs of $97,674,221.[1488]

We received two comments on proposed Form N–PORT's estimated hour and costs burdens. One commenter, who submitted a comment letter on behalf of certain asset management firms focused on alternative investment strategies, stated that the proposed estimates of hours and costs were not realistic.[1489] The commenter stated that, based on its outreach, several firms were currently spending more than 198 hours per year on investment company quarterly reporting. [1490] This commenter additionally noted that Form N–PORT requires more information than current quarterly reports, particularly for funds that implement ''alternative'' strategies, and must be filed monthly. The commenter also indicated that at least one firm they reached out to anticipated hiring one or more full-time equivalents to handle the reporting requirements. We do not agree with the commenter's suggestion that the burden estimates it compiled based on outreach to firms regarding their current time spent on quarterly reporting is necessarily inconsistent with the burden estimates we proposed. We understand that the burden will vary across funds depending on the size of the fund, the size of the fund complex, and the complexity of the portfolio, among other factors. The burden for some funds will exceed our estimate, and the burden for others will be less due to the nature of the fund. Also, while it is true that Form N–PORT will require more frequent reporting and information not currently required for quarterly reporting, not all requirements for quarterly reporting, such as reporting on a T + 0 basis, will be required on Form N–PORT. Thus, the commenter's estimates, which revolved around alternative strategy funds, appear to be within, but on the high end of the Commission's estimates.

Another commenter suggested that complying with Form N–PORT reporting requirements could cost $800,000 to $1,500,000 for the fund complex (of approximately 250 funds).[1491] The commenter specified that the initial burden associated with the proposed requirements would be over 6000 hours in total to conduct analysis, develop and test newly created interfaces between the reporting solution and internal and external data sources in an attempt to automate the collection, aggregation, and validation of data reported on Form N–PORT. The commenter further asserted that ongoing reporting requirements on Form N–PORT may require a support team of up to 10–15 members. The commenter's estimates of initial burden hours are therefore approximately 24 hours, based on a complex of 250 funds, lower than our proposed estimated initial filing burden of 44 hours per fund for fund filers filing in-house, and 60 hours per fund for fund filers retaining a third party service provider. Assuming the support team was 15 members (*i.e.,* the high end of the range set forth by the commenter), and a 2,000 hours work year, the commenter's annual estimated burden to file reports on Form N–PORT would be approximately 120 hours per fund.[1492] This is in the range of our proposed annual estimate of 168 hours per year for fund filers filing in house and 108 hours per year for fund filers retaining a third-party service provider. Finally, assuming that the dollar estimates that the commenter cited of between $800,000 to $1,500,000 were additional external costs of reporting on Form N–PORT, the commenter's estimated external costs would be between $3,200 and $6,000 per fund. These are in the range of our estimated external costs per fund (not including monetization of internal burden hours) of $4,805 per year for fund filers filing in house, and $11,440 per year for fund filers using a service provider.

As discussed above, our adoption includes some modifications from the proposal that address concerns raised by commenters and that are intended, in part, to decrease reporting and implementation burdens relative to the proposal.[1493] We believe that our modifications from the proposal will reduce the estimated initial burden hours associated with implementation of Form N–PORT reporting requirements, relative to the proposal, particularly for funds that will be required to report risk metrics or custom derivatives transactions but will not affect external costs or ongoing burden hours. Based on our review of funds and the new reporting requirements, we

for the purposes of our analysis, we did not ascribe any time to collecting the required information. *See also supra* footnote 1474 (noting that our estimates did not account for economies of scale).

1482 The estimate is based on the following calculation: (1 filing × 60 hours) + (11 filings × 9 hours) = 159 burden hours per year.

1483 The estimate is based on the following calculation: 12 filings × 9 hours = 108.

1484 The estimate is based on the following calculation: (159 + (108 × 2))/3 = 125.

1485 The estimate is based on the following calculation: (3,749 × 178 hours) + (6,962 × 125 hours) = 1,537,572.

1486 We estimated that money market funds that file reports on Form N–MFP in house license a third-party software solution for approximately $3,696 per fund per year. Due to the increased volume and complexity of the information that will be filed in reports pursuant to proposed Form N–PORT, we increased our external cost estimate for funds filing in house on proposed Form N–PORT by 30% (or $1,109).

1487 We estimated that money market funds that file reports on Form N–MFP through a third-party service provider pay approximately $8,800 per fund per year. Due to the increased volume and complexity of the information that will be filed in reports pursuant to proposed Form N–PORT, we increased our estimate for funds filing through a third-party service provider on proposed Form N–PORT by 30% (or $2,640).

1488 This estimate is based on the following calculation: (3,749 funds that will file reports on proposed Form N–PORT in house × $4,809 per fund, per year) + (6,962 funds that will file reports on proposed Form N–PORT using a third-party service provider × $11,440 per fund, per year) = $97,674,221.

1489 *See* Simpson Thacher Comment Letter.

1490 *See id.* The commenter noted that in the Proposing Release that we estimated 198 burden hours in the first year, and 168 hours thereafter ''for each investment company.'' As noted in the proposing release, 168 hours was the Commission's ''per fund'' burden hour estimate for the first year for funds preparing and filing the reports in house, where ''fund'' is a registered management investment company *and any separate series thereof.* It is not clear from the comment letter whether firms that provided estimates to the commenter were providing estimated burdens for quarterly reporting per fund series, per investment company, or per fund complex. For purposes of the PRA, however, we conservatively assume it is per fund series.

1491 *See* Invesco Comment Letter.

1492 15 members × 2000 hours = 30,000 hours. 30,000 hours/250 funds = 120 hours.

1493 *See supra* section III.B.2.

believe that, on average, the initial burden to file reports on Form N–PORT will decrease by 0.5 hours, resulting in an initial burden of 43.5 hours per fund for the 35% of funds that choose to file reports on Form N–PORT in-house, and 59.5 hours for the 65% of funds that choose to retain a third-party service provider.[1494]

We have revised our estimate of the number of funds that will file Form N–PORT upward from 10,710 funds to 11,382 funds to reflect updates to the industry data figures that were utilized in the Proposing Release.[1495] We continue to estimate that 35% of funds (3,984 funds, updated from 3,749 in our proposal) will license a software solution and file reports on Form N–PORT in house, and 65% of funds (7,398 funds, updated from 6,962 funds in our proposal) will retain the services of a third party to provide data aggregation, validation and/or filing services as part of the preparation and filing of reports on Form N–PORT.[1496] The Commission estimates that, on an annual basis, funds generally will incur in the aggregate 1,959,423 burden hours in the first year and an additional 1,468,296 burden hours for filings in subsequent years in order to comply with Form N–PORT filing requirements.[1497] Amortized over three years, the total annual hour burden of filing reports on Form N–PORT will be 1,632,005 hours, with an average annual hour burden of 143 hours per fund.[1498]

We further estimate the total annual external cost burden of compliance with the information collection requirements of Form N–PORT will be $103,787,680, or $9,118 per fund.[1499]

2. Rescission of Form N–Q

In connection with our adoption of Form N–PORT, and as proposed, our reforms will rescind Form N–Q in order to eliminate unnecessarily duplicative reporting requirements. The rescission of Form N–Q will affect all management investment companies required to file reports on the form.

In our proposal, we estimated that each fund requires an average of approximately 21 hours per year to prepare and file two reports on Form N–Q annually, for a total estimated annual burden of 219,513 hours.[1500] We received no comments on this estimate.

We have revised our estimate of the number of funds that would file Form N–Q upward from 10,453 funds to 11,863 funds to reflect updates to the industry data figures that were utilized in the Proposing Release.[1501] Accordingly, we estimate that, in the aggregate, our rescission would eliminate 249,123 annual burden hours that would be associated with filing Form N–Q.[1502] Additionally, we estimate that there are no external costs associated with the certification requirement or with preparation of reports on Form N–Q in general.

B. Census Reporting

1. Form N–CEN

As amended, rule 30a–1 will require all funds to file reports on Form N–CEN with the Commission on an annual basis.[1503] Similar to current Form N–SAR, Form N–CEN requires reporting with the Commission of certain census-type information. However, unlike Form N–SAR, which requires semi-annual reporting for all management investment companies, Form N–CEN requires annual reporting.[1504] Form N–CEN will be a collection of information under the PRA and is designed to facilitate the Commission's oversight of funds and its ability to monitor trends and risks. This new collection of information will be mandatory for all funds, and responses will not be kept confidential.

In the Proposing Release, we estimated that the Commission would receive an average of 3,146 reports per year, based on the number of existing Form N–SAR filers.[1505] We estimated that management investment companies would each spend as much as 13.35 hours annually, preparing and filing reports on proposed Form N–CEN.[1506] The Commission further estimated that UITs, including separate account UITs, would each spend as much as 9.11 hours annually, preparing and filing reports on proposed Form N–CEN, since a UIT would be required to respond to fewer items.[1507]

As discussed below, we estimated that management investment companies each spend as much as 15.35 hours preparing and filing each report on Form N–SAR. We noted that we generally sought with proposed Form N–CEN, where appropriate, to simplify and decrease the census-type reporting burdens placed on registrants by current Form N–SAR. For example, we noted that proposed Form N–CEN would reduce the number of attachments that may need to be filed with the reports and largely eliminate financial statement-type information from the reports. Additionally, we noted our belief that reports in XML on proposed Form N–CEN would be less burdensome to produce than the reports on Form N–SAR currently required to be filed using outdated technology. Accordingly, for management investment companies we believe the estimated hour burden for filing reports on proposed Form N–CEN should be a reduced burden from the hour burden associated with Form N–SAR.[1508] As such, we estimated that the

[1494] *See supra* footnotes 1474 (estimating an initial burden of 44 hours per fund in the Proposing Release for the 35% of funds that choose to file reports on Form N–PORT in-house) and 1480 (estimating an initial burden of 60 hours per fund in the Proposing Release for the 65% of funds that choose to retain a third-party service provider).

[1495] This estimate of 11,382 funds includes 9,039 mutual funds (excluding money market funds), 1,594 ETFs (including eight ETFs organized as UITs and 1,586 ETFs that are management investment companies), and 749 closed-end funds (excluding SBICs). Based on data obtained from the ICI and reports filed by registrants on Form N–SAR. *See supra* footnote 1259 and accompanying and following text; *see also* 2016 ICI Fact Book, *supra* footnote 2, at 22, 176.

[1496] These estimates are based on the following calculations: 3,749 funds = 11,382 funds × 0.35. 7,398 funds = 11,382 funds × 0.65.

[1497] These estimates are based on the following calculations: 1,959,423 hours in the first year = (3,984 funds × 43.5 hours for the first filing for funds filing in-house) + (3,984 funds × 14 hours for each subsequent filing × 11 filings) + (7,398 funds × 59.5 hours for the first filing for funds retaining a third-party service provider) + (7,398 funds × 9 hours for each subsequent filing × 11 filings). 1,468,296 hours in subsequent years = (3,984 funds filing in-house × 14 hours × 12 filings) + (7,398 funds retaining a third-party service provider × 9 hours × 12 filings).

[1498] These estimates are based on the following calculations: 1,632,005 hours amortized over three years = (1,959,423 hours + (1,468,296 hours × 2))/3. 143 hours per fund = 1,632,005 hours/11,382 funds.

[1499] These estimates are based on the following calculations: $103,776,240 = (3,984 funds × $4,805) + 7,398 funds × $11,440). $9,118 per fund = $103,787,680/11,382 funds.

[1500] This estimate is based on the following calculation: 219,513 hours per year = 10,453 funds × 10.5 hours × 2 filings per year. Management investment companies currently are required to file a quarterly report on Form N–Q after the close of the first and third quarters of each fiscal year.

[1501] This estimate of 11,863 funds includes 9,520 mutual funds (including money market funds), 1,594 ETFs, and 749 closed-end funds (excluding SBICs). Based on data obtained from the ICI and reports filed by registrants on Form N–SAR. *See supra* footnote 1259 and accompanying and following text; *see also* 2016 ICI Fact Book, *supra* footnote 2, at 22, 176.

[1502] This estimate is based on the following calculation: 249,123 hours per year = 11,863 funds × 10.5 hours × 2 filings per year.

[1503] For purposes of the PRA analysis, the burdens associated with amended rule 30a–1 are included in the collection of information estimates of Form N–CEN.

[1504] UITs are only required to file Form N–SAR on an annual basis. *See* rule 30a–1.

[1505] This estimate was based on 2,419 management companies and 727 UITs filing reports on Form N–SAR as of December 31, 2014.

[1506] Our estimate included the hourly burden associated with registering/maintaining LEIs for the registrant/funds, which would be required to be included in reports on Form N–CEN.

[1507] *See* Proposing Release, *supra* footnote 7, at 33675.

[1508] We note that reports on Form N–CEN would be filed annually, rather than semi-annually as in the case of reports on Form N–SAR. Thus, while we estimated that the burden associated with each annual hour burden for management companies would be 13.35 per report on proposed Form N–CEN, down from 15.35 hours per report for Form N–SAR.

In the Proposing Release, we also noted that UITs may, however, experience an increase in the hour burden associated with census-type reporting if proposed Form N–CEN were adopted because UITs would be required to respond to more items in the form than they are currently required to respond to under Form N–SAR. For example, UITs would be required to provide certain background information and attachments in their reports on proposed Form N–CEN, which they are not currently required to provide in their reports on Form N–SAR. As a result, we increased the estimated annual hour burden for each UIT from 7.11 hours in the currently approved collection for Form N–SAR to 9.11 hours for proposed Form N–CEN.

We also noted our belief that, in the first year reports on the form are filed, funds may require additional time to prepare and file reports. We estimated that, for the first year, each fund would each require 20 additional hours.[1509] Accordingly, we estimated that management investment companies would each require 33.35 annual burden hours in the first year [1510] and 13.35 annual burden hours in each subsequent year for preparing and filing reports on proposed Form N–CEN. Additionally, we estimated that UITs would each require 29.11 annual burden hours in the first year [1511] and 9.11 annual burden hours in each subsequent year for preparing and filing reports on proposed Form N–CEN.

In the Proposing Release, we further estimated that the average annual hour burden per response for proposed Form N–CEN for the first year would be 32.37 hours [1512] and 12.37 hours in subsequent years.[1513] Amortizing the burden over three years, we estimated that the average annual hour burden per fund per year would be 19.04 [1514] and the total aggregate annual hour burden would be 59,900.[1515]

With respect to the initial filing of a report on Form N–CEN, we estimated an external cost of $220 per fund and, with respect to subsequent filings, we estimated an annual external cost of $120 per fund.[1516] We estimated the amortized annual external cost per fund would be $153.[1517] We also estimated that no external cost burden was associated with Form N–SAR. External costs include the cost of goods and services, which with respect to reports on Form N–CEN, would include the costs of registering and maintaining an LEI for the registrant/funds.[1518] In sum, we estimated that all applicable funds would incur, in the aggregate, external annual costs of $1,748,637.[1519]

One commenter expressed the general belief that requiring census-type data on Form N–CEN on an annual basis, rather than on a semi-annual basis on Form N–SAR, would significantly lessen reporting burdens for funds and lower costs for fund shareholders when compared to the status quo.[1520] We agree and continue to believe the estimated hour and cost burdens associated with Form N–CEN estimated in the Proposing Release reflect this reduction in burdens and costs. With the exception of this comment, we did not receive comments on the estimated hour and costs burdens discussed above associated with reporting census-type information on Form N–CEN.

As discussed above, our adoption of Form N–CEN includes a number of modifications or clarifications from the proposal that address concerns raised by commenters and that are intended, in part, to decrease reporting and implementation burdens relative to the proposal. For example, we have extended the filing period for Form N–CEN from 60 days, as proposed, to 75 days to, in part, respond to commenters' concerns that 60 days would not provide funds the time necessary to collect, verify, and report information on Form N–CEN.[1521] We also have modified the proposal by moving the management's statement regarding a change in independent public accountant originally filed on Form N–SAR from an attachment to Form N–CEN, as proposed, to an exhibit to Form N–CSR, thereby shifting burden associated with this exhibit filing from Form N–CEN to Form N–CSR. However, we recognize a few reporting items and sub-items have been added to the form that were not contemplated in the burden hours and costs we estimated in the Proposing Release. For example, we are adopting a requirement that a fund (other than a money market fund) provide its monthly average net assets during the reporting period,[1522] and we are also requiring the reporting of CRD numbers for directors.[1523]

We believe that certain of the modifications from and clarifications to the proposal that we are adopting today will generally reduce the estimated burden hours and costs associated with implementation of Form N–CEN reporting requirements relative to the proposal, while a few others will increase those estimates. For these reasons, we believe that the net effect of such modifications from the proposal will not have a net impact on the estimated burden hours and costs stated in the Proposing Release. Accordingly, we are not estimating a change to the proposed per-fund estimates as a result of the modifications we have made to the proposed requirements. The Commission, however, has modified the estimated increase in aggregate annual burden hours and external costs that will result from reporting requirements on Form N–CEN in light of updated data regarding the number of management investment companies and UITs.

We have revised our estimate of the number of reports on Form N–CEN per year downward from 3,146 reports to 3,113 reports to reflect updates to the industry data figures that were utilized

---

report on Form N–CEN for management companies would be two hours less than the burden associated with each report on Form N–SAR, we estimated that the annual Form N–CEN burden for management companies would actually be 17.35 hours less than that associated with Form N–SAR. This estimate is based on the following calculation: 15.35 Form N–SAR burden hours × 2 reports) − 13.35 Form N–CEN burden hours = 17.35 hours.

[1509] This additional time may be attributable to, among other things, reviewing and collecting new or revised data pursuant to the Form N–CEN requirements or changing the software currently used to generate reports on Form N–SAR in order to output similar data in a different format.

[1510] This estimate is based on the following calculation: 13.35 hours for each filing + 20 additional hours for the first filing = 33.35 hours.

[1511] This estimate was based on the following calculation: 9.11 hours for each filing + 20 additional hours for the first filing = 29.11 hours.

[1512] This estimate was based on the following calculation: ((2,419 management investment companies × 33.35 hours) + (727 UITs × 29.11 hours)) ÷ 3,146 total funds = 32.37 hours.

[1513] This estimate was based on the following calculation: ((2,419 management investment companies × 13.35 hours) + (727 UITs × 9.11 hours)) ÷ 3,146 total funds = 12.37 hours.

[1514] This estimate was based on the following calculation: (32.37 hours per management company in first year + (12.37 in each year thereafter × 2 years)) ÷ 3 years = 19.04 hours per year.

[1515] This estimate was based on the following calculation: 3,146 funds × 19.04 hours per fund per year = 59,900 hours per year.

[1516] *See* Proposing Release, *supra* footnote 7, at n.766 (discussing the costs associated with registering and maintaining an LEI).

[1517] This estimate was based on the following calculation: ($220 in first year + (2 years × $120 each subsequent year)) ÷ 3 years = $153 per year.

[1518] *See* Item B.1.d and Item C.1.c of Form N–CEN (requiring LEI for the registrant and each series of a management company).

[1519] This estimate was based on the following calculation: $153 per year per fund × 11,429 funds = $1,748,637 per year.

[1520] *See* ICI Comment Letter.

[1521] *See supra* section II.D.3.

[1522] *See supra* footnotes 1016–1021 and accompanying and following text.

[1523] *See supra* footnotes 823–824 and accompanying text.

in the Proposing Release.[1524] We continue to estimate that management investment companies will each spend as much as 13.35 hours annually, preparing and filing reports on Form N–CEN.[1525] The Commission also continues to estimate that UITs, including separate account UITs, will each spend as much as 9.11 hours annually, preparing and filing reports on Form N–CEN, since a UIT will be required to respond to fewer reporting items.[1526]

We continue to estimate that management investment companies currently spend as much as 15.35 hours preparing and filing each report on Form N–SAR, and note that we generally have sought to simplify and decrease the census-type reporting burdens placed on registrants by current Form N–SAR in adopting Form N–CEN. For example, Form N–CEN, as adopted, will reduce the number of attachments that may need to be filed with the reports and largely eliminate financial statement-type information from the reports. Additionally, we continue to believe that reports in XML on Form N–CEN will be less burdensome to produce than the reports on Form N–SAR currently required to be filed using outdated technology. Accordingly, for management investment companies we continue to believe that the estimated hour burden for filing reports on Form N–CEN should be a reduced burden from the hour burden associated with Form N–SAR.[1527] As such, we continue to estimate that the annual hour burden for management companies will be 13.35 per report on Form N–CEN, down from 15.35 hours per report for Form N–SAR.

We continue to believe that UITs may, however, experience an increase in the hour burden associated with census-type reporting on Form N–CEN because UITs will be required to respond to more items in the form than they are currently required to respond to under Form N–SAR. For example, UITs will be required to provide certain background information and attachments in their reports on Form N–CEN, which they are not currently required to provide in their reports on Form N–SAR. As a result, we continue to estimate an increase in the annual hour burden for UITs from 7.11 hours in the currently approved collection for Form N–SAR to 9.11 hours for Form N–CEN.

In addition, we continue to believe that, in the first year reports on the form are filed, funds may require additional time to prepare and file reports. Therefore, we continue to estimate that, for the first year, each fund will require 20 additional hours.[1528] Accordingly, we estimate that each management investment company will require 33.35 annual burden hours in the first year[1529] and 13.35 annual burden hours in each subsequent year for preparing and filing reports on Form N–CEN. Furthermore, we estimate that each UIT will require 29.11 annual burden hours in the first year[1530] and 9.11 annual burden hours in each subsequent year for preparing and filing reports on Form N–CEN.

We also continue to estimate (after rounding to the nearest hundredth of an hour) that the average annual hour burden per response for Form N–CEN for the first year will be 32.37 hours[1531] and 12.37 hours in subsequent years.[1532] Amortizing the burden over three years, we estimate that the average annual hour burden per fund per year will be 19.04 hours[1533] and the total aggregate annual hour burden will be 59,272 hours.[1534]

External costs include the cost of goods and services, which with respect to reports on Form N–CEN, will include the costs of registering and maintaining an LEI for the registrant/funds.[1535] We estimate an external cost of $219, rather than $220 per fund with respect to the initial filing of a report on Form N–CEN, and we estimate an annual external cost of $119, rather than $120 per fund with respect to subsequent filings, reflecting updates to the industry data figures that were utilized in the Proposing Release.[1536] Accordingly, we estimate the amortized annual external cost per registrants and fund will be $152 per year, rather than $153 per year as proposed.[1537] In sum, we estimate that all applicable funds will incur, in the aggregate, external annual costs of $2,088,176, rather than $1,748,637, reflecting updates to the industry data figures that were utilized in the Proposing Release.[1538]

2. Rescission of Form N–SAR

In connection with our adoption of new Form N–CEN, we are rescinding Form N–SAR in order to eliminate unnecessarily duplicative reporting requirements. This rescission will affect all management investment companies and UITs.

We received no comments on the estimates put forward in our proposal. Thus, as proposed, we estimate that the average annual hour burden per response for Form N–SAR is 15.35 hours for a management investment company and 7.11 hours for a UIT, since a UIT is required to answer fewer items.[1539] We have revised our estimate of the weighted average annual burden per response to about 14.27 hours to reflect updates to the industry data figures that were utilized in the Proposing Release.[1540] We therefore

[1524] This estimate is based on 2,392 management companies and 721 UITs filing reports on Form N–SAR as of December 31, 2015.

[1525] Our estimate includes the hourly burden associated with registering/maintaining LEIs for the registrant/funds, which would be required to be included in reports on Form N–CEN.

[1526] *See id.*

[1527] We note that reports on Form N–CEN will be filed annually, rather than semi-annually as in the case of reports on Form N–SAR. Thus, while we estimate that the burden associated with each report on Form N–CEN for management companies will be two hours less than the burden associated with each report on Form N–SAR, we estimate that the annual Form N–CEN burden for management companies will actually be 17.35 hours less than that associated with Form N–SAR. This estimate is based on the following calculation: (15.35 Form N–SAR burden hours per report × 2 reports per year) − 13.35 Form N–CEN burden hours per year = 17.35 hours per year.

[1528] This additional time may be attributable to, among other things, reviewing and collecting new or revised data pursuant to the Form N–CEN requirements or changing the software currently used to generate reports on Form N–SAR in order to output similar data in a different format.

[1529] This estimate is based on the following calculation: 13.35 hours for filings + 20 additional hours for the first filing = 33.35 hours.

[1530] This estimate is based on the following calculation: 9.11 hours for filings + 20 additional hours for the first filing = 29.11 hours.

[1531] This estimate is based on the following calculation: ((2,392 management investment companies × 33.35 hours per management investment company in the first year) + (721 UITs × 29.11 hours per UIT in the first year)) ÷ 3,113 total funds = 32.37 hours in the first year.

[1532] This estimate is based on the following calculation: ((2,392 management investment companies × 13.35 hours per subsequent year) + (721 UITs × 9.11 hours per subsequent year)) ÷ 3,113 total funds = 12.37 hours per subsequent year.

[1533] This estimate is based on the following calculation: (32.37 hours in first year + (12.37 per subsequent year × 2 years)) ÷ 3 years = 19.04 hours per year.

[1534] This estimate is based on the following calculation: 3,113 funds × 19.04 hours per year = 59,272 hours per year.

[1535] *See* Item B.1.d and Item C.1.c of Form N–CEN (requiring LEI for the registrant and each management company).

[1536] *See supra* footnote 63 (discussing the costs associated with registering and maintaining an LEI).

[1537] This estimate is based on the following calculation: ($219 in the first year + ($119 per subsequent year × 2 years)) ÷ 3 years = $152 per year.

[1538] This estimate is based on the following calculation: $152 per registrant or fund per year × (3,113 investment company registrants + 9,039 mutual funds (which reflects the number of mutual fund series, but excludes money market funds, which would have already obtained LEIs pursuant to the requirements of Form N–MFP) + 1,586 ETFs (excluding 8 UITs that are not ETFs)) = $152 per fund per year × 13,738 registrants and funds = $2,088,176 per year.

[1539] *See* Proposing Release, *supra* footnote 7, at n.724.

[1540] This estimate is based on the following calculation: (15.35 hours per management investment company per response × 2,392 management investment companies × 2 responses estimate an aggregate annual hour burden of about 78,561 hours.[1541]

Accordingly, we estimate that, in the aggregate, the rescission will eliminate the 78,561 annual burden hours that would be associated with filing Form N–SAR. Additionally, we estimate that there are no external costs associated with preparation of reports on Form N–SAR.

C. Amendments to Regulation S–X

As discussed above, we are adopting certain amendments to Articles 6 and 12 of Regulation S–X. As outlined in section II.C. above, the amendments would: (1) Require new, standardized disclosures regarding fund holdings in open futures contracts, open forward foreign currency contracts, and open swap contracts, and additional disclosures regarding fund holdings of written and purchased options contracts; (2) update the disclosures for other investments and investments in and advances to affiliates, as well as reorganize the order in which some investments are presented; and (3) amend the rules regarding the general form and content of fund financial statements.[1542]

1. Rule 30e–1

Section 30(e) of the Investment Company Act requires every registered investment company to transmit to its stockholders, at least semiannually, reports containing such information and financial statements or their equivalent, as of a reasonably current date, as the Commission may prescribe by rules and regulations.[1543] Rule 30e–1 generally requires management investment companies to transmit to their shareholders, at least semi-annually, reports containing the information that is required to be included in such reports by the fund's registration statement form under the Investment Company Act.[1544] Pursuant to this rule and Forms N–1A and N–2, management investment companies are required to include the financial statements required by Regulation S–X in their shareholder reports.[1545]

Rule 30e–1 also permits, under certain conditions, delivery of a single shareholder report to investors who share an address (''householding'').[1546] Specifically, rule 30e–1 permits householding of annual and semi-annual reports by management companies to satisfy the transmission requirements of rule 30e–1 if, in addition to the other conditions set forth in the rule, the management company has obtained from each applicable investor written or implied consent to the householding of shareholder reports at such address. The rule requires management companies that wish to household shareholder reports with implied consent to send a notice to each applicable investor stating, among other things, that the investors in the household will receive one report in the future unless the investors provide contrary instructions. In addition, at least once a year, management companies relying on the householding provision must explain to investors who have provided written or implied consent how they can revoke their consent.

Compliance with the disclosure requirements of rule 30e–1 is mandatory. Responses to the disclosure requirements are not kept confidential.

Based on staff conversations with fund representatives, we previously estimated that it takes approximately 84 hours per fund to comply with the collection of information associated with rule 30e–1, including the householding requirements. This time is spent, for example, preparing, reviewing, and certifying the reports. The previously total estimated annual hour burden of responding to rule 30e–1 was approximately 898,968 hours.[1547]

In the Proposing Release, we estimated that 11,230 management companies would have to comply with these amendments.[1548] In addition, we estimated that the amendments would likely increase the time spent preparing, reviewing and certifying reports, if adopted. The extent to which a fund's burden would increase as a result of the proposed amendments would depend on the extent to which the fund invests in the instruments covered by many of the amendments. We estimated that, on an annual basis, funds generally would incur an additional 9 burden hours in the first year[1549] and an additional 3 burden hours for filings in subsequent years in order to comply with the proposed amendments.[1550] Amortized over three years, we estimated that the average annual hour burden associated with the amendments for Regulation S–X would be 5 hours per fund.[1551] Accordingly, we estimated a total annual average hour burden associated with the amendments would be 56,150.[1552]

We also estimated an annual external cost burden of compliance with the information collection requirements of rule 30e–1, which is currently $31,061 per fund, would not change as a result of the proposed amendments to

---

per year + 7.11 hours per UIT per response × 721 UITs) ÷ (2,392 management companies × 2 responses per management company per year + 721 UITs × 1 response per management company per year) = 78,561 hours ÷ 5,505 responses per year = ~14.27 hours per response. The numbers of management investment companies and UITs are based on data obtained from the ICI and reports filed by registrants on Form N–SAR. *See supra* footnotes 2 and 1259 and accompanying and following text; *see also* 2016 ICI Fact Book, *supra* footnote 2, at 22, 176.

[1541] This estimate is based on the following calculation: ~14.27 hours per response × (2,392 management companies × 2 responses per management company per year + 721 UITs × 1 response per management company per year) = ~14.27 hours per response × 5,505 responses per year = ~78,561 hours per year.

[1542] Our amendments would also require prominent placement of disclosures regarding investments in derivatives in a fund's financial statements, rather than allowing such schedules to be placed in the notes to the financial statements. *See supra* section II.C.

[1543] Section 30(e).

[1544] Rule 30e–1.

[1545] *See* Item 27 of Form N–1A; and Item 24 of Form N–2.

[1546] *See* rule 30e–1(f).

[1547] This estimate is based on the following calculation: 84 hours per fund × 10,702 funds (the estimated number of portfolios the last time the rule's information collections were submitted for PRA renewal in 2015) = 898,968 hours.

[1548] *See* Proposing Release, *supra* footnote 7, at n. 777. As noted in the Proposing Release, this estimate included 9,259 mutual funds (including money market funds), 1,403 ETFs (1,411 ETFs − 8 UIT ETFs) and 568 closed-end funds.

[1549] With respect to the amendments to Article 6 of Regulation S–X, we estimated that each fund would spend an average of 5 hours to initially comply with the amendments. For example, amendments to Article 6–07.1 would likely require funds to identify non-cash income and put a process in place to capture it in the financial statements. In addition, some funds would also likely move their schedules from financial statement notes to the financial statements themselves. With respect to the amendments requiring disclosure of the components of a custom basket/index, some funds voluntarily provide this disclosure now, but others do not; we recognized that funds would be affected by this requirement differently depending on their investments.

With respect to the amendments to Article 12 of Regulation S–X, we estimated each fund would spend an average of four hours to initially comply with the amendments. For example, while accounting guidance already requires funds to identify the level of each security (such as Level 3 securities), we estimated there will be an increased burden in adding another note to the financial statements. This increased burden would vary depending on the information already reported by funds in their financial statements. Likewise, while many funds voluntarily identify illiquid securities in their schedule of investments, the funds that do not make this disclosure would bear an initial burden to comply with these amendments.

[1550] With respect to the amendments to Article 6 of Regulation S–X, we estimated each fund would require two hours to comply with the requirements in each subsequent year. We likewise estimated that each fund would require one hour to comply with the requirements of the proposed amendments to Article 12 in each subsequent year.

[1551] Proposing Release, *supra* footnote 7, at n. 780. The estimate was based on the following calculation: (9 hours + (3 hours × 2))/3 = 5.

[1552] *See id.*, at n. 781. The estimate was based on the following calculation: 5 hours × 11,230 management investment companies = 56,150.

Regulation S–X.[1553] We further estimated that the total annual external cost burden for rule 30e–1 would be $348,815,030.[1554] External costs included, for example, the costs for funds to prepare, print, and mail the reports.

We did not receive any comments on the estimated hour and costs burdens relating to our proposed amendments to Regulation S–X. As discussed above, our adoption includes numerous modifications or clarifications from the proposal that address concerns raised by commenters and that are intended, in part, to decrease reporting and implementation burdens relative to the proposal. For example, we are limiting the requirement for nonpublic indexes to require funds to only report the top 50 components of the index or custom basket and any components that represent more than one percent of the notional value of the index or custom basket.[1555] In order to eliminate the unnecessary disclosure of immaterial amounts of non-cash income, we adopted a 5 percent de minimis reporting threshold for reporting non-cash income, such as payment-in-kind interest.[1556] We also eliminated our proposed securities lending disclosures in fund financial statements in favor of disclosures that would be made in a fund's Statement of Additional Information (or, for closed-end funds, reports on Form N–CSR) and in Form N–CEN.[1557] In Article 12 of Regulation S–X, in response to commenter concerns, and as more fully discussed above in section II.C.4, we eliminated proposed disclosure requirements relating to the liquidity of securities and federal income tax basis.[1558] We also eliminated a proposal to require funds to categorize the schedule of securities by type of investment, the related industry, *and* the related country, or geographic region.[1559]

However, for variable rate securities, we are now requiring funds to provide disclosure of both a description of reference rate and spread and the end of period interest rate, rather than just the reference rate that we proposed, which may add additional burdens on funds.[1560]

For these and other reasons, we believe that our modifications from and clarifications to the proposal will, on a net basis, generally reduce the burden hours and costs associated with implementation of Regulations-X's reporting requirements relative to the proposal. However, although we did not receive any comments specifically addressing the burden estimates for our proposed amendments to Regulation S–X, we recognize that several commenters, although they did not provide quantitative estimates, suggested that implementation of the proposed new reporting requirements, generally would be costly.[1561] Based, in part, on the shifting of the securities lending disclosures to the Statement of Additional Information (or, for closed-end funds, reports on Form N–CSR) and Form N–CEN, as well as the other modification discussed above, we estimate that funds will incur a reduction of 2 burden hours in the first year and a reduction of .5 hours for filings in subsequent years from our proposed estimates.

The Commission has also modified the estimated increase in annual burden hours and total time costs that will result from the amendments based on updated industry data. We have revised our estimate of the number of management companies that will have to comply with the amendments to Regulation S–X upward from 11,230 management companies to 11,859 management companies to reflect updates to the industry data figures that were utilized in the Proposing Release.[1562] The Commission now estimates that, on an annual basis, funds generally will incur an additional 7 burden hours in the first year and an additional 2.5 burden hours for filings in subsequent years in order to comply with the proposed amendments. Amortized over three years, the average aggregate annual hour burden associated with the amendments for Regulation S–X will be 4 hours per fund.[1563] We therefore estimate an average total annual hour burden associated with the amendments of 47,436.[1564]

We continue to estimate an annual external cost burden of compliance with the information collection requirements of rule 30e–1, which is currently $31,061 per fund, will not change as a result of the proposed amendments to Regulation S–X.[1565] We further estimate that the total annual external cost burden for rule 30e–1 will be $368,352,399.[1566]

2. Rule 30e–2

Rule 30e–2 requires registered UITs that invest substantially all of their assets in shares of a management investment company to send their unitholders annual and semiannual reports containing financial information on the underlying company.[1567] Specifically, rule 30e–2 requires that the report contain all the applicable information and financial statements or their equivalent, required by rule 30e–1 under the Investment Company Act to be included in reports of the underlying fund for the same fiscal period.[1568] Rule 30e–2 also permits UITs to rely on the householding provision in rule 30e–1 to transmit a single shareholder report to investors who share an address.[1569]

Compliance with the disclosure requirements of rule 30e–2 is mandatory. Responses to the disclosure requirements are not kept confidential.

As noted in the Proposing Release, the Commission previously estimates that the annual burden associated with rule 30e–2, including the householding requirements, was 121 hours per respondent. The Commission further estimated the total annual hour burden was approximately 91,960 hours.[1570]

As discussed above, we are adopting certain amendments to Articles 6 and 12

[1553] Because the proposed amendments would largely reorganize information currently reported by funds in their financial statements, either voluntarily or because it is required, we did not believe the external costs, such as printing and mailing costs, would increase as a result of the amendments.

[1554] *See* Proposing Release, *supra* footnote 7, at n. 783. This estimate was based on the following calculation: 11,230 funds × $31,061 = $348,815,030. The total annual cost burden of rule 30e–1 was $333,905,750, which reflected the higher estimated number of funds subject to rule 30e–1 at the time of the last renewal for the rule.

[1555] *See supra* sections II.C.2.a and II.C.2.d.

[1556] *See supra* section II.C.6

[1557] *Id.*

[1558] *See supra* section II.C.4.

[1559] *See supra* section II.C.3.

[1560] *See id.*

[1561] *See, e.g.,* Simpson Thacher Comment Letter; and Fidelity Comment Letter.

[1562] This estimate included 9,520 mutual funds (including money market funds), 1,589 ETFs (1,594, ETFs − 5 UIT ETFs) and 750 closed-end funds and was based on internal SEC data as well as ICI statistics as of December 31, 2015, *available at http://www.ici.org/research/stats.*

[1563] The estimate is based on the following calculation: (7 hours + (2.5 hours × 2))/3 = 4.

[1564] The estimate is based on the following calculation: 4 hours × 11,859 management investment companies = 47,436.

[1565] We continue to believe that amendments will largely reorganize information currently reported by funds in their financial statements, either voluntarily or because it is required and will therefore not result in an increase of external costs, such as printing and mailing costs.

[1566] This estimate is based on the following calculation: 11,859 funds × $31,061 = $368,352,399.

[1567] Rule 30e–2.

[1568] As discussed above, rule 30e–1 (together with Forms N–1A and N–2) essentially requires management investment companies to transmit to their shareholders, at least semi-annually, reports containing the financial statements required by Regulation S–X.

[1569] *See* rule 30e–2(b); *see also supra* footnote 1546 and accompanying text.

[1570] This estimate is based on the following calculations: 700 UITs (the estimated number of UITs the last time the rule's information collections were submitted for PRA renewal in 2015) × 121 hours per UIT = 84,700.

of Regulation S–X that will increase the time spent preparing, reviewing and certifying reports.[1571] The extent to which a UIT's burden increases as a result of the adopted amendments will depend on the extent to which an underlying fund invests in the instruments covered by many of the amendments.

In the Proposing Release, we estimated that there were 727 UITs that may be subject to the proposed amendments.[1572] We also estimated that, on an annual basis, UITs generally would incur an additional 9 burden hours in the first year and an additional 3 burden hours for filings in subsequent years in order to comply with the proposed amendments. Amortized over three years, we estimated that the average annual hour burden associated with the proposed amendments would be 5 hours per fund.[1573] Accordingly, we estimated that the total average annual hour burden associated with the proposed amendments to Regulation S–X would be 3,635 hours.[1574]

In addition, we estimated that the annual external cost burden of compliance with the information collection requirements of rule 30e–2, which are currently $20,000 per respondent, would not change as a result of the proposed amendments to Regulation S–X.[1575] We further estimated that the total annual external cost burden for rule 30e–2 would be $14,540,000.[1576] External costs include, for example, the costs for the funds to prepare, print, and mail the reports.

We did not receive any comments on the estimated hour and costs burdens. For the reasons discussed above, we now estimate that funds will incur a reduction of 2 burden hours in the first year and a reduction of .5 hours for filings in subsequent years from our proposed costs. The Commission has also modified the estimated increase in annual burden hours and total time costs that will result from the amendments based on updated industry data. We have revised our estimate of the number of UITs that will have to comply with the amendments to Regulation S–X downward from 727 UITs to 721 UITs to reflect updates to the industry data figures that were utilized in the Proposing.[1577] For the reasons discussed above, we now estimate that, on an annual basis, UITs generally will incur an additional 7 burden hours in the first year[1578] and an additional 2.5 burden hours for filings in subsequent years in order to comply with the amendments to Regulation S–X.[1579] Amortized over three years, we now estimate that the average annual hour burden associated with the amendments will be 4 hours per fund.[1580] We therefore estimate a total average annual hour burden associated with the amendments to Regulation S–X will be 2,884 hours.[1581]

In addition, we estimate that the annual external cost burden of compliance with the information collection requirements of rule 30e–2, which are currently $20,000 per respondent, will not change as a result of the amendments to Regulation S–X.[1582] We further estimate that the total annual external cost burden for rule 30e–2 will be $14,420,000.[1583]

D. Amendments to Registration Statement Forms

As discussed above, we are amending Forms N–1A, N–2, N–3, N–4, and N–6.[1584] We are adopting amendments to Forms N–1A and N–3 to require certain disclosures in fund Statements of Additional Information regarding securities lending activities.[1585] We are also amending Forms N–1A, N–2, N–3, N–4, and N–6 to exempt funds from those forms' respective books and records disclosure requirements if the information is provided in a fund's most recent report on Form N–CEN.[1586]

Form N–1A is the form used by open-end management investment companies to register under the Investment Company Act and/or register their securities under the Securities Act. Form N–2 is the form used by closed-end management investment companies to register under the Investment Company act and register their securities under the Securities Act. Form N–3 is the form used by separate accounts offering variable annuity contracts which are organized as management investment companies to register under the Investment Company Act and/or register their securities under the Securities Act. Form N–4 is the form used by insurance company separate accounts organized as unit investment trusts that offer variable annuity contracts to register under the Investment Company Act and/or register their securities under the Securities Act. Form N–6 is the form used by insurance company separate accounts organized as unit investment trusts that offer variable life insurance policies to register under the Investment Company Act and/or register their securities under the Securities Act. Compliance with the disclosure requirements of Forms N–1A, N–2, N–3, N–4, and N–6 is mandatory. Responses to the disclosure requirements are not kept confidential.

Currently, we estimate the following total hour burden for each of the relevant forms:

[1571] As discussed above, the amendments will: (1) Require new, standardized disclosures regarding fund holdings in open futures contracts, open forward foreign currency contracts, and open swap contracts, and additional disclosures regarding fund holdings of written and purchased options contracts; (2) update the disclosures for other investments and investments in and advances to affiliates, as well as reorganize the order in which some investments are presented; and (3) amend the rules regarding the general form and content of fund financial statements. In addition, our amendments will also require prominent placement of disclosures regarding investments in derivatives in a fund's financial statements, rather than allowing such schedules to be placed in the notes to the financial statements.

[1572] *See* Proposing Release, *supra* footnote 7, at n. 789. This estimate was based on the number of UITs that filed Form N–SAR with the Commission as of December 31, 2014.

[1573] The estimate was based on the following calculation: (9 hours + (3 hours × 2))/3 = 5.

[1574] The estimate was based on the following calculation: 5 hours × 727 UITs = 3,635.

[1575] *See supra* footnote 1553.

[1576] This estimate is based on the following calculation: 727 UITs × $20,000 = $14,540,000. The current total annual cost burden of rule 30e–2 is $15,200,000, which reflects the higher estimated number of UITs at the time of the last renewal for the rule. *See supra* footnote 1570.

[1577] This estimate is based on the number of UITs that filed Form N–SAR with the Commission as of December 31, 2015.

[1578] *See supra* footnotes 1562–1563 and accompanying text.

[1579] *See id.*

[1580] The estimate is based on the following calculation: (7 hours + (2.5 hours × 2))/3 = 4.

[1581] The estimate is based on the following calculation: 4 hours × 721 UITs = 2,884.

[1582] *See supra* footnote 1553.

[1583] This estimate is based on the following calculation: 721 UITs × $20,000 = $14,420,000. The current total annual cost burden of rule 30e–2 is $15,200,000, which reflects the higher estimated number of UITs at the time of the last renewal for the rule.

[1584] *See supra* section II.F; footnotes 807–809 and accompanying text.

[1585] *See* Item 19(i) of Form N–1A; Item 21(j) of Form N–3; *see also supra* section II.F. We proposed similar requirements be included in fund financial statements as part of the proposed amendments to Regulation S–X. *See* proposed rule 6–03(m) of Regulation S–X; Proposing Release, *supra* footnote 7, at 33624.

[1586] *See* footnotes 807–809 and accompanying text.

FORM	TOTAL BURDEN HOURS
N-1A	1,579,974
N-2	86,533
N-3	3,104
N-4	343,117
N-6	85,269

In the Proposing Release, we estimated that 11,957 funds would have to comply with the proposed amendments to Regulation S–X, including, among other things, the proposed new disclosure in the notes to financial statements relating to a fund's securities lending activities.[1587]

In the Proposing Release, we estimated that the total hour burden for each respective form would not change as a result of the proposed amendments concerning books and records disclosures.[1588] We estimated, however, that the amendments to Regulation S–X—including the new required disclosures in the notes to the financial statements concerning the fund's securities lending activities, but also a number of other amendments—would result in funds incurring an additional 9 burden hours in the first year and an additional 3 burden hours for filings in subsequent years.[1589] Amortized over three years, the average additional annual hour burden was estimated to be 5 hours per fund.[1590] Accordingly, we estimated that the total annual average hour burden associated with the amendments would be 59,785 hours.[1591] We did not receive any comments on the estimated hour burden.

We continue to estimate no change in burden hours as a result of the books and records disclosures. However, we now estimate that those forms—*viz.,* Forms N–1A and N–3—that include the new disclosure requirements concerning securities lending activities would impose part, but not all, of the additional hour burden previously estimated for Regulation S–X as funds may need to collect, collate, tabulate, present, and review the information in order to prepare the required Statement of Additional Information disclosures. We estimate that 9,502 and 16 funds per year could file registration statements or amendments to registration statements on Forms N–1A and N–3, respectively. We estimate that funds will incur an additional 2 burden hours in the first year and an additional 0.5 hours for filings in subsequent years. Amortized over three years, the average additional annual hour burden will therefore be 1 hour per fund.[1592] Accordingly, we estimate that the total annual average hour burden associated with the amendments to Forms N–1A and N–3 is, respectively, 9,504,[1593] and 16 hours.[1594] For Forms N–4 and N–6, to which the securities lending activity disclosure requirement amendments do not apply, we continue to estimate total annual hour burden of 343,117 hours and 85,269 hours, respectively.

In the Proposing Release, for both the books and records amendments and the Regulation S–X requirement, of which the securities lending requirements were a part, we estimated that there would be no changes to the annual external cost burden per fund as a result of the amendments, and accordingly estimated no change to the current estimated total external cost burden associated with the forms.[1595] We did not receive any comments on the estimated external cost burden. We therefore continue to estimate no change to the external cost burden as a result of the amendments, and so we continue to estimate the total cost burden for each of the respective forms as follows:

FORM	TOTAL COST BURDEN
N-1A	$124,820,197
N-2	$5,488,048
N-3	$205,180
N-4	$36,308,889
N-6	$5,316,892

E. Amendments to Form N–CSR

As previously discussed above, we are adopting, as proposed, the rescission of Form N–Q.[1596] In connection with the rescission of Form N–Q, we also are adopting, as proposed, amendments to Form N–CSR, the reporting form used by management companies to file certified shareholder reports under the Investment Company Act and the Exchange Act.[1597] Form N–Q currently

[1587] We estimated in the Proposing Release that 11,230 management companies would be required to comply with the amendments. Proposing Release, *supra* footnote 7, at 33676. We also estimated that 727 UITs may be subject to the proposed amendments. Proposing Release, *supra* footnote 7, at 33677. 11,230 management companies + 727 UITs = 11,957.

[1588] Proposing Release, *supra* footnote 7, at 33681.

[1589] Proposing Release, *supra* footnote 7, at 33676–77.

[1590] 9 hours in first year + (3 hours per year thereafter × 2 years) = 9 hours + 6 hours = 15 hours total. 15 hours total ÷ 3 years = 5 hours per year.

[1591] 11,957 funds × 5 hours per fund = 59,785.

[1592] 2 hours in first year + (0.5 hours per year thereafter × 2 years) = 2 hours + 1 hour = 3 hours total. 3 hours total ÷ 3 years = 1 hour per year.

[1593] 1 hour per fund × 9,504 funds per year = 9,504 hours per year.

[1594] 1 hour per fund × 16 funds per year = 16 hours per year.

[1595] Proposing Release, *supra* footnote 7, at 33677, 33681.

[1596] *See supra* section III.B.

[1597] *See* Proposing Release, *supra* footnote 7, at section V.E.

requires principal executive and financial officers of the fund to make certifications for the first and third fiscal quarters relating to (1) the accuracy of information reported to the Commission, and (2) disclosure controls and procedures and internal control over financial reporting.[1598] The rescission of Form N–Q adopted today eliminates these certifications.

Form N–CSR requires similar certification with respect to the fund's second and fourth fiscal quarters. As a result of the rescission of Form N–Q adopted today, we are also adopting amendments to the form of certification in Form N–CSR to require each certifying officer to state that he or she has disclosed in the report any change in the registrant's internal control over financial reporting that occurred during the most recent fiscal half-year, rather than the registrant's most recent fiscal quarter as currently required by the form.[1599] Lengthening the look-back of this certification to six months, so that the certifications on Form N–CSR for the semi-annual and annual reports will cover the first and second fiscal quarters and third and fourth fiscal quarters, respectively, will fill the gap in certification coverage that would otherwise occur once the rescission of Form N–Q is effective. As proposed, compliance with the amended certification requirements will be mandatory and responses are not kept confidential.

In addition, as discussed above, we are moving the change in independent public accountant attachment proposed on Form N–CEN to Form N–CSR so that an accountant's letter regarding a change in accountant will become available to the public semi-annually rather than annually.[1600] We are also adopting amendments to require closed-end funds to report on Form N–CSR certain disclosures regarding securities lending activities.[1601]

In the Proposing Release, we estimated that the current annual burden associated with Form N–CSR is 14.42 hours per fund[1602] and that the current total annual time burden for Form N–CSR is 177,799 hours.[1603] We noted that the amount and content of the information contained in the reports filed on Form N–CSR would not change as the result of the proposed amendments to the certification requirements of Form N–CSR and that funds likely already have policies and procedures in place to assist officers in their certifications of this information. Accordingly, we estimated that the proposed amendments to the certification requirements of Form N–CSR would not change the annual hour burden associated with Form N–CSR and, thus, we continued to estimate the annual hour burden associated with Form N–CSR to be 14.42 hours per fund. With respect to the total annual hour burden, however, we estimated 161,937 hours.[1604] We noted that this decrease in the current total annual hour burden was a result of the decrease in the number of funds estimated to file Form N–CSR.

In addition, in the Proposing Release, we also estimated that the current annual cost of outside services associated with Form N–CSR is approximately $129 per fund.[1605] We noted our belief that external costs would include the cost of goods and services purchased to prepare and update filings on Form N–CSR. We also expressed our belief that those costs would not change as a result of the proposed amendments to the certification requirements of Form N–CSR and, thus, continued to estimate a current external cost burden of $129 per fund to file Form N–CSR. In the Proposing Release, we further estimated that the total annual external cost burden for Form N–CSR would be $2,897,340.[1606]

We did not receive any comments on the estimated hour and cost burdens associated with our proposed amendments to the certification requirements of Form N–CSR. As discussed above, we are adopting amendments to modify Form N–CSR so that an accountant's letter regarding a change in accountant will become available to the public semi-annually pursuant to an exhibit filing on Form N–CSR rather than annually as an attachment to Form N–CEN, as proposed.[1607] We believe that this modification from the proposal will increase the hour burden associated with Form N–CSR by one-tenth of an hour[1608] with an additional internal cost burden of $32.40 per fund.[1609] In addition, as noted above, we are adopting an amendment to require closed-end funds include in their annual reports on Form N–CSR information concerning securities lending activities. We estimate that this amendment will increase the hour burden associated with Form N–CSR for closed-end funds by an additional 2 burden hours with an additional internal cost burden of $648 per fund in the first year,[1610] and an additional 0.5 hours with an additional internal cost burden of $162 per fund for filings in subsequent years.[1611] We have modified the estimated increase in annual burden hours and total time costs that will result from amendments to Form N–CSR adopted today in light of these modifications and updated data on industry earnings estimates.

For purposes of the PRA analysis, we estimate that the annual burden associated with Form N–CSR is 14.52 hours per fund.[1612] For closed-end funds, we estimate that the annual burden associated with Form N–CSR is 16.52 hours per fund in the first year and 15.02 for filings in subsequent

[1598] *See supra* footnote 521 and accompanying text.

[1599] *See* Item 11(b) of Form N–CSR; paragraph 5(b) of certification exhibit of Item 11(a)(2) of Form N–CSR.

[1600] *See supra* section II.D.4.b.

[1601] *See* Item 12 of Form N–CSR; *see also supra* footnote 1181 and accompanying text.

[1602] This estimate accounted for two filings per year. In addition, we noted that the estimate did not separately account for the certifications on Form N–CSR.

[1603] This estimate was based on the following calculation: 14.42 hours × 12,330 funds (the estimated number of funds the last time the rule's information collections were submitted for PRA renewal in 2013)).

[1604] This estimate was based on the following calculation: 11,230 funds × 14.42 hours = 161,937. *See supra* footnote 1548 (calculating the estimate for 11,230 funds).

[1605] We estimated that the external costs associated with Form N–CSR would not include the external costs associated with the shareholder report. The external costs associated with the shareholder report are accounted for under the collections of information related to rules 30e–1 and 30e–2 under the Investment Company Act.

[1606] This estimate was based on the following calculation: 11,230 funds × $129 = $1,448,670; $1,448,670 × 2 times per year = $2,897,340. We noted that the current total annual cost burden of Form N–CSR at the time of the Proposing Release was $3,189,771, which reflected the higher estimated number of filers for Form N–CSR at the time of the last renewal for the form. *See supra* footnote 1603.

[1607] *See supra* section III.B.3.

[1608] Paralleling this modification, we believe that the modification to move the change in independent public accountant exhibit from Form N–CEN as proposed to Form N–CSR will also reduce the hour burden requirement associated with Form N–CEN by one-tenth of an hour. *See supra* section IV.B.1.

[1609] This estimate is based on the following calculation: 0.10 hour × $324 (blended hourly rate for compliance attorney ($340) and senior programmer ($308) = $32.40.

[1610] This estimate is based on the following calculation: 2 hours × $324 (blended hourly rate for compliance attorney ($340) and senior programmer ($308) = $648.

[1611] This estimate is based on the following calculation: 0.5 hour × $324 (blended hourly rate for compliance attorney ($340) and senior programmer ($308) = $162.

[1612] This estimate is based on the following calculation: 14.52 = 14.42 + 0.10. This estimate accounts for two filings per year. We note that this estimate does not separately account for the certifications on Form N–CSR or the securities lending activities information annual reporting requirement for closed-end funds on Form N–CSR.

years.[1613] Amortized over three years, the average additional annual hour burden will therefore be 1 hour per closed-end fund.[1614] Accordingly, we estimate that, for closed-end funds, the total annual average hour burden associated with the amendments to Form N–CSR related to securities lending activities is 750 hours.[1615] We have revised our estimate of the total annual hour burden downward from 177,799 hours to 172,899 hours to reflect updates to the industry data figures that were utilized in the Proposing Release as well as the increase in the hour burdens resulting from the amendments.[1616] This decrease in the total annual hour burden is a result of the decrease in the number of funds estimated to file Form N–CSR, from our estimate of 12,330 funds in the Proposing Release to our current estimate of 11,856 funds.

In addition, as stated in the Proposing Release, we continue to estimate that the annual cost of outside services associated with Form N–CSR is approximately $129 per fund.[1617] Based on updated statistics regarding the number of funds, we estimate that the total annual external cost burden for Form N–CSR will be $3,058,848, rather than $2,897,340 as we estimated in the Proposing Release.[1618]

V. Final Regulatory Flexibility Analysis

This Final Regulatory Flexibility Analysis (''FRFA'') has been prepared in accordance with section 4(a) of the Regulatory Flexibility Act (''RFA'').[1619] It relates to new Form N–PORT and new Form N–CEN and amendments to Form N–CSR, amendments to Regulation S–X, the rescission of Forms N–Q and N–SAR, and amendments to Forms N–1A, N–2, N–3, N–4, and N–6. An Initial Regulatory Flexibility Analysis (''IRFA'') was prepared in accordance with the RFA and included in the Proposing Release.[1620]

A. Need for and Objectives of the Forms and Form Amendments and Rules and Rule Amendments

The Commission collects certain information about the funds that it regulates. The Commission is adopting new rules, rule amendments, and new forms and form amendments that will improve the quality of information that funds report to the Commission, benefitting the Commission's risk monitoring and oversight, examination, and enforcement programs.

We believe that these new rules, rule amendments, and new forms and form amendments will improve the information that funds report to their shareholders and the Commission. In addition, the new forms will require reports be filed in a structured data format (XML) to allow for easier collection and analysis of data by Commission staff and the public. This is the format used by Form N–MFP, Form 13F, and Form D, which greatly improves the ability of Commission staff and other potential users to aggregate and analyze the data reported.

The Commission's objective is to gain more timely and useful information about funds' operations and portfolio holdings. The Commission also believes that its risk monitoring and oversight, examination, and enforcement programs will be improved by requiring enhanced information from funds.

B. Significant Issues Raised by Public Comments

In the Proposing Release, we requested comment on every aspect of the IRFA, including the number of small entities that would be affected by the proposed amendments, the existence or nature of the potential impact of the proposals on small entities discussed in the analysis and how to quantify the impact of the proposed rules.

One commenter noted that the rulemaking will place an ''undue work and financial burden'' on small closed-end funds.[1621] The commenter also noted that a closed-end fund that is not listed on an exchange, a small number of assets under management, and limited holdings should be required to file reports on Form N–PORT quarterly, as opposed to monthly.[1622] Commenters also generally noted the high cost of the rulemaking.[1623] Other commenters generally requested more time in order to comply with the new forms, rules, and rule amendments.[1624]

As we noted above,[1625] we believe that, in order to ensure that the Commission and its staff receive timely information, it is appropriate to require that funds file reports on Form N–PORT within 30 days of month-end. Although reports on Form N–MFP are required to be filed within 5 days of month end, we recognize that preparing reports on Form N–PORT will initially require a significant effort by funds.[1626] Therefore, we have determined to require a 30-day filing period for reports on Form N–PORT in order to balance the Commission's need for timely information with the operational burdens of reporting. Moreover, lag times of more than 30 days would make monthly reporting impractical, as reports would overlap with preparation time.[1627] We also note that several commenters noted that reporting on the same basis used to calculate NAV (generally a T+1 basis), which the Form now explicitly requires, as opposed to a T+0 basis, which is used for financial reporting, will reduce the estimated time to gather the information.[1628] As a result, we are adopting our requirement for reports on Form N–PORT to be filed with the Commission within 30 days of month-end.[1629] Moreover, given the nature and frequency of filings on Form

[1613] This estimate is based on the following calculation: 16.52 = 14.52 + 2. 15.02 = 14.52 + 0.5.

[1614] This estimate is based on the following calculation: 2 hours in first year + (0.5 hours per year thereafter × 2 years) = 2 hours + 1 hour = 3 hours total. 3 hours total ÷ 3 years = 1 hour per year.

[1615] This estimate is based on the following calculation: 1 hour per fund × 750 closed-end funds per year = 750 hours per year.

[1616] This estimate is based on the following calculation: 172,899 = (750 hours (closed-end funds)) + (172,149 hours (14.52 hours × (1,594 exchange-traded funds—eight organized as UITs + 750 closed-end funds + 481 money market funds + 9,039 other mutual funds))). *See supra* footnote 1259 and accompanying and following text.

[1617] We estimate that the external costs associated with Form N–CSR will not include the external costs associated with the shareholder report. The external costs associated with the shareholder report are accounted for under the collections of information related to rules 30e–1 and 30e–2 under the Investment Company Act.

[1618] This estimate is based on the following calculation: 11,856 funds × $129 = $1,529,424; $1,529,424 × 2 times per year = $3,058,848. *See supra* footnote 1603.

[1619] 5 U.S.C. 603.

[1620] *See* Proposing Release, *supra* footnote 7, at section VI.

[1621] *See* Carol Singer Comment Letter.

[1622] *Id.; see also* Schnase Comment Letter (noting that monthly reporting on Form N–PORT would be particularly burdensome on smaller funds).

[1623] *See, e.g.,* Schnase Comment Letter (''I am not convinced this is a cost better or more efficiently borne by the fund rather than the data users and sellers, particularly for smaller funds already struggling to meet costly filing requirements.''); Wahh Comment Letter; Carol Singer Comment Letter.

[1624] *See, e.g.,* Simpson Thacher Comment Letter (''With respect to the Commission's proposed compliance dates for the new reporting requirements, we are concerned that the timeline outlined in the Release is too aggressive for smaller investment company complexes.'').

[1625] *See supra* section II.A.3.

[1626] *See supra* section III.B.3.

[1627] Dreyfus Comment Letter (advocating for bi-monthly or quarterly reporting, with 45–60 days to file reports on Form N–PORT).

[1628] *See* Schwab Comment Letter (reporting that converting from T+1 to T+0 accounting would add approximately 6–10 days to the process of compiling data for Form N–PORT). While commenters acknowledged that reporting holdings on a T+1 basis would save time vis a vis compiling data for month-end reporting, they still noted that they would need more than 30 days after month-end to file reports on Form N–PORT. *See* Invesco Comment Letter; *but see* SIFMA Comment Letter I (requesting that funds be given the option to report on either a T+0 or T+1 basis).

[1629] *See* General Instruction A of proposed Form N–PORT.

N–PORT, we are adopting a delayed compliance period for small entities that will file reports on Form N–PORT.[1630] Specifically, for smaller entities (*i.e.,* funds that together with other investment companies in the same ''group of related investment companies'' have net assets of less than $1 billion as of the end of the most recent fiscal year), we are providing for an extra 12 months (or 30 months after the effective date) to comply with the new reporting requirements.

Apart from commenter concerns discussed above regarding the costs and financial burdens associated with the overall rulemaking, commenters did not raise specific concerns about the impact of new Form N–CEN or the rescission of Form N–SAR on small entities. One commenter expressed the belief that annual filings on Form N–CEN would be appropriate but that some of the requested information on the form probably would not be applicable to small closed-end funds with certain characteristics.[1631] As discussed above, Form N–CEN reporting requirements depend on the type of registrant filing the report.[1632] For example, all funds, including small entities, will be required to complete Parts A, B, and G of the form (as applicable), and all management companies, except for SBICs, will be required to complete Part C. On the other hand, only closed-end funds and SBICs will be required to complete Part D and only ETFs and UITs will be required to complete Parts E and F, respectively. Thus, certain reporting requirements on Form N–CEN may or may not be applicable to small entities depending on the type of registrant.

C. Small Entities Subject to the Rule

An investment company is a small entity if, together with other investment companies in the same group of related investment companies, it has net assets of $50 million or less as of the end of its most recent fiscal year.[1633] Commission staff estimates that, as of December 2015, approximately 129 registered investment companies, including 117 open and closed-end funds (including one SBIC) and 12 UITs are small entities. The Commission staff further estimates that, as of December 2015, approximately 34 BDCs are small entities. Since the new forms and form amendments and new rules and rule amendments, pertain to all registered funds (subject to the limitations discussed in section V.D, below), all entities, including small entities, will be subject to the adopted rules. Specific reporting, recordkeeping, and other compliance requirements, in addition to the estimated number of small entities subject to the form and form amendments and rule and rule amendments, are discussed below.

D. Projected Reporting, Recordkeeping, and Other Compliance Requirements

The amendments would create, amend, or eliminate current reporting requirements for small entities.

1. Form N–PORT

Funds currently report portfolio holdings information quarterly on Form N–Q (first and third fiscal quarters) and Form N–CSR (second and fourth fiscal quarters). The Commission is adopting new Form N–PORT on which funds, other than MMFs, UITs, and SBICs, will be required to report portfolio holdings information and information related to liquidity, derivatives, securities lending, purchases and redemptions, and counterparty exposure each month. Funds will be required to file reports on Form N–PORT within 30 days after the end of the monthly period using a structured format. Only information reported for the third month of each quarter will be available to the public and such information would not be made public until 60 days after the end of the third month of the fund's fiscal quarter. For smaller funds and fund groups (*i.e.,* funds that together with other investment companies in the same ''group of related investment companies'' have net assets of less than $1 billion as of the end of the most recent fiscal year), which will include small entities, we are providing an extra 12 months (or 30 months after the effective date) to comply with the new Form N–PORT reporting requirements.

We received no comments on the IRFA analysis of new Form N–PORT or the estimated costs discussed above in sections III.B.3 and IV.A.1. Therefore, based on our experience with other structured data filings, we estimate that funds will prepare and file their reports on proposed Form N–PORT by either (1) licensing a software solution and preparing and filing the reports in house, or (2) retaining a service provider to provide data aggregation and validation services as part of the preparation and filing of reports on Form N–PORT on behalf of the fund. We estimate that approximately 117 open and closed-end funds (other than money market funds and SBICs), are small entities that will file, on a monthly basis, a complete report on Form N–PORT reporting certain information regarding the fund and its portfolio holdings. As discussed above, we estimate, for funds that choose to license a software solution to file reports on Form N–PORT, that completing, reviewing, and filing Form N–PORT will cost $56,682 for each fund, including small entities, in its first year of reporting and $47,465 per year for each subsequent year.[1634] We further estimate, for funds that choose to retain a third-party service provider to provide data aggregation and validation services as part of the preparation and filing of reports on Form N–PORT, that completing, reviewing, and filing Form N–PORT will cost $55,492 for each fund, including small entities, in its first year of reporting, and $39,214 per year for each subsequent year.[1635] We received no comments on the IRFA analysis of Form N–PORT, but discuss in detail comments received on our cost estimates in sections III.B.3 and IV.A.1 above.

2. Rescission of Form N–Q

Our proposal will rescind Form N–Q in order to eliminate unnecessarily duplicative reporting requirements. The rescission of Form N–Q will affect all management investment companies required to file reports on the form. We expect that approximately 117 open and closed-end funds are small entities that will be affected by the rescission of Form N–Q.

We received no comments on the IRFA analysis of the rescission of Form N–Q or the projected costs savings from rescinding Form N–Q. As discussed above, we estimate that the rescission of Form N–Q will save $6,804 per year for each fund, including small entities.[1636]

3. Form N–CEN

Funds currently report census type information relating to the fund's organization, service providers, fees and expenses, portfolio strategies and investments, portfolio transactions, and share transactions on Form N–SAR. Funds file this form semi-annually with the Commission, except for UITs, which must file such reports annually.[1637] The

[1630] *See supra* section II.H.1.

[1631] *See* Carol Singer Comment Letter.

[1632] *See supra* section II.D.2.

[1633] 17 CFR 270.0–10(a).

[1634] *See supra* footnotes 1300–1301 and accompanying text.

[1635] *See supra* footnotes 1302–1303 and accompanying text.

[1636] The estimated cost is based upon the following calculations: ($6,804 = 21 hours/fund × $324/hour compensation for professionals commonly used in preparation of Form N–Q filings.) $324 = $308 per hour for Senior Programmers + $340 per hour for compliance attorneys/2), as we believe these employees would commonly be responsible for completing reports on Form N–Q.

[1637] *See* rule 30b1–1 and rule 30a–1.

utility of the information reported on Form N–SAR has been limited for two reasons. First, the data items funds are required to report on Form N–SAR have not been updated to reflect current Commission staff needs. Second, the technology by which funds file reports on Form N–SAR has not been updated and limits the Commission staff's ability to extract and analyze reported data.

Because of these limitations, the Commission is replacing Form N–SAR with new Form N–CEN. This new form will streamline and update the required data items to reflect current Commission staff needs. Where possible, we have endeavored to exclude items from Form N–CEN that are disclosed or reported pursuant to other Commission forms, or are otherwise available; however, in some limited cases, we are collecting information on Form N–CEN that may be similarly disclosed or reported elsewhere because we believe it will be useful to have such information in a structured format to facilitate comparisons across funds. We also believe this format will allow for easier data analysis and use in the Commission's rulemaking, inspection, and risk monitoring functions and reduce burdens on filers. Finally, the Commission is requiring that funds file reports on Form N–CEN annually, opposed to semi-annually, which is currently required for Form N–SAR (except UITs, which currently must file reports annually).

We received no comments on the IRFA analysis of Form N–CEN, but discuss in detail comments received on our cost estimates in sections III.D.2, III.D.3, and IV.B.1, above. Therefore, we estimate that approximately 129 registered investment companies, including 117 open and closed-end funds (including one SBIC) and 12 UITs, are small entities that will be required to file a complete report on Form N–CEN. Although UITs are required to complete fewer items on Form N–CEN than other registered investment companies, the burden on UITs will increase because UITs will be required to respond to more items in Form N–CEN than they are currently required to respond to under Form N–SAR.

As discussed above, the Commission estimates that Form N–CEN filers, including small entities, would incur additional costs of $14.6 million each year and $20.2 million in one-time costs as a result of the form's reporting requirements.[1638]

4. Rescission of Form N–SAR

Our proposal will rescind Form N–SAR in order to eliminate unnecessarily duplicative reporting requirements. We estimate that approximately 129 registered investment companies that are small entities, including 117 open and closed-end funds (including one SBIC) and 12 UITs would be affected by the rescission of Form N–SAR.

As discussed above, the Commission estimates that rescinding Form N–SAR will save current Form N–SAR filers, including small entities, about $25.5 million per year.[1639] We received no comments on the IRFA analysis of the rescission of Form N–SAR or the projected expense savings from rescinding Form N–SAR.

5. Regulation S–X Amendments

The Commission is also amending Regulation S–X to require new, standardized disclosures regarding fund holdings in open futures contracts, open forward foreign currency contracts, and open swap contracts, and additional disclosures regarding fund holdings of written and purchased options, update the disclosures for other investments with conforming amendments, and amend the rules regarding the form and content of fund financial statements. We believe that the amendments we are adopting today are generally consistent with how many funds are currently reporting investments (including derivatives), and other information according to current industry practices. The Commission believes investors will benefit from our amendments because increased disclosure and standardization of fund holdings will improve comparability among funds including transparency for investors regarding a fund's use of derivatives and the liquidity of certain investments. The Commission also believes that greater clarity will benefit the industry, while any additional burdens will be reduced since similar disclosures will be required on Form N–PORT.

We received no comments on the IRFA analysis of the Regulation S–X amendments, which included the proposed securities lending activity disclosures, or on the estimated costs discussed above in section III.C.3

We therefore expect that approximately 129 registered investment companies, including 117 open and closed-end funds (including one SBIC) and 12 UITs and, approximately 34 BDCs, are small entities that will be affected by the amendments to Regulation S–X. As discussed above, we estimate that amending Regulation S–X will cost $1,911 for each fund, including small entities, in its first year of reporting, and $683 per year for each subsequent year.[1640] As discussed above, we further estimate that amending Regulation S–X will cost $1,911 for each UIT, including small entities, in its first year of reporting, and $683 per year for each subsequent year.[1641]

6. Amendments to Registration Statement Forms

We are amending Forms N–1A, N–2, N–3, N–4, and N–6 to exempt funds from those forms' respective books and records disclosures if the information is provided in a fund's most recent report on Form N–CEN.[1642] The books and records disclosures required by these registration statement forms are not provided in a structured format. We believe that having this information in a structured format will increase our efficiency in preparing for exams as well as our ability to identify current industry trends and practices and, therefore, are requiring that it be reported on Form N–CEN. We are also adopting amendments to Forms N–1A and N–3 to require certain disclosures in fund Statements of Additional Information regarding securities lending activities.[1643] We believe that investors and others will benefit from the additional transparency into the economic effects of fund securities lending activities that these requirements will yield.

As discussed above, in sections III.E and IV.D, we did not receive any comments on the estimated hour and cost burdens or quantitatively estimated economic benefits or costs associated with our amendments to fund registration statement forms, or on their IRFA analysis or our IRFA analysis of securities lending disclosures. We expect that approximately 90 registered investment companies, including 78 open-end funds and 12 UITs, and approximately 34 BDCs, are small entities that would be required to file registration statements on the amended forms. As discussed above, the Commission estimates that Form N–1A and N–3 filers, including small entities, would incur additional costs of $1.3 million each year and $3.9 million in

[1638] *See supra* section III.D.2. However, as discussed below, the annual costs of reporting on Form N–CEN would be offset by the rescission of Form N–SAR. *See id.*

[1639] *See supra* section III.D.2. However, as discussed above, the annual savings from the rescission of Form N–SAR would be partially offset by the reporting requirements of Form N–CEN. *See id.*

[1640] *See supra* section III.C.3.

[1641] *See id.*

[1642] *See supra* footnotes 807–809 and accompanying text.

[1643] *See supra* section II.F.

one-time costs as a result of the amendments to those forms.[1644]

7. Amendments to Form N–CSR

Form N–Q and Form N–CSR currently require a quarterly SOX certification relating to the accuracy of information reported to the Commission and disclosure controls and procedures and internal control over financial reporting. To facilitate the elimination of Form N–Q, we are expanding the SOX certification for Form N–CSR to six months to maintain coverage for the entire fiscal year. As discussed above, in section IV.E, we did not receive any comments on the estimated hour and cost burdens associated with our proposed amendments to the certification requirements of Form N–CSR. In addition, we also are moving the change in independent public accountant attachment proposed on Form N–CEN to Form N–CSR so that an accountant's letter regarding a change in accountant will become available to the public semi-annually rather than annually.[1645]

As discussed above, in sections III.B.3 and IV.E, we did not receive any comments on the estimated hour and cost burdens associated with our amendments to Form N–CSR or its IRFA analysis.

Therefore, we expect that approximately 129 registered investment companies, including 78 open-end funds, 39 closed-end funds (including one SBIC) and 12 UITs, are small entities that will be affected by the amendments to Form N–CSR. As discussed above, the Commission does not believe that the costs associated with reporting on Form N–CSR will change for funds, including small entities, as a result of the amendments to the certification requirements associated with Form N–CSR adopted today.[1646] We do estimate that the annual burden associated with filing reports on Form N–CSR will increase from 14.42 to 14.52 per registrant in light of moving the change in independent public accountant attachment proposed on Form N–CEN to Form N–CSR.[1647] In addition, we estimate that the amendment to require closed-end funds to report on Form N–CSR certain disclosures regarding securities lending activities will increase the hour burden associated with Form N–CSR for closed-end funds by an additional 2 burden hours in the first year and an addition 0.5 hours for filings in subsequent years.[1648]

[1644] *See supra* section III.E.3.

[1645] *See supra* section II.D.4.b.

[1646] *See supra* section III.B.3.

[1647] *See supra* footnote 1612 and accompanying text.

[1648] *See supra* footnote section IV.E.

E. Agency Action To Minimize Effect on Small Entities

The RFA directs the Commission to consider significant alternatives that would accomplish our stated objective, while minimizing any significant economic impact on small entities. The Commission considered the following alternatives for small entities in relation our forms and form amendments and rules and rule amendments: (i) Establishing different reporting requirements or frequency to account for resources available to small entities; (ii) using performance rather than design standards; and (iii) exempting small entities from all or part of the proposal.

Small entities currently follow the same requirements that large entities do when filing reports on Form N–SAR, Form N–CSR, and Form N–Q. The Commission believes that establishing different reporting requirements or frequency for small entities would not be consistent with the Commission's goal of industry oversight and investor protection. However, as discussed above, we are adopting a delayed compliance period for small entities that will file reports on Form N–PORT.

VI. Statutory Authority

We are adopting the rules and forms contained in this document under the authority set forth in the Securities Act, particularly, section 19 thereof [15 U.S.C. *77a et seq.*], the Trust Indenture Act, particularly, section 319 thereof [15 U.S.C. 77aaa *et seq.*], the Exchange Act, particularly, sections 10, 13, 15, 23, and 35A thereof [15 U.S.C. 78a *et seq.*], the Investment Company Act, particularly, sections 8, 30, and 38 thereof [15 U.S.C. 80a *et seq.*], and 44 U.S.C. 3506, 3507.

List of Subjects

17 CFR Part 200

Administrative practice and procedure, Organization and functions (Government agencies).

17 CFR Part 210

Accounting, Investment companies, Reporting and recordkeeping requirements, Securities.

17 CFR Part 232

Administrative practice and procedure, Incorporation by reference, Reporting and recordkeeping requirements, Securities.

17 CFR Part 239

Investment companies, Reporting and recordkeeping requirements, Securities.

17 CFR Parts 240 and 249

Reporting and recordkeeping requirements, Securities.

17 CFR Parts 270 and 274

Investment companies, Reporting and recordkeeping requirements, Securities.

For reasons set forth in the preamble, title 17, chapter II of the Code of Federal Regulations is amended as follows:

PART 200—ORGANIZATION; CONDUCT AND ETHICS; AND INFORMATION AND REQUESTS

Subpart N—Commission Information Collection Requirements Under the Paperwork Reduction Act: OMB Control Numbers

■ 1. The authority citation for part 200 subpart N continues to read as follows:

Authority: 44 U.S.C. 3506; 44 U.S.C. 3507.

■ 2. Effective June 1, 2018, § 200.800 in paragraph (b) is amended by removing the entry for ''Form N–SAR'' and adding in its place an entry ''Form N–CEN'' and adding an entry in numerical order by part and section number for ''Form N–PORT'', to read as follows:

§ 200.800 OMB control numbers assigned pursuant to the Paperwork Reduction Act.

* * * * *

(b) * * *

Information collection requirement	17 CFR part or section where identified and described	Current OMB control No.
* * * * * * *		
Form N–CEN	274.101	3235–0729
* * * * * * *		
Form N–PORT	274.150	3235–0730
* * * * * * *		

PART 210—FORM AND CONTENT OF AND REQUIREMENTS FOR FINANCIAL STATEMENTS, SECURITIES ACT OF 1933, SECURITIES EXCHANGE ACT OF 1934, INVESTMENT COMPANY ACT OF 1940, INVESTMENT ADVISERS ACT OF 1940, AND ENERGY POLICY AND CONSERVATION ACT OF 1975

■ 3. The authority citation for part 210 continues to read as follows:

Authority: 15 U.S.C. 77f, 77g, 77h, 77j, 77s, 77z–2, 77z–3, 77aa(25), 77aa(26), 77nn(25), 77nn(26), 78c, 78j–1, 78*l,* 78m, 78n, 78o(d), 78q, 78u–5, 78w, 78*ll,* 78mm, 80a–8, 80a–20, 80a–29, 80a–30, 80a–31, 80a–37(a), 80b–3, 80b–11, 7202 and 7262, unless otherwise noted.

■ 4. Effective January 17, 2017, revise § 210.6–01 and the undesignated heading preceding it to read as follows:

Registered Investment Companies and Business Development Companies

§ 210.6–01 Application of §§ 210.6–01 to 210.6–10.

Sections 210.6–01 to 210.6–10 shall be applicable to financial statements filed for registered investment companies and business development companies.

■ 5. Effective January 17, 2017, revise § 210.6–03 to read as follows:

§ 210.6–03 Special rules of general application to registered investment companies and business development companies.

The financial statements filed for persons to which §§ 210.6–01 to 210.6–10 are applicable shall be prepared in accordance with the following special rules in addition to the general rules in §§ 210.1–01 to 210.4–10 (Articles 1, 2, 3, and 4). Where the requirements of a special rule differ from those prescribed in a general rule, the requirements of the special rule shall be met.

(a) *Content of financial statements.* The financial statements shall be prepared in accordance with the requirements of this part (Regulation S–X) notwithstanding any provision of the articles of incorporation, trust indenture or other governing legal instruments specifying certain accounting procedures inconsistent with those required in §§ 210.6–01 to 210.6–10.

(b) *Audited financial statements.* Where, under Article 3 of this part, financial statements are required to be audited, the independent accountant shall have been selected and ratified in accordance with section 32 of the Investment Company Act of 1940 (15 U.S.C. 80a–31).

(c) *Consolidated and combined statements.* (1) Consolidated and combined statements filed for registered investment companies and business development companies shall be prepared in accordance with §§ 210.3A–01 to 210.3A–04 (Article 3A) except that:

(i) Statements of the registrant may be consolidated only with the statements of subsidiaries which are investment companies;

(ii) A consolidated statement of the registrant and any of its investment company subsidiaries shall not be filed unless accompanied by a consolidating statement which sets forth the individual statements of each significant subsidiary included in the consolidated statement: *Provided, however,* That a consolidating statement need not be filed if all included subsidiaries are totally held; and

(iii) Consolidated or combined statements filed for subsidiaries not consolidated with the registrant shall not include any investment companies unless accompanied by consolidating or combining statements which set forth the individual statements of each included investment company which is a significant subsidiary.

(2) If consolidating or combining statements are filed, the amounts included under each caption in which financial data pertaining to affiliates is required to be furnished shall be subdivided to show separately the amounts:

(i) Eliminated in consolidation; and

(ii) Not eliminated in consolidation.

(d) *Valuation of investments.* The balance sheets of registered investment companies, other than issuers of face-amount certificates, and business development companies, shall reflect all investments at value, with the aggregate cost of each category of investment reported under §§ 210.6–04.1, 6–04.2, 6–04.3 and 6–04.9 or the aggregate cost of each category of investment reported under § 210.6–05.1 shown parenthetically. State in a note the methods used in determining value of investments. As required by section 28(b) of the Investment Company Act of 1940 (15 U.S.C. 80a–28(b)), *qualified* assets of face-amount certificate companies shall be valued in accordance with certain provisions of the Code of the District of Columbia. For guidance as to valuation of securities, see §§ 404.03 to 404.05 of the Codification of Financial Reporting Policies.

(e) *Qualified assets.* State in a note the nature of any investments and other assets maintained or required to be maintained, by applicable legal instruments, in respect of outstanding face-amount certificates. If the nature of the qualifying assets and amount thereof are not subject to the provisions of section 28 of the Investment Company Act of 1940 (15 U.S.C. 80a–28), a statement to that effect shall be made.

(f) *Restricted securities.* State in a note unless disclosed elsewhere the following information as to investment securities which cannot be offered for public sale without first being registered under the Securities Act of 1933 (15 U.S.C. 77a *et seq.*) (restricted securities):

(1) The policy of the person with regard to acquisition of restricted securities.

(2) The policy of the person with regard to valuation of restricted securities. Specific comments shall be given as to the valuation of an investment in one or more issues of securities of a company or group of affiliated companies if any part of such investment is restricted and the aggregate value of the investment in all

issues of such company or affiliated group exceeds five percent of the value of total assets. (As used in this paragraph, the term *affiliated* shall have the meaning given in § 210.6–02(a).)

(3) A description of the person's rights with regard to demanding registration of any restricted securities held at the date of the latest balance sheet.

(g) *Income recognition.* Dividends shall be included in income on the ex-dividend date; interest shall be accrued on a daily basis. Dividends declared on short positions existing on the record date shall be recorded on the ex-dividend date and included as an expense of the period.

(h) *Federal income taxes.* (1) The company's status as a *regulated investment company* as defined in subtitle A, chapter 1, subchapter M of the Internal Revenue Code, as amended, shall be stated in a note referred to in the appropriate statements. Such note shall also indicate briefly the principal assumptions on which the company relied in making or not making provisions for income taxes. However, a company which retains realized capital gains and designates such gains as a distribution to shareholders in accordance with section 852(b)(3)(D) of the Internal Revenue Code shall, on the last day of its taxable year (and not earlier), make provision for taxes on such undistributed capital gains realized during such year.

(2) State the following amounts based on cost for Federal income tax purposes:

(i) Aggregate gross unrealized appreciation for all investments in which there is an excess of value over tax cost;

(ii) The aggregate gross unrealized depreciation for all investments in which there is an excess of tax cost over value;

(iii) The net unrealized appreciation or depreciation; and

(iv) The aggregate cost of investments for Federal income tax purposes.

(i) *Issuance and repurchase by a registered investment company or business development company of its own securities.* Disclose for each class of the company's securities:

(1) The number of shares, units, or principal amount of bonds sold during the period of report, the amount received therefor, and, in the case of shares sold by closed-end management investment companies, the difference, if any, between the amount received and the net asset value or preference in involuntary liquidation (whichever is appropriate) of securities of the same class prior to such sale; and

(2) The number of shares, units, or principal amount of bonds repurchased during the period of report and the cost thereof. Closed-end management investment companies shall furnish the following additional information as to securities repurchased during the period of report:

(i) As to bonds and preferred shares, the aggregate difference between cost and the face amount or preference in involuntary liquidation and, if applicable net assets taken at value as of the date of repurchase were less than such face amount or preference, the aggregate difference between cost and such net asset value;

(ii) As to common shares, the weighted average discount per share, expressed as a percentage, between cost of repurchase and the net asset value applicable to such shares at the date of repurchases.

Note to paragraphs (h)(2)(i) and (ii): The information required by paragraphs (h)(2)(i) and (ii) of this section may be based on reasonable estimates if it is impracticable to determine the exact amounts involved.

(j) *Series companies.* (1) The information required by this part shall, in the case of a person which in essence is comprised of more than one separate investment company, be given as if each class or series of such investment company were a separate investment company; this shall not prevent the inclusion, at the option of such person, of information applicable to other classes or series of such person on a comparative basis, except as to footnotes which need not be comparative.

(2) If the particular class or series for which information is provided may be affected by other classes or series of such investment company, such as by the offset of realized gains in one series with realized losses in another, or through contingent liabilities, such situation shall be disclosed.

(k) *Certificate reserves.* (1) For companies issuing face-amount certificates subsequent to December 31, 1940 under the provisions of section 28 of the Investment Company Act of 1940 (15 U.S.C. 80a–28), balance sheets shall reflect reserves for outstanding certificates computed in accordance with the provisions of section 28(a) of the Act.

(2) For other companies, balance sheets shall reflect reserves for outstanding certificates determined as follows:

(i) For certificates of the installment type, such amount which, together with the lesser of future payments by certificate holders as and when accumulated at a rate not to exceed 3½ per centum per annum (or such other rate as may be appropriate under the circumstances of a particular case) compounded annually, shall provide the minimum maturity or face amount of the certificate when due.

(ii) For certificates of the fully-paid type, such amount which, as and when accumulated at a rate not to exceed 3½ per centum per annum (or such other rate as may be appropriate under the circumstances of a particular case) compounded annually, shall provide the amount or amounts payable when due.

(iii) Such amount or accrual therefor, as shall have been credited to the account of any certificate holder in the form of any credit, or any dividend, or any interest in addition to the minimum maturity or face amount specified in the certificate, plus any accumulations on any amount so credited or accrued at rates required under the terms of the certificate.

(iv) An amount equal to all advance payments made by certificate holders, plus any accumulations thereon at rates required under the terms of the certificate.

(v) Amounts for other appropriate contingency reserves, for death and disability benefits or for reinstatement rights on any certificate providing for such benefits or rights.

(l) *Inapplicable captions.* Attention is directed to the provisions of §§ 210.4–02 and 210.4–03 which permit the omission of separate captions in financial statements as to which the items and conditions are not present, or the amounts involved not significant. However, amounts involving directors, officers, and affiliates shall nevertheless be separately set forth except as otherwise specifically permitted under a particular caption.

■ 6. Effective January 17, 2017, revise § 210.6–04 to read as follows:

§ 210.6–04 Balance sheets.

This section is applicable to balance sheets filed by registered investment companies and business development companies except for persons who substitute a statement of net assets in accordance with the requirements specified in § 210.6–05, and issuers of face-amount certificates which are subject to the special provisions of § 210.6–06. Balance sheets filed under this rule shall comply with the following provisions:

Assets

1. *Investments in securities of unaffiliated issuers.*

2. *Investments in and advances to affiliates.* State separately investments in and advances to: (a) Controlled companies and (b) other affiliates.

3. *Other investments.* State separately amounts of assets related to (a) variation margin receivable on futures contracts, (b) forward foreign currency contracts; (c) swap contracts; and (d) investments—other than those presented in §§ 210.12–12, 12–12A, 12–12B, 12–13, 12–13A, 12–13B, and 12–13C.

4. *Cash.* Include under this caption cash on hand and demand deposits. Provide in a note to the financial statements the information required under § 210.5–02.1 regarding restrictions and compensating balances.

5. *Receivables.* (a) State separately amounts receivable from (1) sales of investments; (2) subscriptions to capital shares; (3) dividends and interest; (4) directors and officers; and (5) others.

(b) If the aggregate amount of notes receivable exceeds 10 percent of the aggregate amount of receivables, the above information shall be set forth separately, in the balance sheet or in a note thereto, for accounts receivable and notes receivable.

6. *Deposits for securities sold short and other investments.* State separately amounts held by others in connection with: (a) Short sales; (b) open option contracts (c) futures contracts, (d) forward foreign currency contracts; (e) swap contracts; and (f) investments—other than those presented in §§ 210.12–12, 12–12A, 12–12B, 12–13, 12–13A, 12–13B, and 12–13C.

7. *Other assets.* State separately (a) prepaid and deferred expenses; (b) pension and other special funds; (c) organization expenses; and (d) any other significant item not properly classified in another asset caption.

8. *Total assets.*

Liabilities

9. *Other investments.* State separately amounts of liabilities related to: (a) Securities sold short; (b) open option contracts written; (c) variation margin payable on futures contracts, (d) forward foreign currency contracts; (e) swap contracts; and (f) investments—other than those presented in §§ 210.12–12, 12–12A, 12–12B, 12–13, 12–13A, 12–13B, and 12–13C.

10. *Accounts payable and accrued liabilities.* State separately amounts payable for: (a) Other purchases of securities; (b) capital shares redeemed; (c) dividends or other distributions on capital shares; and (d) others. State separately the amount of any other liabilities which are material.

11. *Deposits for securities loaned.* State the value of securities loaned and indicate the nature of the collateral received as security for the loan, including the amount of any cash received.

12. *Other liabilities.* State separately (a) amounts payable for investment advisory, management and service fees; and (b) the total amount payable to: (1) Officers and directors; (2) controlled companies; and (3) other affiliates, excluding any amounts owing to noncontrolled affiliates which arose in the ordinary course of business and which are subject to usual trade terms.

13. *Notes payable, bonds and similar debt.* (a) State separately amounts payable to: (1) Banks or other financial institutions for borrowings; (2) controlled companies; (3) other affiliates; and (4) others, showing for each category amounts payable within one year and amounts payable after one year.

(b) Provide in a note the information required under § 210.5–02.19(b) regarding unused lines of credit for short-term financing and § 210.5–02.22(b) regarding unused commitments for long-term financing arrangements.

14. *Total liabilities.*

15. *Commitments and contingent liabilities.*

Net Assets

16. *Units of capital.* (a) Disclose the title of each class of capital shares or other capital units, the number authorized, the number outstanding, and the dollar amount thereof.

(b) Unit investment trusts, including those which are issuers of periodic payment plan certificates, also shall state in a note to the financial statements: (1) The total cost to the investors of each class of units or shares; (2) the adjustment for market depreciation or appreciation; (3) other deductions from the total cost to the investors for fees, loads and other charges, including an explanation of such deductions; and (4) the net amount applicable to the investors.

17. *Accumulated undistributed income (loss).* Disclose:

(a) The accumulated undistributed investment income-net,

(b) accumulated undistributed net realized gains (losses) on investment transactions, and (c) net unrealized appreciation (depreciation) in value of investments at the balance sheet date.

18. *Other elements of capital.* Disclose any other elements of capital or residual interests appropriate to the capital structure of the reporting entity.

19. *Net assets applicable to outstanding units of capital.* State the net asset value per share.

■ 7. Effective January 17, 2017, revise § 210.6–05 to read as follows:

§ 210.6–05 Statements of net assets.

In lieu of the balance sheet otherwise required by § 210.6–04, persons may substitute a statement of net assets if at least 95 percent of the amount of the person's total assets are represented by investments in securities of unaffiliated issuers. If presented in such instances, a statement of net assets shall consist of the following:

Statements of Net Assets

1. A schedule of investments in securities of unaffiliated issuers as prescribed in § 210.12–12.

2. The excess (or deficiency) of other assets over (under) total liabilities stated in one amount, except that any amounts due from or to officers, directors, controlled persons, or other affiliates, excluding any amounts owing to noncontrolled affiliates which arose in the ordinary course of business and which are subject to usual trade terms, shall be stated separately.

3. Disclosure shall be provided in the notes to the financial statements for any item required under § 210.6–04.3 and §§ 210.6–04.9 to 210.6–04.13.

4. The balance of the amounts captioned as *net assets.* The number of outstanding shares and net asset value per share shall be shown parenthetically.

5. The information required by (i) § 210.6–04.16, (ii) § 210.6–04.17 and (iii) § 210.6–04.18 shall be furnished in a note to the financial statements.

■ 8. Effective January 17, 2017, revise § 210.6–07 to read as follows:

§ 210.6–07 Statements of operations.

Statements of operations filed by registered investment companies, other than issuers of face-amount certificates, subject to the special provisions of § 210.6–08, and business development companies, shall comply with the following provisions:

Statements of Operations

1. *Investment income.* State separately income from: (a) Dividends; (b) interest on securities; and (c) other income. Any other category of income which exceeds five percent of the total shown under this caption (*e.g.* income from non-cash dividends, income from payment-in-kind interest) shall be stated separately. If income from investments in or indebtedness of affiliates is included hereunder, such income shall be segregated under an appropriate caption subdivided to show separately income from: (1) Controlled companies; and (2) other affiliates. If income from non-cash dividends or payment in kind interest are included in income, the bases of recognition and measurement used in

respect to such amounts shall be disclosed.

2. *Expenses.* (a) State separately the total amount of investment advisory, management and service fees, and expenses in connection with research, selection, supervision, and custody of investments. Amounts of expenses incurred from transactions with affiliated persons shall be disclosed together with the identity of and related amount applicable to each such person accounting for five percent or more of the total expenses shown under this caption together with a description of the nature of the affiliation. Expenses incurred within the person's own organization in connection with research, selection and supervision of investments shall be stated separately. Reductions or reimbursements of management or service fees shall be shown as a negative amount or as a reduction of total expenses shown under this caption.

(b) State separately any other expense item the amount of which exceeds five percent of the total expenses shown under this caption.

(c) A note to the financial statements shall include information concerning management and service fees, the rate of fee, and the base and method of computation. State separately the amount and a description of any fee reductions or reimbursements representing: (1) Expense limitation agreements or commitments; and (2) offsets received from broker-dealers showing separately for each amount received or due from (i) unaffiliated persons; and (ii) affiliated persons. If no management or service fees were incurred for a period, state the reason therefor.

(d) If any expenses were paid otherwise than in cash, state the details in a note.

(e) State in a note to the financial statements the amount of brokerage commissions (including dealer markups) paid to affiliated broker-dealers in connection with purchase and sale of investment securities. Open-end management companies shall state in a note the net amounts of sales charges deducted from the proceeds of sale of capital shares which were retained by any affiliated principal underwriter or other affiliated broker-dealer.

(f) State separately all amounts paid in accordance with a plan adopted under 17 CFR 270.12b–1 of this chapter. Reimbursement to the fund of expenses incurred under such plan (12b–1 expense reimbursement) shall be shown as a negative amount and deducted from current 12b–1 expenses. If 12b–1 expense reimbursements exceed current 12b–1 costs, such excess shall be shown as a negative amount used in the calculation of total expenses under this caption.

(g)(1) *Brokerage/Service Arrangements.* If a broker-dealer or an affiliate of the broker-dealer has, in connection with directing the person's brokerage transactions to the broker-dealer, provided, agreed to provide, paid for, or agreed to pay for, in whole or in part, services provided to the person (other than brokerage and research services as those terms are used in section 28(e) of the Securities Exchange Act of 1934 [15 U.S.C. 78bb(e)]), include in the expense items set forth under this caption the amount that would have been incurred by the person for the services had it paid for the services directly in an arms-length transaction.

(2) *Expense Offset Arrangements.* If the person has entered into an agreement with any other person pursuant to which such other person reduces, or pays a third party which reduces, by a specified or reasonably ascertainable amount, its fees for services provided to the person in exchange for use of the person's assets, include in the expense items set forth under this caption the amount of fees that would have been incurred by the person if the person had not entered into the agreement.

(3) *Financial Statement Presentation.* Show the total amount by which expenses are increased pursuant to paragraphs (1) and (2) of this paragraph (2)(g) as a corresponding reduction in total expenses under this caption. In a note to the financial statements, state separately the total amounts by which expenses are increased pursuant to paragraphs (1) and (2) of this paragraph (2)(g), and list each category of expense that is increased by an amount equal to at least 5 percent of total expenses. If applicable, the note should state that the person could have employed the assets used by another person to produce income if it had not entered into an arrangement described in paragraph (2)(g)(2) of this section.

3. *Interest and amortization of debt discount and expense.* Provide in the body of the statements or in the footnotes, the average dollar amount of borrowings and the average interest rate.

4. *Investment income before income tax expense.*

5. *Income tax expense.* Include under this caption only taxes based on income.

6. *Investment income-net.*

7. *Realized and unrealized gain (loss) on investments-net.* (a) State separately the net realized gain or loss from: (1) Transactions in investment securities of unaffiliated issuers, (2) transactions in investment securities of affiliated issuers, (3) expiration or closing of option contracts written, (4) closed short positions in securities, (5) expiration or closing of futures contracts, (6) settlement of forward foreign currency contracts, (7) expiration or closing of swap contracts, and (8) transactions in other investments held during the period.

(b) Distributions of realized gains by other investment companies shall be shown separately under this caption.

(c) State separately the amount of the net increase or decrease during the period in the unrealized appreciation or depreciation in the value of: (1) Investment securities of unaffiliated issuers, (2) investment securities of affiliated issuers, (3) option contracts written, (4) short positions in securities, (5) futures contracts, (6) forward foreign currency contracts, (7) swap contracts, and (8) other investments held at the end of the period.

(d) State separately any: (1) Federal income taxes and (2) other income taxes applicable to realized and unrealized gain (loss) on investments, distinguishing taxes payable currently from deferred income taxes.

8. *Net gain (loss) on investments.*

9. *Net increase (decrease) in net assets resulting from operations.*

■ 9. Effective January 17, 2017, revise § 210.6–10 to read as follows:

§ 210.6–10 What schedules are to be filed.

(a) When information is required in schedules for both the person and its subsidiaries consolidated, it may be presented in the form of a single schedule, provided that items pertaining to the registrant are separately shown and that such single schedule affords a properly summarized presentation of the facts.

(b) The schedules shall be examined by an independent accountant if the related financial statements are so examined.

(c) *Management investment companies.* (1) Except as otherwise provided in the applicable form, the schedules specified in this paragraph shall be filed for management investment companies as of the dates of the most recent audited balance sheet and any subsequent unaudited statement being filed for each person or group.

Schedule I—Investments in securities of unaffiliated issuers. The schedule prescribed by § 210.12–12 shall be filed in support of caption 1 of each balance sheet.

Schedule II—Investments in and advances to affiliates. The schedule prescribed by § 210.12–14 shall be filed in support of caption 2 of each balance sheet.

Schedule III—Investments—securities sold short. The schedule prescribed by § 210.12–12A shall be filed in support of caption 9(a) of each balance sheet.

Schedule IV—Open option contracts written. The schedule prescribed by § 210.12–13 shall be filed in support of caption 9(b) of each balance sheet.

Schedule V—Open futures contracts. The schedule prescribed by § 210.12–13A shall be filed in support of captions 3(a) and 9(c) of each balance sheet.

Schedule VI—Open forward foreign currency contracts. The schedule prescribed by § 210.12–13B shall be filed in support of captions 3(b) and 9(d) of each balance sheet.

Schedule VII—Open swap contracts. The schedule prescribed by § 210.12–13C shall be filed in support of captions 3(c) and 9(e) of each balance sheet.

Schedule VIII—Investments—other than those presented in §§ 210.12–12, 12–12A, 12–12B, 12–13, 12–13A, 12–13B and 12–13C. The schedule prescribed by § 210.12–13D shall be filed in support of captions 3(d) and 9(f) of each balance sheet.

(2) When permitted by the applicable form, the schedule specified in this paragraph may be filed for management investment companies as of the dates of the most recent audited balance sheet and any subsequent unaudited statement being filed for each person or group.

Schedule IX—Summary schedule of investments in securities of unaffiliated issuers. The schedule prescribed by § 210.12–12B may be filed in support of caption 1 of each balance sheet.

(d) *Unit investment trusts.* Except as otherwise provided in the applicable form:

(1) Schedules I and II, specified below in this section, shall be filed for unit investment trusts as of the dates of the most recent audited balance sheet and any subsequent unaudited statement being filed for each person or group.

(2) Schedule III, specified below in this section, shall be filed for unit investment trusts for each period for which a statement of operations is required to be filed for each person or group.

Schedule I—Investment in securities. The schedule prescribed by § 210.12–12 shall be filed in support of caption 1 of each balance sheet (§ 210.6–04).

Schedule II—Allocation of trust assets to series of trust shares. If the trust assets are specifically allocated to different series of trust shares, and if such allocation is not shown in the balance sheet in columnar form or by the filing of separate statements for each series of trust shares, a schedule shall be filed showing the amount of trust assets, indicated by each balance sheet filed, which is applicable to each series of trust shares.

Schedule III—Allocation of trust income and distributable funds to series of trust shares. If the trust income and distributable funds are specifically allocated to different series of trust shares and if such allocation is not shown in the statement of operations in columnar form or by the filing of separate statements for each series of trust shares, a schedule shall be submitted showing the amount of income and distributable funds, indicated by each statement of operations filed, which is applicable to each series of trust shares.

(e) *Face-amount certificate investment companies.* Except as otherwise provided in the applicable form:

(1) Schedules I, V and X, specified below, shall be filed for face-amount certificate investment companies as of the dates of the most recent audited balance sheet and any subsequent unaudited statement being filed for each person or group.

(2) All other schedules specified below in this section shall be filed for face-amount certificate investment companies for each period for which a statement of operations is filed, except as indicated for Schedules III and IV.

Schedule I—Investment in securities of unaffiliated issuers. The schedule prescribed by § 210.12–21 shall be filed in support of caption 1 and, if applicable, caption 5(a) of each balance sheet. Separate schedules shall be furnished in support of each caption, if applicable.

Schedule II—Investments in and advances to affiliates and income thereon. The schedule prescribed by § 210.12–22 shall be filed in support of captions 1 and 5(b) of each balance sheet and caption 1 of each statement of operations. Separate schedules shall be furnished in support of each caption, if applicable.

Schedule III—Mortgage loans on real estate and interest earned on mortgages. The schedule prescribed by § 210.12–23 shall be filed in support of captions 1 and 5(c) of each balance sheet and caption 1 of each statement of operations, except that only the information required by Column G and note 8 of the schedule need be furnished in support of statements of operations for years for which related balance sheets are not required.

Schedule IV—Real estate owned and rental income. The schedule prescribed by § 210.12–24 shall be filed in support of captions 1 and 5(a) of each balance sheet and caption 1 of each statement of operations for rental income included therein, except that only the information required by Columns H, I and J, and item ''Rent from properties sold during the period'' and note 4 of the schedule need be furnished in support of statements of operations for years for which related balance sheets are not required.

Schedule V—Qualified assets on deposit. The schedule prescribed by § 210.12–27 shall be filed in support of the information required by caption 4 of § 210.6–06 as to total amount of qualified assets on deposit.

Schedule VI—Certificate reserves. The schedule prescribed by § 210.12–26 shall be filed in support of caption 7 of each balance sheet.

Schedule VII—Valuation and qualifying accounts. The schedule prescribed by § 210.12–09 shall be filed in support of all other reserves included in the balance sheet.

■ 10. Effective January 17, 2017, revise § 210.12–12 to read as follows:

For Management Investment Companies

§ 210.12–12 Investments in securities of unaffiliated issuers.

[For management investment companies only]

Col. A	Col. B	Col. C
Name of issuer and title of issue [1 2 3 4]	Balance held at close of period. Number of shares—principal amount of bonds and notes [7].	Value of each item at close of period.[5 6 8 9 10]

[1] Each issue shall be listed separately: *Provided,* however, that an amount not exceeding five percent of the total of Column C may be listed in one amount as ''Miscellaneous securities,'' provided the securities so listed are not restricted, have been held for not more than one year prior to the date of the related balance sheet, and have not previously been reported by name to the shareholders of the person for which the schedule is filed or to any exchange, or set forth in any registration statement, application, or annual report or otherwise made available to the public. If any securities are listed as ''Miscellaneous securities,'' briefly explain in a footnote what the term represents.

[2] Categorize the schedule by (i) the type of investment (such as common stocks, preferred stocks, convertible securities, fixed income securities, government securities, options purchased, warrants, loan participations and assignments, commercial paper, bankers' acceptances, certificates of deposit, short-term securities, repurchase agreements, other investment companies, and so forth); and (ii) the related industry, country, or geographic region of the investment. Short-term debt instruments (*i.e.,* debt instruments whose maturities or expiration dates at the time of acquisition are one year or less) of the same issuer may be aggregated, in which case the range of interest rates and maturity dates shall be indicated. For issuers of periodic payment plan certificates and unit investment trusts, list separately: (i) Trust shares in trusts created or serviced by the depositor or sponsor of this trust; (ii) trust shares in other trusts; and (iii) securities of other investment companies. Restricted securities shall not be combined with unrestricted securities of the same issuer. Repurchase agreements shall be stated separately showing for each the name of the party or parties to the agreement, the date of the agreement, the total amount to be received upon repurchase, the repurchase date and description of securities subject to the repurchase agreements.

[3] For options purchased, all information required by § 210.12–13 for options contracts written should be shown. Options on underlying investments where the underlying investment would otherwise be presented in accordance with §§ 210.12–12, 12–13A, 12–13B, 12–13C, or 12–13D should include the description of the underlying investment as would be required by §§ 210.12–12, 12–13A, 12–13B, 12–13C, or 12–13D as part of the description of the option.

[4] Indicate the interest rate or preferential dividend rate and maturity date, as applicable, for preferred stocks, convertible securities, fixed income securities, government securities, loan participations and assignments, commercial paper, bankers' acceptances, certificates of deposit, short-term securities, repurchase agreements, or other instruments with a stated rate of income. For variable rate securities, indicate a description of the reference rate and spread and: (1) The end of period interest rate or (2) disclose the end of period reference rate for each reference rate described in the Schedule in a note to the Schedule. For securities with payment in kind income, disclose the rate paid in kind.

[5] The subtotals for each category of investments, subdivided both by type of investment and industry, country or geographic region, shall be shown together with their percentage value compared to net assets. (§§ 210.6–04.19 or 210.6–05.4.)

[6] Column C shall be totaled. The total of Column C shall agree with the correlative amounts shown on the related balance sheet.

[7] Indicate by an appropriate symbol each issue of securities which is non-income producing. Evidences of indebtedness and preferred shares may be deemed to be income producing if, on the respective last interest payment date or date for the declaration of dividends prior to the date of the related balance sheet, there was only a partial payment of interest or a declaration of only a partial amount of the dividends payable; in such case, however, each such issue shall be indicated by an appropriate symbol referring to a note to the effect that, on the last interest or dividend date, only partial interest was paid or partial dividends declared. If, on such respective last interest or dividend date, no interest was paid or no cash or in kind dividends declared, the issue shall not be deemed to be income producing. Common shares shall not be deemed to be income producing unless, during the last year preceding the date of the related balance sheet, there was at least one dividend paid upon such common shares.

[8] Indicate by an appropriate symbol each issue of restricted securities. State the following in a footnote: (a) As to each such issue: (1) Acquisition date, (2) carrying value per unit of investment at date of related balance sheet, *e.g.,* a percentage of current market value of unrestricted securities of the same issuer, etc., and (3) the cost of such securities; (b) as to each issue acquired during the year preceding the date of the related balance sheet, the carrying value per unit of investment of unrestricted securities of the same issuer at: (1) The day the purchase price was agreed to; and (2) the day on which an enforceable right to acquire such securities was obtained; and (c) the aggregate value of all restricted securities and the percentage which the aggregate value bears to net assets.

[9] Indicate by an appropriate symbol each issue of securities whose value was determined using significant unobservable inputs.

[10] Indicate by an appropriate symbol each issue of securities held in connection with open put or call option contracts, loans for short sales, or where any portion of the issue is on loan.

■ 11. Effective January 17, 2017, revise § 210.12–12A to read as follows:

§ 210.12–12A Investments—securities sold short.

[For management investment companies only]

Col. A	Col. B	Col. C
Name of issuer and title of issue [1 2 3]	Balance of short position at close of period (number of shares).	Value of each open short position [4 5 6]

[1] Each issue shall be listed separately.

[2] Categorize the schedule as required by instruction 2 of § 210.12–12.

[3] Indicate the interest rate or preferential dividend rate and maturity date, as applicable, for preferred stocks, convertible securities, fixed income securities, government securities, loan participations and assignments, commercial paper, bankers' acceptances, certificates of deposit, short-term securities, repurchase agreements, or other instruments with a stated rate of income. For variable rate securities, indicate a description of the reference rate and spread and: (1) The end of period interest rate or (2) disclose the end of period reference rate for each reference rate described in the Schedule in a note to the Schedule. For securities with payment in kind income, disclose the rate paid in kind.

[4] The subtotals for each category of investments, subdivided both by type of investment and industry, country, or geographic region, shall be shown together with their percentage value compared to net assets.

[5] Column C shall be totaled. The total of Column C shall agree with the correlative amounts shown on the related balance sheet.

[6] Indicate by an appropriate symbol each issue of securities whose value was determined using significant unobservable inputs.

■ 12. Effective January 17, 2017, revise § 210.12–12B to read as follows:

§ 210.12–12B Summary schedule of investments in securities of unaffiliated issuers.

Column A	Column B	Column C	Column D
Name of issuer and title of issue [1 3 4 5 6 7 8].	Balance held at close of period. Number of shares—principal amount of bonds and notes [10].	Value of each item at close of period [2 9 11 12 13].	Percentage value compared to net assets.

[1] Categorize the schedule by (a) the type of investment (such as common stocks, preferred stocks, convertible securities, fixed income securities, government securities, options purchased, warrants, loan participations and assignments, commercial paper, bankers' acceptances, certificates of deposit, short-term securities, repurchase agreements, other investment companies, and so forth); and (b) the related industry, country or geographic region of the investment.

[2] The subtotals for each category of investments, subdivided both by type of investment and industry, country, or geographic region, shall be shown together with their percentage value compared to net assets.

[3] Indicate the interest rate or preferential dividend rate and maturity date, as applicable, for preferred stocks, convertible securities, fixed income securities, government securities, loan participations and assignments, commercial paper, bankers' acceptances, certificates of deposit, short-term securities, repurchase agreements, or other instruments with a stated rate of income. For variable rate securities, indicate a description of the reference rate and spread and: (1) The end of period interest rate or (2) disclose the end of period reference rate for each reference rate described in the Schedule in a note to the Schedule. For securities with payment in kind income, disclose the rate paid in kind.

[4] Except as provided in note 6, list separately the 50 largest issues and any other issue the value of which exceeded one percent of net asset value of the registrant as of the close of the period. For purposes of the list (including, in the case of short-term debt instruments, the first sentence of note 4), aggregate and treat as a single issue, respectively, (a) short-term debt instruments (*i.e.,* debt instruments whose maturities or expiration dates at the time of acquisition are one year or less) of the same issuer (indicating the range of interest rates and maturity dates); and (b) fully collateralized repurchase agreements (indicate in a footnote the range of dates of the repurchase agreements, the total purchase price of the securities, the total amount to be received upon repurchase, the range of repurchase dates, and description of securities subject to the repurchase agreements). Restricted and unrestricted securities of the same issue should be aggregated for purposes of determining whether the issue is among the 50 largest issues, but should not be combined in the schedule. For purposes of determining whether the value of an issue exceeds one percent of net asset value, aggregate and treat as a single issue all securities of any one issuer, except that all fully collateralized repurchase agreements shall be aggregated and treated as a single issue. The U.S. Treasury and each agency, instrumentality, or corporation, including each government-sponsored entity, that issues U.S. government securities is a separate issuer.

[5] For options purchased, all information required by § 210.12–13 for options contracts written should be shown. Options on underlying investments where the underlying investment would otherwise be presented in accordance with §§ 210.12–12, 12–13A, 12–13B, 12–13C, or 12–13D should include the description of the underlying investment as would be required by §§ 210.12–12, 12–13A, 12–13B, 12–13C, or 12–13D as part of the description of the option.

[6] If multiple securities of an issuer aggregate to greater than one percent of net asset value, list each issue of the issuer separately (including separate listing of restricted and unrestricted securities of the same issue) except that the following may be aggregated and listed as a single issue: (a) Fixed-income securities of the same issuer which are not among the 50 largest issues and whose value does not exceed one percent of net asset value of the registrant as of the close of the period (indicating the range of interest rates and maturity dates); and (b) U.S. government securities of a single agency, instrumentality, or corporation, which are not among the 50 largest issues and whose value does not exceed one percent of net asset value of the registrant as of the close of the period (indicating the range of interest rates and maturity dates). For each category identified pursuant to note 1, group all issues that are neither separately listed nor included in a group of securities that is listed in the aggregate as a single issue in a sub-category labeled ''Other securities,'' and provide the information for Columns C and D.

[7] Any securities that would be required to be listed separately or included in a group of securities that is listed in the aggregate as a single issue may be listed in one amount as ''Miscellaneous securities,'' provided the securities so listed are eligible to be, and are, categorized as ''Miscellaneous securities'' in the registrant's Schedule of Investments in Securities of Unaffiliated Issuers required under § 210.12–12. However, if any security that is included in ''Miscellaneous securities'' would otherwise be required to be included in a group of securities that is listed in the aggregate as a single issue, the remaining securities of that group must nonetheless be listed as required by notes 4 and 5 even if the remaining securities alone would not otherwise be required to be listed in this manner (*e.g.,* because the combined value of the security listed in ''Miscellaneous securities'' and the remaining securities of the same issuer exceeds one percent of net asset value, but the value of the remaining securities alone does not exceed one percent of net asset value).

[8] If any securities are listed as ''Miscellaneous securities'' pursuant to note 6 or ''Other securities'' pursuant to note 5, briefly explain in a footnote what those terms represent.

[9] Total Column C. The total of Column C should equal the total shown on the related balance sheet for investments in securities of unaffiliated issuers.

[10] Indicate by an appropriate symbol each issue of securities which is non-income producing. Evidences of indebtedness and preferred shares may be deemed to be income producing if, on the respective last interest payment date or date for the declaration of dividends prior to the date of the related balance sheet, there was only a partial payment of interest or a declaration of only a partial amount of the dividends payable; in such case, however, each such issue shall be indicated by an appropriate symbol referring to a note to the effect that, on the last interest or dividend date, only partial interest was paid or partial dividends declared. If, on such respective last interest or dividend date, no interest was paid or no cash or in kind dividends declared, the issue shall not be deemed to be income producing. Common shares shall not be deemed to be income producing unless, during the last year preceding the date of the related balance sheet, there was at least one dividend paid upon such common shares.

[11] Indicate by an appropriate symbol each issue of restricted securities. State the following in a footnote: (a) As to each such issue: (1) Acquisition date, (2) carrying value per unit of investment at date of related balance sheet, *e.g.,* a percentage of current market value of unrestricted securities of the same issuer, etc., and (3) the cost of such securities; (b) as to each issue acquired during the year preceding the date of the related balance sheet, the carrying value per unit of investment of unrestricted securities of the same issuer at: (1) The day the purchase price was agreed to; and (2) the day on which an enforceable right to acquire such securities was obtained; and (c) the aggregate value of all restricted securities and the percentage which the aggregate value bears to net assets.

[12] Indicate by an appropriate symbol each issue of securities whose value was determined using significant unobservable inputs.

[13] Indicate by an appropriate symbol each issue of securities held in connection with open put or call option contracts, loans for short sales, or where any portion of the issue is on loan.

§ 210.12–12C [Removed and Reserved].

■ 13. Effective January 17, 2017, remove and reserve § 210.12–12C.

■ 14. Effective January 17, 2017, revise § 210.12–13 to read as follows:

§ 210.12–13 Open option contracts written.

[For management investment companies only]

Col. A	Col. B	Col. C	Col. D	Col. E	Col. F	Col. G
Description [1 2 3]	Counterparty [4]	Number of contracts [5].	Notional amount	Exercise price	Expiration date	Value.[6 7 8]

[1] Information as to put options shall be shown separately from information as to call options.
[2] Options where descriptions, counterparties, exercise prices or expiration dates differ shall be listed separately.
[3] Options on underlying investments where the underlying investment would otherwise be presented in accordance with §§ 210.12–12, 12–13A, 12–13B, 12–13C, or 12–13D should include the description of the underlying investment as would be required by §§ 210.12–12, 12–13A, 12–13B, 12–13C, or 12–13D as part of the description of the option.
If the underlying investment is an index or basket of investments, and the components are publicly available on a Web site as of the balance sheet date, identify the index or basket. If the underlying investment is an index or basket of investments, the components are not publicly available on a Web site as of the balance sheet date, and the notional amount of the option contract does not exceed one percent of the net asset value of the registrant as of the close of the period, identify the index or basket. If the underlying investment is an index or basket of investments, the components are not publicly available on a Web site as of the balance sheet date, and the notional amount of the option contract exceeds one percent of the net asset value of the registrant as of the close of the period, provide a description of the index or custom basket and list separately: (i) The 50 largest components in the index or custom basket and (ii) any other components where the notional value for that components exceeds 1% of the notional value of the index or custom basket. For each investment separately listed, include the description of the underlying investment as would be required by §§ 210.12–12, 12–13, 12–13A, 12–13B, or 12–13D as part of the description, the quantity held (*e.g.* the number of shares for common stocks, principal amount for fixed income securities), the value at the close of the period, and the percentage value when compared to the custom basket's net assets.
[4] Not required for exchange traded or centrally cleared options.
[5] If the number of shares subject to option is substituted for number of contracts, the column name shall reflect that change.
[6] Indicate by an appropriate symbol each investment which cannot be sold because of restrictions or conditions applicable to the investment.
[7] Indicate by an appropriate symbol each investment whose value was determined using significant unobservable inputs.
[8] Column G shall be totaled and shall agree with the correlative amount shown on the related balance sheet.

■ 15. Effective January 17, 2017, add § 210.12–13A to read as follows:

§ 210.12–13A Open futures contracts.

[For management investment companies only]

Col. A	Col. B	Col. C	Col. D	Col. E	Col. F
Description [1 2 3 4 5]	Number of contracts.	Expiration date	Notional amount [6]	Value	Unrealized appreciation/depreciation.

[1] Information as to long purchases of futures contracts shall be shown separately from information as to futures contracts sold short.
[2] Futures contracts where descriptions or expiration dates differ shall be listed separately.
[3] Description should include the name of the reference asset or index.
[4] Indicate by an appropriate symbol each investment which cannot be sold because of restrictions or conditions applicable to the investment.
[5] Indicate by an appropriate symbol each investment whose value was determined using significant unobservable inputs.
[6] Notional amount shall be the current notional amount at close of period.

■ 16. Effective January 17, 2017, add § 210.12–13B to read as follows:

§ 210.12–13B Open forward foreign currency contracts.

[For management investment companies only]

Col. A	Col. B	Col. C	Col. D	Col. E
Amount and description of currency to be purchased [1].	Amount and description of currency to be sold [1].	Counterparty	Settlement date	Unrealized appreciation/depreciation.[2 3 4]

[1] Forward foreign currency contracts where description of currency purchased, description of currency sold, counterparty, or settlement dates differ shall be listed separately.
[2] Indicate by an appropriate symbol each investment which cannot be sold because of restrictions or conditions applicable to the investment.
[3] Indicate by an appropriate symbol each investment whose value was determined using significant unobservable inputs.
[4] Column E shall be totaled and shall agree with the total of correlative amount(s) shown on the related balance sheet.

■ 17. Effective January 17, 2017, add § 210.12–13C to read as follows:

§ 210.12–13C Open swap contracts.

[For management investment companies only]

Col. A	Col. B	Col. C	Col. D	Col. E	Col. F	Col. G	Col. H
Description and terms of payments to be received from another party [1 2 3].	Description and terms of payments to be paid to another party [1 2 3].	Counterparty [4].	Maturity date.	Notional amount.	Value	Upfront payments/receipts	Unrealized appreciation/depreciation.[5 6 7]

[1] List each major category of swaps by descriptive title (*e.g.,* credit default swaps, interest rate swaps, total return swaps). Credit default swaps where protection is sold shall be listed separately from credit default swaps where protection is purchased.

[2] Swaps where description, counterparty, or maturity dates differ shall be listed separately within each major category.

[3] Description should include information sufficient for a user of financial information to understand the terms of payments to be received and paid. (*e.g.* For a credit default swap, including, among other things, description of reference obligation(s) or index, financing rate to be paid or received, and payment frequency. For an interest rate swap, this may include, among other things, whether floating rate is paid or received, fixed interest rate, floating interest rate, and payment frequency. For a total return swap, this may include, among other things, description of reference asset(s) or index, financing rate, and payment frequency.) If the reference instrument is an index or basket of investments, and the components are publicly available on a Web site as of the balance sheet date, identify the index or basket.If the reference instrument is an index or basket of investments, the components are not publicly available on a Web site as of the balance sheet date, and the notional amount of the swap contract does not exceed one percent of the net asset value of the registrant as of the close of the period, identify the index or basket. If the reference instrument is an index or basket of investments, the components are not publicly available on a Web site as of the balance sheet date, and the notional amount of the swap contract exceeds one percent of the net asset value of the registrant as of the close of the period provide a description of the index or custom basket and list separately: (i) The 50 largest components in the index or custom basket and (ii) any other components where the notional value for that components exceeds 1% of the notional value of the index or custom basket. For each investment separately listed, include the description of the underlying investment as would be required by §§ 210.12–12, 210.12–13, 210.12–13A, 210.12–13B, or 210.12–13D as part of the description, the quantity held (*e.g.*, the number of shares for common stocks, principal amount for fixed income securities), the value at the close of the period, and the percentage value when compared to the custom basket's net assets.

[4] Not required for exchange-traded or centrally cleared swaps.

[5] Indicate by an appropriate symbol each investment which cannot be sold because of restrictions or conditions applicable to the investment.

[6] Indicate by an appropriate symbol each investment whose value was determined using significant unobservable inputs.

[7] Columns G and H shall be totaled and shall agree with the total of correlative amount(s) shown on the related balance sheet.

■ 18. Effective January 17, 2017, add § 210.12–13D to read as follows:

§ 210.12–13D Investments other than those presented in §§ 210.12–12, 12–12A, 12–12B, 12–13, 12–13A, 12–13B, and 12–13C.

[For management investment companies only]

Col. A	Col. B	Col. C
Description [1 2 3]	Balance held at close of period—quantity [4 5] ...	Value of each item at close of period.[6 7 8 9]

[1] Each investment where any portion of the description differs shall be listed separately.

[2] Categorize the schedule by (i) the type of investment (such as real estate, commodities, and so forth); and, as applicable, (ii) the related industry, country, or geographic region of the investment.

[3] Description should include information sufficient for a user of financial information to understand the nature and terms of the investment, which may include, among other things, reference security, asset or index, currency, geographic location, payment terms, payment rates, call or put feature, exercise price, expiration date, and counterparty for non-exchange-traded investments.

[4] If practicable, indicate the quantity or measure in appropriate units.

[5] Indicate by an appropriate symbol each investment which is non-income producing.

[6] Indicate by an appropriate symbol each investment which cannot be sold because of restrictions or conditions applicable to the investment.

[7] Indicate by an appropriate symbol each investment whose value was determined using significant unobservable inputs.

[8] Indicate by an appropriate symbol investment subject to option. State in a footnote: (a) The quantity subject to option, (b) nature of option contract, (c) option price, and (d) dates within which options may be exercised.

[9] Column C shall be totaled and shall agree with the correlative amount shown on the related balance sheet.

■ 19. Effective January 17, 2017, revise § 210.12–14 to read as follows:

§ 210.12–14 Investments in and advances to affiliates.

[For management investment companies only]

Col. A	Col. B	Col. C	Col. D	Col. E	Col. F
Name of issuer and title of issue or nature of indebtedness [1 2 3].	Number of shares—principal amount of bonds, notes and other indebtedness held at close of period.	Net realized gain or loss for the period [4 6].	Net increase or decrease in unrealized appreciation or depreciation for the period [4 6].	Amount of dividends or interest [4 6]. (1) Credited to income. (2) Other	Value of each item at close of period.[4 5 7 8 9]

[1] (a) List each issue separately and group (1) Investments in majority-owned subsidiaries; (2) other controlled companies; and (3) other affiliates. (b) If during the period there has been any increase or decrease in the amount of investment in and advance to any affiliate, state in a footnote (or if there have been changes to numerous affiliates, in a supplementary schedule) (1) name of each issuer and title of issue or nature of indebtedness; (2) balance at beginning of period; (3) gross additions; (4) gross reductions; (5) balance at close of period as shown in Column E. Include in the footnote or schedule comparable information as to affiliates in which there was an investment at any time during the period even though there was no investment at the close of the period of report.

[2] Categorize the schedule as required by instruction 2 of § 210.12–12.

[3] Indicate the interest rate or preferential dividend rate and maturity date, as applicable, for preferred stocks, convertible securities, fixed income securities, government securities, loan participations and assignments, commercial paper, bankers' acceptances, certificates of deposit, short-term securities, repurchase agreements, or other instruments with a stated rate of income. For variable rate securities, indicate a description of the reference rate and spread and: (1) The end of period interest rate or (2) disclose the end of period reference rate for each reference rate described in the Schedule in a note to the Schedule. For securities with payment in kind income, disclose the rate paid in kind.

[4] Columns C, D, E, and F shall be totaled. The totals of Column F shall agree with the correlative amount shown on the related balance sheet.

[5] (a) Indicate by an appropriate symbol each issue of restricted securities. The information required by instruction 8 of § 210.12–12 shall be given in a footnote. (b) Indicate by an appropriate symbol each issue of securities subject to option. The information required by § 210.12–13 shall be given in a footnote.

[6] (a) Include in Column E (1) as to each issue held at the close of the period, the dividends or interest included in caption 1 of the statement of operations. In addition, show as the final item in Column E (1) the aggregate of dividends and interest included in the statement of operations in respect of investments in affiliates not held at the close of the period. The total of this column shall agree with the correlative amount shown on the related statement of operations.

(b) Include in Column E (2) all other dividends and interest. Explain in an appropriate footnote the treatment accorded each item.

(c) Indicate by an appropriate symbol all non-cash dividends and interest and explain the circumstances in a footnote.

(d) Indicate by an appropriate symbol each issue of securities which is non-income producing. Evidences of indebtedness and preferred shares may be deemed to be income producing if, on the respective last interest payment date or date for the declaration of dividends prior to the date of the related balance sheet, there was only a partial payment of interest or a declaration of only a partial amount of the dividends payable; in such case, however, each such issue shall be indicated by an appropriate symbol referring to a note to the effect that, on the last interest or dividend date, only partial interest was paid or partial dividends declared. If, on such respective last interest or dividend date, no interest was paid or no cash or in kind dividends declared, the issue shall not be deemed to be income producing. Common shares shall not be deemed to be income producing unless, during the last year preceding the date of the related balance sheet, there was at least one dividend paid upon such common shares.

(e) Include in Column C (1) as to each issue held at the close of the period, the realized gain or loss included in § 210.6–07.7 of the statement of operations. In addition, show as the final item in Column C (1) the aggregate of realized gain or loss included in the statement of operations in respect of investments in affiliates not held at the close of the period. The total of this column shall agree with the correlative amount shown on the related statement of operations.

(f) Include in Column D (1) as to each issue held at the close of the period, the net increase or decrease in unrealized appreciation or depreciation included in § 210.6–07 .7 of the statement of operations. In addition, show as the final item in Column D (1) the aggregate of increase or decrease in unrealized appreciation or depreciation included in the statement of operations in respect of investments in affiliates not held at the close of the period. The total of this column shall agree with the correlative amount shown on the related statement of operations.

[7] The subtotals for each category of investments, subdivided both by type of investment and industry, country, or geographic region, shall be shown together with their percentage value compared to net assets.

[8] Indicate by an appropriate symbol each issue of securities whose value was determined using significant unobservable inputs.

[9] Indicate by an appropriate symbol each issue of securities held in connection with open put or call option contracts, loans for short sales, or where any portion of the issue is on loan.

PART 232—REGULATION S–T—GENERAL RULES AND REGULATIONS FOR ELECTRONIC FILINGS

■ 20. The authority citation for part 232 continues to read, in part, as follows:

Authority: 15 U.S.C. 77c, 77f, 77g, 77h, 77j, 77s(a), 77z–3, 77sss(a), 78c(b), 78*l*, 78m, 78n, 78o(d), 78w(a), 78*ll*, 80a–6(c), 80a–8, 80a–29, 80a–30, 80a–37, and 7201 *et seq.;* and 18 U.S.C. 1350, unless otherwise noted.

* * * * *

§ 232.105 [Amended]

■ 21. Effective June 1, 2018, amend § 232.105 by removing and reserving paragraph (a).

§ 232.301 [Amended]

■ 22. Effective June 1, 2018, amend § 232.301 by removing the fourth sentence ''Additional provisions applicable to Form N–SAR filers are set forth in the EDGAR Filer Manual, Volume III: ''N–SAR Supplement,'' Version 5 (September 2015).''

§ 232.401 [Amended]

■ 23. Effective August 1, 2019, amend § 232.401 paragraph (d)(2)(iii) by removing the phrase '', N–CSR (§ 274.128 of this chapter) or N–Q (§ 274.130 of this chapter)'' and adding in its place ''or N–CSR (§ 274.128 of this chapter)''.

PART 239—FORMS PRESCRIBED UNDER THE SECURITIES ACT OF 1933

■ 24. The authority citation for part 239 continues to read, in part, as follows:

Authority: 15 U.S.C. 77c, 77f, 77g, 77h, 77j, 77s, 77z–2, 77z–3, 77sss, 78c, 78l, 78m, 78n, 78o(d), 78o–7, 78o–7 note, 78u–5, 78w(a), 78*ll*, 78mm, 80a–2(a), 80a–3, 80a–8, 80a–9, 80a–10, 80a–13, 80a–24, 80a–26, 80a–29, 80a–30, 80a–37, and Sec. 71003 and Sec. 84001, Public Law 114–94, 129 Stat. 1312, unless otherwise noted.

* * * * *

§ 239.23 [Amended]

■ 25. Effective January 17, 2017, amend Form N–14 (referenced in § 239.23) Item 14, subpart 1(ii) by removing the phrase ''the following schedules in support of the most recent balance sheet: (A) Columns C and D of Schedule III [17 CFR 210.12–14]; and (B) Schedule IV [17 CFR 210.12–03];'' and adding in its place ''columns C and D of Schedule III [17 CFR 210.12–14] in support of the most recent balance sheet''.

PART 240 — GENERAL RULES AND REGULATIONS, SECURITIES EXCHANGE ACT OF 1934

■ 26. The authority citation for part 240 continues to read, in part, as follows:

Authority: 15 U.S.C. 77c, 77d, 77g, 77j, 77s, 77z–2, 77z–3, 77eee, 77ggg, 77nnn, 77sss, 77ttt, 78c, 78c–3, 78c–5, 78d, 78e, 78f, 78g, 78i, 78j, 78j–1, 78k, 78k–1, 78*l,* 78m, 78n, 78n–1, 78*o,* 78*o*–4, 78*o*–10, 78p, 78q, 78q–1, 78s, 78u–5, 78w, 78x, 78*ll,* 78mm, 80a–20, 80a–23, 80a–29, 80a–37, 80b–3, 80b–4, 80b–11, 7201 *et seq.* and 8302; 7 U.S.C. 2(c)(2)(E); 12 U.S.C. 5221(e)(3); 18 U.S.C. 1350; Public Law 111–203, 939A, 124 Stat. 1376 (2010); and Public Law 112–106, sec. 503 and 602, 126 Stat. 326 (2012), unless otherwise noted.

* * * * *

§ 240.10A–1 [Amended]

■ 27. Effective June 1, 2018, amend § 240.10A–1 paragraph (a)(4)(i) by removing the phrase ''Form N–SAR, § 274.101'' and adding in its place ''Form N–CSR, § 274.128''.

§ 240.12b–25 [Amended]

■ 28. Effective June 1, 2018, amend § 240.12b–25 by:
■ a. In the section heading, removing ''N–SAR'' and adding in its place ''N–CEN'';
■ b. In paragraph (a), removing ''Form N–SAR'' and adding in its place ''Form N–CEN''; and
■ c. In paragraph (b)(2)(ii), removing ''N–SAR,'' and adding in its place ''N–CEN,''.

§ 240.13a–10 [Amended]

■ 29. Effective June 1, 2018, amend § 240.13a–10 by:
■ a. In paragraph (h), removing the phrase ''Rule 30b1–1 (§ 270.30b1–1 of this chapter)'' and adding in its place ''Rule 30a–1 (§ 270.30a–1 of this chapter)'';
■ b. In Note 1, removing ''§ 270.30b1–1'' and adding in its place ''§ 270.30a–1''.

§ 240.13a–11 [Amended]

■ 30. Effective June 1, 2018, amend § 240.13a–11 paragraph (b) introductory text by removing ''§ 270.30b1–1'' and adding in its place ''§ 270.30a–1''.

§ 240.13a–13 [Amended]

■ 31. Effective June 1, 2018, amend § 240.13a–13 paragraph (b)(1) by removing ''§ 270.30b1–1'' and adding in its place ''§ 270.30a–1 of this chapter''.

§ 240.13a–16 [Amended]

■ 32. Effective June 1, 2018, amend § 240.13a–16 paragraph (a)(1) by removing the phrase ''Rule 30b1–1 (17 CFR 270.30b1–1)'' and adding in its place ''§ 270.30a–1 of this chapter''.

§ 240.15d–10 [Amended]

■ 33. Effective June 1, 2018, amend § 240.15d–10 paragraph (h) by removing the phrase ''Rule 30b1–1 (§ 270.30b1–1 of this chapter)'' and adding in its place ''Rule 30a–1 (§ 270.30a–1 of this chapter)''.

§ 240.15d–11 [Amended]

■ 34. Effective June 1, 2018, amend § 240.15d–11 paragraph (b) introductory text by removing ''§ 270.30b1–1'' and adding in its place ''§ 270.30a–1''.

§ 240.15d–13 [Amended]

■ 35. Effective June 1, 2018, amend § 240.15d–13 paragraph (b)(1) by removing ''§ 270.30b1–1'' and adding in its place ''§ 270.30a–1 of this chapter''.

§ 240.15d–16 [Amended]

■ 36. Effective June 1, 2018, amend § 240.15d–16 paragraph (a)(1) by removing the phrase ''Rule 30b1–1 [17 CFR 270.30b1–1]'' and adding in its place ''§ 270.30a–1 of this chapter''.

PART 249—FORMS, SECURITIES EXCHANGE ACT OF 1934

■ 37. The general authority citation for part 249 continues to read, and effective January 17, 2017, the sectional authority for § 249.330 is revised to read as follows:

Authority: 15 U.S.C. 78a *et seq.* and 7201 *et seq.;* 12 U.S.C. 5461 *et seq.;* and 18 U.S.C. 1350; Sec. 953(b), Public Law 111–203, 124 Stat. 1904; Sec. 102(a)(3), Public Law 112–106, 126 Stat. 309 (2012); Sec. 107, Public Law 112–106, 126 Stat. 313 (2012), and Sec. 72001, Public Law 114–94, 129 Stat. 1312 (2015), unless otherwise noted.

* * * * *

Section 249.330 is also issued under 15 U.S.C. 80a–29(a).

* * * * *

§ 249.322 [Amended]

■ 38. Effective June 1, 2018, amend § 249.322 in the first sentence of paragraph (a) by removing the phrase ''a semi-annual, annual, or transition report on Form N–SAR (§§ 249.330; 274.101) or'' and adding in its place ''an annual report on Form N–CEN (§§ 249.330; 274.101) or a semi-annual or annual report on''.

■ 39. Effective June 1, 2018, § 249.330 is revised to read as follows:

§ 249.330 Form N–CEN, annual report of registered investment companies.

This form shall be used by registered unit investment trusts and small business investment companies for annual reports to be filed pursuant to § 270.30a–1 of this chapter in satisfaction of the requirement of section 30(a) of the Investment Company Act of 1940 (15 U.S.C. 80a–29(a)) that every registered investment company must file annually with the Commission such information, documents, and reports as investment companies having securities registered on a national securities exchange are required to file annually pursuant to section 13(a) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a)) and the rules and regulations thereunder.

Note: The text of Form N–CEN will not appear in the *Code of Federal Regulations.*

§ 249.332 [Removed and Reserved]

■ 40. Effective August 1, 2019, § 249.332 is removed and reserved.

PART 270—RULES AND REGULATIONS, INVESTMENT COMPANY ACT OF 1940

■ 41. The authority citation for part 270 continues to read, in part, as follows:

Authority: 15 U.S.C. 80a–1 *et seq.,* 80a–34(d), 80a–37, 80a–39, and Public Law 111–203, sec. 939A, 124 Stat. 1376 (2010), unless otherwise noted.

* * * * *

§ 270.8b–16 [Amended]

■ 42. Effective June 1, 2018, amend § 270.8b–16 paragraph (a) by removing the phrase ''a semi-annual report on Form N–SAR, as prescribed by rule 30b1–1 (17 CFR 270.30b1–1)'' and adding in its place ''an annual report on Form N–CEN, as prescribed by § 270.30a–1 of this chapter''.

§ 270.8b–33 [Amended]

■ 43. Effective August 1, 2019, amend § 270.8b–33 by:
■ a. In the first sentence, removing the phrase '', Form N–CSR (§§ 249.331 and 274.128 of this chapter), or Form N–Q (§§ 249.332 and 274.130 of this chapter)'' and adding in its place the phrase ''or Form N–CSR (§§ 249.331 and 274.128 of this chapter)''; and
■ b. In the third sentence, removing the phrase ''or Form N–Q''.

§ 270.10f–3 [Amended]

■ 44. Effective June 1, 2018, amend § 270.10f–3 by removing and reserving paragraph (c)(9).

■ 45. Effective June 1, 2018, revise § 270.30a–1 to read as follows:

§ 270.30a–1 Annual report for registered investment companies.

Every management investment company must file an annual report on Form N–CEN (§ 274.101 of this chapter) at least every twelve months and not more than seventy-five calendar days after the close of each fiscal year. Every unit investment trust must file an annual report on Form N–CEN (§ 274.101 of this chapter) at least every twelve months and not more than seventy-five calendar days after the close of each calendar year. A registered investment company that has filed a registration statement with the Commission registering its securities for the first time under the Securities Act of 1933 is relieved of this reporting obligation with respect to any reporting period or portion thereof prior to the date on which that registration statement becomes effective or is withdrawn.

§ 270.30a–2 [Amended]

■ 46. Effective August 1, 2019, amend § 270.30a–2 by:

■ a. In the section heading, removing the phrase ''and Form N–Q''; and

■ b. In the first sentence of paragraph (a), removing the phrases ''or Form N–Q (§§ 249.332 and 274.130 of this chapter)'' and ''or Item 3 of Form N–Q, as applicable,''.

§ 270.30a–3 [Amended]

■ 47. Effective August 1, 2019, amend § 270.30a–3 by:

■ a. In paragraph (b), removing the phrase ''and Form N–Q (§§ 249.332 and 274.130 of this chapter)''.

■ b. In the first sentence of paragraph (c), removing the phrase ''and Form N–Q (§§ 249.332 and 274.130 of this chapter)''.

■ c. In the second sentence of paragraph (c), removing the phrase ''and Form N–Q''.

■ 48. Effective June 1, 2018, § 270.30a–4 is added to read as follows:

§ 270.30a–4 Annual report for wholly-owned registered management investment company subsidiary of registered management investment company.

Notwithstanding the provisions of § 270.30a–1, a registered management investment company that is a wholly-owned subsidiary of a registered management investment company need not file an annual report on Form N–CEN if financial information with respect to that subsidiary is reported in the parent's annual report on Form N–CEN.

§ 270.30b1–1 [Removed and Reserved]

■ 49. Effective June 1, 2018, § 270.30b1–1 is removed and reserved.

§ 270.30b1–2 [Removed and Reserved]

■ 50. Effective June 1, 2018, § 270.30b1–2 is removed and reserved.

§ 270.30b1–3 [Removed and Reserved]

■ 51. Effective June 1, 2018, § 270.30b1–3 is removed and reserved.

§ 270.30b1–5 [Removed and Reserved]

■ 52. Effective August 1, 2019, § 270.30b1–5 is removed and reserved.

■ 53. Effective January 17, 2017, § 270.30b1–9 is added to read as follows:

§ 270.30b1–9 Monthly report.

Each registered management investment company or exchange-traded fund organized as a unit investment trust, or series thereof, other than a registered open-end management investment company that is regulated as a money market fund under § 270.2a–7 or a small business investment company registered on Form N–5 (§§ 239.24 and 274.5 of this chapter), must file a monthly report of portfolio holdings on Form N–PORT (§ 274.150 of this chapter), current as of the last business day, or last calendar day, of the month. A registered investment company that has filed a registration statement with the Commission registering its securities for the first time under the Securities Act of 1933 is relieved of this reporting obligation with respect to any reporting period or portion thereof prior to the date on which that registration statement becomes effective or is withdrawn. Reports on Form N–PORT must be filed with the Commission no later than 30 days after the end of each month.

§ 270.30d–1 [Amended]

■ 54. Effective August 1, 2019, amend § 270.30d–1 by removing the phrase ''and Form N–Q (§§ 249.332 and 274.130 of this chapter)''.

■ 55. Effective June 1, 2018, Section 270.30d–1 is further amended by removing the phrase ''Form N–SAR'' and adding in its place ''Form N–CEN''.

* * * * *

PART 274—FORMS PRESCRIBED UNDER THE INVESTMENT COMPANY ACT OF 1940

■ 56. The general authority citation for part 274 continues to read as follows, and effective January 17, 2017, the sectional authorities for §§ 274.101 and 274.130 are removed:

Authority: 15 U.S.C. 77f, 77g, 77h, 77j, 77s, 78c(b), 78*l*, 78m, 78n, 78o(d), 80a–8, 80a–24, 80a–26, 80a–29, and Public Law 111–203, sec. 939A, 124 Stat. 1376 (2010), unless otherwise noted.

* * * * *

§§ 239.15A and 274.11A [Amended]

■ 57. Effective August 1, 2019, Form N–1A (referenced in §§ 239.15A and 274.11A) is amended as follows:

■ a. In Item 16(f), Instruction 3(b), remove the phrase ''N–Q'' and add in its place ''N–PORT for the last month of the Fund's first or third fiscal quarters''; and

■ b. In Item 27(d)(1), revise Instruction 4.

The additions and revisions read as follows:

NOTE: The text of Form N–1A does not, and this amendment will not, appear in the *Code of Federal Regulations.*

Form N–1A

* * * * *

Item 27. Financial Statements

* * * * *

(d) * * *

(1) * * *

Instructions

* * *

4. ''*Statement Regarding Availability of Quarterly Portfolio Schedule.* A statement that: (i) The Fund files its complete schedule of portfolio holdings with the Commission for the first and third quarters of each fiscal year as an exhibit to its reports on Form N–PORT; (ii) the Fund's Form N–PORT reports are available on the Commission's Web site at *http://www.sec.gov;* and (iii) if the Fund makes the information on Form N–PORT available to shareholders on its Web site or upon request, a description of how the information may be obtained from the Fund.

* * * * *

■ 58. Effective January 17, 2017, Form N–1A (referenced in §§ 239.15A and 274.11A) is further amended as follows:

■ a. In Item 19, add paragraph (i) to Item 19;

■ b. In Item 27(b)(1), Instruction 1, remove the phrase ''Schedule VI'' and adding in its place ''Schedule IX'', and remove the phrase ''[17 CFR 210.12–12C]'' and adding in its place ''[17 CFR 210.12–12B]'';

■ c. In Item 27(b)(1), Instruction 2, removing the phrase ''[17 CFR 210.12–12C]'' and adding in its place ''17 CFR 210.12–12B]''; and

■ d. In Item 33, add an instruction.

The additions and revisions read as follows:

Note: The text of Form N–1A does not, and this amendment will not, appear in the *Code of Federal Regulations.*

Form N–1A

* * * * *

Item 19. Investment Advisory and Other Services

* * * * *

(i) *Securities Lending.*

(1) Provide the following dollar amounts of income and fees/compensation related to the securities lending activities of each Series during its most recent fiscal year:

(i) Gross income from securities lending activities, including income from cash collateral reinvestment;

(ii) All fees and/or compensation for each of the following securities lending activities and related services: Any share of revenue generated by the securities lending program paid to the securities lending agent(s) (''revenue split''); fees paid for cash collateral management services (including fees deducted from a pooled cash collateral reinvestment vehicle) that are not included in the revenue split; administrative fees that are not included in the revenue split; fees for indemnification that are not included in the revenue split; rebates paid to borrowers; and any other fees relating to the securities lending program that are not included in the revenue split, including a description of those other fees;

(iii) The aggregate fees/compensation disclosed pursuant to paragraph (ii); and

(iv) Net income from securities lending activities (*i.e.,* the dollar amount in paragraph (i) minus the dollar amount in paragraph (iii)).

Instruction. If a fee for a service is included in the revenue split, state that the fee is ''included in the revenue split.''

(2) Describe the services provided to the Series by the securities lending agent in the Series' most recent fiscal year.

* * * * *

Item 33. Location of Accounts and Records

* * * * *

Instructions.

* * *

3. A Fund may omit this information to the extent it is provided in its most recent report on Form N–CEN [17 CFR 274.101].

* * * * *

■ 59. Effective August 1, 2019, Form N–2 (referenced in §§ 239.14 and 274.11a–1) is amended by revising paragraph (b) in Item 24, Instruction 6.

The additions and revisions read as follows:

Note: The text of Form N–2 does not, and this amendment will not, appear in the *Code of Federal Regulations.*

Form N–2

* * * * *

Item 24. Financial Statements

* * * * *

Instructions

* * * * *

6. * * *

(b) ''*Statement Regarding Availability of Quarterly Portfolio Schedule.* A statement that: (i) The Registrant files its complete schedule of portfolio holdings with the Commission for the first and third quarters of each fiscal year as an exhibit to its reports on Form N–PORT; (ii) the Registrant's Form N–PORT reports are available on the Commission's Web site at *http://www.sec.gov*; (iii) if the Registrant makes the information on Form N–PORT available to shareholders on its Web site or upon request, a description of how the information may be obtained from the Registrant.'';

* * * * *

■ 60. Effective January 17, 2017, Form N–2 (referenced in §§ 239.14 and 274.11a–1) is further amended as follows:

■ a. In Item 24, Instruction 7, remove the phrase ''Schedule VI'' and add in its place ''Schedule IX'', and remove the phrase ''[17 CFR 210.12–12C]'' and add in its place ''17 CFR 210.12–12B]''; and

■ b. In Item 32, add an instruction.

The additions and revisions read as follows:

Note: The text of Form N–2 does not, and this amendment will not, appear in the *Code of Federal Regulations.*

Form N–2

* * * * *

Item 32. Location of Accounts and Records

* * * * *

Instruction. The Registrant may omit this information to the extent it is provided in its most recent report on Form N–CEN [17 CFR 274.101].

* * * * *

■ 61. Effective August 1, 2019, Form N–3 (referenced in §§ 239.17a and 274.11b) is amended as follows:

■ a. In Item 19(e)(ii), Instruction 3(b), remove the phrase ''N–Q'' and add in its place ''N–PORT for the Registrant's first or third fiscal quarters'';

■ b. In Item 28(a), revise Instruction 6, paragraph (ii).

The additions and revisions read as follows:

Note: The text of Form N–3 does not, and this amendment will not, appear in the *Code of Federal Regulations.*

Form N–3

* * * * *

Item 28. Financial Statements

* * * * *

(a) * * *

Instructions. * * *

6. * * *

(ii) *Statement Regarding Availability of Quarterly Portfolio Schedule.* A statement that: (i) The Registrant files its complete schedule of portfolio holdings with the Commission for the first and third quarters of each fiscal year as an exhibit to its reports on Form N–PORT; (ii) the Registrant's Form N–PORT reports are available on the Commission's Web site at *http://www.sec.gov*; and (iii) if the Registrant makes the information on Form N–PORT available to contract owners on its Web site or upon request, a description of how the information may be obtained from the Fund;

* * * * *

■ 62. Effective January 17, 2017, Form N–3 (referenced in §§ 239.17a and 274.11b) is further amended as follows:

■ a. In Item 21, add paragraph (j); In Item 28(a), Instruction 7(i), remove the phrase ''Schedule VI'' and add in its place ''Schedule IX'', and remove the phrase ''[17 CFR 210.12–12C]'' and add in its place ''[17 CFR 210.12–12B]'';

■ b. In Item 28(a), Instruction 7(i), remove the phrase ''[17 CFR 210.12–12C]'' and add in its place ''17 CFR 210.12–12]''; and

■ c. In Item 36, add an instruction.

The additions and revisions read as follows:

Note: The text of Form N–3 does not, and this amendment will not, appear in the *Code of Federal Regulations.*

Form N–3

* * * * *

Item 21. Investment Advisory and Other Services

* * * * *

(j) Securities Lending.

(i) Provide the following dollar amounts of income and fees/compensation related to the securities lending activities of each series of the Registrant during its most recent fiscal year:

(A) Gross income from securities lending activities;

(B) All fees and/or compensation for each of the following securities lending activities and related services: Any share of revenue generated by the securities lending program paid to the securities lending agent(s) (''revenue split''); fees paid for cash collateral management services (including fees deducted from a pooled cash collateral reinvestment vehicle) that are not included in the revenue split; administrative fees that are not included in the revenue split; fees for indemnification that are not included in the revenue split; rebates paid to borrowers; and any other fees relating to the securities lending program that are not included in the revenue split, including a description of those other fees;

(C) The aggregate fees/compensation disclosed pursuant to paragraph (B); and

(D) Net income from securities lending activities (*i.e.,* the dollar amount in paragraph (A) minus the dollar amount in paragraph (C)).

Instruction. If a fee for a service is included in the revenue split, state that the fee is ''included in the revenue split.''

(ii) Describe the services provided to the series of the Registrant by the securities lending agent in the series of the Registrant's most recent fiscal year.

* * * * *

Item 36. Location of Accounts and Records

* * * * *

Instruction. The Registrant may omit this information to the extent it is provided in its most recent report on Form N–CEN [17 CFR 274.101].

* * * * *

■ 63. Effective January 17, 2017, Form N–4 (referenced in §§ 239.17b and 274.11c) is amended by adding an instruction to Item 30 to read as follows:

Form N–4

* * * * *

Item 30. Location of Accounts and Records

* * * * *

Instruction. The Registrant may omit this information to the extent it is provided in its most recent report on Form N–CEN [17 CFR 274.101].

* * * * *

■ 64. Effective January 17, 2017, Form N–6 (referenced in §§ 239.17c and 274.11d) is amended by adding an instruction to Item 31 to read as follows:

Form N–6

* * * * *

Item 31. Location of Accounts and Records

* * * * *

Instruction. The Registrant may omit this information to the extent it is provided in its most recent report on Form N–CEN [17 CFR 274.101].

* * * * *

■ 65. Effective June 1, 2018, § 274.101 is revised to read as follows:

§ 274.101 Form N–CEN, annual report of registered investment companies.

This form shall be used by registered investment companies for annual reports to be filed pursuant to 17 CFR 270.30a–1.

Note: The text of Form N–CEN will not appear in the *Code of Federal Regulations.*

BILLING CODE 8011–01–P

FORM N-CEN

ANNUAL REPORT FOR REGISTERED INVESTMENT COMPANIES

Form N-CEN is to be used by all registered investment companies, other than face-amount certificate companies, to file annual reports with the Commission. Such reports should be filed not later than 75 days after the close of the fiscal year for which the report is being prepared, except that unit investment trusts shall file such reports not later than 75 days after the close of the calendar year for which the report is being prepared, pursuant to rule 30a-1 under the Investment Company Act of 1940 ("Act") (17 CFR 270.30a-1). Face-amount certificate companies should continue to file periodic reports pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934 ("Exchange Act"). The Commission may use the information provided on Form N-CEN in its regulatory, enforcement, examination, disclosure review, inspection, and policymaking roles.

GENERAL INSTRUCTIONS

A. Rule as to Use of Form N-CEN

Form N-CEN is the reporting form that is to be used for annual reports filed pursuant to rule 30a-1 under the Act (17 CFR 270.30a-1) by registered investment companies, other than face-amount certificate companies, under section 30(a) of the Act and, in the case of small business investment companies and registered unit investment trusts, under section 13 or 15(d) of the Exchange Act, if applicable.

Registrants must respond to all items in the relevant Parts of Form N-CEN, as listed below in this General Instruction A. If an item within a required Part is inapplicable, the Registrant should respond "N/A" to that item. Registrants are not, however, required to respond to items in Parts of Form N-CEN that they are not required by this General Instruction A to respond to.

Management investment companies: Management investment companies other than small business investment companies must complete Parts A, B, C, and G of this Form. Management investment companies that offer multiple series must complete Part C as to each series separately, even if some information is the same for two or more series. Closed-end management investment companies also must complete Part D of this Form. Small business investment companies must complete Parts A, B, D, and G of this Form. Management investment companies that are registered on Form N-3 also must complete certain items in Part F of this Form as directed by Item B.6.c.i.

Exchange-traded funds or exchange-traded managed funds: Funds that are exchange-traded funds or exchange-traded managed funds, as defined by this Form, must complete Part E of this Form in addition to any other required Parts.

Unit investment trusts: Unit investment trusts must complete Parts A, B, F, and G of this Form.

B. Application of General Rules and Regulations

The General Rules and Regulations under the Act contain certain general requirements that are applicable to reporting on any form under the Act. These general requirements should be carefully read and observed in the preparation and filing of reports on this Form, except that any provision in the Form or in these instructions shall be controlling.

C. Filing of Report

1. All registered investment companies with shares outstanding (other than shares issued in connection with an initial investment to satisfy section 14(a) of the Act) must file a report on Form N-CEN at least annually. Management investment companies offering multiple series with different fiscal year ends must file a report as of each fiscal year end that responds to (i) Parts A, B, and G, and (ii) Part C and, if applicable, Part E as to only those series with the fiscal year end covered by the report.

   If a Registrant changes its fiscal year, a report filed on Form N-CEN may cover a period shorter than 12 months, but in no event may a report filed on Form N-CEN cover a period longer than 12 months or a period that overlaps with a period covered by a previously filed report. For example, if in 2017 a Registrant with a September 30 fiscal year end changes its fiscal year end to December 31, the Registrant could file a report on this Form for the fiscal period ending September 30, 2017 and a report for the period ending December 31, 2017. A Registrant could not, however, only file a report for the fiscal period ending December 31, 2017 if its last report was filed for the fiscal period ending September 30, 2016.

   An extension of time of up to 15 days for filing the form may be obtained by following the procedures specified in rule l2b-25 under the Exchange Act (17 CFR 240.12b-25).

2. A registrant may file an amendment to a previously filed report at any time, including an amendment to correct a mistake or error in a previously filed report. A registrant that files an amendment to a previously filed report must provide information in response to all required items of Form N-CEN, regardless of why the amendment is filed.

3. Reports must be filed electronically using the Commission's Electronic Data Gathering, Analysis, and Retrieval ("EDGAR") system in accordance with Regulation S-T. Consult the EDGAR Filer Manual and Appendices for EDGAR filing instructions.

D. Paperwork Reduction Act Information

A registrant is required to disclose the information specified by Form N-CEN, and the Commission will make this information public, except for information reported in response to Item B.9.h. A registrant is not required to respond to the collection of information contained in Form N-CEN unless the form displays a currently valid Office of Management and Budget ("OMB") control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to the Secretary, Securities and Exchange Commission, Washington, DC 20549. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. 3507.

E. Definitions

Except as defined below or where the context clearly indicates the contrary, terms used in Form N-CEN have meanings as defined in the Act and the rules and regulations thereunder. Unless otherwise indicated, all references in the form or its instructions to statutory sections or to rules are sections of the Act and the rules and regulations thereunder.

In addition, the following definitions apply:

"Class" means a class of shares issued by a Fund that has more than one class that represents interest in the same portfolio of securities under rule 18f-3 under the Act (17 CFR 270.18f-3) or under an order exempting the Fund from provisions of section 18 of the Act (15 U.S.C. 80a-18).

"CRD number" means a central licensing and registration system number issued by the Financial Industry Regulatory Authority.

"Exchange-Traded Fund" means an open-end management investment company (or Series or Class thereof) or unit investment trust (or series thereof), the shares of which are listed and traded on a national securities exchange at market prices, and that has formed and operates under an exemptive order under the Act granted by the Commission or in reliance on an exemptive rule under the Act adopted by the Commission.

"Exchange-Traded Managed Fund" means an open-end management investment company (or Series or Class thereof) or unit investment trust (or series thereof), the shares of which are listed and traded on a national securities exchange at net asset value-based prices, and that has formed and operates under an exemptive order under the Act granted by the Commission or in reliance on an exemptive rule under the Act adopted by the Commission.

"Fund" means the Registrant or a separate Series of the Registrant. When an item of Form N-CEN specifically applies to a Registrant or Series, those terms will be used.

"LEI" means, with respect to any company, the "legal entity identifier" as assigned by a utility endorsed by the Global LEI Regulatory Oversight Committee or accredited by the Global LEI Foundation. In the case of a financial institution, if a "legal entity identifier" has not been assigned, then provide the RSSD ID, if any, assigned by the National Information Center of the Board of Governors of the Federal Reserve System.

"Money Market Fund" means an open-end management investment company registered under the Act, or Series thereof, that is regulated as a money market fund pursuant to rule 2a-7 under the Act (17 CFR 270.2a-7).

"PCAOB number" means the registration number issued to an independent public accountant registered with the Public Company Accounting Oversight Board.

"Registrant" means the investment company filing this report or on whose behalf the report is filed.

"SEC File number" means the number assigned to an entity by the Commission when that entity registered with the Commission in the capacity in which it is named in Form N-CEN.

"Series" means shares offered by a Registrant that represent undivided interests in a portfolio of investments and that are preferred over all other Series of shares for assets specifically allocated to that Series in accordance with rule 18f-2(a) (17 CFR 270.18f-2(a)).

FORM N-CEN
ANNUAL REPORT FOR REGISTERED INVESTMENT COMPANIES

Part A: General Information

Item A.1. Reporting period covered.

a. Report for period ending: [yyyy/mm/dd]

b. Does this report cover a period of less than 12 months? [Y/N]

Part B: Information About the Registrant

Item B.1. Background information.

a. Full name of Registrant: ____

b. Investment Company Act file number (*e.g.*, 811-): ____

c. CIK: ____

d. LEI: ____

Item B.2. Address and telephone number of Registrant.

a. Street: ____

b. City: ____

c. State, if applicable: ____

d. Foreign country, if applicable: ____

e. Zip code and zip code extension, or foreign postal code: ____

f. Telephone number (including country code if foreign): ____

g. Public website, if any: ____

Item B.3. Location of books and records.

a. Name of person (*e.g.*, a custodian of records): ____

b. Street: ____

c. City: ____

d. State, if applicable: ____

e. Foreign country, if applicable: ____

f. Zip code and zip code extension, or foreign postal code: ____

g. Telephone number (including country code if foreign): ____

h. Briefly describe the books and records kept at this location: ____

Instruction. Provide the requested information for each person maintaining physical possession of each account, book, or other document required to be maintained by section 31(a) of the Act (15 U.S.C. 80a-30(a)) and the rules under that section.

Item B.4. Initial or final filings.

a. Is this the first filing on this form by the Registrant? [Y/N]

b. Is this the last filing on this form by the Registrant? [Y/N]

Instruction. Respond "yes" to Item B.4.b only if the Registrant has filed an application to deregister or will file an application to deregister before its next required filing on this form

Item B.5. Family of investment companies.

a. Is the Registrant part of a family of investment companies? [Y/N]

i. Full name of family of investment companies: ____

Instruction. "Family of investment companies" means, except for insurance company separate accounts, any two or more registered investment companies that (i) share the same investment adviser or principal underwriter; and (ii) hold themselves out to investors as related companies for purposes of investment and investor services. In responding to this item, all Registrants in the family of investment companies should report the name of the family of investment companies identically.

Insurance company separate accounts that may not hold themselves out to investors as related companies (products) for purposes of investment and investor services should consider themselves part of the same family if the operational or accounting or control systems under which these entities function are substantially similar.

Item B.6. Organization. Indicate the classification of the Registrant by checking the applicable item below.

a. Open end management investment company registered under the Act on Form N-1A: ____

i. Total number of Series of the Registrant: ____

ii. If a Series of the Registrant with a fiscal year end covered by the report was terminated during the reporting period, provide the following information:

1. Name of the Series: ____
2. Series identification number: ____
3. Date of termination (month/year): ____

b. Closed-end management investment company registered under the Act on Form N-2: ____

c. Separate account offering variable annuity contracts which is registered under the Act as a management investment company on Form N-3: ____

  i. Registrants that indicate they are a management investment company registered under the Act on Form N-3, should respond to Item F.13 through Item F.16 of this Form in addition to the Parts required by General Instruction A of this Form.

d. Separate account offering variable annuity contracts which is registered under the Act as a unit investment trust on Form N-4: ____

e. Small business investment company registered under the Act on Form N-5: ____

f. Separate account offering variable life insurance contracts which is registered under the Act as a unit investment trust on Form N-6: ____

g. Unit investment trust registered under the Act on Form N-8B-2: ____

Instruction. For Item B.6.a.i, the Registrant should include all Series that have been established by the Registrant and have shares outstanding (other than shares issued in connection with an initial investment to satisfy section 14(a) of the Act).

Item B.7. Securities Act registration. Is the Registrant the issuer of a class of securities registered under the Securities Act of 1933 ("Securities Act")? [Y/N]

Item B.8. Directors: Provide the information requested below about each person serving as director of the Registrant (management investment companies only):

a. Full name: ____

b. CRD number, if any: ____

c. Is the person an "interested person" of the Registrant as that term is defined in section 2(a)(19) of the Act (15 U.S.C. 80a-2(a)(19))? [Y/N]

d. Investment Company Act file number of any other registered investment company for which the person also serves as a director (*e.g.,* 811-): ____

Item B.9. Chief compliance officer. Provide the information requested below about each person serving as chief compliance officer of the Registrant for purposes of rule 38a-1 (17 CFR 270.38a-1):

a. Full name: ____

b. CRD number, if any: ____

c. Street: ____

d. City: ____

e. State, if applicable: ____

f. Foreign country, if applicable: ____

g. Zip code and zip code extension, or foreign postal code: ____

h. Telephone number (including country code if foreign): ____

i. Has the chief compliance officer changed since the last filing? [Y/N]

j. If the chief compliance officer is compensated or employed by any person other than the Registrant, or an affiliated person of the Registrant, for providing chief compliance officer services, provide:

   i. Name of the person: ____

   ii. Person's IRS Employer Identification Number: ____

Item B.10. Matters for security holder vote. Were any matters submitted by the Registrant for its security holders' vote during the reporting period? [Y/N]

a. If yes, and to the extent the response relates only to certain series of the Registrant, indicate the series involved:

   i. Series name: _____

   ii. Series identification number: ____

Instruction. Registrants registered on Forms N-3, N-4 or N-6, should respond "yes" to this Item only if security holder votes were solicited on contract-level matters.

Item B.11. Legal proceedings.

a. Have there been any material legal proceedings, other than routine litigation incidental to the business, to which the Registrant or any of its subsidiaries was a party or of which any of their property was the subject during the reporting period? [Y/N] If yes, include the attachment required by Item G.1.a.i.

   i. If yes, and to the extent the response relates only to certain series of the Registrant, indicate the series involved:

      1. Series name: _____

      2. Series identification number: ____

b. Has any proceeding previously reported been terminated? [Y/N] If yes, include the attachment required by Item G.1.a.i.

   i. If yes, and to the extent the response relates only to certain series of the Registrant, indicate the series involved:

      1. Series name: _____

      2. Series identification number: ____

Instruction. For purposes of this Item, the following proceedings should be described: (1) any bankruptcy, receivership or similar proceeding with respect to the Registrant or any of its significant subsidiaries; (2) any proceeding to which any director, officer or other affiliated person of the Registrant is a party adverse to the Registrant or any of its subsidiaries; and (3) any proceeding involving the revocation or suspension of the right of the Registrant to sell securities.

Item B.12. Fidelity bond and insurance (management investment companies only).

a. Were any claims with respect to the Registrant filed under a fidelity bond (including, but not limited to, the fidelity insuring agreement of the bond) during the reporting period? [Y/N]

i. If yes, enter the aggregate dollar amount of claims filed: ____

Item B.13. Directors and officers/errors and omissions insurance (management investment companies only).

a. Are the Registrant's officers or directors covered in their capacities as officers or directors under any directors and officers/errors and omissions insurance policy owned by the Registrant or anyone else? [Y/N]

i. If yes, were any claims filed under the policy during the reporting period with respect to the Registrant? [Y/N]

Item B.14. Provision of financial support. Did an affiliated person, promoter, or principal underwriter of the Registrant, or an affiliated person of such a person, provide any form of financial support to the Registrant during the reporting period? [Y/N] If yes, include the attachment required by Item G.1.a.ii, unless the Registrant is a Money Market Fund.

a. If yes and to the extent the response relates only to certain series of the Registrant, indicate the series involved:

i. Series name: _____

ii. Series identification number: ____

Instruction. For purposes of this Item, a provision of financial support includes any (1) capital contribution, (2) purchase of a security from a Money Market Fund in reliance on rule 17a-9 under the Act (17 CFR 270.17a-9), (3) purchase of any defaulted or devalued security at fair value reasonably intended to increase or stabilize the value or liquidity of the Registrant's portfolio, (4) execution of letter of credit or letter of indemnity, (5) capital support agreement (whether or not the Registrant ultimately received support), (6) performance guarantee, or (7) other similar action reasonably intended to increase or stabilize the value or liquidity of the Registrant's portfolio. Provision of financial support does not include any (1) routine waiver of fees or reimbursement of Registrant's expenses, (2) routine inter-fund lending, (3) routine inter-fund purchases of Registrant's shares, or (4) action that would qualify as financial support as defined above, that the board of directors has otherwise determined not to be reasonably intended to increase or stabilize the value or liquidity of the Registrant's portfolio.

Item B.15. Exemptive orders.

a. During the reporting period, did the Registrant rely on any orders from the Commission granting an exemption from one or more provisions of the Act, Securities Act or Exchange Act? [Y/N]

   i. If yes, provide below the release number for each order: ____

Item B.16. Principal underwriters.

a. Provide the information requested below about each principal underwriter:

   i. Full name: ____

   ii. SEC file number (e.g., 8-): ____

   iii. CRD number: ____

   iv. LEI, if any: ____

   v. State, if applicable: ____

   vi. Foreign country, if applicable: ____

   vii. Is the principal underwriter an affiliated person of the Registrant, or its investment adviser(s) or depositor? [Y/N]

b. Have any principal underwriters been hired or terminated during the reporting period? [Y/N]

Item B.17. Independent public accountant. Provide the following information about each independent public accountant:

a. Full name: ____

b. PCAOB number: ____

c. LEI, if any: ____

d. State, if applicable: ____

e. Foreign country, if applicable: ____

f. Has the independent public accountant changed since the last filing? [Y/N]

Item B.18. Report on internal control (management investment companies only). For the reporting period, did an independent public accountant's report on internal control note any material weaknesses? [Y/N]

Instruction. Small business investment companies are not required to respond to this item.

Item B.19. Audit opinion. For the reporting period, did an independent public accountant issue an opinion other than an unqualified opinion with respect to its audit of the Registrant's financial statements? [Y/N]

a. If yes, and to the extent the response relates only to certain series of the Registrant, indicate the series involved:

i. Series name: _____

ii. Series identification number: ____

Item B.20. Change in valuation methods. Have there been material changes in the method of valuation (e.g., change from use of bid price to mid price for fixed income securities or change in trigger threshold for use of fair value factors on international equity securities) of the Registrant's assets during the reporting period? [Y/N] If yes, provide the following:

a. Date of change: ___

b. Explanation of the change: ____

c. Asset type involved: ____

d. Type of investments involved: ____

e. Statutory or regulatory basis, if any: ____

f. To the extent the response relates only to certain series of the Registrant, indicate the series involved:

i. Series name: _____

ii. Series identification number: ____

Instruction. Responses to this item need not include changes to valuation techniques used for individual securities (*e.g.*, changing from market approach to income approach for a private equity security). In responding to Item B.20.c., provide the applicable "asset type" category specified in Item C.4.a. of Form N-PORT. In responding to Item B.20.d., provide a brief description of the type of investments involved. If the change in valuation methods applies only to certain sub-asset types included in the response to Item B.20.c., please provide the sub-asset types in the response to Item B.20.d. The responses to Item B.20.c. and Item B.20.d. should be identical only if the change in valuation methods applies to all assets within that category.

Item B.21. Change in accounting principles and practices. Have there been any changes in accounting principles or practices, or any change in the method of applying any such accounting principles or practices, which will materially affect the financial statements filed or to be filed for the current year with the Commission and which has not been previously reported? [Y/N] If yes, include the attachment required by Item G.1.a.iv.

Item B.22. Net asset value error corrections (open-end management investment companies only).

a. During the reporting period, were any payments made to shareholders or shareholder accounts reprocessed as a result of an error in calculating the Registrant's net asset value (or net asset value per share)? [Y/N]

i. If yes, and to the extent the response relates only to certain Series of the Registrant, indicate the Series involved:

1. Series name: _____

2. Series identification number: ____

Item B.23. Rule 19a-1 notice (management investment companies only). During the reporting period, did the Registrant pay any dividend or make any distribution in the nature of a dividend payment, required to be accompanied by a written statement pursuant to section 19(a) of the Act (15 U.S.C. 80a-19(a)) and rule 19a-1 thereunder (17 CFR 270.19a-1)? [Y/N]

a. If yes, and to the extent the response relates only to certain Series of the Registrant, indicate the Series involved:

i. Series name: _____

ii. Series identification number: ____

Part C: Additional Questions for Management Investment Companies

Item C.1. Background information.

a. Full name of the Fund: ____

b. Series identification number, if any: ____

c. LEI: ____

d. Is this the first filing on this form by the Fund? [Y/N]

Item C.2. Classes of open-end management investment companies.

a. How many Classes of shares of the Fund (if any) are authorized? ____

b. How many new Classes of shares of the Fund were added during the reporting period? ____

c. How many Classes of shares of the Fund were terminated during the reporting period? ___

d. For each Class with shares outstanding, provide the information requested below:

i. Full name of Class: ____

ii. Class identification number, if any: ____

iii. Ticker symbol, if any: ____

Item C.3. Type of fund. Indicate if the Fund is any one of the types listed below. Check all that apply.

a. Exchange-Traded Fund or Exchange-Traded Managed Fund or offers a Class that itself is an Exchange-Traded Fund or Exchange-Traded Managed Fund:

i. Exchange-Traded Fund: ____

ii. Exchange-Traded Managed Fund: ____

b. Index Fund: ____

i. Is the index whose performance the Fund tracks, constructed:

1. By an affiliated person of the fund? [Y/N]

2. Exclusively for the fund? [Y/N]

ii. Provide the annualized difference between the Fund's total return during the reporting period and the index's return during the reporting period (*i.e.*, the Fund's total return less the index's return):

1. Before Fund fees and expenses: ____

2. After Fund fees and expenses (*i.e.*, net asset value): ____

iii. Provide the annualized standard deviation of the daily difference between the Fund's total return and the index's return during the reporting period:

1. Before Fund fees and expenses: ____

2. After Fund fees and expenses (*i.e.*, net asset value): ____

c. Seeks to achieve performance results that are a multiple of an index or other benchmark, the inverse of an index or other benchmark, or a multiple of the inverse of an index or other benchmark: ____

d. Interval Fund: ____

e. Fund of Funds: ____

f. Master-Feeder Fund: ____

i. If the Registrant is a master fund, then provide the information requested below with respect to each feeder fund:

1. Full name: ____

2. For registered feeder funds:

A. Investment Company Act file number (*e.g.,* 811-): ____

B. Series identification number, if any: ____

C. LEI of feeder fund: ____

3. For unregistered feeder funds:

A. SEC file number of the feeder fund's investment adviser (*e.g.,* 801-): ____

B. LEI of feeder fund, if any: ___

ii. If the Registrant is a feeder fund, then provide the information requested below with respect to a master fund registered under the Act:

1. Full name: ____

2. Investment Company Act file number (*e.g.,* 811-): ____

3. SEC file number of the master fund's investment adviser (*e.g.,* 801-): ___

4. LEI: ___

g. Money Market Fund: ____

h. Target Date Fund: ___

i. Underlying fund to a variable annuity or variable life insurance contract: ____

Instructions.

1. "Fund of Funds" means a fund that acquires securities issued by any other investment company in excess of the amounts permitted under paragraph (A) of section 12(d)(1) of the Act (15 U.S.C. 80a-12(d)(1)(A)), but, for purposes of this Item, does not include a fund that acquires securities issued by another investment company solely in reliance on rule 12d1-1 under the Act (CFR 270.12d1-1).
2. "Index Fund" means an investment company, including an Exchange-Traded Fund, that seeks to track the performance of a specified index.
3. "Interval Fund" means a closed-end management investment company that makes periodic repurchases of its shares pursuant to rule 23c-3 under the Act (17 CFR 270.23c-3).
4. "Master-Feeder Fund" means a two-tiered arrangement in which one or more funds (each a feeder fund) holds shares of a single Fund (the master fund) in accordance with section 12(d)(1)(E) of the Act (15 U.S.C. 80a-12(d)(1)(E)) or pursuant to exemptive relief granted by the Commission.
5. "Target Date Fund" means an investment company that has an investment objective or strategy of providing varying degrees of long-term appreciation and capital preservation through a mix of equity and fixed income exposures that changes over time based on an investor's age, target retirement date, or life expectancy.

Item C.4. Diversification. Does the Fund seek to operate as a "non-diversified company" as such term is defined in section 5(b)(2) of the Act (15 U.S.C. 80a-5(b)(2))? [Y/N]

Item C.5. Investments in certain foreign corporations.

a. Does the fund invest in a controlled foreign corporation for the purpose of investing in certain types of instruments such as, but not limited to, commodities? [Y/N]

b. If yes, provide the following information:

   i. Full name of subsidiary: ___

   ii. LEI of subsidiary, if any: ___

Instruction. "Controlled foreign corporation" has the meaning provided in section 957 of the Internal Revenue Code [26 U.S.C. 957].

Item C.6. Securities lending.

a. Is the Fund authorized to engage in securities lending transactions? [Y/N]

b. Did the Fund lend any of its securities during the reporting period? [Y/N]

   i. If yes, during the reporting period, did any borrower fail to return the loaned securities by the contractual deadline with the result that:

1. The Fund (or its securities lending agent) liquidated collateral pledged to secure the loaned securities? [Y/N]
2. The Fund was otherwise adversely impacted? [Y/N]

Instruction. For purposes of this Item, other adverse impacts would include, for example, (1) a loss to the Fund if collateral and indemnification were not sufficient to replace the loaned securities or their value, (2) the Fund's ineligibility to vote shares in a proxy, or (3) the Fund's ineligibility to receive a direct distribution from the issuer.

c. Provide the information requested below about each securities lending agent, if any, retained by the Fund:

   i. Full name of securities lending agent: ____

   ii. LEI, if any: ____

   iii. Is the securities lending agent an affiliated person, or an affiliated person of an affiliated person, of the Fund? [Y/N]

   iv. Does the securities lending agent or any other entity indemnify the fund against borrower default on loans administered by this agent? [Y/N]

   v. If the entity providing the indemnification is not the securities lending agent, provide the following information:

      1. Name of person providing indemnification: ____
      2. LEI, if any, of person providing indemnification: ____

   vi. Did the Fund exercise its indemnification rights during the reporting period? [Y/N]

d. If a person managing any pooled investment vehicle in which cash collateral is invested in connection with the Fund's securities lending activities (*i.e.*, a cash collateral manager) does not also serve as securities lending agent, provide the following information about each person:

   i. Full name of cash collateral manager: ____

   ii. LEI, if any: ____

   iii. Is the cash collateral manager an affiliated person, or an affiliated person of an affiliated person, of a securities lending agent retained by the Fund? [Y/N]

   iv. Is the cash collateral manager an affiliated person, or an affiliated person of an affiliated person, of the Fund? [Y/N]

e. Types of payments made to one or more securities lending agents and cash collateral managers (check all that apply):

   i. Revenue sharing split: ____

ii. Non-revenue sharing split (other than administrative fee): ____

iii. Administrative fee: ____

iv. Cash collateral reinvestment fee: ____

v. Indemnification fee: ____

vi. Other: _____. If other, describe: ______.

f. Provide the monthly average of the value of portfolio securities on loan during the reporting period. ___

g. Provide the net income from securities lending activities. ____

Item C.7. Reliance on certain rules. Did the Fund rely on any of the following rules under the Act during the reporting period? (check all that apply)

a. Rule 10f-3 (17 CFR 270.10f-3): ____

b. Rule 12d1-1 (17 CFR 270.12d1-1): ____

c. Rule 15a-4 (17 CFR 270.15a-4): ____

d. Rule 17a-6 (17 CFR 270.17a-6): ____

e. Rule 17a-7 (17 CFR 270.17a-7): ____

f. Rule 17a-8 (17 CFR 270.17a-8): ____

g. Rule 17e-1 (17 CFR 270.17e-1): ____

h. Rule 22d-1 (17 CFR 270.22d-1): ____

i. Rule 23c-1 (17 CFR 270.23c-1): ____

j. Rule 32a-4 (17 CFR 270.32a-4): ____

Item C.8. Expense limitations.

a. Did the Fund have an expense limitation arrangement in place during the reporting period? [Y/N]

b. Were any expenses of the Fund reduced or waived pursuant to an expense limitation arrangement during the reporting period? [Y/N]

c. Are the fees waived subject to recoupment? [Y/N]

d. Were any expenses previously waived recouped during the period? [Y/N]

Instruction. Provide information concerning any direct or indirect limitations, waivers or reductions, on the level of expenses incurred by the fund during the reporting period. A limitation, for example, may be applied indirectly (such as when an adviser agrees to accept a reduced fee pursuant to a voluntary fee waiver) or it may apply only for a temporary period such as for a new fund in its start-up phase.

Item C.9. Investment advisers.

a. Provide the following information about each investment adviser (other than a sub-adviser) of the Fund:

i. Full name: ____

ii. SEC file number (*e.g.*, 801-): ____

iii. CRD number: ____

iv. LEI, if any: ____

v. State, if applicable: ____

vi. Foreign country, if applicable: ____

vii. Was the investment adviser hired during the reporting period? [Y/N]

1. If the investment adviser was hired during the reporting period, indicate the investment adviser's start date: ____

b. If an investment adviser (other than a sub-adviser) to the Fund was terminated during the reporting period, provide the following with respect to each investment adviser:

i. Full name: ____

ii. SEC file number (*e.g.*, 801-): ____

iii. CRD number: ____

iv. LEI, if any: ____

v. State, if applicable: ____

vi. Foreign country, if applicable: ____

vii. Termination date: ____

c. For each sub-adviser to the Fund, provide the information requested:

i. Full name: ____

ii. SEC file number (*e.g.*, 801-): ____

iii. CRD number: _____

iv. LEI, if any: _____

v. State, if applicable: ____

vi. Foreign country, if applicable: ____

vii. Is the sub-adviser an affiliated person of the Fund's investment adviser(s)? [Y/N]

viii. Was the sub-adviser hired during the reporting period? [Y/N]

1. If the sub-adviser was hired during the reporting period, indicate the sub-adviser's start date: ____

d. If a sub-adviser was terminated during the reporting period, provide the following with respect to each such sub-adviser:

i. Full name: ____

ii. SEC file number (*e.g.*, 801-): ____

iii. CRD number: ____

iv. LEI, if any: ____

v. State, if applicable: ____

vi. Foreign country, if applicable: ____

vii. Termination date: ____

Item C.10. Transfer agents.

a. Provide the following information about each person providing transfer agency services to the Fund:

i. Full name: ____

ii. SEC file number (e.g., 84- or 85-): ____

iii. LEI, if any: ____

iv. State, if applicable: ____

v. Foreign country, if applicable: ____

vi. Is the transfer agent an affiliated person of the Fund or its investment adviser(s)? [Y/N]

vii. Is the transfer agent a sub-transfer agent? [Y/N]

b. Has a transfer agent been hired or terminated during the reporting period? [Y/N]

Item C.11. Pricing services.

a. Provide the following information about each person that provided pricing services to the Fund during the reporting period:

i. Full name: ____

ii. LEI, if any, or provide and describe other identifying number: ____

iii. State, if applicable: _____

iv. Foreign country, if applicable: ____

v. Is the pricing service an affiliated person of the Fund or its investment adviser(s)? [Y/N]

b. Was a pricing service hired or terminated during the reporting period? [Y/N]

Item C.12. Custodians.

a. Provide the following information about each person that provided custodial services to the Fund during the reporting period:

i. Full name: ____

ii. LEI, if any: ____

iii. State, if applicable: ____

iv. Foreign country, if applicable: ____

v. Is the custodian an affiliated person of the Fund or its investment adviser(s)? [Y/N]

vi. Is the custodian a sub-custodian? [Y/N]

vii. With respect to the custodian, check below to indicate the type of custody:

1. Bank — section 17(f)(1) (15 U.S.C. 80a-17(f)(1)): ____

2. Member national securities exchange — rule 17f-1 (17 CFR 270.17f-1): ____

3. Self — rule 17f-2 (17 CFR 270.17f-2): ____

4. Securities depository — rule 17f-4 (17 CFR 270.17f-4): ____

5. Foreign custodian — rule 17f-5 (17 CFR 270.17f-5): ____

6. Futures commission merchants and commodity clearing organizations — rule 17f-6 (17 CFR 270.17f-6): ____

7. Foreign securities depository — rule 17f-7 (17 CFR 270.17f-7): ____

8. Insurance company sponsor — rule 26a-2 (17 CFR 270.26a-2): ____

9. Other: ____. If other, describe: ______.

b. Has a custodian been hired or terminated during the reporting period? [Y/N]

Item C.13. Shareholder servicing agents.

a. Provide the following information about each shareholder servicing agent of the Fund:

i. Full name: ____

ii. LEI, if any, or provide and describe other identifying number: ____

iii. State, if applicable: _____

iv. Foreign country, if applicable: ____

v. Is the shareholder servicing agent an affiliated person of the Fund or its investment adviser(s)? [Y/N]

vi. Is the shareholder servicing agent a sub-shareholder servicing agent? [Y/N]

b. Has a shareholder servicing agent been hired or terminated during the reporting period? [Y/N]

Item C.14. Administrators.

a. Provide the following information about each administrator of the Fund:

i. Full name: ____

ii. LEI, if any, or provide and describe other identifying number: ____

iii. State, if applicable: _____

iv. Foreign country, if applicable: ___

v. Is the administrator an affiliated person of the Fund or its investment adviser(s)? [Y/N]

vi. Is the administrator a sub-administrator? [Y/N]

b. Has an administrator been hired or terminated during the reporting period? [Y/N]

Item C.15. Affiliated broker-dealers. Provide the following information about each affiliated broker-dealer:

a. Full name: ____

b. SEC file number: ____

c. CRD number: ____

d. LEI, if any: ____

e. State, if applicable: _____

f. Foreign country, if applicable: ____

g. Total commissions paid to the affiliated broker-dealer for the reporting period: ____

Item C.16. Brokers.

a. For each of the ten brokers that received the largest dollar amount of brokerage commissions (excluding dealer concessions in underwritings) by virtue of direct or indirect participation in the Fund's portfolio transactions, provide the information below:

i. Full name of broker: ____

ii. SEC file number: ____

iii. CRD number: ____

iv. LEI, if any: ____

v. State, if applicable: _____

vi. Foreign country, if applicable: ____

vii. Gross commissions paid by the Fund for the reporting period: ____

b. Aggregate brokerage commissions paid by Fund during the reporting period: ____

Item C.17. Principal transactions.

a. For each of the ten entities acting as principals with which the Fund did the largest dollar amount of principal transactions (include all short-term obligations, and U.S. government and tax-free securities) in both the secondary market and in underwritten offerings, provide the information below:

i. Full name of dealer: ____

ii. SEC file number: ____

iii. CRD number: ____

iv. LEI, if any: ____

v. State, if applicable: _____

vi. Foreign country, if applicable: ____

vii. Total value of purchases and sales (excluding maturing securities) with Fund: ____

b. Aggregate value of principal purchase/sale transactions of Fund during the reporting period: ____

Instructions to Item C.16 and Item C.17.

To help Registrants distinguish between agency and principal transactions, and to promote consistent reporting of the information required by these items, the following criteria should be used:

1. If a security is purchased or sold in a transaction for which the confirmation specifies the amount of the commission to be paid by the Registrant, the transaction should be considered an agency transaction and included in determining the answers to Item C.16.

2. If a security is purchased or sold in a transaction for which the confirmation specifies only the net amount to be paid or received by the Registrant and such net amount is equal to the market value of the security at the time of the transaction, the transaction should be considered a principal transaction and included in determining the amounts in Item C.17.

3. If a security is purchased by the Registrant in an underwritten offering, the acquisition should be considered a principal transaction and included in answering Item C.17 even though the Registrant has knowledge of the amount the underwriters are receiving from the issuer.
4. If a security is sold by the Registrant in a tender offer, the sale should be considered a principal transaction and included in answering Item C.17 even though the Registrant has knowledge of the amount the offeror is paying to soliciting brokers or dealers.
5. If a security is purchased directly from the issuer (such as a bank CD), the purchase should be considered a principal transaction and included in answering Item C.17.
6. The value of called or maturing securities should not be counted in either agency or principal transactions and should not be included in determining the amounts shown in Item C.16 and Item C.17. This means that the acquisition of a security may be included, but it is possible that its disposition may not be included. Disposition of a repurchase agreement at its expiration date should not be included.
7. The purchase or sales of securities in transactions not described in paragraphs (1) through (6) above should be evaluated by the Fund based upon the guidelines established in those paragraphs and classified accordingly. The agents considered in Item C.16 may be persons or companies not registered under the Exchange Act as securities brokers. The persons or companies from whom the investment company purchased or to whom it sold portfolio instruments on a principal basis may be persons or entities not registered under the Exchange Act as securities dealers.

Item C.18. Payments for brokerage and research. During the reporting period, did the Fund pay commissions to broker-dealers for "brokerage and research services" within the meaning of section 28(e) of the Exchange Act (15 U.S.C. 78bb)? [Y/N]

Item C.19. Average net assets.

a. Provide the Fund's (other than a money market fund's) monthly average net assets during the reporting period: ___

b. Provide the money market fund's daily average net assets during the reporting period: ___

Part D: Additional Questions for Closed-End Management Investment Companies and Small Business Investment Companies

Item D.1. Securities issued by Registrant. Indicate by checking below which of the following securities have been issued by the Registrant. Indicate all that apply.

a. Common stock: ____

i. Title of class: ____

ii. Exchange where listed: ____

iii. Ticker symbol: ____

b. Preferred stock: ____

i. Title of class: ____

ii. Exchange where listed: ____

iii. Ticker symbol: ____

c. Warrants: ____

i. Title of class: ____

ii. Exchange where listed: ____

iii. Ticker symbol: ____

d. Convertible securities: ____

i. Title of class: ____

ii. Exchange where listed: ____

iii. Ticker symbol: ____

e. Bonds: ____

i. Title of class: ____

ii. Exchange where listed: ____

iii. Ticker symbol: ____

f. Other: ____. If other, describe: ______.

i. Title of class: ____

ii. Exchange where listed: ____

iii. Ticker symbol: ____

Instruction. For any security issued by the Fund that is not listed on a securities exchange but that has a ticker symbol, provide that ticker symbol.

Item D.2. Rights offerings.

a. Did the Fund make a rights offering with respect to any type of security during the reporting period? [Y/N] If yes, answer the following as to each rights offering made by the Fund:

b. Type of security.

i. Common stock: ____

ii. Preferred stock: ____

iii. Warrants: ____

iv. Convertible securities: ____

v. Bonds: ____

vi. Other: ____. If other, describe: ______.

c. Percentage of participation in primary rights offering: ___

Instruction. For Item D.2.c., the "percentage of participation in primary rights offering" is calculated as the percentage of subscriptions exercised during the primary rights offering relative to the amount of securities available for primary subscription.

Item D.3. Secondary offerings.

a. Did the Fund make a secondary offering during the reporting period? [Y/N]

b. If yes, indicate by checking below the type(s) of security. Indicate all that apply.

i. Common stock: ____

ii. Preferred stock: ____

iii. Warrants: ____

iv. Convertible securities: ____

v. Bonds: ____

vi. Other: ____. If other, describe: ______.

Item D.4. Repurchases.

a. Did the Fund repurchase any outstanding securities issued by the Fund during the reporting period? [Y/N]

b. If yes, indicate by checking below the type(s) of security. Indicate all that apply:

i. Common stock: ____

ii. Preferred stock: ___

iii. Warrants: ____

iv. Convertible securities: ____

v. Bonds: ____

vi. Other: ____. If other, describe: ______.

Item D.5. Default on long-term debt.

a. Were any issues of the Fund's long-term debt in default at the close of the reporting period with respect to the payment of principal, interest, or amortization? [Y/N] If yes, provide the following:

i. Nature of default: ____

ii. Date of default: ____

iii. Amount of default per $1,000 face amount: ____

iv. Total amount of default: ____

Instruction. The term "long-term debt" means debt with a period of time from date of initial issuance to maturity of one year or greater.

Item D.6. Dividends in arrears.

a. Were any accumulated dividends in arrears on securities issued by the Fund at the close of the reporting period? [Y/N] If yes, provide the following:

i. Title of issue: ____

ii. Amount per share in arrears: ____

Instruction. The term "dividends in arrears" means dividends that have not been declared by the board of directors or other governing body of the Fund at the end of each relevant dividend period set forth in the constituent instruments establishing the rights of the stockholders.

Item D.7. Modification of securities. Have the terms of any constituent instruments defining the rights of the holders of any class of the Registrant's securities been materially modified? [Y/N] If yes, provide the attachment required by Item G.1.b.ii.

Item D.8. Management fee (closed-end companies only). Provide the Fund's advisory fee as of the end of the reporting period as a percentage of net assets: ____

Instruction. Base the percentage on amounts incurred during the reporting period.

Item D.9. Net annual operating expenses. Provide the Fund's net annual operating expenses as of the end of the reporting period (net of any waivers or reimbursements) as a percentage of net assets: ____

Item D.10. Market price. Market price per share at end of reporting period: ____

Instruction. Respond to this item with respect to common stock issued by the Registrant only.

Item D.11. Net asset value. Net asset value per share at end of reporting period: ____

Instruction. Respond to this item with respect to common stock issued by the Registrant only.

Item D.12. Investment advisers (small business investment companies only).

a. Provide the following information about each investment adviser (other than a sub-adviser) of the Fund:

i. Full name: ____

ii. SEC file number (*e.g.*, 801-): ____

iii. CRD number: _____

iv. LEI, if any: _____

v. State, if applicable: _____

vi. Foreign country, if applicable: ____

vii. Was the investment adviser hired during the reporting period? [Y/N]

1. If the investment adviser was hired during the reporting period, indicate the investment adviser's start date: ____

b. If an investment adviser (other than a sub-adviser) to the Fund was terminated during the reporting period, provide the following with respect to each investment adviser:

i. Full name: ____

ii. SEC file number (*e.g.*, 801-): ____

iii. CRD number: ____

iv. LEI, if any: ____

v. State, if applicable: _____

vi. Foreign country, if applicable: ____

vii. Termination date: ____

c. For each sub-adviser to the Fund, provide the information requested:

i. Full name: ____

ii. SEC file number (*e.g.*, 801-): ____

iii. CRD number: _____

iv. LEI, if any: _____

v. State, if applicable: _____

vi. Foreign country, if applicable: ____

vii. Is the sub-adviser an affiliated person of the Fund's investment adviser(s)? [Y/N]

viii. Was the sub-adviser hired during the reporting period? [Y/N]

1. If the sub-adviser was hired during the reporting period, indicate the sub-adviser's start date: ____

d. If a sub-adviser was terminated during the reporting period, provide the following with respect to each such sub-adviser:

i. Full name: ____

ii. SEC file number (*e.g.*, 801-): ____

iii. CRD number: ____

iv. LEI, if any: ____

v. State, if applicable: _____

vi. Foreign country, if applicable: ____

vii. Termination date: ____

Item D.13. Transfer agents (small business investment companies only).

a. Provide the following information about each person providing transfer agency services to the Fund:

i. Full name: ____

ii. SEC file number (e.g., 84- or 85-): ____

iii. LEI, if any: ____

iv. State, if applicable: ____

v. Foreign country, if applicable: ____

vi. Is the transfer agent an affiliated person of the Fund or its investment adviser(s)? [Y/N]

vii. Is the transfer agent a sub-transfer agent? [Y/N]

b. Has a transfer agent been hired or terminated during the reporting period? [Y/N]

Item D.14. Custodians (small business investment companies only).

a. Provide the following information about each person that provided custodial services to the Fund during the reporting period:

i. Full name: ____

ii. LEI, if any: ____

iii. State, if applicable: ____

iv. Foreign country, if applicable: ____

v. Is the custodian an affiliated person of the Fund or its investment adviser(s)? [Y/N]

vi. Is the custodian a sub-custodian? [Y/N]

vii. With respect to the custodian, check below to indicate the type of custody:

1. Bank — section 17(f)(1) (15 U.S.C. 80a-17(f)(1)): ____
2. Member national securities exchange — rule 17f-1 (17 CFR 270.17f-1): ____
3. Self — rule 17f-2 (17 CFR 270.17f-2): ____
4. Securities depository — rule 17f-4 (17 CFR 270.17f-4): ____
5. Foreign custodian — rule 17f-5 (17 CFR 270.17f-5): ____
6. Futures commission merchants and commodity clearing organizations — rule 17f-6 (17 CFR 270.17f-6): ____
7. Foreign securities depository — rule 17f-7 (17 CFR 270.17f-7): ____
8. Insurance company sponsor — rule 26a-2 (17 CFR 270.26a-2): ____
9. Other: ____. If other, describe: ______.

b. Has a custodian been hired or terminated during the reporting period? [Y/N]

Part E: Additional Questions for Exchange-Traded Funds and Exchange-Traded Managed Funds

Item E.1. Exchange.

a. Exchange where listed. Provide the name of the national securities exchange on which the Fund's shares are listed: ____

b. Ticker. Provide the Fund's ticker symbol: ____

Item E.2. Authorized participants. For each authorized participant of the Fund, provide the following information:

a. Full name: ____

b. SEC file number: ____

c. CRD number: ____

d. LEI, if any: ____

e. The dollar value of the Fund shares the authorized participant purchased from the Fund during the reporting period: ____

f. The dollar value of the Fund shares the authorized participant redeemed during the reporting period: ____

g. Did the Fund require that an authorized participant post collateral to the Fund or any of its designated service providers in connection with the purchase or redemption of Fund shares during the reporting period? [Y/N]

Instruction. The term "authorized participant" means a broker-dealer that is also a member of a clearing agency registered with the Commission or a DTC Participant, and which has a written agreement with the Exchange-Traded Fund or Exchange-Traded Managed Fund or one of its designated service providers that allows the authorized participant to place orders to purchase or redeem creation units of the Exchange-Traded Fund or Exchange-Traded Managed Fund.

Item E.3. Creation units.

a. Number of Fund shares required to form a creation unit as of the last business day of the reporting period: ____

b. Based on the dollar value paid for each creation unit purchased by authorized participants during the reporting period, provide:

i. The average percentage of that value composed of cash: ___%

ii. The standard deviation of the percentage of that value composed of cash: ___%

iii. The average percentage of that value composed of non-cash assets and other positions exchanged on an "in-kind" basis: ___%

iv. The standard deviation of the percentage of that value composed of non-cash assets and other positions exchanged on an "in-kind" basis: ___%

c. Based on the dollar value paid for creation units redeemed by authorized participants during the reporting period, provide:

i. The average percentage of that value composed of cash: ___%

ii. The standard deviation of the percentage of that value composed of cash: ___%

iii. The average percentage of that value composed of non-cash assets and other positions exchanged on an "in-kind" basis: ___%

iv. The standard deviation of the percentage of that value composed of non-cash assets and other positions exchanged on an "in-kind" basis: ___%

d. For creation units purchased by authorized participants during the reporting period, provide:

i. The average transaction fee charged to an authorized participant for transacting in the creation units, expressed as:

1. Dollars per creation unit, if charged on that basis: $___

2. Dollars for one or more creation units purchased on the same day, if charged on that basis: $___

3. A percentage of the value of each creation unit, if charged on that basis: $___

ii. The average transaction fee charged to an authorized participant for transacting in those creation units the consideration for which was fully or partially composed of cash, expressed as:

1. Dollars per creation unit, if charged on that basis: $___
2. Dollars for one or more creation units purchased on the same day, if charged on that basis: $___
3. A percentage of the cash in each creation unit, if charged on that basis: ___%

e. For creation units redeemed by authorized participants during the reporting period, provide:

i. The average transaction fee charged to an authorized participant for transacting in the creation units, expressed as:

1. Dollars per creation unit, if charged on that basis: $___
2. Dollars for one or more creation units redeemed on the same day, if charged on that basis: $___
3. A percentage of the value of each creation unit, if charged on that basis: $___

ii. The average transaction fee charged to an authorized participant for transacting in those creation units the consideration for which was fully or partially composed of cash, expressed as:

1. Dollars per creation unit, if charged on that basis: $___
2. Dollars for one or more creation units redeemed on the same day, if charged on that basis: $___
3. A percentage of the cash in each creation unit, if charged on that basis: ___%

Instruction. The term "creation unit" means a specified number of Exchange-Traded Fund or Exchange-Traded Managed Fund shares that the fund will issue to (or redeem from) an authorized participant in exchange for the deposit (or delivery) of specified securities, cash, and other assets or positions.

Item E.4. Benchmark return difference (unit investment trusts only).

a. If the Fund is an Index Fund as defined in Item C.3 of this Form, provide the following information:

i. Is the index whose performance the Fund tracks, constructed:

1. By an affiliated person of the fund? [Y/N]
2. Exclusively for the fund? [Y/N]

ii. The annualized difference between the Fund's total return during the reporting period and the index's return during the reporting period (i.e., the Fund's total return less the index's return):

1. Before Fund fees and expenses: ____

2. After Fund fees and expenses (*i.e.*, net asset value): ____

iii. The annualized standard deviation of the daily difference between the Fund's total return and the index's return during the reporting period:

1. Before Fund fees and expenses: ____

2. After Fund fees and expenses (*i.e.*, net asset value): ____

Part F: Additional Questions for Unit Investment Trusts

Item F.1. Depositor. Provide the following information about each depositor:

a. Full name: ____

b. CRD number, if any: ____

c. LEI, if any: ____

d. State, if applicable: ____

e. Foreign country, if applicable: ____

f. Full name of ultimate parent of depositor: ____

Item F.2. Administrators.

a. Provide the following information about each administrator of the Fund:

i. Full name: ____

ii. LEI, if any, or provide and describe other identifying number: ____

iii. State, if applicable: ____

iv. Foreign country, if applicable: ____

v. Is the administrator an affiliated person of the Fund or depositor? [Y/N]

vi. Is the administrator a sub-administrator? [Y/N]

b. Has an administrator been hired or terminated during the reporting period? [Y/N]

Item F.3. Insurance company separate accounts. Is the Registrant a separate account of an insurance company? [Y/N]

Instruction. If the answer to Item F.3 is yes, respond to Item F.12 through Item F.17. If the answer to Item F.3 is no, respond to Item F.4 through Item F.11, and Item F.17.

Item F.4. Sponsor. Provide the following information about each sponsor:

a. Full name: ____

b. CRD number, if any: ____

c. LEI, if any: ____

d. State, if applicable: ____

e. Foreign country, if applicable: ____

Item F.5. Trustees. Provide the following information about each trustee:

a. Full name: ____

b. State, if applicable: ____

c. Foreign country, if applicable: ____

Item F.6. Securities Act registration.

a. Provide the number of series existing at the end of the reporting period that had outstanding securities registered under the Securities Act: ____

b. Provide the CIK for each of these existing series: ____

Item F.7. New series.

a. Number of new series for which registration statements under the Securities Act became effective during the reporting period: ____

b. Total aggregate value of the portfolio securities on the date of deposit for the new series: ____

Item F.8. Series with a current prospectus. Number of series for which a current prospectus was in existence at the end of the reporting period: _____

Item F.9. Number of existing series for which additional units were registered under the Securities Act.

a. Number of existing series for which additional units were registered under the Securities Act during the reporting period: ____

b. Total value of additional units: ____

Item F.10. Value of units placed in portfolios of subsequent series. Total value of units of prior series that were placed in the portfolios of subsequent series during the reporting period (the value of these units is to be measured on the date they were placed in the subsequent series): ____

Item F.11. Assets. Provide the total assets of all series of the Registrant combined as of the end of the reporting period: ____

Item F.12. Series ID of separate account. Series identification number: ____

Item F.13. Number of contracts. For each security that has a contract identification number assigned pursuant to rule 313 of Regulation S-T (17 CFR 232.313), provide the number of individual contracts that are in force at the end of the reporting period: ____

Instruction. In the case of group contracts, each participant certificate should be counted as an individual contract.

Item F.14. Information on the security issued through the separate account. For each security that has a contract identification number assigned pursuant to rule 313 of Regulation S-T (17 CFR 232.313), provide the following information as of the end of the reporting period:

a. Full name of the security: ____

b. Contract identification number: ____

c. Total assets attributable to the security: ____

d. Number of contracts sold during the reporting period: ____

e. Gross premiums received during the reporting period: ____

f. Gross premiums received pursuant to section 1035 exchanges: ____

g. Number of contracts affected in connection with premiums paid in pursuant to section 1035 exchanges: ____

h. Amount of contract value redeemed during the reporting period: ____

i. Amount of contract value redeemed pursuant to section 1035 exchanges: ____

j. Number of contracts affected in connection with contract value redeemed pursuant to section 1035 exchanges: ____

Instruction. In the case of group contracts, each participant certificate should be counted as an individual contract.

Item F.15. Reliance on rule 6c-7. Did the Registrant rely on rule 6c-7 under the Act (17 CFR 270.6c-7) during the reporting period? [Y/N]

Item F.16. Reliance on rule 11a-2. Did the Registrant rely on rule 11a-2 under the Act (17 CFR 270.11a-2) during the reporting period? [Y/N]

Item F.17. Divestments under section 13(c) of the Act.

a. If the Registrant has divested itself of securities in accordance with section 13(c) of the Act (15 U.S.C. 80a-13(c)) since the end of the reporting period immediately prior to the current reporting period and before filing of the current report, disclose the information requested below for each such divested security:

   i. Full name of the issuer: ____

ii. Ticker symbol: ____

iii. CUSIP number: ____

iv. Total number of shares or, for debt securities, principal amount divested: ____

v. Date that the securities were divested: ____

vi. Name of the statute that added the provision of section 13(c) in accordance with which the securities were divested: ____

b. If the Registrant holds any securities of the issuer on the date of the filing, provide the information requested below:

i. Ticker symbol: ____

ii. CUSIP number: ____

iii. Total number of shares or, for debt securities, principal amount held on the date of the filing: ____

Instructions.

This item may be used by a unit investment trust that divested itself of securities in accordance with section 13(c). A unit investment trust is not required to include disclosure under this item; however, the limitation on civil, criminal, and administrative actions under section 13(c) does not apply with respect to a divestment that is not disclosed under this item.

If a unit investment trust divests itself of securities in accordance with section 13(c) during the period that begins on the fifth business day before the date of filing a report on Form N-CEN and ends on the date of filing, the unit investment trust may disclose the divestment in either the report or an amendment thereto that is filed not later than five business days after the date of filing the report.

For purposes of determining when a divestment should be reported under this item, if a unit investment trust divests its holdings in a particular security in a related series of transactions, the unit investment trust may deem the divestment to occur at the time of the final transaction in the series. In that case, the unit investment trust should report each transaction in the series on a single report on Form N-CEN, but should separately state each date on which securities were divested and the total number of shares or, for debt securities, principal amount divested, on each such date.

Item F.17 shall terminate one year after the first date on which all statutory provisions that underlie section 13(c) have terminated.

Part G: Attachments

Item G.1. Attachments.

a. Attachments applicable to all Registrants. All Registrants shall file the following attachments, as applicable, with the current report. Indicate the attachments filed with the current report by checking the applicable items below:

i. Legal proceedings: ____

ii. Provision of financial support: ____

iii. Independent public accountant's report on internal control (management investment companies other than small business investment companies only): ____

iv. Change in accounting principles and practices: ____

v. Information required to be filed pursuant to exemptive orders: ____

vi. Other information required to be included as an attachment pursuant to Commission rules and regulations: ____

Instructions.

1. Item G.1.a.i. Legal proceedings.

(a) If the Registrant responded "YES" to Item B.11.a., provide a brief description of the proceedings. As part of the description, provide the case or docket number (if any), and the full names of the principal parties to the proceeding.

(b) If the Registrant responded "YES" to Item B.11.b., identify the proceeding and give its date of termination.

2. Item G.1.a.ii. Provision of financial support. If the Registrant responded "YES" to Item B.14., provide the following information (unless the Registrant is a Money Market Fund):

(a) Description of nature of support.

(b) Person providing support.

(c) Brief description of relationship between the person providing support and the Registrant.

(d) Date support provided.

(e) Amount of support.

(f) Security supported (if applicable). Disclose the full name of the issuer, the title of the issue (including coupon or yield, if applicable) and at least two identifiers, if available (*e.g.*, CIK, CUSIP, ISIN, LEI).

(g) Value of security supported on date support was initiated (if applicable).

(h) Brief description of reason for support.

(i) Term of support.

(j) Brief description of any contractual restrictions relating to support.

3. Item G.1.a.iii. Independent public accountant's report on internal control (management investment companies other than small business investment companies only). Each management investment company shall furnish a report of its independent public accountant on the company's system of internal accounting controls. The accountant's report shall be based on the review, study and evaluation of the accounting system, internal accounting controls, and procedures for safeguarding securities made during the audit of the financial statements for the reporting period. The report should disclose any material weaknesses in: (a) the accounting system; (b) system of internal accounting control; or (c) procedures for safeguarding securities which exist as of the end of the Registrant's fiscal year. The accountant's report shall be furnished as an exhibit to the form and shall: (1) be addressed to the Registrant's shareholders and board of directors; (2) be dated; (3) be signed manually; and (4) indicate the city and state where issued.

   Attachments that include a report that discloses a material weakness should include an indication by the Registrant of any corrective action taken or proposed.

   The fact that an accountant's report is attached to this form shall not be regarded as acknowledging any review of this form by the independent public accountant.

4. Item G.1.a.iv. Change in accounting principles and practices. If the Registrant responded "YES" to Item B.21, provide an attachment that describes the change in accounting principles or practices, or the change in the method of applying any such accounting principles or practices. State the date of the change and the reasons therefor. A letter from the Registrant's independent accountants, approving or otherwise commenting on the change, shall accompany the description.

5. Item G.1.a.v. Information required to be filed pursuant to exemptive orders. File as an attachment any information required to be reported on Form N-CEN or any predecessor form to Form N-CEN (e.g., Form N-SAR) pursuant to exemptive orders issued by the Commission and relied on by the Registrant.

6. Item G.1.a.vi. Other information required to be included as an attachment pursuant to Commission rules and regulations. File as an attachment any other information required to be included as an attachment pursuant to Commission rules and regulations.

b. Attachments to be filed by closed-end management investment companies and small business investment companies. Registrants shall file the following attachments, as applicable, with the current report. Indicate the attachments filed with the current report by checking the applicable items below.

i. Material amendments to organizational documents: ____

ii. Instruments defining the rights of the holders of any new or amended class of securities: ____

iii. New or amended investment advisory contracts: ____

iv. Information called for by Item 405 of Regulation S-K: ____

v. Code of ethics (small business investment companies only): ____

Instructions.

7. Item G.1.b.i. Material amendments to organizational documents. Provide copies of all material amendments to the Registrant's charters, by-laws, or other similar organizational documents that occurred during the reporting period.

8. Item G.1.b.ii. Instruments defining the rights of the holders of any new or amended class of securities. Provide copies of all constituent instruments defining the rights of the holders of any new or amended class of securities for the current reporting period. If the Registrant has issued a new class of securities other than short-term paper, furnish a description of the class called for by the applicable item of Form N-2. If the constituent instruments defining the rights of the holders of any class of the Registrant's securities have been materially modified during the reporting period, give the title of the class involved and state briefly the general effect of the modification upon the rights of the holders of such securities.

9. Item G.1.b.iii. New or amended investment advisory contracts. Provide copies of any new or amended investment advisory contracts that became effective during the reporting period.

10. Item G.1.b.iv. Information called for by Item 405 of Regulation S-K. Provide the information called for by Item 405 of Regulation S-K concerning failure of certain closed-end management investment company and small business investment company shareholders to file certain ownership reports.

11. Item G.1.b.v. Code of ethics (small business investment companies only).

(a) (1) Disclose whether, as of the end of the period covered by the report, the Registrant has adopted a code of ethics that applies to the Registrant's principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, regardless of whether these individuals are employed by the Registrant or a third party. If the Registrant has not adopted such a code of ethics, explain why it has not done so.

(2) For purposes of this instruction, the term "code of ethics" means written standards that are reasonably designed to deter wrongdoing and to promote: (i) honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships; (ii) full, fair, accurate, timely, and understandable disclosure in reports and documents that a Registrant files with, or submits to, the Commission and in other public communications made by the Registrant; (iii) compliance with applicable governmental laws, rules, and regulations; (iv) the prompt internal reporting of violations of the code to an appropriate person or persons identified in the code; and (v) accountability for adherence to the code.

(3) The Registrant must briefly describe the nature of any amendment, during the period covered by the report, to a provision of its code of ethics that applies to the Registrant's principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, regardless of whether these individuals are employed by the Registrant or a third party, and that relates to any element of the code of ethics definition enumerated in paragraph (a)(2) of this instruction. The Registrant must file a copy of any such amendment as an exhibit to this report on Form N-CEN, unless the Registrant has elected to satisfy paragraph (a)(6) of this instruction by posting its code of ethics on its website pursuant to paragraph (a)(6)(ii) of this Instruction, or by undertaking to provide its code of ethics to any person without charge, upon request, pursuant to paragraph (a)(6)(iii) of this instruction.

(4) If the Registrant has, during the period covered by the report, granted a waiver, including an implicit waiver, from a provision of the code of ethics to the Registrant's principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, regardless of whether these individuals are employed by the Registrant or a third party, that relates to one or more of the items set forth in paragraph (a)(2) of this instruction, the Registrant must briefly describe the nature of the waiver, the name of the person to whom the waiver was granted, and the date of the waiver.

(5) If the Registrant intends to satisfy the disclosure requirement under paragraph (a)(3) or (4) of this instruction regarding an amendment to, or a waiver from, a provision of its code of ethics that applies to the Registrant's principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions and that relates to any element of the code of ethics definition enumerated in paragraph (a)(2) of this instruction by posting such information on its Internet website, disclose the Registrant's Internet address and such intention.

(6) The Registrant must: (i) file with the Commission a copy of its code of ethics that applies to the Registrant's principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, as an exhibit to its report on this Form N-CEN; (ii) post the text of such code of ethics on its Internet website and disclose, in its most recent report on this Form N-CEN, its Internet address and the fact that it has posted such code of ethics on its Internet website; or (iii) undertake in its most recent report on this Form N-CEN to provide to any person without charge, upon request, a copy of such code of ethics and explain the manner in which such request may be made.

(7) A Registrant may have separate codes of ethics for different types of officers. Furthermore, a "code of ethics" within the meaning of paragraph (a)(2) of this instruction may be a portion of a broader document that addresses additional topics or that applies to more persons than those specified in paragraph (a)(1) of this instruction. In satisfying the requirements of paragraph (a)(6) of this instruction, a Registrant need only file, post, or provide the portions of a broader document that constitutes a "code of ethics" as defined in paragraph (a)(2) of this instruction and that apply to the persons specified in paragraph (a)(1) of this instruction.

(8) If a Registrant elects to satisfy paragraph (a)(6) of this instruction by posting its code of ethics on its Internet website pursuant to paragraph (a)(6)(ii), the code of ethics must remain accessible on its website for as long as the Registrant remains subject to the requirements of this instruction and chooses to comply with this instruction by posting its code on its Internet website pursuant to paragraph (a)(6)(ii).

(9) The Registrant does not need to provide any information pursuant to paragraphs (a)(3) and (4) of this instruction if it discloses the required information on its Internet website within five business days following the date of the amendment or waiver and the Registrant has disclosed in its most recently filed report on this Form N-CEN its Internet website address and intention to provide disclosure in this manner. If the amendment or waiver occurs on a Saturday, Sunday, or holiday on which the Commission is not open for business, then the five business day period shall begin to run on and include the first business day thereafter. If the Registrant elects to disclose this information through its website, such information must remain available on the website for at least a 12-month period. The Registrant must retain the information for a period of not less than six years following the end of the fiscal year in which the amendment or waiver occurred. Upon request, the Registrant must furnish to the Commission or its staff a copy of any or all information retained pursuant to this requirement.

(10) The Registrant does not need to disclose technical, administrative, or other non-substantive amendments to its code of ethics.

(11) For purposes of this instruction: (i) the term "waiver" means the approval by the Registrant of a material departure from a provision of the code of ethics; and (ii) the term "implicit waiver" means the Registrant's failure to take action within a reasonable period of time regarding a material departure from a provision of the code of ethics that has been made known to an executive officer, as defined in rule 3b-7 under the Exchange Act (17 CFR 240.3b-7), of the Registrant.

(b) (1) Disclose that the Registrant's board of directors has determined that the Registrant either: (i) has at least one audit committee financial expert serving on its audit committee; or (ii) does not have an audit committee financial expert serving on its audit committee.

(2) If the Registrant provides the disclosure required by paragraph (b)(1)(i) of this instruction, it must disclose the name of the audit committee financial expert and whether that person is "independent." In order to be considered "independent" for purposes of this instruction, a member of an audit committee may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee: (i) accept directly or indirectly any consulting, advisory, or other compensatory fee from the issuer; or (ii) be an "interested person" of the investment company as defined in Section 2(a)(19) of the Act (15 U.S.C. 80a-2(a)(19)).

(3) If the Registrant provides the disclosure required by paragraph (b)(1)(ii) of this instruction, it must explain why it does not have an audit committee financial expert.

(4) If the Registrant's board of directors has determined that the Registrant has more than one audit committee financial expert serving on its audit committee, the Registrant may, but is not required to, disclose the names of those additional persons. A Registrant choosing to identify such persons must indicate whether they are independent pursuant to paragraph (b)(2) of this instruction.

(5) For purposes of this instruction, an "audit committee financial expert" means a person who has the following attributes: (i) an understanding of generally accepted accounting principles and financial statements; (ii) the ability to assess the general application of such principles in connection with the accounting for estimates, accruals, and reserves; (iii) experience preparing, auditing, analyzing, or evaluating financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the Registrant's financial statements, or experience actively supervising one or more persons engaged in such activities; (iv) an understanding of internal controls and procedures for financial reporting; and (v) an understanding of audit committee functions.

(6) A person shall have acquired such attributes through: (i) education and experience as a principal financial officer, principal accounting officer, controller, public accountant, or auditor or experience in one or more positions that involve the performance of similar functions; (ii) experience actively supervising a principal financial officer, principal accounting officer, controller, public accountant, auditor, or person performing similar functions; (iii) experience overseeing or assessing the performance of companies or public accountants with respect to the preparation, auditing, or evaluation of financial statements; or (iv) other relevant experience.

(7) (i) A person who is determined to be an audit committee financial expert will not be deemed an "expert" for any purpose, including without limitation for purposes of Section 11 of the Securities Act (15 U.S.C. 77k), as a result of being designated or identified as an audit committee financial expert pursuant to this instruction; (ii) the designation or identification of a person as an audit committee financial expert pursuant to this instruction does not impose on such person any duties, obligations, or liability that are greater than the duties, obligations, and liability imposed on such person as a member of the audit committee and board of directors in the absence of such designation or identification; (iii) the designation or identification of a person as an audit committee financial expert pursuant to this instruction does not affect the duties, obligations, or liability of any other member of the audit committee or board of directors.

(8) If a person qualifies as an audit committee financial expert by means of having held a position described in paragraph (b)(6)(iv) of this Instruction, the Registrant shall provide a brief listing of that person's relevant experience.

SIGNATURES

Pursuant to the requirements of the Investment Company Act of 1940, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

____
(Registrant)

Date ______________________________________

____
(Signature)*

*Print full name and title of the signing officer under his/her signature.

BILLING CODE 8011–01–P

■ 66. Effective January 17, 2017, Form N–CSR (referenced in § 274.128) is amended as follows:

■ a. In Item 2(c) and 2(f), remove the phrase ''Item 12(a)(1)'' and add in its place ''Item 13(a)(1)'';

■ b. In Item 11(b), remove the phrase ''the second fiscal quarter of'';

■ c. Revise the instruction to Item 11(b);

■ d. Redesignate Item 12 as Item 13;

■ e. Add new Item 12;

■ f. In paragraph 4(d) of the certification exhibits listed in Item 13, remove the phrase ''the second fiscal quarter of the'';

■ g. In Item 13, revise the instruction to paragraph (a)(2);

■ h. In Item 13, add paragraph (a)(4).

The additions and revisions read as follows:

Note: The text of Form N–CSR does not, and these amendments will not, appear in the *Code of Federal Regulations.*

Form N–CSR

* * * * *

Item 11. Controls and Procedures.

(b) * * *

Instruction to paragraph (b). Until the date that the registrant has filed its first report on Form N–PORT [17 CFR 270.150], the registrant's disclosures required by this Item are limited to any change in the registrant's internal control over financial reporting that occurred during the registrant's last fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

* * * * *

Item 12. Disclosure of Securities Lending Activities for Closed-End Management Investment Companies

(a) If the registrant is a closed-end management investment company, provide the following dollar amounts of income and fees/compensation related to the securities lending activities of the registrant during its most recent fiscal year:

(1) Gross income from securities lending activities;

(2) All fees and/or compensation for each of the following securities lending activities and related services: Any share of revenue generated by the securities lending program paid to the securities lending agent(s) (''revenue split''); fees paid for cash collateral management services (including fees deducted from a pooled cash collateral reinvestment vehicle) that are not included in the revenue split; administrative fees that are not included in the revenue split; fees for indemnification that are not included in the revenue split; rebates paid to borrowers; and any other fees relating to the securities lending program that are not included in the revenue split, including a description of those other fees;

(3) The aggregate fees/compensation disclosed pursuant to paragraph (2); and

(4) Net income from securities lending activities (*i.e.,* the dollar amount in paragraph (1) minus the dollar amount in paragraph (3)).

Instruction to paragraph (a). If a fee for a service is included in the revenue split, state that the fee is ''included in the revenue split.''

(b) If the registrant is a closed-end management investment company, describe the services provided to the registrant by the securities lending agent in the registrant's most recent fiscal year.

* * * * *

Item 13. Exhibits.

(a) * * *

(2) * * *

Instruction to paragraph (a)(2). Until the date that the registrant has filed its first report on Form N–PORT [17 CFR 270.150], in the certification required by Item 13(a)(2), the registrant's certifying officers must certify that they have disclosed in the report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

* * * * *

(4) Change in the registrant's independent public accountant. Provide the information called for by Item 4 of Form 8–K under the Exchange Act (17 CFR 249.308). Unless otherwise specified by Item 4, or related to and necessary for a complete understanding of information not previously disclosed, the information should relate to events occurring during the reporting period.

§ 274.130 [Removed and Reserved]

■ 67. Effective August 1, 2019, § 274.130 is removed and reserved.

■ 68. Effective January 17, 2017, § 274.150 is added to read as follows:

§ 274.150 Form N–PORT, Monthly portfolio holdings report.

(a) Except as provided in paragraph (b) of this section, this form shall be used by registered management investment companies or exchange-traded funds organized as unit investment trusts, or series thereof, to file reports pursuant to § 270.30b1–9 of this chapter not later than 30 days after the end of each month.

(b) Form N–PORT shall not be filed by a registered open-end management investment company that is regulated as a money market fund under § 270.2a–7 of this chapter or a small business investment company registered on Form N–5 (§§ 239.24 and 274.5 of this chapter), or series thereof.

Note: The text of Form N–PORT will not appear in the *Code of Federal Regulations.*

FORM N-PORT
MONTHLY PORTFOLIO INVESTMENTS REPORT

Form N-PORT is to be used by a registered management investment company, or an exchange-traded fund organized as a unit investment trust, or series thereof ("Fund"), other than a Fund that is regulated as a money market fund ("money market fund") under rule 2a-7 under the Investment Company Act of 1940 [15 U.S.C. 80a] ("Act") (17 CFR 270.2a-7) or a small business investment company ("SBIC") registered on Form N-5 (17 CFR 239.24 and 274.5), to file monthly portfolio holdings reports pursuant to rule 30b1-9 under the Act (17 CFR 270.30b1-9). The Commission may use the information provided on Form N-PORT in its regulatory, enforcement, examination, disclosure review, inspection, and policymaking roles.

GENERAL INSTRUCTIONS

A. Rule as to Use of Form N-PORT

Form N-PORT is the reporting form that is to be used for monthly reports of Funds other than money market funds and SBICs under section 30(b) of the Act, as required by rule 30b1-9 under the Act (17 CFR 270.30b1-9). Funds must report information about their portfolios and each of their portfolio holdings as of the last business day, or last calendar day, of the month. A registered investment company that has filed a registration statement with the Commission registering its securities for the first time under the Securities Act of 1933 is relieved of this reporting obligation with respect to any reporting period or portion thereof prior to the date on which that registration statement becomes effective or is withdrawn.

If the due date falls on a weekend or holiday, the filing deadline will be the next business day. Reports on Form N-PORT must disclose portfolio information as calculated by the fund for the reporting period's ending net asset value (commonly, and as permitted by rule 2a-4, the first business day following the trade date). Reports on Form N-PORT must be filed with the Commission no later than 30 days after the end of each month. Each Fund is required to file a separate report.

A Fund may file an amendment to a previously filed report at any time, including an amendment to correct a mistake or error in a previously filed report. A Fund that files an amendment to a previously filed report must provide information in response to all items of Form N-PORT, regardless of why the amendment is filed.

B. Application of General Rules and Regulations

The General Rules and Regulations under the Act contain certain general requirements that are applicable to reporting on any form under the Act. These general requirements shall be carefully read and observed in the preparation and filing of reports on this Form, except that any provision in the Form or in these instructions shall be controlling.

C. Filing of Reports

Reports must be filed electronically using the Commission's Electronic Data Gathering, Analysis, and Retrieval ("EDGAR") system in accordance with Regulation S-T. Consult the EDGAR Filer Manual and Appendices for EDGAR filing instructions.

D. Paperwork Reduction Act Information

A Fund is not required to respond to the collection of information contained in Form N-PORT unless the form displays a currently valid Office of Management and Budget ("OMB") control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to the Secretary, Securities and Exchange Commission, Washington, DC 20549. OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. 3507.

E. Definitions

References to sections and rules in this Form N-PORT are to the Act, unless otherwise indicated. Terms used in this Form N-PORT have the same meanings as in the Act or related rules, unless otherwise indicated.

As used in this Form N-PORT, the terms set out below have the following meanings:

"Class" means a class of shares issued by a Fund that has more than one class that represents interests in the same portfolio of securities under rule 18f-3 [17 CFR 270.18f-3] or under an order exempting the Fund from provisions of section 18 of the Act [15 U.S.C. 80a-18].

"Controlled Foreign Corporation" has the meaning provided in section 957 of the Internal Revenue Code [26 U.S.C. 957].

"Exchange-Traded Fund" means an open-end management investment company (or Series or Class thereof) or unit investment trust (or series thereof), the shares of which are listed and traded on a national securities exchange at market prices, and that has formed and operates under an exemptive order under the Act granted by the Commission or in reliance on an exemptive rule under the Act adopted by the Commission.

"Fund" means the Registrant or a separate Series of the Registrant. When an item of Form N-PORT specifically applies to a Registrant or a Series, those terms will be used.

"ISIN" means, with respect to any security, the "international securities identification number" assigned by a national numbering agency, partner, or substitute agency that is coordinated by the Association of National Numbering Agencies.

"LEI" means, with respect to any company, the "legal entity identifier" as assigned by a utility endorsed by the Global LEI Regulatory Oversight Committee or accredited by the Global LEI Foundation. In the case of a financial institution, if a "legal entity identifier" has not been assigned, then provide the RSSD ID, if any, assigned by the National Information Center of the Board of Governors of the Federal Reserve System.

"Multiple Class Fund" means a Fund that has more than one Class.

"Registrant" means a management investment company, or an Exchange-Traded Fund organized as a unit investment trust, registered under the Act.

"Restricted Security" has the meaning defined in rule 144(a)(3) under the Securities Act of 1933 [17 CFR 230.144(a)(3)].

"Series" means shares offered by a Registrant that represent undivided interests in a portfolio of investments and that are preferred over all other series of shares for assets specifically allocated to that series in accordance with rule 18f-2(a) [17 CFR 270.18f-2(a)].

"Swap" means either a "security-based swap" or a "swap" as defined in sections 3(a)(68) and (69) of the Securities Exchange Act of 1934 [15 U.S.C. 78c(a)(68) and (69)] and any rules, regulations, or interpretations of the Commission with respect to such instruments.

F. Public Availability

Information reported on Form N-PORT for the third month of each Fund's fiscal quarter will be made publicly available 60 days after the end of the Fund's fiscal quarter.

The SEC does not intend to make public the information reported on Form N-PORT for the first and second months of each Fund's fiscal quarter that is identifiable to any particular fund or adviser, or any information reported with regards to country of risk and economic exposure (Item C.5.b of this Form), delta (Items C.9.f.v, C.11.c.vii, or C.11.g.iv), or miscellaneous securities (Part D of this Form), or explanatory notes related to any of those topics (Part E) that is identifiable to any particular fund or adviser. However, the SEC may use information reported on this Form in its regulatory programs, including examinations, investigations, and enforcement actions.

G. Responses to Questions

In responding to the items on this Form, the following guidelines apply unless otherwise specifically indicated:

- Funds may respond to this Form using their own internal methodologies and the conventions of their service providers, provided the information is consistent with information that they report internally and to current and prospective investors. However, the methodologies and conventions must be consistently applied and the Fund's responses must be consistent with any instructions or other guidance relating to this Form. A Fund may explain any of its methodologies, including related assumptions, in Part E.
- A Fund is not required to respond to an item that is wholly inapplicable (for example, no response would be required for Item C.11 when reporting information about an

investment that is not a derivative). If a sub-item requests information that is not applicable (for example, an LEI for a counterparty that does not have an LEI), respond N/A;

- If an item requests the name of an entity, provide the full name to the extent known, and do not use abbreviations (other than abbreviations that are part of the full name);
- If an item requests information expressed as a percentage, enter the response as a percentage (not a decimal), (*e.g.,* 5.27%);
- For currencies other than U.S. dollars, also report the applicable three-letter alphabetic currency code pursuant to the International Organization for Standardization ("ISO") 4217 standard;
- If an item requests a unique identifier, such an identifier may be internally generated by the Fund or provided by a third party, but should be consistently used across the Fund's filings for reporting that investment so that the Commission, investors, and other users of the information can track the investment from report to report;
- If an item requests a date, provide information in yyyy/mm/dd format; and
- If an item requests information regarding a "holding" or "investment," separately report information as to each holding or investment that is recorded in the Fund's books as part of a larger transaction. For example, two or more partially offsetting legs of a transaction entered into with the same counterparty under a common master agreement shall each be separately reported.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM N-PORT
MONTHLY SCHEDULE OF PORTFOLIO INVESTMENTS

Part A: General Information

Item A.1. Information about the Registrant.

a. Name of Registrant.

b. Investment Company Act file number for Registrant: (*e.g.,* 811-__________).

c. CIK number of Registrant.

d. LEI of Registrant.

e. Address and telephone number of Registrant.

Item A.2. Information about the Series.

a. Name of Series.

b. EDGAR series identifier (if any).

c. LEI of Series.

Item A.3. Reporting period.

a. Date of fiscal year-end.

b. Date as of which information is reported.

Item A.4. Does the Fund anticipate that this will be its final filing on Form N-PORT? [Y/N]

Part B: Information About the Fund

Report the following information for the Fund and its consolidated subsidiaries.

Item B.1. Assets and liabilities. Report amounts in U.S. dollars.

a. Total assets, including assets attributable to miscellaneous securities reported in Part D.

b. Total liabilities.

c. Net assets.

Item B.2. Certain assets and liabilities. Report amounts in U.S. dollars.

a. Assets attributable to miscellaneous securities reported in Part D.

b. Assets invested in a Controlled Foreign Corporation for the purpose of investing in certain types of instruments such as, but not limited to, commodities.

c. Borrowings attributable to amounts payable for notes payable, bonds, and similar debt, as reported pursuant to rule 6-04(13)(a) of Regulation S-X [17 CFR 210.6-04(13)(a)].

d. Payables for investments purchased either (i) on a delayed delivery, when-issued, or other firm commitment basis, or (ii) on a standby commitment basis.

e. Liquidation preference of outstanding preferred stock issued by the Fund.

Item B.3. Portfolio level risk metrics. If the average value of the Fund's debt securities positions for the previous three months, in the aggregate, exceeds 25% or more of the Fund's net asset value, provide:

a. Interest Rate Risk (DV01). For each currency for which the Fund had a value of 1% or more of the Fund's net asset value, provide the change in value of the portfolio resulting from a 1 basis point change in interest rates, for each of the following maturities: 3 month, 1 year, 5 years, 10 years, and 30 years.

b. Interest Rate Risk (DV100). For each currency for which the Fund had a value of 1% or more of the Fund's net asset value, provide the change in value of the portfolio resulting from a 100 basis point change in interest rates, for each of the following maturities: 3 month, 1 year, 5 years, 10 years, and 30 years.

c. Credit Spread Risk (SDV01, CR01 or CS01). Provide the change in value of the portfolio resulting from a 1 basis point change in credit spreads where the shift is applied to the option adjusted spread, aggregated by investment grade and non-investment grade exposures, for each of the following maturities: 3 month, 1 year, 5 years, 10 years, and 30 years.

For purposes of Item B.3., calculate value as the sum of the absolute values of: (i) the value of each debt security, (ii) the notional value of each swap, including, but not limited to, total return swaps, interest rate swaps, and credit default swaps, for which the underlying reference asset or assets are debt securities or an interest rate; (iii) the notional value of each futures contract for which the underlying reference asset or assets are debt securities or an interest rate; and (iv) the delta-adjusted notional value of any option for which the underlying reference asset is an asset described in clause (i),(ii), or (iii). Report zero for maturities to which the Fund has no exposure. For exposures that fall between any of the listed maturities in (a) and (b), use linear interpolation to approximate exposure to each maturity listed above. For exposures outside of the range of maturities listed above, include those exposures in the nearest maturity.

Item B.4. Securities lending.

a. For each borrower in any securities lending transaction, provide the following information:

   i. Name of borrower.

   ii. LEI (if any) of borrower.

   iii. Aggregate value of all securities on loan to the borrower.

b. Did any securities lending counterparty provide any non-cash collateral? [Y/N] If yes, unless the non-cash collateral is included in the Schedule of Portfolio Investments in Part C, provide the following information for each category of non-cash collateral received for loaned securities:

   i. Aggregate principal amount.

   ii. Aggregate value of collateral.

   iii. Category of investments that most closely represents the collateral, selected from among the following (asset-backed securities; agency collateralized mortgage obligations; agency debentures and agency strips; agency mortgage-backed securities; U.S. Treasuries (including strips); other instrument). If "other instrument," include a brief description, including, if applicable, whether it is an irrevocable letter of credit.

Item B.5. Return information.

a. Monthly total returns of the Fund for each of the preceding three months. If the Fund is a Multiple Class Fund, report returns for each Class. Such returns shall be calculated in accordance with the methodologies outlined in Item 26(b)(1) of Form N-1A, Instruction 13 to sub-Item 1 of Item 4 of Form N-2, or Item 26(b)(i) of Form N-3, as applicable.

b. Class identification number(s) (if any) of the Class(es) for which returns are reported.

c. For each of the preceding three months, monthly net realized gain (loss) and net change in unrealized appreciation (or depreciation) attributable to derivatives for each of the following asset categories: commodity contracts, credit contracts, equity contracts, foreign exchange contracts, interest rate contracts, and other contracts. Within each such asset category, further report the same information for each of the following types of derivatives instrument: forward, future, option, swaption, swap, warrant, and other. Report in U.S. dollars. Losses and depreciation shall be reported as negative numbers.

d. For each of the preceding three months, monthly net realized gain (loss) and net change in unrealized appreciation (or depreciation) attributable to investments other than derivatives. Report in U.S. dollars. Losses and depreciation shall be reported as negative numbers.

Item B.6. Flow information. Provide the aggregate dollar amounts for sales and redemptions/repurchases of Fund shares during each of the preceding three months. If shares of the Fund are held in omnibus accounts, for purposes of calculating the Fund's sales, redemptions, and repurchases, use net sales or redemptions/repurchases from such omnibus accounts. The amounts to be reported under this Item should be after any front-end sales load has been deducted and before any deferred or contingent deferred sales load or charge has been deducted. Shares sold shall include shares sold by the Fund to a registered unit investment trust. For mergers and other acquisitions, include in the value of shares sold any transaction in which the Fund acquired the assets of another investment company or of a personal holding company in exchange for its own shares. For liquidations, include in the value of shares redeemed any transaction in which the Fund liquidated all or part of its assets. Exchanges are defined as the redemption or repurchase of shares of one Fund or series and the investment of all or part of the proceeds in shares of another Fund or series in the same family of investment companies.

a. Total net asset value of shares sold (including exchanges but excluding reinvestment of dividends and distributions).

b. Total net asset value of shares sold in connection with reinvestments of dividends and distributions.

c. Total net asset value of shares redeemed or repurchased, including exchanges.

Item B.7. [Reserved]

Part C: Schedule of Portfolio Investments

For each investment held by the Fund and its consolidated subsidiaries, disclose the information requested in Part C. A Fund may report information for securities in an aggregate amount not exceeding five percent of its total assets as miscellaneous securities in Part D in lieu of reporting those securities in Part C, provided that the securities so listed are not restricted, have been held for not more than one year prior to the end of the reporting period covered by this report, and have not been previously reported by name to the shareholders of the Fund or to any exchange, or set forth in any registration statement, application, or report to shareholders or otherwise made available to the public.

Item C.1. Identification of investment.

a. Name of issuer (if any).

b. LEI (if any) of issuer. In the case of a holding in a fund that is a series of a series trust, report the LEI of the series.

c. Title of the issue or description of the investment.

d. CUSIP (if any).

e. At least one of the following other identifiers:

i. ISIN.

ii. Ticker (if ISIN is not available).

iii. Other unique identifier (if ticker and ISIN are not available). Indicate the type of identifier used.

Item C.2. Amount of each investment.

a. Balance. Indicate whether amount is expressed in number of shares, principal amount, or other units. For derivatives contracts, as applicable, provide the number of contracts.

b. Currency. Indicate the currency in which the investment is denominated.

c. Value. Report values in U.S. dollars. If currency of investment is not denominated in U.S. dollars, provide the exchange rate used to calculate value.

d. Percentage value compared to net assets of the Fund.

Item C.3. Indicate payoff profile among the following categories (long, short, N/A). For derivatives, respond N/A to this Item and respond to the relevant payoff profile question in Item C.11.

Item C.4. Asset and issuer type. Select the category that most closely identifies the instrument among each of the following:

a. Asset type (short-term investment vehicle (*e.g.,* money market fund, liquidity pool, or other cash management vehicle), repurchase agreement, equity-common, equity-preferred, debt, derivative-commodity, derivative-credit, derivative-equity, derivative-foreign exchange, derivative-interest rate, derivatives-other, structured note, loan, ABS-mortgage backed security, ABS-asset backed commercial paper, ABS-collateralized bond/debt obligation, ABS-other, commodity, real estate, other). If "other," provide a brief description.

b. Issuer type (corporate, U.S. Treasury, U.S. government agency, U.S. government sponsored entity, municipal, non-U.S. sovereign, private fund, registered fund, other). If "other," provide a brief description.

Item C.5. Country of investment or issuer.

a. Report the ISO country code that corresponds to the country where the issuer is organized.

b. If different from the country where the issuer is organized, also report the ISO country code that corresponds to the country of investment or issuer based on the concentrations of the risk and economic exposure of the investments.

Item C.6. Is the investment a Restricted Security? [Y/N]

Item C.7. [Reserved]

Item C.8. Indicate the level within the fair value hierarchy in which the fair value measurements fall pursuant to U.S. Generally Accepted Accounting Principles (ASC 820, Fair Value Measurement). [1/2/3] Report "N/A" if the investment does not have a level associated with it (i.e., net asset value used as the practical expedient).

Item C.9. For debt securities, also provide:

a. Maturity date.

b. Coupon.

  i. Select the category that most closely reflects the coupon type among the following (fixed, floating, variable, none).

  ii. Annualized rate.

c. Currently in default? [Y/N]

d. Are there any interest payments in arrears or have any coupon payments been legally deferred by the issuer? [Y/N]

e. Is any portion of the interest paid in kind? [Y/N] Enter "N" if the interest may be paid in kind but is not actually paid in kind or if the Fund has the option of electing in-kind payment and has elected to be paid in-kind.

f. For convertible securities, also provide:

  i. Mandatory convertible? [Y/N]

  ii. Contingent convertible? [Y/N]

  iii. Description of the reference instrument, including the name of issuer, title of issue, and currency in which denominated, as well as CUSIP of reference instrument, ISIN (if CUSIP is not available), ticker (if CUSIP and ISIN are not available), or other identifier (if CUSIP, ISIN, and ticker are not available). If other identifier provided, indicate the type of identifier used.

iv. Conversion ratio per US$1000 notional, or, if bond currency is not in U.S. dollars, per 1000 units of the relevant currency, indicating the relevant currency. If there is more than one conversion ratio, provide each conversion ratio.

v. Delta (if applicable).

Item C.10. For repurchase and reverse repurchase agreements, also provide:

a. Select the category that reflects the transaction (repurchase, reverse repurchase). Select “repurchase agreement” if the Fund is the cash lender and receives collateral. Select “reverse repurchase agreement” if the Fund is the cash borrower and posts collateral.

b. Counterparty.

i. Cleared by central counterparty? [Y/N] If Y, provide the name of the central counterparty.

ii. If N, provide the name and LEI (if any) of counterparty.

c. Tri-party? [Y/N]

d. Repurchase rate.

e. Maturity date.

f. Provide the following information concerning the securities subject to the repurchase agreement (*i.e.,* collateral). If multiple securities of an issuer are subject to the repurchase agreement, those securities may be aggregated in responding to Items C.10.f.i-iii.

i. Principal amount.

ii. Value of collateral.

iii. Category of investments that most closely represents the collateral, selected from among the following (asset-backed securities; agency collateralized mortgage obligations; agency debentures and agency strips; agency mortgage-backed securities; private label collateralized mortgage obligations; corporate debt securities; equities; money market; U.S. Treasuries (including strips); other instrument). If “other instrument,” include a brief description, including, if applicable, whether it is a collateralized debt obligation, municipal debt, whole loan, or international debt.

Item C.11. For derivatives, also provide:

a. Type of derivative instrument that most closely represents the investment, selected from among the following (forward, future, option, swaption, swap (including but not limited to total return swaps, credit default swaps, and interest rate swaps), warrant, other). If “other,” provide a brief description.

b. Counterparty.

   i. Provide the name and LEI (if any) of counterparty (including a central counterparty).

c. For options and warrants, including options on a derivative (*e.g.*, swaptions) provide:

   i. Type, selected from among the following (put, call). Respond call for warrants.

   ii. Payoff profile, selected from among the following (written, purchased). Respond purchased for warrants.

   iii. Description of reference instrument.

      1. If the reference instrument is a derivative, indicate the category of derivative from among the categories listed in sub-Item C.11.a. and provide all information required to be reported on this Form for that category.

      2. If the reference instrument is an index or custom basket, and if the index's or custom basket's components are publicly available on a website and are updated on that website no less frequently than quarterly, identify the index and provide the index identifier, if any. If the index's or custom basket's components are not publicly available in that manner, and the notional amount of the derivative represents 1% or less of the net asset value of the Fund, provide a narrative description of the index. If the index's or custom basket's components are not publicly available in that manner, and the notional amount of the derivative represents more than 5% of the net asset value of the Fund, provide the (i) name, (ii) identifier, (iii) number of shares or notional amount or contract value as of the trade date (all of which would be reported as negative for short positions), and (iv) value of every component in the index or custom basket. The identifier shall include CUSIP of the index's or custom basket's components, ISIN (if CUSIP is not available), ticker (if CUSIP and ISIN are not available), or other identifier (if CUSIP, ISIN, and ticker are not available). If other identifier provided, indicate the type of identifier used.

         If the index's or custom basket's components are not publicly available in that manner, and the notional amount of the derivative represents greater than 1%, but 5% or less, of the net asset value of the Fund, Funds shall report the required component information described above, but may limit reporting to the (i) 50 largest components in the index and (ii) any other components where the notional value for that components is over 1% of the notional value of the index or custom basket.

      3. If the reference instrument is neither a derivative, an index, or a custom basket, the description of the reference instrument shall include the name of issuer and title of issue, as well as CUSIP of reference instrument, ISIN (if

CUSIP is not available), ticker (if CUSIP and ISIN are not available), or other identifier (if CUSIP, ISIN, and ticker are not available). If other identifier provided, indicate the type of identifier used.

iv. Number of shares or principal amount of underlying reference instrument per contract.

v. Exercise price or rate.

vi. Expiration date.

vii. Delta.

viii. Unrealized appreciation or depreciation. Depreciation shall be reported as a negative number.

d. For futures and forwards (other than forward foreign currency contracts), provide:

i. Payoff profile, selected from among the following (long, short).

ii. Description of reference instrument, as required by sub-Item C.11.c.iii.

iii. Expiration date.

iv. Aggregate notional amount or contract value on trade date.

v. Unrealized appreciation or depreciation. Depreciation shall be reported as a negative number.

e. For forward foreign currency contracts and foreign currency swaps, provide:

i. Amount and description of currency sold.

ii. Amount and description of currency purchased.

iii. Settlement date.

iv. Unrealized appreciation or depreciation. Depreciation shall be reported as a negative number.

f. For swaps (other than foreign exchange swaps), provide:

i. Description and terms of payments necessary for a user of financial information to understand the terms of payments to be paid and received, including, as applicable, description of the reference instrument, obligation, or index (including the information required by sub-Item C.11.c.iii), financing rate, floating coupon rate, fixed coupon rate, and payment frequency.

1. Description and terms of payments to be received from another party.

2. Description and terms of payments to be paid to another party.

ii. Termination or maturity date.

iii. Upfront payments or receipts.

iv. Notional amount.

v. Unrealized appreciation or depreciation. Depreciation shall be reported as a negative number.

g. For other derivatives, provide:

i. Description of information sufficient for a user of financial information to understand the nature and terms of the investment, including as applicable, among other things, currency, payment terms, payment rates, call or put feature, exercise price, and information required by sub-Item C.11.c.iii.

ii. Termination or maturity (if any).

iii. Notional amount(s).

iv. Delta (if applicable).

v. Unrealized appreciation or depreciation. Depreciation shall be reported as a negative number.

Item C.12. Securities lending.

a. Does any amount of this investment represent reinvestment of cash collateral received for loaned securities? [Y/N] If Yes, provide the value of the investment representing cash collateral.

b. Does any portion of this investment represent non-cash collateral that is treated as a Fund asset and received for loaned securities? [Y/N] If yes, provide the value of the securities representing non-cash collateral.

c. Is any portion of this investment on loan by the Fund? [Y/N] If Yes, provide the value of the securities on loan.

Part D: Miscellaneous Securities

For reports filed for the last month of each fiscal quarter, report miscellaneous securities, if any, using the same Item numbers and reporting the same information that would be reported for each investment in Part C if it were not a miscellaneous security. Information reported in this Item will be nonpublic.

Part E: Explanatory Notes (if any)

The Fund may provide any information it believes would be helpful in understanding the information reported in response to any Item of this Form. The Fund may also explain any assumptions that it made in responding to any Item of this Form. To the extent responses relate to a particular Item, provide the Item number(s), as applicable.

Part F: Exhibits

For reports filed for the end of the first and third quarters of the Fund's fiscal year, attach no later than 60 days after the end of the reporting period the Fund's complete portfolio holdings as of the close of the period covered by the report. These portfolio holdings must be presented in accordance with the schedules set forth in §§210.12-12 – 12-14 of Regulation S-X [17 CFR 210.12-12 – 12-13D].

SIGNATURES

The Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Registrant: _________________________ By (Signature): ______________________

Name: ____

Title: ____

Date: ____

■ 69. Effective June 1, 2018, Form N–8F (referenced in § 274.218) is amended by revising Instruction 6 to read as follows:

Form N–8F

* * * * *

Instructions for using Form N–8F

* * * * *

6. Funds are reminded of the requirement to timely file a final Form N–CEN with the Commission. *See* rule 30a1–1 under the Act [17 CFR 270.30a1–1]; Form N–CEN [17 CFR 274.101].

By the Commission.

Dated: October 13, 2016.

Brent J. Fields,

Secretary.

[FR Doc. 2016–25349 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–C

FEDERAL REGISTER

Vol. 81 Friday,

No. 223 November 18, 2016

Part III

Securities and Exchange Commission

17 CFR Parts 210, 270, and 274

Investment Company Swing Pricing; Final Rule

SECURITIES AND EXCHANGE COMMISSION

17 CFR Parts 210, 270, and 274

[Release Nos. 33–10234; IC–32316; File No. S7–16–15]

RIN 3235–AL61

Investment Company Swing Pricing

AGENCY: Securities and Exchange Commission.

ACTION: Final rule.

SUMMARY: The Securities and Exchange Commission is adopting amendments to rule 22c–1 under the Investment Company Act to permit a registered open-end management investment company (''open-end fund'' or ''fund'') (except a money market fund or exchange-traded fund), under certain circumstances, to use ''swing pricing,'' the process of adjusting the fund's net asset value (''NAV'') per share to effectively pass on the costs stemming from shareholder purchase or redemption activity to the shareholders associated with that activity, and amendments to rule 31a–2 to require funds to preserve certain records related to swing pricing. The Commission is also adopting amendments to Form N–1A and Regulation S–X and a new item in Form N–CEN, all of which address a fund's use of swing pricing.

DATES: *Effective Date:* November 19, 2018.

Compliance Dates: See section II.C.

FOR FURTHER INFORMATION CONTACT: Zeena Abdul-Rahman, John Foley, Andrea Ottomanelli Magovern, Naseem Nixon, Amanda Hollander Wagner, Senior Counsels; Thoreau Bartmann, Melissa Gainor, Senior Special Counsels; or Kathleen Joaquin, Senior Financial Analyst, Investment Company Rulemaking Office, at (202) 551–6792; Ryan Moore, Assistant Chief Accountant, or Matt Giordano, Chief Accountant, Office of the Chief Accountant, at (202) 551–6918, Division of Investment Management, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–8549.

SUPPLEMENTARY INFORMATION: The Securities and Exchange Commission (the ''Commission'') is adopting amendments to rules 22c–1 [17 CFR 270.22c–1] and 31a–2 [17 CFR 270.31a–2] under the Investment Company Act of 1940 [15 U.S.C. 80a–1 *et seq.*] (''Investment Company Act'' or ''Act''); amendments to Form N–1A [referenced in 17 CFR 274.11A] under the Investment Company Act and the Securities Act of 1933 (''Securities Act'') [15 U.S.C. 77a *et seq.*]; amendments to Article 6 [17 CFR 210.6–01 *et seq.*] of Regulation S–X [17 CFR 210]; and adopting a new item in Form N–CEN [referenced in 17 CFR 274.101] under the Investment Company Act.[1]

Table of Contents

I. Introduction

Avoiding shareholder dilution is a key concern of the Investment Company Act.[2] In particular, section 22(c) gives the Commission broad powers to regulate the pricing of redeemable securities for the purpose of eliminating or reducing so far as reasonably practicable any dilution of the value of outstanding fund shares.[3] Under rule 22c–1 under the Investment Company Act, fund shareholders purchase and redeem fund shares at a price based on the current NAV next computed after the receipt of an order to purchase or redeem (the ''forward price'').[4] Forward pricing addresses, in part, the risk of shareholder dilution posed by the ''backward pricing'' method used by funds prior to the adoption of the forward pricing rule.[5] However, under rule 22c–1, the NAV price that a purchasing or redeeming shareholder receives when transacting shares typically does not take into account the transaction costs (including trading costs and changes in market prices) that may arise when the fund buys portfolio investments to invest proceeds from purchasing shareholders or sells portfolio investments to meet shareholder redemptions.[6]

[1] Unless otherwise noted, all references to statutory sections are to the Investment Company Act, and all references to rules under the Investment Company Act are to Title 17, Part 270 of the Code of Federal Regulations [17 CFR part 270].

[2] *See* Investment Trusts and Investment Companies Investment Trusts and Investment Companies: Hearings on S. 3580 before a Subcomm. of the Senate Comm. on Banking and Currency, 76th Cong., 3d Sess. (1940), at 37, 137–145 (stating that, among the abuses that served as a backdrop for the Act, were ''practices which resulted in substantial dilution of investors' interests'', including backward pricing by fund insiders to increase investment in the fund and thus enhance management fees, but causing dilution of existing investors in the fund).

[3] Section 22(a) of the Act authorizes securities associations registered under section 15A of the Securities Exchange Act of 1934 (the ''Exchange Act'') to prescribe rules related to the method of computing purchase and redemption prices of redeemable securities and the minimum time period that must elapse after the sale or issue of such securities before any resale or redemption may occur, for the purpose of ''eliminating or reducing so far as reasonably practicable any dilution of the value of other outstanding securities of such company or any other result of such purchase, redemption, or sale which is unfair to holders of such other outstanding securities.''

Section 22(c) of the Act authorizes the Commission to make rules and regulations applicable to registered investment companies and to principal underwriters of, and dealers in, the redeemable securities of any registered investment company, whether or not members of any securities association, to the same extent, covering the same subject matter, and for the accomplishment of the same ends as are prescribed in section 22(a) in respect of the rules which may be made by a registered securities association governing its members.

[4] *See* rule 22c–1(a). Prior to adoption of rule 22c–1, investor orders to purchase and redeem could be executed at a price computed before receipt of the order, allowing investors to lock-in a low price in a rising market and a higher price in a falling market. The forward pricing provision of rule 22c–1 was designed to eliminate these trading practices and the dilution to fund shareholders that occurred as a result of backward pricing. *See* Pricing of Redeemable Securities for Distribution, Redemption, and Repurchase, Investment Company Act Release No. 14244 (Nov. 21, 1984) [49 FR 46558 (Nov. 27, 1984)], at text following n.2.

[5] *See* Pricing of Redeemable Securities for Distribution, Redemption and Repurchase and Time-Stamping of Orders by Dealers, Investment Company Act Release No. 5519 (Oct. 16, 1968) [33 FR 16331 (Nov. 7, 1968)] (''Rule 22c–1 Adopting Release''), at 2 (''One purpose of [rule 22c–1] is to eliminate or reduce so far as reasonably practicable any dilution of the value of outstanding redeemable securities of registered investment companies through (i) the sale of such securities at a price below their net asset value or (ii) the redemption or repurchase of such securities at a price above their net asset value. Dilution through the sale of redeemable securities at a price below their net asset value may occur, for example, through the practice of selling securities for a certain period of time at a price based upon a previously established net asset value. This practice permits a potential investor to take advantage of an upswing in the market and an accompanying increase in the net asset value of investment company shares by purchasing such shares at a price which does not reflect the increase.'').

[6] *See* Open-End Fund Liquidity Risk Management Programs; Swing Pricing; Re-Opening of Comment

We sought to address the risk of shareholder dilution that can result from such transaction costs, along with the risk that a fund would be unable to meet its obligations to redeeming shareholders or other obligations under applicable law (while mitigating investor dilution) as a result of liquidity risk, with the proposal on fund liquidity risk management that we published in 2015.[7] In order to provide funds with a tool to mitigate potential dilution and to manage fund liquidity, the proposal included amendments to rule 22c–1 under the Act to permit funds (except money market funds and exchange-traded funds (''ETFs'')) to use ''swing pricing,'' a process of adjusting the fund's NAV to effectively pass on more of the costs stemming from shareholder transaction flows into and out of the fund to shareholders associated with that activity.

We received more than 70 comment letters on the proposal,[8] many of which addressed the swing pricing amendments.[9] Today, we are adopting new rule 22c–1(a)(3) permitting funds (other than money market funds and ETFs) to engage in swing pricing substantially as proposed, with certain modifications to respond to commenters' suggestions and concerns.[10] We believe swing pricing could be an effective tool to assist U.S. registered funds in mitigating potential shareholder dilution. We also believe that swing pricing may be an additional tool to manage a fund's liquidity risk.

We are also adopting amendments to rule 31a–2 to require funds to maintain records evidencing and supporting each computation of an adjustment to the fund's NAV based on the fund's swing pricing policies and procedures. Finally, we are adopting amendments to Form N–1A and Regulation S–X and adopting a new item in Form N–CEN to require a fund to publicly disclose certain information regarding its use of swing pricing.[11] We anticipate that this information will facilitate the Commission's ability to monitor and assess compliance with rule 22c–1 as amended and may assist investors in making more informed investment choices.

II. Discussion

A. Swing Pricing

1. Background

Under rule 22c–1, all investors who submit requests to redeem from an open-end fund on any particular day must receive the NAV next calculated by the fund after receipt of such redemption request.[12] As most funds, with the exception of money market funds, calculate their NAV only once a day, this means that redemption requests submitted during the day receive the end of day NAV, typically calculated as of 4 p.m. Eastern time.[13] When calculating a fund's NAV, however, rule 2a–4 requires funds to reflect changes in holdings of portfolio securities and changes in the number of outstanding shares resulting from distributions, redemptions, and repurchases no later than the first business day following the trade date.[14] We allow this calculation method to provide funds with additional time and flexibility to incorporate last-minute portfolio transactions into their NAV calculations on the business day following the trade date, rather than on the trade date.[15] As a practical matter, this calculation method also gave broker-dealers, retirement plan administrators, and other intermediaries additional time to transmit transactions submitted before the cut-off time on the trade date, which then may be reflected in computation of the fund's NAV on the business day following the trade date.[16]

Nevertheless, we recognize that trading activity and other changes in portfolio holdings associated with meeting redemptions may occur over multiple business days following the redemption request. If these activities occur (and their associated costs are reflected in NAV) in days following redemption requests, the costs of providing liquidity to redeeming investors could be borne by the remaining investors in the fund, thus potentially diluting the interests of non-redeeming shareholders.[17] The less liquid the fund's portfolio holdings, the greater these liquidity costs can become.[18] The significant growth in the assets managed by funds with strategies that focus on holding relatively less liquid investments (such as fixed income funds, including emerging

Period for Investment Company Reporting Modernization Release, Investment Company Act Release No. 31835 (Sept. 22, 2015) [80 FR 62273 (Oct. 15, 2015)] (''Proposing Release''), at section III.F, 184–187. However, going forward, in a fund that swing prices, the NAV of the fund would reflect such costs, which would be borne by redeeming and purchasing shareholders.

[7] *See id.*

[8] The comment letters on the Proposing Release (File No. S7–16–15) are *available at http://www.sec.gov/comments/s7-16-15/s71615.shtml.* We are adopting requirements for funds to adopt liquidity risk management programs today in a companion release. *See* Investment Company Liquidity Risk Management Programs, Investment Company Act Release No. 32315 (Oct. 13, 2106) (''Liquidity Risk Management Programs Adopting Release'').

[9] *See, e.g.,* Comment Letter of the Mutual Fund Directors Forum (Jan. 13, 2016) (''MFDF Comment Letter'') (recommending that the Commission consider issuing a separate proposal for swing pricing due to the difficult operational issues of swing pricing); Comment Letter of Investment Company Institute (Jan. 13, 2016) (''ICI Comment Letter I'') (arguing that, for funds to adopt swing pricing, there must be widespread changes in market practices and significant reengineering of fund operations). *But see* Comment Letter of Eaton Vance Corp. (June 13, 2016) (''Eaton Vance Comment Letter'') (expressing that there are investor protection concerns associated with the implementation of swing pricing, but acknowledging the significant costs to existing shareholders as a result of purchase and redemption activity).

[10] If any provision of these rules, or the application thereof to any person or circumstance, is held to be invalid, such invalidity shall not affect other provisions or application of such provisions to other persons or circumstances that can be given effect without the invalid provision or application.

[11] We are adopting Form N–CEN today in a companion release. *See* Investment Company Reporting Modernization, Investment Company Act Release No. 32314 (Oct. 13, 2016) (''Investment Company Reporting Modernization Adopting Release'').

[12] The process of calculating or ''striking'' the NAV of the fund's shares on any given trading day is based on several factors, including the market value of portfolio securities, fund liabilities, and the number of outstanding fund shares, among others.

[13] Commission rules do not require that a fund calculate its NAV at a specific time of day. Current NAV must be computed at least once daily, subject to limited exceptions, Monday through Friday, at the specific time or times set by the board of directors. *See* rule 22c–1(b)(1).

[14] Rule 2a–4(a)(2)–(3).

[15] *See* Adoption of Rule 2a–4 Defining the Term ''Current Net Asset Value'' in Reference to Redeemable Securities Issued by a Registered Investment Company, Investment Company Act Release No. 4105 (Dec. 22, 1964) [29 FR 19100 (Dec. 30, 1964)].

[16] *See infra* footnote 195. These redemptions are effected at the trade date's NAV.

[17] The transaction costs associated with redemptions can vary significantly, with some costs having a more immediate impact on shareholders than others. For example, during times of heightened market volatility and wider bid-ask spreads for the fund's underlying holdings, selling the fund's investments to meet redemptions will necessarily result in costs to the fund, which in turn may negatively impact investors who chose to redeem in the days immediately following the stress event. The impact of such costs on the remaining fund investors can vary depending on when a shareholder choses to redeem. *See, e.g.,* Comment Letter of Mutual Fund Directors Forum on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 6.

[18] *See, e.g.* Comment Letter of Morningstar, Inc. (Jan. 13, 2016) (''Morningstar Comment Letter''). *See also* Proposing Release, *supra* footnote 6, at n.45 and accompanying text. We discuss the extent to which swing pricing could effectively pass on to redeeming shareholders more of the costs stemming from their trading activity, as opposed to being borne by non-redeeming shareholders, in *infra* section II.A.2. Furthermore, because shareholders' purchase activity would provide liquidity to a fund, which could reduce the fund's costs in meeting shareholders' redemption requests that day, investors who purchase shares on a day that the fund adjusts its NAV downward would not create dilution for non-redeeming shareholders. *See infra* at text following footnote 123.

market debt funds, open-end funds with alternative strategies, and emerging market equity funds), which could incur significant trading costs, could give rise to increased dilution effects from redeeming and subscribing shareholders in those funds.[19]

As we discuss more broadly in the Liquidity Risk Management Programs Adopting Release, these factors in fund redemptions can create incentives, at least in theory, in times of liquidity stress in the markets for shareholders to redeem quickly to avoid further losses (or a ''first-mover advantage'').[20] If shareholder redemptions are motivated by this first-mover advantage, they can lead to increasing outflows, and as the level of outflows from a fund increases, the incentive for remaining shareholders to redeem may also increase.[21] Additionally, a fund experiencing large outflows as a result of redemptions may be exposed to predatory trading activity in the securities it holds.[22] Regardless of whether investor redemptions are motivated by a first-mover advantage or other factors, there can be significant adverse consequences to remaining investors in a fund in these circumstances, including material dilution of remaining investors' interests in the fund.[23]

As a means of addressing potential shareholder dilution from redemptions, the Commission adopted in 2005 rule 22c–2 under the Investment Company Act, which permits funds to impose redemption fees under certain circumstances.[24] Although the Commission adopted the redemption fee rule to allow funds to recoup some of the direct and indirect costs incurred as a result of short-term trading strategies, such as market timing, rule 22c–2 is not limited to the context of market timing and expressly contemplates that a fund board of directors may approve a redemption fee in order to ''eliminate or reduce so far as practicable any dilution of the value of the outstanding securities issued by the fund,'' and thus the rule can also be used to mitigate dilution arising from shareholder transaction activity generally.[25] In adopting rule 22c–2, the Commission stated that the amount of the redemption fee under rule 22c–2 may include indirect costs associated with transactions in fund shares, such as liquidity costs.[26]

Fund boards have flexibility under rule 22c–2 to adopt redemption fees that address the needs of their funds.[27] Rule 22c–2 provides discretion for fund boards to structure redemption fees in way that ''in its judgment, is necessary or appropriate'' to achieve the anti-dilution purposes of the rule.[28] For example, we believe that a fund board, consistent with its obligations under 22c–2, may determine that it is appropriate to approve a redemption fee that would apply for an indefinite time period after purchase of the security—that is, whenever an investor redeems from the fund—in order to reduce dilution.[29] In addition, a fund board might determine it appropriate to impose a redemption fee only on a subset of such redemptions that the board determines are most likely to result in such costs or dilution, such as all redemptions exceeding a certain size (*e.g.* over $100,000 or $250,000) or on such large redemptions if advance notice is not provided.[30] The details of the redemption fee and the circumstances under which it would (and would not) be imposed, as well as

[19] *See* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8, at section II.C.

[20] *See id.,* at n.84 and accompanying text. *But see* Comment Letter of Nuveen Investments on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 10 (stating that there is no evidence that shareholders are actually motivated by a first-mover advantage); Comment Letter of BlackRock on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 17 (stating that although incentives to redeem may exist, this does not necessarily imply that investors will in fact redeem *en masse* in times of market stress, but also noting that a well-structured fund ''should seek to avoid features that could create a 'first-mover advantage' in which one investor has an incentive to leave'' before others); Comment Letter of Association of Institutional Investors on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 10–11 (''The empirical evidence of historical redemption activity, even during times of market stress, supports the view that either (i) there are not 'incentives to redeem' that are sufficient to overcome the asset owner's asset allocation decision or (ii) that there are disincentives, such as not triggering a taxable event, that outweigh the hypothesized 'incentives to redeem.' ''); Comment Letter of The Capital Group Companies on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 8 (''We also do not believe that the mutualization of fund trading costs creates any first mover advantage.''); Comment Letter of Investment Company Institute on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015) (''Investor behavior provides evidence that any mutualized trading costs must not be sufficiently large to drive investor flows. We consistently observe that investor outflows are modest and investors continue to purchase shares in most funds even during periods of market stress.''). *See also* discussion of the potential first-mover advantage in the Proposing Release, *supra* footnote 6, at n.49.

[21] *Id.*

[22] *See, e.g.,* Joshua Coval & Erik Stafford, *Asset Fire Sales (and Purchases) in Equity Markets,* 86 J. Fin. Econ. 479 (2007) (''Funds experiencing large outflows tend to decrease existing positions, which creates price pressure in the securities held in common by distressed funds. Similarly, the tendency among funds experiencing large inflows to expand existing positions creates positive price pressure in overlapping holdings. Investors who trade against constrained mutual funds earn significant returns for providing liquidity. In addition, future flow-driven transactions are predictable, creating an incentive to front-run the anticipated forced trades by funds experiencing extreme capital flows.''); Teodor Dyakov & Marno Verbeek, *Front-Running of Mutual Fund Fire-Sales,* 37 J. of Bank. and Fin. 4931 (2013) (''We show that a real-time trading strategy which front-runs the anticipated forced sales by mutual funds experiencing extreme capital outflows generates an alpha of 0.5% per month during the 1990–2010 period . . . Our results suggest that publicly available information of fund flows and holdings exposes mutual funds in distress to predatory trading.''). *See* discussion of predatory trading concerns in the Proposing Release, *supra* footnote 6, at nn.805–809 and accompanying text.

[23] *See* Proposing Release, *supra* footnote 6, at n.37.

[24] *See* Mutual Fund Redemption Fees, Investment Company Act Release No. 26782 (Mar. 11, 2005) [70 FR 13328 (Mar. 18, 2005)] (''Redemption Fees Adopting Release''). The redemption fee may be no more than two percent of the value of the shares redeemed. Rule 22c–2(a)(1)(i).

[25] *See* Redemption Fees Adopting Release, *supra* footnote 24, at section II.A. (''Rule 22c–2 requires that each fund's board of directors (including a majority of independent directors) either (i) approve a redemption fee that in its judgment is necessary or appropriate to recoup costs the fund may incur as a result of redemptions, or to otherwise eliminate or reduce dilution of the fund's outstanding securities, or (ii) determine that imposition of a redemption fee is not necessary or appropriate.'') (internal citation omitted). *See also* Comment Letter of Federated Investors, Inc. (Jan. 13, 2016) (''Federated Comment Letter'') (stating that redemption fees currently permitted under rule 22c–2 may be an effective anti-dilution tool and presenting an illustrative redemption fee structure assessed in an amount equal to expected transaction costs, up to two percent, for transactions over a certain dollar amount).

[26] *See* Redemption Fees Adopting Release, *supra* footnote 24.

[27] *See id.,* at section II. (''[Rule 22c–2] permits each board to take steps it concludes are necessary to protect its investors, and provides the board flexibility to tailor the redemption fee to meet the needs of the fund.''); and Mutual Fund Redemption Fees, Investment Company Act Release No. 27504 (Sept. 27, 2006) [71 FR 58257 (Oct. 3, 2001)], at section II.C (''[T]he terms of redemption fee policies are a matter for fund boards to determine.'').

[28] Rule 22c–2.

[29] While rule 22c–2 provides a minimum seven day ''time period'' during which a redemption fee, if imposed, must apply, (*i.e.* a fee may not apply only to shares redeemed in three days or less after purchase, but must capture shares redeemed within at least a seven-day period after purchase), it does not impose a maximum duration of such a time period, and thus redemption fees may be imposed on shares redeemed within a month, three months, or even longer periods, depending on the duration deemed appropriate by the fund board. *See* rule 22c–2(a)(1)(i).

[30] Redemption fees imposed for an indefinite time period after purchase but only on redemptions exceeding a certain size—like redemption fees imposed on all shares redeemed within a certain time period—might potentially implicate the senior security concerns of section 18(f)(1), but we note that in adopting rule 22c–2 we explicitly provided exemptive relief from section 18(f)(1) for redemption fees imposed under rule 22c–2. *See* Redemption Fees Adopting Release, *supra* footnote 24, at n.30 (''By adopting the rule, we are providing an exemption from . . . the Act's prohibition against the issuance of a senior security.'').

exceptions or waivers must be disclosed to fund investors.[31]

While we believe redemption fees may be an effective anti-dilution tool, we acknowledge that these fees are viewed as unpopular with investors and intermediaries [32] and entail their own operational complexities.[33] As a result, redemption fees have not become prevalent as a means of addressing dilution due to shareholder transaction activity, and thus are used by a limited number of funds.[34]

Funds may also attempt to address potential shareholder dilution by reserving the right to redeem in kind instead of with cash.[35] In-kind redemptions may reduce transaction costs by reducing the need for cash transactions, but they raise challenges of their own.[36] There are often logistical and operational issues associated with paying in-kind redemptions, and this limits the availability of in-kind redemptions under many circumstances.[37] For instance, in-kind redemptions could entail operational difficulties that result in manual processes, which would be imposed on both the fund and on investors receiving portfolio securities.[38] Moreover, some shareholders are generally unable or unwilling to receive in-kind redemptions.[39]

Funds may still mitigate shareholder dilution using redemption fees and redemptions in kind, but each has downsides (as described above) and they are not broadly utilized by funds. Therefore, for the reasons discussed throughout this section, we believe that providing funds the option to use swing pricing as another anti-dilution tool is likely to benefit investors and may complement or be an alternative to the tools currently available to funds.

Finding efficient and cost-effective ways to protect fund shareholders from the dilutive impacts of trading activity and related costs is challenging, and many tools have been used in different jurisdictions to address these issues.[40] As discussed in detail in the Proposing Release, one particularly successful tool, which has been applied in the Luxembourg fund industry for over 15 years, is swing pricing.[41] Swing pricing is regarded abroad as an efficient mechanism to protect non-transacting shareholders from dilution, as well as an additional tool to help funds manage liquidity risks.[42] Asset managers have

[31] *See id.,* at n.32 (''The details of the redemption fee, the circumstances under which it would (and would not) be imposed, and the specific exceptions to imposition of the fee are currently disclosed to fund investors when they decide to invest in a fund, and may include exceptions for particular transactions.''). *See also* Item 11(c) of Form N–1A.

[32] *See* Eaton Vance Comment Letter (''Even investors who understand that transaction fees accrue to the benefit of the fund (and thus, indirectly, to fund shareholders) often react negatively when confronted with having to pay them.'').

[33] For example, we recognize the compliance burdens and operational challenges certain types of redemption fees place on intermediaries, who would be required to track various fund policies for such fees by share class that may include varying fee rates, applicability and waiver policies. Such data also would require daily updating as it is sourced by systems that support both front-end (customer facing) and back-end transaction processing to ensure fees are accurately assessed. *See* Proposing Release, *supra* footnote 6 at text accompanying n.724 (acknowledging potential operational complexity that could accompany the use of redemption fees). We acknowledge that these operational challenges may be particularly acute in circumstances where a fund's policies assess redemption fees only in circumstances where the fund is experiencing heavy redemptions or particular market stresses or where a fund assesses redemption fees that may vary in size each time they are applied.

[34] *See* Eaton Vance Comment Letter (''Given a choice, most investors appear to prefer funds that do not charge transactions fees over funds that do. This creates a competitive disadvantage for funds that impose transaction fees, accounting for their limited use.'').

[35] *See, e.g.,* Adoption of (1) Rule 18f–1 Under the Investment Company Act of 1940 to Permit Registered Open-End Investment Companies Which Have the Right to Redeem In Kind to Elect to Make Only Cash Redemptions and (2) Form N–18F–1, Investment Company Act Release No. 6561 (June 14, 1971) [36 FR 11919 (June 23, 1971)] (''Rule 18f–1 and Form N–18F–1 Adopting Release'') (stating that the definition of ''redeemable security'' in section 2(a)(32) of the Investment Company Act ''has traditionally been interpreted as giving the issuer the option of redeeming its securities in cash or in kind.'').

[36] Mutual funds that reserve the right to redeem their shares in kind may use such redemptions to manage liquidity risk under exceptional circumstances. *See* Karen Damato, *'Redemptions in Kind' Become Effective for Tax Management,* Wall Street Journal (Mar. 10, 1999), *available at http://www.wsj.com/articles/SB921028092685519084* (''`Redemptions in kind' are typically viewed by fund managers as an emergency measure, a step they could take to meet massive redemptions in the midst of a market meltdown.''). Funds may also use in-kind redemptions for other reasons. For example, funds may wish to redeem certain investors (particularly, large, institutional investors) in kind, because in-kind redemptions could have a lower tax impact on the fund than selling portfolio securities in order to pay redemptions in cash. This, in turn, could benefit the remaining shareholders in the fund. *See, e.g., id. See also* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8, at section III.F.

[37] *See, e.g.,* Comment Letter of Invesco on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 11 (noting that while ''Invesco has on occasion exercised rights to redeem in kind, in practice such rights are exercised infrequently'').

[38] *See* Money Market Fund Reform; Amendments to Form PF, Investment Company Act Release No. 31166 (July 23, 2014) [79 FR 47736 (Aug. 14, 2014)] (''2014 Money Market Fund Reform Adopting Release''), at section II.L.1.f (discussing ''complex valuation and operational issues'' associated with in-kind redemptions). *See also* Money Market Fund Reform; Amendments to Form PF, Investment Company Act Release No. 30551 (June 5, 2013) [78 FR 36834, (June 19, 2013)] (''2013 Money Market Fund Reform Proposing Release''), at n.473 and accompanying text.

[39] *See* Comment Letter of BlackRock Inc. (Jan. 13, 2016) (''BlackRock Comment Letter'') (''[R]edemptions in-kind are not practical for retail investors, as retail investors may lack the proper custodial accounts to hold a particular security and they may be less likely to have the necessary expertise and/or the operational ability to trade the securities that could be held in a fund. For example, a retail investor may not have a custodial account set up to hold a security that is traded in another country, nor the sophistication to be able to trade such a security.''). *See also* Comment Letter of Invesco Ltd. (Jan. 13, 2016) (''Invesco Comment Letter'') (''The primary problem with using redemptions in-kind to meet large redemptions is the willingness and ability of the redeeming entity to receive securities instead of cash.''); Peter Fortune, *Mutual Funds, Part I: Reshaping the American Financial System,* New England Econ. Rev. (July/Aug. 1997), at 47, *available at http://www.bostonfed.org/economic/neer/neer1997/neer497d.htm.* (''A fund redeeming in kind does so at the risk of its reputation and future business . . .''). In the context of money market funds, we requested comment on whether we should require redemptions in kind for redemptions in excess of a certain size threshold, to ease liquidity strains on the fund and reduce the risks and unfairness posed by significant sudden redemptions. *See* Money Market Fund Reform; Proposed Rule, Investment Company Act Release No. 28807 (June 30, 2009) [74 FR 32688 (July 8, 2009)] (''2009 Money Market Fund Reform Proposing Release''), at section III.B. Commenters generally opposed this type of reform for a variety of reasons, all of which likely would apply equally to funds other than money market funds. For example, most commenters stated that in-kind redemptions would be technically unworkable due to complex valuation and operational issues that would be imposed on both the fund and on investors receiving the in-kind distribution. *See* 2013 Money Market Fund Reform Proposing Release, *supra* footnote 38, at section III.B.9.c.

[40] *See* Proposing Release, *supra* footnote 6, at text preceding n.423 (''While redemption fees (or purchase fees) could mitigate dilution arising from shareholder transaction activity, implementing a fee requires coordination with the fund's service providers, which could entail operational complexity.''); *see also id.,* at text accompanying and following n.445 (''In considering the swing pricing proposal, we considered proposing a rule that would permit `dual pricing' as opposed to swing pricing. We understand that certain foreign funds use dual pricing as an alternative means of mitigating potential dilution arising from shareholder transaction activity. A fund using dual pricing would not adjust the fund's NAV by a swing factor when it faces high levels of net purchases or net redemptions, but instead would quote two prices—one for incoming shareholders (reflecting the cost of buying portfolio securities at the ask price in the market), and one for outgoing shareholders (reflecting the proceeds the fund would receive from selling portfolio securities at the bid price in the market). While we believe that dual pricing also could mitigate potential dilution, we believe that swing pricing is a preferable alternative because we believe it would be simpler to implement and for investors to understand.'') (internal citation omitted).

[41] *See* Proposing Release *supra* footnote 6, at n.418 and accompanying text. Luxembourg is a significant jurisdiction for the organization of UCITS funds in Europe.

[42] *See, e.g.,* Association of the Luxembourg Fund Industry, Swing Pricing Update 2015 (Dec. 2015) (''ALFI Survey 2015''), at 21, *available at http://www.alfi.lu/sites/alfi.lu/files/ALFI-Swing-Pricing-*

Continued

implemented swing pricing for a range of fund types and asset classes, including equity, fixed income and multi-asset funds.[43] A number of other jurisdictions also permit the use of swing pricing within their domestic markets, or are considering allowing its use.[44] Although swing pricing may be more or less widely implemented in different jurisdictions (due to a particular home market's regulatory regime, investor profiles and operational infrastructure), when implemented it has been shown to provide performance benefits to funds,[45] which is consistent with a reduction in dilution attributable to the transactions costs associated with shareholder activity.[46]

Against this background, today we are adopting amendments to rule 22c–1 that will enable funds to choose to use ''swing pricing'' as a tool to mitigate shareholder dilution. After further consideration and after evaluating comments, we have modified several aspects of the final rule from the proposal, including eliminating the consideration of ''market impact'' when setting a fund's swing factor; requiring funds to establish and disclose an upper limit on the fund's swing factor, which may not exceed two percent of the fund's NAV per share; and refining certain financial statement and performance reporting requirements related to swing pricing. The amendments as adopted also incorporate certain modifications to the board's approval and oversight role associated with swing pricing. The fund's board does not have to specifically approve changes to the fund's swing pricing policies and procedures. However, under the final rule, the fund's board will be required to approve the fund's swing pricing policies and procedures and periodically review a written report prepared by the persons responsible for administering swing pricing that describes, among other things, the swing pricing administrator's review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution. This report also must describe the administrator's review and assessment of the fund's swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements of the rule, including the information and data supporting these determinations. The board-approved policies and procedures must specify the process for setting the swing threshold, swing factor, and swing factor upper limit. In addition, the board will be required to approve the swing threshold(s) and the upper limit on the swing factor(s) used by the fund, and any changes thereto. We are also providing for an extended effective date to help alleviate concerns raised by commenters regarding operational changes that will be necessary before this new pricing method becomes available in the marketplace, because we believe that efficient, coordinated efforts to implement such operational changes will ultimately benefit investors. We have directed our staff to review, two years after the rule's effective date, market practices associated with funds' use of swing pricing under rule 22c–1(a)(3) to mitigate dilution and to provide the Commission with the results of this review.

2. Overview of Swing Pricing Proposal and Comments Received

We proposed amendments to rule 22c–1 that would permit a registered open-end fund (but not a money market fund or ETF) to choose to establish and implement swing pricing.[47] Under the proposal, a fund that chooses to use swing pricing would need to have policies and procedures that would require the fund to adjust its NAV per share by an amount known as the ''swing factor'' once the level of net purchases or net redemptions has exceeded a set, specified percentage of the fund's NAV, known as the ''swing threshold.'' A fund would be required to consider certain factors in determining its swing threshold, and the fund's board would be required to approve the swing threshold. Likewise, a fund would have to consider certain factors in determining the ''swing factor,'' which is the amount that the funds NAV would swing in response to the costs associated with the shareholder purchase and redemption activity, and the board would have to approve any swing factor upper limit.

Nearly all commenters supported the goals of swing pricing, and the ability of swing pricing in theory to achieve these goals.[48] However, commenters also highlighted a variety of concerns, many stemming from operational hurdles to implementing swing pricing in the United States that would require significant changes to fund processing infrastructure and systems.[49] Several commenters urged the Commission to assist the industry in addressing the operational challenges before swing pricing is implemented,[50] by seeking input from industry participants and other regulators about what could be done to make swing pricing a viable option in the U.S.[51] Commenters indicated that funds, intermediaries and service providers will have different levels of operational changes and burdens to consider, and certain funds may have the ability to implement swing pricing sooner than other funds (*e.g.,* some fund complexes have experience with implementing swing pricing in other jurisdictions, or are larger and may have more resources available to implement swing pricing, or are otherwise in a better position to be able to receive sufficient information to allow them to reasonably estimate whether they have crossed a swing threshold with high confidence). Commenters noted that such disparities could allow some funds to implement swing pricing faster than others, and that allowing time to work through operational issues in an efficient manner for all funds should help facilitate its implementation.[52]

Survey-2015-FINAL.pdf (noting that it is ''increasingly evident . . . that swing pricing is an accepted and well established anti-dilution standard in the marketplace and has become the most commonly practiced form of anti-dilution protection''); and *id.,* at 17 (noting that a significant percentage of survey respondents indicated that ''there is potential to apply swing pricing as part of a range of measures to assist with fund liquidity issues'').

[43] *See id.,* at 8–9.

[44] *See id.,* at 6, 20.

[45] *See infra* footnote 88 and accompanying text.

[46] *See also* BlackRock, *Fund Structures as Systemic Risk Mitigants,* Viewpoint (Sept. 2014) (''BlackRock Fund Structures Paper''), *available at https://www.blackrock.com/corporate/en-fi/literature/whitepaper/viewpoint-fund-structures-as-systemic-risk-mitigants-september-2014.pdf.*

[47] *See* Proposing Release, *supra* footnote 6, at section III.F.

[48] *See, e.g.,* Comment Letter of Americans for Financial Reform (Jan. 13, 2016) (''AFR Comment Letter''); Federated Comment Letter; Comment Letter of Global Association of Risk Professionals (Jan. 12, 2016) (''GARP Comment Letter''); Comment Letter of Vanguard (Jan. 6, 2016) (''Vanguard Comment Letter'').

[49] While most commenters supported the idea of swing pricing (with certain reservations), a few opposed swing pricing outright. *See, e.g.,* Comment Letter of ETF Consultants (Jan. 25, 2016) (''ETF Consultants Comment Letter''); Comment Letter of Voya Investment Management (Jan. 12, 2016) (''Voya Comment Letter''); Comment Letter of Eaton Vance Investment Managers (Jan. 13, 2016). *See also infra* section II.A.3.b. for a detailed discussion on operational challenges.

[50] *See, e.g.,* BlackRock Comment Letter; Comment Letter of Dodge & Cox (Jan. 21, 2016) (''Dodge & Cox Comment Letter''); Comment Letter of Pacific Investment Management Company LLC (Jan. 13, 2016) (''PIMCO Comment Letter''); Comment Letter of Securities Industry and Financial Markets Association (Jan. 13, 2016) (Comments on Swing Pricing Proposal) (''SIFMA Comment Letter II'').

[51] *See, e.g.,* Morningstar Comment Letter; SIFMA Comment Letter II; Vanguard Comment Letter.

[52] *See, e.g.,* BlackRock Comment Letter; Comment Letter of Capital Research and Management Company (Jan. 13, 2016) (''CRMC Comment

In response to commenters' concerns regarding swing pricing's operational challenges and costs and to help facilitate efficient implementation of swing pricing, the Commission is adopting amendments to rule 22c–1 permitting swing pricing with a two-year extended effective date. Delaying the effective date should provide funds, intermediaries, and service providers a reasonable amount of time to evaluate and implement in an orderly and more cost-effective manner the necessary operational changes to conduct swing pricing, regardless of the unique operational hurdles a particular entity may face.[53] Providing this extended effective date may result in long-term benefits for many funds and investors as it may allow the industry to develop and implement standardized operations solutions for swing pricing that likely would result in lower costs, processing efficiencies and reduced operational risks that ultimately benefit investors.[54] We also appreciate the extent of operational changes that will be necessary for many funds to conduct swing pricing and that these changes may still be costly to implement, but we were not persuaded by commenters who argued that these changes are insurmountable, and indeed one stated that despite these challenges ''the long-term benefits of enabling swing pricing for U.S. open-end mutual funds outweigh the one-time costs related to implementation for industry participants.'' [55] These issues are discussed in detail below.

As discussed in section II.A.3.b. below, commenters highlighted the various benefits of swing pricing for investors, including how the tool may be used to address the dilutive effect of shareholder transaction activity effectively and efficiently, and with observable performance benefits to the non-transacting shareholders in such funds.[56] Also, as discussed in section II.A.3.b. below, commenters raised overarching concerns regarding swing pricing generally, including shareholder fairness, alternatives to swing pricing such as redemption fees or redemptions in kind, the impacts swing pricing will have on the current NAV and potential performance volatility, and transparency, disclosure, and potential gaming behavior concerns.

With respect to the more detailed elements of the proposed swing pricing rules, multiple commenters raised various additional concerns, and in some cases provided suggestions on the processes for determining the swing threshold, calculating the swing factor, estimating net shareholder flows, pricing errors and materiality, impacts on financial statement presentation and other disclosures, and board approval and oversight, all of which are discussed in the sections below.

3. Discussion of Final Swing Pricing Rules

a. Scope of New Swing Pricing Rules

Under the final rule, all registered open-end management investment companies, with the exception of money market funds and ETFs, may choose to use swing pricing.[57] Although rule 22c–1(a) generally applies to all registered investment companies issuing redeemable securities,[58] we believe money market funds, while potentially susceptible to the risk of dilution, already have extensive tools at their disposal to mitigate potential shareholder dilution, and ETFs, because they redeem directly only with authorized participants, are generally able to utilize transaction fees to pass on certain costs associated with redemptions.

A fund may decide to adopt swing pricing policies and procedures as part of the liquidity risk management program it is required to implement under rule 22e–4.[59] Some fund complexes may decide to use swing pricing for certain funds within the complex but not others, or establish different swing thresholds for different funds within the complex.[60] As discussed below, funds utilizing swing pricing are required to exclude any purchases and redemptions that are made in kind in determining whether the fund's level of net purchases or net redemptions has exceeded the fund's swing threshold.[61] We are not permitting closed-end investment companies (''closed-end funds''), unit investment trusts (''UITs''), ETFs and money market funds to use swing pricing under the final rule, as discussed in more detail below.

Closed-End Funds

Closed-end funds do not issue redeemable securities and therefore do not incur the same costs as open-end funds, associated with shareholder purchase and redemption activity, that swing pricing is intended to address.[62] One commenter suggested that swing pricing should be permitted for closed-end funds, indicating that certain closed-end funds (*e.g.,* those that rely on rule 23c–3) may incur transaction costs that may be mitigated by swing pricing.[63] The same commenter

Letter''); Comment Letter of Fidelity Management & Research Company (Jan. 13, 2016) (''Fidelity Comment Letter''); ICI Comment Letter I (suggesting that the SEC consider a delayed effective date (of two years or 30 months) to permit funds and intermediaries to work through operational issues, and to reduce potential competitive disadvantages that may result for funds that may be less ready to adopt swing pricing).

[53] *Id.*

[54] *See infra* footnote 212 and accompanying paragraph. We note that providing an extended effective date to address such operational changes may also, consequently, alleviate some of the competitive concerns raised by commenters regarding certain funds being in a better position than others to rapidly implement swing pricing.

[55] GARP Comment Letter.

[56] *See infra* footnote 88 and accompanying text.

[57] For purposes of the new amendments to rule 22c–1, ''exchange-traded fund'' includes an exchange-traded managed fund (''ETMF''). *See* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8 at n.30 and accompanying text (discussing ETMFs in greater detail).

[58] Rule 2a–7 provides exemptions from rule 22c–1 for money market funds to permit certain money market funds to use the amortized cost method and/or the penny-rounding method to calculate its NAV, and to permit a money market fund to impose liquidity fees and temporarily suspend redemptions. *See* rule 2a–7(c)(1)(i); rule 2a–7(c)(2).

[59] *See* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8. Under rule 22e–4, each open-end fund, including open-end ETFs but not including money market funds, is required to adopt and implement a written liquidity risk management program reasonably designed to assess and manage the fund's liquidity risk. *See id.*

[60] Outside the U.S., it is a common industry practice for funds within a fund complex each to have an individual swing threshold, or for some funds within a complex to use swing pricing while others do not. *See, e.g.,* BlackRock Fund Structures Paper, *supra* footnote 46; and J.P. Morgan Asset Management, *Swing Pricing: The J.P. Morgan Asset Management Approach in the Luxembourg Domiciled SICAVs* (June 2014), *available at http://www.jpmorganassetmanagement.de/DE/dms/Swing%20Pricing%20%5bMKR%5d%20%5bIP_EN%5d.pdf* (''J.P. Morgan Asset Management Swing Pricing Paper'').

[61] We note that although redemptions in kind are excluded from the swing threshold, any such redemptions would still receive the swung NAV if the fund were to swing price on that day. This is because the swung NAV would apply to all redemption transactions on that day, regardless of how the proceeds are paid. We recognize that funds have discretion in determining whether to satisfy redemptions in kind, and that a fund that does satisfy redemptions in kind is less likely to cross its swing threshold. As a result, a fund can control how much it engages in swing pricing through its use of redemptions in kind. We believe this flexibility is appropriate, however, because funds have discretion on whether to use swing pricing, and redemptions in kind reduce dilution, which lessens the need for swing pricing.

[62] *See* section 2(a)(32) (defining ''redeemable security'') and section 5(a)(1)–(2) (defining ''open-end company'' and ''closed-end company'') of the Act.

[63] *See* Comment Letter of Simpson Thacher & Bartlett LLP (Jan. 14, 2016) (''[A] closed-end fund that continuously offers its shares may determine that the subscribing shareholders should bear the costs of the fund investing the new cash. In such situations, a fund and its board may determine that the use of the swing-pricing mechanism is appropriate. Accordingly, there may be potential benefits in allowing closed-end funds the option to use swing pricing.'').

Certain closed-end funds (''closed-end interval funds'') do elect to repurchase their shares at

Continued

conceded, however, that the ''the risk of investor dilution in connection with any offering or tender process is low for closed-end funds,'' that ''the goals of the 'swing-pricing' option for open-end funds are already met for closed-end funds through existing mechanisms,'' and that the commenter would not expect many closed-end funds to utilize swing pricing. Because closed-end funds do not issue redeemable securities,[64] and therefore are much less likely to encounter much of the dilution that swing pricing is intended to address,[65] we agree that the goals of swing pricing are already met for closed-end funds and, as proposed, we are not permitting closed-end funds to utilize swing pricing.[66]

UITs

Although UITs issue redeemable securities, we are not permitting UITs to utilize swing pricing for a number of reasons. First, most assets currently held in UITs serve as separate account vehicles used to fund variable annuity and variable life insurance products, and these UITs essentially function as pass-through vehicles, investing principally in securities of one or more open-end funds that could implement swing pricing.[67] UITs are not actively managed, and their portfolios are not actively traded. Unlike an open-end fund, a UIT generally does not have personnel available to actively manage the UIT's liquidity level. Because of the lack of a manager, we do not believe it would be feasible for a UIT to engage in the active administration of the swing pricing threshold and factor required by the rule. Also, UITs whose sponsor maintains a secondary market for the purchase and sale of units do not incur the dilutive transaction costs that swing pricing targets. Finally, we are not permitting UITs that are ETFs to utilize swing pricing for the reasons discussed in the ETFs section immediately below.

We did not receive any comments on the Proposing Release indicating that UITs should be permitted to utilize swing pricing.

ETFs

As proposed, we are not permitting ETFs to use swing pricing because, unlike mutual funds, which typically internalize the costs associated with purchases and redemptions of shares, ETFs typically externalize these costs by redeeming in kind and by charging a fixed and/or variable fee to authorized participants who purchase creation units from, and sell creation units to, an ETF to cover liquidity and transaction costs.[68] We also are not including ETFs within the scope of rule 22c–1(a)(3) because we believe that swing pricing could impede the effective functioning of an ETF's arbitrage mechanism.[69] The effective functioning of the arbitrage mechanism is necessary in order for an ETF's shares to trade at a price that is at or close to the NAV of the ETF.[70] If an ETF were to adopt swing pricing policies and procedures, an authorized participant would not know whether the ETF's NAV would be adjusted by a swing factor on any given day and therefore may not be able to assess whether an arbitrage opportunity exists.[71] The Commission historically has considered the effective functioning of the arbitrage mechanism to be central to the principle that all shareholders be treated equitably when buying and selling their fund shares (*i.e.,* that shareholders would not transact in shares of an ETF at market prices significantly diverging from the ETF's NAV).[72] Therefore, we believe that the implementation of swing pricing by an ETF could raise concerns about the equitable treatment of shareholders, to the extent that swing pricing could impede the effective functioning of the arbitrage mechanism. No commenters disagreed with our proposal not to allow ETFs to use swing pricing. We are, as proposed, not permitting ETFs to utilize swing pricing.

Money Market Funds

Under the final rule, like under the proposal, money market funds would not be able to use swing pricing. No commenters suggested that money market funds be allowed to use swing pricing. Money market funds are subject to extensive requirements concerning the liquidity of their portfolio investments. Also, a money market fund is permitted to impose a liquidity fee on redemptions if its weekly liquid investments fall below a certain threshold, and these fees serve a similar purpose as the NAV adjustments contemplated by swing pricing.[73] That is, money market fund liquidity fees allocate at least some of the costs of providing liquidity to redeeming rather

periodic intervals pursuant to rule 23c–3 under the Investment Company Act. *See* Liquidity Risk Management Program Adopting Release, *supra* footnote 8, at n.145.

[64] If a closed-end fund were to repurchase shares, it would have control over the timing and amount of any such repurchases (subject to the requirements of rule 23c–3, in the case of interval funds), and thus would not face the same liquidity pressures as open-end funds.

[65] *See supra* section I.

[66] We believe that the risk of investor dilution targeted by swing pricing is already sufficiently mitigated for closed-end interval funds by the requirements in rule 23c–3 and, therefore, it would not be appropriate to permit such funds to utilize swing pricing.

[67] *See* Proposing Release, *supra* footnote 6, at n.139 and accompanying text. We currently estimate that approximately 92.9% of UITs serve as separate account vehicles (based on data as of December 31, 2015).

[68] The fixed and/or variable fees are imposed to offset both transfer and other transaction costs that may be incurred by the ETF (or its service providers), as well as brokerage, tax-related, foreign exchange, execution, market impact and other costs and expenses related to the execution of trades resulting from such transaction. The amount of these fixed and variable fees typically depends on whether the authorized participant effects transactions in kind or with cash and is related to the costs and expenses associated with transactions effected in kind versus in cash. When an authorized participant redeems ETF shares by selling a creation unit to the ETF, for example, the fees imposed by the ETF defray the costs of the liquidity that the redeeming authorized participant receives, which in turn mitigates the risk that dilution of non-redeeming authorized participants would result when an ETF redeems its shares. *See* Invesco Comment Letter (''When an authorized participant redeems in cash, the variable transaction fee that an ETF may impose to offset transaction costs should address both dilution and liquidity concerns.'').

[69] ETMF market makers would not engage in the same kind of arbitrage as ETF market makers because all trading prices of ETMF shares are linked to NAV. *See* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8, at n.834 and accompanying text. ETMFs would charge transaction fees that mitigate the risk of dilution, however, and therefore we do not include ETMFs within the scope of rule 22c–1(a)(3).

[70] By this we mean that, and we generally expect that, each day and over time an ETF's shares will trade at or close to the ETF's intraday value. *See* Request for Comment on Exchange-Traded Products, Securities Exchange Act Release No. 75165 (June 12, 2015) [80 FR 34729 (June 17, 2015)] (''2015 ETP Request for Comment'') (''When providing exemptive or no-action relief under the Exchange Act, the Commission and its staff have analyzed and relied upon the representations from ETP issuers regarding the continuing existence of effective and efficient arbitrage to help ensure that the secondary market prices of ETP Securities do not vary substantially from the value of their underlying portfolio or reference assets.''). *See also* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8 at n.844. Because an ETF does not determine its NAV in real time throughout the trading day, in assessing whether this expectation is met, one looks to the difference between the ETF shares' closing market price and the ETF's end-of-day net asset value (*i.e.,* its ''premium'' or ''discount''). *See* 2015 ETP Request for Comment.

[71] *See infra* paragraph accompanying footnote 128 (noting that a fund is not required to disclose its swing threshold under the final rule).

[72] *See, e.g.,* Spruce ETF Trust, *et al.,* Investment Company Act Release No. 31301 (Oct. 21, 2014) [79 FR 63964 (Oct. 27, 2014)] (''ETFs require various exemptions from the provisions of the [Investment Company Act] and the rules thereunder. Critically, in granting such exemptions to date, the Commission has required that a mechanism exist to ensure that ETF shares would trade at a price that is at or close to the NAV per share of the ETF.''); and Precidian ETFs Trust, *et al.,* Investment Company Act Release No. 31300 (Oct. 21, 2014) [79 FR 63971 (Oct. 27, 2014)] (notice of application).

[73] *See* rule 2a–7(c)(2); *see also* 2014 Money Market Fund Reform Adopting Release, *supra* footnote 38, at section III.A.

than non-transacting shareholders,[74] and generate additional liquidity to meet redemption requests.[75] We therefore believe that money market funds already have liquidity risk management tools at their disposal that could accomplish comparable goals to the swing pricing permitted for other funds under rule 22c–1(a)(3).

We also believe that the liquidity fee regime permitted under rule 2a–7 is a more appropriate tool for money market funds to manage the allocation of liquidity costs than swing pricing.[76] Money market funds also have unique minimum liquid investment requirements, and we believe the use of liquidity fees is appropriately tied to those requirements. We also anticipate that open-end funds that adopt swing pricing policies and procedures may be required under such procedures to adjust their NAV from time to time (whenever the fund's net purchases or net redemptions exceed the fund's swing threshold). In contrast, money market fund investors (particularly, investors in stable-NAV money market funds) are particularly sensitive to price volatility,[77] and we anticipate liquidity fees will be used only in times of stress when money market funds' internal liquidity has been partially depleted.

We note that some foreign jurisdictions have a similar conception of liquidity fees as a distinct tool separate from swing pricing. For example, in Europe, UCITS may use swing pricing and apply ''dilution levies,'' which are in many respects similar to liquidity fees.[78] While many UCITS use swing pricing as a matter of normal course, dilution levies may be considered a liquidity risk management tool that is used in connection with stressed conditions.[79]

b. General Considerations Relating to Swing Pricing

As highlighted above, most commenters expressed general support for the goals of swing pricing, as well as the ability of swing pricing to achieve these goals if successfully implemented.[80] These commenters highlighted the value of swing pricing for investors, and noted that the tool may address the dilutive effect of shareholder transaction activity effectively and through a more efficient means than many other tools.[81]

Several commenters suggested that, in addition to mitigating potential dilution arising from purchase and redemption activity, swing pricing also could help deter redemptions motivated by any first-mover advantage.[82] That is, if non-transacting shareholders understood that redeeming shareholders—especially shareholders seeking to redeem large holdings—would bear the estimated costs of their redemption activity, it would reduce shareholders' incentive to redeem large holdings quickly because there would be less risk that non-transacting shareholders would bear the costs of other shareholders' redemption activity. We agree that this may be an additional useful effect of swing pricing for the funds that choose to use it.

As discussed in more detail in section II.A.3.d. below, swing pricing would require a fund, in determining whether the fund's level of net purchases or net redemptions has exceeded the swing threshold, to make such a determination based on receipt of sufficient information about the fund's net shareholder flows to allow the fund to reasonably estimate whether it has crossed the swing threshold with high confidence. We understand that, to the extent that funds engage in swing pricing, funds may be able to use the earlier receipt of net flow information in other ways, in particular, receiving net flow data earlier than current practice may provide valuable and improved information to fund managers for portfolio management and liquidity risk management, allowing them to better manage the portfolio. For example, the receipt of earlier net flow data will enable a more timely analysis of potential portfolio adjustments.[83] Even on days where a fund does not meet the swing threshold, the shareholder flow data that the fund receives may be useful, allowing portfolio managers to better manage the fund's portfolio in response to expected shareholder transaction activity.[84]

Some commenters also suggested that swing pricing and redemption fees can accomplish many of the same goals.[85] Although swing pricing has similar anti-dilutive effects as redemption or liquidity fees, swing pricing has the benefit of not requiring transfer agents or intermediaries to process, reconcile, and remit to funds the additional fees charged on shareholder transactions. The swing pricing adjustment would be applied when a fund calculates its NAV, thus potentially allowing for a more efficient and cost-effective tool.[86] We agree with commenters that swing pricing may have significant anti-dilutive benefits for the funds that choose to utilize it, and that it may be more advantageous to use in many respects than other potential tools designed to address the same concern, such as dual pricing.[87]

[74] *See, e.g.,* 2014 Money Market Fund Reform Adopting Release, *supra* footnote 38, at n.139 and accompanying text.

[75] *See id.,* at n.120.

[76] While funds may adopt swing pricing policies and procedures at their discretion, rule 2a–7 requires a money market fund under certain circumstances to impose a one percent liquidity fee on each shareholder's redemption, unless the fund's board of directors (including a majority of its independent directors) determines that such fee is not in the best interests of the fund, or determines that a lower or higher fee (not to exceed two percent) is in the best interests of the fund. *See* rule 2a–7(c)(2)(ii).

[77] For example, retail and government money market funds are permitted to maintain a stable NAV, reflecting in part our understanding that investors in these products have a low tolerance for NAV volatility. *See* 2014 Money Market Fund Reform Adopting Release, *supra* footnote 38, at section III.B.3.c. Investors in floating NAV money market funds also could be sensitive to principal volatility, as we recognized in adopting requirements that all money market funds disclose their daily net asset value (rounded to the fourth decimal place) on their Web sites, and as we discussed in the economic analysis of the 2014 Money Market Fund Reform Adopting Release. *See id.,* at section III.E.9 and section III.K.

[78] *See, e.g.,* BlackRock Fund Structures Paper, *supra* footnote 46, at 6; *see also supra* footnote 24 and accompanying and following text (discussing redemption fees that are currently permitted under rule 22c–2).

[79] *See* BlackRock Fund Structures Paper, *supra* footnote 46, at 6.

[80] *See, e.g.,* GARP Comment Letter; Comment Letter of J.P. Morgan Asset Management (Jan. 13, 2016) (''J.P. Morgan Comment Letter''); SIFMA Comment Letter II.

[81] Some of these commenters noted investor and intermediary omnibus account issues, as well as systems and operational disadvantages associated with alternative tools, such as redemption fees, dual pricing and redemptions in kind. *See, e.g.,* Comment Letter of Charles Schwab Investment Management (Jan. 13, 2016) (''Charles Schwab Comment Letter''); Federated Comment Letter; Comment Letter of HSBC Global Asset Management (Jan. 13, 2016) (''HSBC Comment Letter'').

[82] *See, e.g.,* BlackRock Comment Letter; Comment Letter of CFA Institute (Jan. 12, 2016) (''CFA Comment Letter''); GARP Comment Letter.

[83] It is our understanding that most portfolio securities trading occurs early morning (when markets open) or close to the end of the trading day. Thus the best market prices may be missed if net flow information is not received by the fund until, for example, late morning on T+1 as often happens today with respect to some funds. *See* GARP Comment Letter.

[84] We recognize that not all funds would be in a position to implement swing pricing quickly but note that such earlier receipt of shareholder flow data may provide an additional incentive for funds to adopt swing pricing beyond the anti-dilutive benefits it may provide.

[85] *See* Federated Comment Letter; Eaton Vance Comment Letter.

[86] However, as discussed in greater detail in section II.A.3.d. below, operational changes will need to be made in order to accurately apply the swing pricing factor. Funds would need to receive timely daily net shareholder flow information from intermediaries prior to the calculation of the NAV, in order to determine whether the swing threshold has been exceeded, and the NAV requires adjustment in accordance with the fund's policies and procedures.

[87] *See* HSBC Comment Letter: Charles Schwab Comment Letter. *See also supra* footnote 24 and accompanying and following text (discussing rule 22c–2 and redemption fees).

We have noted that performance benefits have been identified in UCITs that use swing pricing, which suggests that it is consistent with swing pricing having the effect of mitigating dilution costs for the non-transacting shareholders in some funds, thus providing observable benefits to those investors.[88] One commenter disputed this notion, indicating that ''the aggregate returns of fund shareholders, before expenses, are exactly the same whether or not a fund uses swing pricing'' because ''the observed improvement in fund pricing is sourced from, and equally offset by, the net transaction costs paid by buyers and sellers of fund shares. . . .'' [89] We believe the commenter's analysis fails to take into account the value that the fund and its non-transacting shareholders realize by reallocating such costs to transacting shareholders (*i.e.,* we believe the commenter is disregarding the value of better aligning transaction costs to transacting, rather than non-transacting, shareholders).[90]

A few commenters advocated for the Commission to require all funds to adopt swing pricing policies and procedures.[91] These commenters suggested that swing pricing has significant benefits for investors, and that if left permissive, rather than mandatory, few funds would be likely to undertake the operational costs and challenges of implementing it.[92] However, the majority of commenters argued that, if the Commission were to adopt swing-pricing rules, it should maintain the proposal's permissive (not mandatory) approach.[93] These commenters agreed that although swing pricing could mitigate potential shareholder dilution on days when a fund experiences heavy redemptions or purchases [94] and could help deter redemptions motivated by any first-mover advantage, it does so at a cost that may be significant for some funds.[95] They also argued that swing pricing may not necessarily be appropriate for all funds, as some funds may be more susceptible to significant and costly shareholder transaction activity than others, and thus requiring all funds to implement swing pricing and bear its associated costs is not justified. They argued that funds would be best situated to determine whether the benefits of swing pricing outweigh the costs.

We appreciate the commenters' concerns that swing pricing may have costs that, for some funds, may not be justified by the benefits.[96] We believe that as funds begin to implement swing pricing, they will be able to better evaluate the benefits and costs, and determine whether swing pricing is appropriate for each particular fund. Accordingly, we believe that the use of swing pricing by funds as an anti-dilution tool at this time should be optional rather than mandatory, and are adopting this permissive approach as proposed.

While most commenters supported swing pricing in concept, a few opposed swing pricing outright, arguing that it may have negative effects on certain shareholders and may add to fund performance volatility.[97] Many commenters who expressed general support for swing pricing also raised other concerns and challenges, many of which were also discussed in the Proposing Release.

Operational Challenges

Commenters raised a variety of operational challenges with respect to the implementation of swing pricing.[98] As discussed in greater detail in section II.A.3.d. below, it is critical that funds obtain sufficient data about shareholder purchase and redemption activity from intermediaries in a timely manner in order to reasonably estimate with high confidence whether a fund should use swing pricing on any given day; this process presents operational challenges at the present time, particularly for some funds.

Several commenters noted that many current systems for processing fund orders are not set up to provide data on shareholder flows until well after a fund's NAV has already been struck, and that some of these systems depend on receiving the fund's NAV before the processing of shareholder purchase and redemptions transactions can begin.[99] Commenters pointed to systems issues and processing issues associated with swing pricing as their greatest concern, and suggested that few funds may adopt swing pricing immediately if the rule was effective upon adoption. Commenters suggested a variety of approaches to addressing these issues, including delayed effective dates for swing pricing to allow for systems changes and industry coordination efforts to be completed,[100] delaying the striking of a fund's NAV to allow more time for shareholder flow data to reach funds,[101] and potential regulatory action

[88] *See* Association of the Luxembourg Fund Industry, Swing Pricing Guidelines (Dec. 2015) (''ALFI Swing Pricing Guidelines 2015''), at 6, *available at http://www.alfi.lu/sites/alfi.lu/files/Swing-Pricing-guidelines-final.pdf* (''Funds that apply swing pricing show superior performance over time compared to funds (with identical investment strategies and trading patterns) that do not employ anti-dilution measures. Swing pricing helps preserve investment returns.''). We are not aware of differences between UCITs and US mutual funds or swing pricing practices that would cause performance benefits in U.S. mutual funds to be dissimilar, as swing pricing in UCITs regimes is also designed to reduce dilution and recapture the costs imposed by purchasing and redeeming shareholders on the fund. As discussed previously, commenters noting differences in the US and UCITs regimes largely pointed to differences in operational practice that made swing pricing easier to implement, and did not suggest that the benefits of swing pricing, once implemented, would differ.

[89] *See* Eaton Vance Comment Letter.

[90] We note that ETFs operating as open-end funds already externalize much of their transaction costs to their authorized participants.

[91] *See* Comment Letter of Chris Barnard (Nov. 30, 2015) (''Barnard Comment Letter''); Invesco Comment Letter.

[92] *See* Invesco Comment Letter (''Partial swing pricing must be mandatory across open-end mutual funds if it is to be used effectively . . . Making implementation optional would enable gaming and permit conflicts of interest.'').

[93] *See, e.g.,* CFA Comment Letter; Comment Letter of Dechert LLP (Jan. 13, 2016) (''Dechert Comment Letter''); ICI Comment Letter I; J.P. Morgan Comment Letter.

[94] *See, e.g.,* BlackRock Comment Letter; Comment Letter of MFS Investment Management (Jan. 13, 2016) (''MFS Comment Letter''); Charles Schwab Comment Letter; SIFMA Comment Letter II.

[95] *See, e.g.,* BlackRock Comment Letter; GARP Comment Letter; MFS Comment Letter; Charles Schwab Comment Letter.

[96] *See infra* section III.

[97] *See* Comment Letter of Anonymous (Sept. 23, 2015); Eaton Vance Comment Letter (discussing a study it conducted that concludes that shareholder capital activity does not meaningfully impact the performance of most mutual funds); ETF Consultants Comment Letter; Voya Comment Letter.

[98] *See, e.g.,* CRMC Comment Letter; Dechert Comment Letter; PIMCO Comment Letter; Comment Letter of Securities Industry and Financial Markets Association (Jan. 13, 2016) (Comments on Proposal to Require Liquidity Risk Management Programs and Related Liquidity Disclosures) (''SIFMA Comment Letter I'').

[99] *See, e.g.,* Eaton Vance Comment Letter; GARP Comment Letter; ICI Comment Letter I; Comment Letter of LPL Financial (Jan. 13, 2016) (''LPL Comment Letter''). Commenters noted that certain platforms of third-party distributors (*e.g.,* retirement plan record keepers, insurance companies, trust companies) require that actual fund NAVs are received before making trade allocations and processing transactions across accounts. For example, once orders in a retirement plan are created, investor transactions must be evaluated against the retirement plan's rules for determining a valid transaction, and the amounts invested are percentage allocations, using the NAV for each applicable fund when calculating the final transaction order. It was also noted that for some funds, a large percentage of purchases and redemptions are from the retirement channel (*e.g.,* approximately 30%)). *See* ICI Comment Letter I.

[100] *See, e.g.,* BlackRock Comment Letter; CRMC Comment Letter; Fidelity Comment Letter; ICI Comment Letter I. *See also infra* footnote 212 and accompanying paragraph (discussing competitive concerns and an extended effective date).

[101] *See* GARP Comment Letter; J.P. Morgan Comment Letter (also discussing potentially delaying NAV publication time from 6 p.m. ET to 8 p.m. ET, and generally concurring with GARP discussion of operational challenges).

to require intermediaries to assist in providing necessary data to funds.[102]

We recognize that most current systems for funds and intermediaries are not set up to accommodate swing pricing, and that certain changes would need to be made before swing pricing can be adopted in the U.S. We also anticipate that certain funds are better positioned to reasonably estimate their net flows, and thus could be ready to implement swing pricing sooner than other funds.[103] As discussed in greater detail in section II.A.3.d. below, we believe that the challenges to implementing swing pricing can be addressed by the fund industry and overcome. Two commenters also noted that the aggregate long-term benefits to both shareholders and to the stability of the overall financial system from swing pricing should be significant, likely outweighing the transition costs.[104] Although funds and intermediaries may incur costs in changing operational systems and developing new processes, because swing pricing is optional (not mandatory) these costs would only be incurred if funds elect to adopt swing pricing.

As mentioned above, the operational difficulties associated with swing pricing are not uniform among all funds. Certain funds that may have more direct relationships with shareholders, instead of being heavily intermediated, and funds that may have more transparency into shareholder flows due to different shareholder bases, or affiliate relationships, or more up-to-date systems may be more easily able to implement swing pricing. We believe, however, that an extended effective date can help ease the overall burden incurred by funds, intermediaries and service providers (and ultimately, the burden incurred by investors) by allowing sufficient time for the development and implementation of efficient and cost effective industry-wide operational solutions.[105] Further, we believe that even if only a limited number of funds adopt swing pricing immediately following the extended effective date, as funds begin to gain familiarity with the process, more funds may choose to adopt it over time.[106] In addition, once a few funds have adopted swing pricing, it may pave the way for other funds to leverage broader industry solutions implemented by intermediaries and service providers in support of swing pricing.[107] Finally, we are adopting swing pricing as a permissive tool, with no expectation that funds will utilize swing pricing by a certain date. This means that as funds, service providers and intermediaries upgrade systems over time, they may re-evaluate their ability to use swing pricing, or build the necessary changes into new systems, allowing more funds to use it in the future, even if they do not make immediate changes in response to our final rule by the extended effective date.

Impacts on Current NAV and Performance Volatility

Several commenters voiced reservations about whether the swung NAV could appropriately be viewed as a fund's current NAV (particularly in light of the use of estimates to determine whether the fund has crossed the swing threshold and the swing factor) and may raise questions about the accuracy of the fund's NAV.[108] Although reasonable high-confidence estimates may be used to implement swing pricing, we believe the standards and guidance provided in this Release for establishing these estimates, as well as processes and procedures that funds may implement (including back-testing and adjusting estimates used based on actual or final data related to flows and transaction costs associated with subsequent portfolio trades), should mitigate concerns regarding the impact of using estimates for swing pricing on current NAVs.[109] We note that current NAV calculation processes already include subjective judgments and estimates, including, for example, fair-value determinations for assets that lack readily available market quotations. Additionally, we believe a swung NAV can reflect a more appropriate allocation of transaction costs to the redeeming shareholders whose redemptions caused these costs for those funds.

Commenters also noted concerns that swing pricing could lead to increased performance volatility.[110] The swing pricing requirements adopted today under rule 22c–1 aim to minimize NAV volatility (and related tracking error) associated with swing pricing to the extent possible. Swing pricing could increase the volatility of a fund's NAV in the short-term because NAV adjustments would occur when the fund's net purchases or net redemptions pass the fund's swing threshold. Thus, the fund's day-to-day NAV would show greater fluctuation than would be the case in the absence of swing pricing. This volatility might increase short-term tracking error (*i.e.,* the difference in return based on the swung NAV compared to the fund's benchmark)[111] during the daily period of NAV adjustment, and could make a fund's short-term performance deviate from the fund's benchmark to a greater degree than if swing pricing had not been used, especially if the NAV is swung on the first or last day of a performance measurement period.[112] However, swing pricing may also result in reduced tracking error over time, as benchmarks typically do not take into account transaction costs associated with responding to daily transactions, and if swing pricing recoups such costs, it may result in a fund that implements swing pricing better matching its benchmark on a long-term basis.

We recognize the desire to balance performance volatility with a fairer allocation of transaction costs. We believe that the use of swing pricing above a swing threshold, which we are permitting as proposed, may reduce the performance volatility potentially

[102] *See, e.g.,* CRMC Comment Letter; GARP Comment Letter; Invesco Comment Letter; T. Rowe Comment Letter.

[103] For example, we understand that some funds may have larger retail shareholder bases that transact directly with the fund's transfer agent or may be primarily distributed through affiliates or broker-dealers (that could potentially provide timely flow data) and/or do not have a substantial number of investors transacting in retirement plans or insurance products, where it may be more challenging to obtain timely estimates. Such funds may also have a high confidence in reasonable estimates used by back-testing their estimated flow information to actual trade flows.

[104] *See* BlackRock Comment Letter; GARP Comment Letter.

[105] *See infra* at footnotes 212–214 and accompanying text.

[106] *See, e.g.,* ALFI Survey 2015, *supra* footnote 42, at *6–7 (noting the trend observed in 2011 towards greater adoption of swing pricing in the Luxembourg fund industry has continued*).

[107] We believe that the extended effective date for swing pricing mitigates competitive concerns by allowing time for funds that choose to implement swing pricing to confront the operational hurdles of doing so. This does not preclude, however, the possibility that certain funds will find it advantageous to wait until swing pricing is more widely established in the market before choosing to implement swing pricing.

[108] *See* Eaton Vance Comment Letter (''In our view, the provisions of the Swing Pricing Proposal that would require funds adopting swing pricing to refer to their adjusted transaction prices as NAV are inconsistent with Chair White's recent statement emphasizing the importance of NAV accuracy.''); *see also* ETF Consultants Comment Letter; ICI Comment Letter I; MFDF Comment Letter.

[109] *See infra* footnote 187 and accompanying paragraph for further discussion on the nature of these estimates.

[110] *See* Federated Comment Letter; HSBC Comment Letter; Voya Comment Letter; Eaton Vance Comment Letter.

[111] We note that tracking error created by allocating some liquidity costs to transacting investors is inevitable for an open-end fund conducting swing pricing just as it is for any fund whose transactions create liquidity costs.

[112] *See* Proposing Release, *supra* footnote 6, at 196–198.

associated with swing pricing.[113] In addition, we are not aware of investors in funds that utilize swing pricing in Europe negatively reacting to funds that swing price because of concerns related to performance volatility or tracking error.[114] Taking these considerations into account, we do not believe that potential volatility and tracking error will necessarily make funds conclude that the potential concerns about swing pricing outweigh its benefits, and thus we continue to believe that we should make this anti-dilution tool available to funds that choose to use it.

Shareholder Fairness Concerns

A number of commenters suggested that swing pricing could raise shareholder fairness concerns, as the proposed swing pricing rules would apply a single adjusted NAV per share to all shareholder orders, regardless of order size. These commenters maintained that swing pricing could thus penalize certain investors disproportionately or give other investors inappropriate ''windfalls.'' [115] As noted in our proposal, we recognize that there are a variety of trade-offs that a fund would have to consider in determining to implement swing pricing.[116] These concerns, however, are partially mitigated by the fact that shareholders could be assured that the threshold level(s) of net purchase or net redemption activity (as included in a fund's swing pricing policies and procedures) would consistently trigger the use of swing pricing when applicable. A board is subject to duties of loyalty and care in the approval of policies and procedures implementing swing pricing, and the fund's adviser is subject to a fiduciary duty to the fund. We believe that such policies, procedures, and controls, as well as board oversight, should help mitigate concerns raised by one commenter of potential fraud and abuses by unscrupulous fund managers and market timers.[117] Moreover, the final rule requires that the swing factor used must be reasonable in relationship to the near-term costs expected to be incurred by the fund as a result of net purchases or net redemptions that occur on the day the swing factor is used. It also requires that the board approve policies and procedures specifying the process for how the swing threshold(s), swing factor(s), and swing factor upper limit are determined,[118] and that the board review at least annually a report reviewing the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution.[119] This report also must describe the swing pricing administrator's review and assessment of the fund's swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements of the rule, including the information and data supporting these determinations.[120] In addition, shareholders will have transparency into a fund's use of swing pricing because a fund will be required to establish and disclose a board-approved upper limit on the swing factor(s) used by the fund, which may not be greater than two percent of the fund's NAV per share.[121] All of these changes are designed to enhance the fair treatment of shareholders in any use of swing pricing and to prevent any abusive practices.

We also observe that transaction costs of purchasing and redeeming investors are today allocated to all non-transacting investors in a mutual fund, and as a result, long-term investors may incur a more substantial burden of such costs than purchasing and redeeming shareholders.[122] However, partial swing pricing would allow funds to more closely align such transactions costs with purchasing and redeeming shareholders, and non-transacting investors would not be paying for the trading activity of such shareholders, which, as some commenters indicated, enhances shareholder fairness overall.[123] Furthermore, we believe that investors who purchase shares on a day that a fund adjusts its NAV downward would not create dilution for non-redeeming shareholders (even though the purchasing shareholders may be receiving a lower price than would be the case if the NAV was not adjusted downward). Under these circumstances, shareholders' purchase activity would provide liquidity to the fund, which could reduce the fund's costs in meeting shareholders' redemptions requests that day. We also note that in circumstances where the flows of purchases and redemptions are fairly balanced, it is unlikely that a fund will cross its swing threshold. Thus, purchasing shareholders are only likely to receive a NAV that is adjusted downward when the fund experiences substantial outflows. After considering the comments received, we believe it is appropriate to apply the swung NAV equally to all transacting shareholders in the fund.

Swing Pricing Transparency and Disclosures

Several commenters raised concerns regarding investor confusion to the extent that a fund's swing threshold and swing factor are not made transparent.[124] We agree that an adequate level of transparency about swing pricing is critical for investors to understand the risks associated with investing in a particular fund. However, we do not believe disclosure of a fund's swing threshold or swing factor is required to provide such transparency. As discussed in greater detail below, we are adopting, with some changes from the proposal, disclosure and reporting requirements regarding swing pricing to assist shareholders in understanding whether a particular fund has implemented swing pricing policies and procedures and whether the fund has utilized swing pricing.[125] As part of the disclosure changes, a fund will be required to disclose the fund's swing factor upper limit and include a description of the effects of swing pricing on a fund's performance.

Other commenters expressed concern that swing pricing could give rise to gaming behavior if certain shareholders were to attempt to time their trading activity to avoid (or take advantage of) pricing adjustments.[126] Requiring a fund

[113] *See id.,* at paragraph accompanying n.447 (discussing partial swing pricing in greater detail).

[114] *See supra* footnote 88 and accompanying text.

[115] *See, e.g.,* CFA Comment Letter; Eaton Vance Comment Letter; Federated Comment Letter. *But see* Morningstar Comment Letter (recognizing this concern, but noting that, when an investor sells fund shares during a time of heightened market volatility and wider bid-ask spreads for the fund's underlying holdings, selling the fund's investments to meet redemptions will necessarily result in costs to the fund, and it is fairer for those who are selling fund shares to bear these costs than those who remain in the fund).

[116] *See* Proposing Release, *supra* footnote 6, at n.450 and preceding and accompanying text (noting, for example, that application of a swing factor could cause certain shareholders to experience benefits or costs, relative to the other shareholders in the fund, that otherwise would not exist).

[117] *See* Eaton Vance Comment Letter.

[118] *See* rule 22c–1(a)(3)(ii)(A).

[119] *See* rule 22c–1(a)(3)(ii)(D).

[120] *See id.*

[121] *See* rule 22c–1(a)(3)(i)(C) and rule 22c–1(a)(3)(ii)(B). *See infra* section II.B for further details on disclosure and reporting requirements for swing pricing.

[122] We note that transacting investors on any given day also may remain long-term investors in a fund if they have not redeemed their entire position.

[123] *See* GARP Comment Letter; HSBC Comment Letter.

[124] *See, e.g.,* AFR Comment Letter; Eaton Vance Comment Letter; ETF Consultants Comment Letter; MFDF Comment Letter.

[125] *See infra* section II.B. for further details on disclosure and reporting requirements for swing pricing. *See also infra* section II.A.3.g. for a discussion of swing pricing impacts on financial statement reporting, performance reporting and pricing errors.

[126] *See* CFA Comment Letter; Federated Comment Letter; HSBC Comment Letter; Invesco Comment Letter.

to publicly disclose its swing threshold could create the potential for shareholder gaming behavior because a fund's shareholders could attempt to time their purchases and redemptions based on the likelihood that a fund would or would not adjust its NAV. One commenter suggested, for example, that certain vendors may have access to fund flow information through non-fund sources (such as by observing intermediary trading behavior) and that market timers may try to use any such information to detect patterns in swing pricing by funds, suggesting that those market timers might seek to transact on days when there is an advantageous change in the fund's NAV.[127]

For a shareholder to effectively game swing pricing, the shareholder would have to know the fund's swing threshold and net flow information on the day that the shareholder was purchasing or redeeming and that flow information would have to not materially change after the shareholder placed its order. Accordingly, without disclosure of this information, it will be difficult for shareholders to determine when the fund's net purchases or net redemptions exceed the swing threshold. After weighing these considerations, we are not requiring a fund to disclose its swing threshold or swing factor under the final rule, and we believe that a fund generally should not disclose its swing threshold unless it has determined that it is in the best interests of the fund to do so. In making this assessment, the fund should consider the nature of the fund's shareholders and whether disclosure of the swing threshold would result in significant shareholder harm. We note that, to the extent a fund does decide to disclose its swing threshold, we believe it would not be appropriate for a fund to disclose it selectively to certain investors (*e.g.,* to only disclose the fund's swing threshold to institutional investors), as we believe this could assist certain groups of shareholders in strategically timing purchases and redemptions of fund shares, potentially disadvantaging shareholders who do not know the fund's swing threshold.[128]

With respect to market timing concerns, we note that a fund's market timing policies and procedures should address and seek to resolve such issues for a fund that uses swing pricing. We note that funds have a variety of tools to prevent any such market timing should it occur, such as redemption fees, purchase blocks, and roundtrip restrictions, which we believe should mitigate this risk. In addition, investors will not be able to purposefully take advantage of swing pricing to obtain a better price without knowledge of contemporaneous intraday flows and a fund's swing thresholds, neither of which funds are required to publicly disclose under the rule.

c. Swing Threshold

Under the final rule, as under the proposed rule, a fund's swing pricing policies and procedures must provide that the fund is required to adjust its NAV once the level of net purchases or net redemptions from the fund has exceeded a set, specified percentage of the fund's net asset value known as the ''swing threshold.'' [129] A fund must adopt policies and procedures that specify the process for how the fund's swing threshold is determined,[130] and the policies and procedures must be approved by the fund's board of directors.[131] In addition, the fund board will review a periodic report that describes, among other things, a review and assessment of the fund's swing threshold.[132] Finally, the fund board will be required to approve the fund's swing threshold and any changes thereto.[133]

In determining whether the fund's level of net purchases or net redemptions has exceeded the swing threshold, the person(s) responsible for administering the fund's swing pricing policies and procedures will be permitted to make this determination based on receipt of sufficient information about the fund shareholders' daily purchase and redemption activity to allow the fund to reasonably estimate whether it has crossed the swing threshold with high confidence.[134] This shareholder flow information may be individual, aggregated, or netted orders, may include reasonable estimates where necessary, and shall exclude any purchases or redemptions that are made in kind and not in cash.[135] The fund's policies and procedures should describe how such determinations will be made.[136] We are adopting a requirement that, in specifying the process for how the swing threshold is determined, a fund consider:

- The size, frequency, and volatility of historical net purchases or net redemptions of fund shares during normal and stressed periods;
- The fund's investment strategy and the liquidity of the fund's portfolio investments;
- The fund's holdings of cash and cash equivalents, as well as borrowing arrangements and other funding sources; and
- The costs associated with transactions in the markets in which the fund invests.[137]

We requested comment on the process a fund would use to determine its swing threshold, including the factors that a fund would be required to consider, and also requested comment on whether there were certain procedures that we should require a fund to use when reviewing its swing threshold. Commenters on the proposed rule expressed a variety of views regarding the factors a fund must consider in specifying the fund's swing threshold. Some commenters indicated that the Commission should be less prescriptive in establishing the factors, arguing that not all of the factors are equally applicable to all funds, that requiring funds to consider all these factors may lead funds to create overly mechanistic checklists, and that a principles-based approach would better allow funds to

[127] *See* Eaton Vance Comment Letter.

[128] The Commission has brought enforcement actions against fund managers for selective disclosure. *See* In the Matter of Evergreen Investment Management Company, LLC and Evergreen Investment Services, Inc., Investment Company Act Release No. 28759 (June 8, 2009) (settled order) (''Evergreen Order''); In the Matter of Alliance Capital Management, L.P., Investment Company Act Release No. 26312 (Dec. 18, 2003) (settled order).

[129] Rule 22c–1(a)(3)(i)(A). Under the rule, ''swing threshold'' is defined as ''the amount of net purchases into or net redemptions from a fund, expressed as a percentage of the fund's net asset value, that triggers the initiation of swing pricing.'' Rule 22c–1(a)(3)(v)(D).

[130] Rule 22c–1(a)(3)(i)(B).

[131] Rule 22c–1(a)(3)(ii)(A).

[132] Rule 22c–1(a)(3)(ii)(D).

[133] Rule 22c–1(a)(3)(ii)(B).

[134] Rule 22c–1(a)(3)(i)(A).

[135] *Id.* As noted in the Proposing Release, when a fund investor purchases or redeems shares of a fund in kind as opposed to in cash, this does not necessarily cause the fund to trade any of its portfolio assets. The risk of dilution as a result of shareholder purchase and redemption activity, therefore, is lower with respect to in-kind purchases and in-kind redemptions, and thus swing pricing would not be permitted unless a fund's net purchases or net redemptions that are made in cash (and not in kind) exceed the fund's swing threshold. *See* Proposing Release, *supra* footnote 6, at n.439 and accompanying paragraph.

[136] *See infra* footnote 179.

[137] Rule 22c–1(a)(3)(i)(B).

These factors overlap significantly with factors that we understand are commonly considered by funds that use swing pricing in other jurisdictions, in order to determine a fund's swing threshold. For example, the Luxembourg Swing Pricing Survey, Reports & Guidelines provides that factors influencing the determination of the swing threshold ordinarily include: (i) Fund size; (ii) type and liquidity of securities in which the fund invests; (iii) costs (and hence, the dilution impact) associated with the markets in which the fund invests; and (iv) investment manager's investment policy and the extent to which the fund can retain cash (or near cash) as opposed to always being fully invested). *See* ALFI Survey 2015, *supra* footnote 42, at 14.

tailor their swing pricing processes to their unique circumstances.[138] Other commenters indicated that the rule's factors as proposed grant ''excessive'' discretion concerning the threshold for swing pricing,[139] and expressed concern that ''fund shareholders will frequently bear swing pricing transaction costs that have little or no relation to the actual impact of their transaction on the fund and its continuing shareholders.''[140] One commenter stated that the factors are in line with the commenter's expectations.[141]

We recognize the potential dangers of being overly prescriptive in this area, but believe that the factors reflect common areas that a fund would consider in establishing its swing pricing process and are consistent with factors that are considered by funds that use swing pricing in other jurisdictions.[142] In addition, we note that the rule does not preclude a fund from considering other factors that the fund believes may be relevant.[143] Similarly, we recognize the potential dangers of providing complete discretion in this area, but note that further constraining funds' decision-making processes in setting the swing threshold may unduly restrict the ability of each fund to select an appropriate threshold that best suits the particular needs of the fund. Both extremes present a risk that transacting shareholders will bear swing pricing costs via the swing factor that are divorced from the fund's transaction costs. After considering commenters' concerns, therefore, we are adopting the factors related to setting a fund's swing threshold as proposed.

We continue to believe that evaluating all four factors will assist a fund in determining what level of net purchases or net redemptions would generally lead to the trading of portfolio assets that would result in material costs to the fund, and thus they are relevant to setting a fund's swing threshold.[144] Two of the factors a fund is required to consider in specifying the fund's swing threshold, relating to a fund's investment strategy and cash holdings, are similar (investment strategy factor) or the same (cash holdings factor) as two of the factors a fund is required to consider in assessing its liquidity risk under rule 22e–4.[145] Overlap between the factors is not surprising, because evaluating a fund's liquidity risk may be relevant to determining the fund's swing threshold (*i.e.,* determining the appropriate circumstances under which the fund should employ swing pricing to combat shareholder dilution).[146] Such overlap may also lead to efficiencies in both analyses, as funds become more familiar with the interaction between the factors, the risk of dilution, and efforts to combat dilution. A third factor (the size, frequency, and volatility of historical net purchases or net redemptions of fund shares during normal and stressed periods) is a consideration in determining how frequently a fund may expect a specified swing threshold to be exceeded.[147] The fourth factor, the costs associated with transactions in the markets in which the fund invests, is a consideration in determining whether costs of responding to shareholder transaction activity are significant enough at a specified threshold level that the fund should utilize swing pricing to address their dilutive impact.[148]

In order to effectively mitigate possible dilution arising in connection with shareholder purchase and redemption activity, a fund's swing threshold should generally reflect the estimated point at which net purchases or net redemptions would trigger the fund's investment adviser to trade portfolio assets in the near term, to a degree or of a type that may generate material liquidity or transaction costs for the fund. We believe that a consideration of the factors set forth above will promote a fund estimating this threshold point.[149]

Full Swing Pricing vs. Swing Pricing Above a Threshold

Like the proposal, the final rule does not impose a minimum ''floor'' for a fund's swing threshold. We believe that different levels of net purchases and net redemptions would create different risks of dilution for funds with different strategies, shareholder bases, and other liquidity-related characteristics, and thus we do not believe that it would be appropriate to determine a single swing threshold floor to apply to all funds that elect to use swing pricing.[150] Rather, we believe it is appropriate to constrain the swing threshold through the factors that a fund must consider in setting the

[138] *See* ICI Comment Letter I; J.P. Morgan Comment Letter; Charles Schwab Comment Letter.

[139] *See* AFR Comment Letter.

[140] *See* Eaton Vance Comment Letter.

[141] *See* HSBC Comment Letter.

[142] *See supra* footnote 137.

[143] In contrast, we have given more limited discretion to funds when setting a fund's swing factor(s), but are not requiring board approval of the fund's swing factors. *See* rule 22(c)–1(a)(3)(i)(C) (providing that the person(s) responsible for administering swing pricing may take into account only the near-term costs expected to be incurred by the fund as a result of net purchases or net redemptions that occur on the day the swing factor(s) is used). Together, these modifications are designed to enhance the fair treatment of shareholders in the use of swing pricing and to prevent abusive practices, while also providing funds with the ability to tailor a fund's use of swing pricing after consideration of the swing threshold factors. *See also* AFR Comment Letter (expressing concern regarding the degree of discretion afforded to funds in setting both the swing threshold and swing factor).

[144] Assessing the size, frequency, and volatility of historical net purchases and net redemptions of fund shares will permit a fund to determine its typical levels of net purchases and net redemptions and the levels the fund could expect to encounter during periods of unusual market stress, as well as the frequency with which the fund could expect to see periods of unusually high purchases or redemptions. We continue to believe that comparing the fund's historical flow patterns with the fund's investment strategy, the liquidity of the fund's portfolio holdings, the fund's holdings of cash and cash equivalents and borrowing arrangements and other funding sources, and the costs associated with transactions in the markets in which the fund invests will allow a fund to predict what levels of purchases and redemptions would result in material costs under a variety of scenarios.

[145] *See* rule 22e–4(b)(2)(ii)(A) (requiring a fund to consider, in assessing its liquidity risk, the fund's ''investment strategy and liquidity of portfolio investments during both normal and reasonably foreseeable stressed conditions (including whether the investment strategy is appropriate for an open-end fund, the extent to which the strategy involves a relatively concentrated portfolio or large positions in particular issuers, and the use of borrowings for investment purposes and derivatives)''; and rule 22e–4(b)(2)(ii)(C) (requiring a fund to consider, in assessing its liquidity risk, the fund's ''holdings of cash and cash equivalents, as well as borrowing arrangements and other funding sources''). *See also* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8.

[146] *See* rule 22e–4(a)(11) (defining liquidity risk). We note that, in the Proposing Release, three of the factors a fund would have been required to consider in specifying the fund's swing threshold aligned with factors a fund is required to consider in assessing its liquidity risk. The change from three to two overlapping factors is due to a change in the liquidity risk assessment factors. *See* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8, at section III.B.2.

[147] This factor is similar to a factor for assessing liquidity risk, however, it has been tailored to be a more precise consideration for setting the swing threshold. *See id.*

[148] As discussed in the Proposing Release, a fund may wish to consider, as applicable, market impact costs and spread costs that the fund typically incurs when it trades its portfolio assets (or assets with comparable characteristics if data concerning a particular portfolio asset is not available to the fund). A fund also may wish to consider, as applicable, the transaction fees and charges that the fund typically is required to pay when it trades portfolio assets. These could include brokerage commissions and custody fees, as well as other charges, fees, and taxes associated with portfolio asset purchases or sales (for example, transfer taxes and repatriation costs for certain foreign securities, or transaction fees associated with portfolio investments in other investment companies).

[149] In circumstances where fund purchases and redemptions are fairly balanced, we believe that it is unlikely that the purchases or redemptions would trigger the fund's investment adviser to trade portfolio assets in the near term, to a degree or of a type that may generate material liquidity or transaction costs for the fund.

[150] We note that, in Europe, there are no across-the-board swing threshold floors applicable to UCITS that use swing pricing.

swing threshold, which are designed to prevent a fund from setting a swing threshold that is inappropriate and does not reflect the size and nature of the liquidity costs likely to be incurred by the fund. We believe that the consideration of the swing threshold factors would lead a fund to set a threshold at a level that would trigger the fund's investment adviser to trade portfolio assets in the near term to a degree or of a type that may generate material liquidity or transaction costs for the fund. We further believe that, after considering the swing threshold factors, a fund would be unable to set the swing threshold at zero.

Commenters generally supported the approach taken under the proposal of not setting a minimum threshold for swing pricing. Some commenters indicated that the Commission should permit full swing pricing because a fund may find it more appropriate for its particular circumstances [151] and would mitigate any potential first-mover advantage inadvertently caused by swing pricing.[152] One commenter also suggested that full swing pricing is more transparent and easier to understand than partial swing pricing.[153] On the other hand, some commenters stated that the Commission should permit only partial swing pricing, arguing that the tracking error and volatility associated with full swing pricing would outweigh its benefits.[154]

On balance, we continue to believe that setting a minimum threshold for all funds would not be appropriate, and that funds should be provided the flexibility to implement swing pricing at a threshold level that best fits their particular circumstances based on the required factors and the guidance set forth herein. We expect that as part of the process of determining whether the benefits of implementing swing pricing are justified given the costs, funds will evaluate the appropriate threshold level and select a level that is suitable for the fund, considering the required factors. We believe that this approach strikes an appropriate balance between competing considerations by allowing tailored choices to be made for each fund but constrained by the factors that the fund must consider in setting the threshold. Therefore, we are adopting the threshold requirements as proposed.

Board Approval of Swing Threshold

We are also requiring the fund's board to approve a fund's swing threshold as proposed. Several commenters opposed the proposed requirement for a fund's board to approve the fund's swing threshold, stating that the determination of swing thresholds is more appropriately a management function.[155] One commenter noted that the determination of a fund's swing threshold would likely be a highly technical analysis ''that requires intimate familiarity with the fund's daily operations.'' [156] Additionally, one commenter questioned whether the board should be required to approve changes to a fund's swing threshold(s), arguing that board approval could be detrimental to a fund's ability to respond quickly to changing market conditions.[157] One commenter, on the other hand, supported requiring that a fund's board, including a majority of independent directors, approve the swing threshold as ''independent perspectives may more fully focus on shareholder interests.'' [158] Another commenter suggested that the proposed swing threshold requirements granted excessive discretion to fund managers notwithstanding the proposed board approval requirement.[159] As discussed in more detail below, several commenters also supported the idea that a fund's board should be given visibility into the process by which the swing threshold was determined via written reports.[160]

After considering commenters' concerns, we believe that board approval of a fund's swing threshold (and any changes thereto) is an important element of board oversight of a fund's swing pricing process. A fund's swing threshold(s) represents the trigger point at which the fund's NAV will be adjusted and thus the point at which swing pricing begins to affect fund shareholders. We believe board review and approval of this determination will help ensure that the fund's swing threshold(s)—and the point at which swing pricing begins to affect shareholders in the fund—is in the best interests of fund shareholders. While requiring board approval of changes to a fund's swing threshold may constrain a fund's ability to immediately or frequently change a fund's swing threshold, we believe that this requirement acts as an important check on the discretion afforded to the fund's swing pricing administrator. Moreover, under the final rule, a fund is permitted to set multiple swing threshold(s), which we believe may allow a fund to prepare for some changes in market conditions.

As described further below, we are also requiring that the board be provided with a written report from the fund's swing pricing administrator that describes, among other things, the administrator's review and assessment of the fund's swing threshold(s), including information and data supporting this determination.[161] We believe that the information provided in this report will help the board in overseeing this important element of the fund's swing pricing process, thereby addressing the concern some commenters expressed that the board may not have the necessary information or expertise to approve the swing threshold (and changes to the threshold).[162] At the same time, we believe that requiring board approval of a fund's swing threshold (and any changes to the threshold), combined with the board review requirement, serves to address concerns about granting excessive discretion to the swing pricing administrator.

Application of Swing Pricing to Purchases and Redemptions

Under the proposal, a fund that adopted swing pricing policies and procedures would have been required to adjust the fund's NAV whenever net redemptions or net subscriptions exceeded the swing threshold. In other words, a fund could not apply swing pricing only when it received net redemptions beyond the threshold. The

[151] *See* Dechert Comment Letter. Full swing pricing is the process of adjusting the fund's NAV whenever there is any level of net purchases or net redemptions, instead of swing pricing above a threshold (*i.e.,* partial swing pricing).

[152] *See* Federated Comment Letter.

[153] *See* HSBC Comment Letter (noting advantages of full swing pricing but also acknowledging benefits of partial swing pricing, such as ''a lower impact on net asset value volatility, tracking error and fund performance.'').

[154] *See* AFR Comment Letter (''We understand that full swing pricing—allowing NAV adjustments anytime there are net purchases or redemptions—may increase volatility, tracking errors, and investor misperceptions about funds' performance that could lead to market distortions. Instead, we support the proposed partial swing pricing that would allow NAV adjustments only when net purchases or redemptions exceed an established threshold. We agree that this approach will result in lower volatility than full swing pricing, while still reducing dilution on assets. To that end, we do not support an option allowing funds to choose to use full swing pricing.''). *See also* MFS Comment Letter.

[155] *See, e.g.,* BlackRock Comment (''Mutual fund boards should not be required to approval all swing thresholds.''); Dechert Comment Letter (stating that board approval of the swing threshold ''should instead be a management function, subject to board oversight'').

[156] Dechert Comment Letter.

[157] Charles Schwab Comment Letter.

[158] CFA Institute Comment Letter (''We also support the requirements that fund boards approve initial swing thresholds and any material changes to it. . .'').

[159] AFR Comment Letter.

[160] *See infra* footnote 276 and accompanying text.

[161] *See infra* section II.A.3.f.

[162] *See id.*

proposal solicited comment on whether a fund should be permitted to apply swing pricing only when the fund's level of net redemptions exceeds the swing threshold. Commenters requested that the Commission permit funds the flexibility to adjust their NAV *only* when net redemptions (as opposed to both net subscriptions or net redemptions) exceed the swing threshold,[163] and permit a fund to set different swing thresholds for net redemptions versus net subscriptions.[164] Commenters argued that this additional flexibility was important because the dilution risks associated with net redemptions may be significantly different from the risks associated with net subscriptions, as funds may be able to manage inflows more effectively over time without as much cost.[165] For this reason, they argued that funds may wish to only use swing pricing for net redemptions, and not subscriptions, or set differing thresholds for subscriptions versus redemptions.

While we agree with commenters that the impact of subscriptions may be different from that of redemptions and that funds have other tools to manage inflows over time,[166] the final rule continues to require a fund to adjust its NAV whenever net purchases or net redemptions exceed the swing threshold. Both purchases and redemptions may cause shareholder dilution in certain circumstances. Accordingly, we believe swing pricing will be a useful tool in mitigating shareholder dilution associated with shareholder purchase activity as well as shareholder redemption activity.

Multiple Swing Thresholds

In response to a comment request in the Proposing Release, a number of commenters suggested that we should permit a fund to set multiple escalating swing thresholds (wherein each threshold could be associated with a different swing factor) instead of only a single threshold.[167] Commenters argued that permitting multiple thresholds may allow funds to more effectively mitigate shareholder dilution, because the costs of managing shareholder activity may increase as redemptions increase, and would allow swing pricing to more precisely reflect different levels of costs associated with different levels of shareholder activity.[168]

We agree that permitting such multiple thresholds may allow funds to more precisely target the costs of managing shareholder activity and better mitigate shareholder dilution effects of such transactions. Accordingly, the final rule permits (but does not require) a fund to set multiple escalating swing thresholds, each associated with a different swing factor.[169] Whichever threshold is triggered on a given day would then determine the single swing factor that would be used to adjust the fund's NAV on that day. If a fund has more than one threshold, each should be established using the same factors discussed above, and if it has multiple swing factors, each should be set taking into account the same considerations discussed in section II.A.2.e. below.

Review Requirement

The proposed rule would have required a fund's swing pricing policies and procedures to provide for a periodic review, no less frequently than annually, of the fund's swing threshold. Beyond specifying certain factors that a fund would be required to consider in reviewing its swing threshold, the proposed rule did not include prescribed review procedures, nor did it specify the changes in a fund's circumstances over the course of the review period that a fund must consider as part of its review. One commenter suggested that the final rule make clear that the required review should be similar in nature to the review that led to the determination of a fund's swing threshold in the first place.[170] Another commenter suggested that the proposal provided little guidance to fund sponsors and boards in how to balance conflicting interests of shareholders in setting appropriate swing thresholds.[171] As discussed in more detail below, several commenters also supported the idea that a fund's board should be given visibility into the process by which the swing threshold was determined via written reports.[172]

We agree that the review requirement should be more robust, and instead of requiring a fund to periodically review the fund's swing threshold, we have adopted in the final rule a requirement that the fund's board of directors, must review, no less frequently than annually, a written report prepared by the person(s) responsible for administering swing pricing for a fund that describes, among other things: (i) The swing pricing administrator's review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution; and (ii) its review and assessment of the swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements in rule 22c–1(a)(3)(i)(B) and (C), including the information and data supporting these determinations.[173] We are also requiring, as proposed, that the fund board approve the fund's swing pricing policies and procedures, which must specify the process for how the fund's swing threshold is determined.[174] Finally, as discussed above, we are requiring that the fund board approve any changes to the fund's swing threshold as proposed. We believe that the written report requirement, which specifies certain information that must be provided to the board, provides additional guidance regarding the information that may be useful in assessing the fund's swing threshold.

A fund may consider whether to review and assess its swing threshold more frequently than annually (*e.g.,* semi-annually or monthly), and/or

[163] *See* Dechert Comment Letter (''[A] fund should be permitted to apply swing pricing to net *redemptions* only, as opposed to applying it equally to net redemptions and net purchases, which would be the case under the proposed rule amendments.'') (emphasis in original).

[164] *See* BlackRock Comment Letter (''[T]he Commission should clarify that funds are permitted to create an 'asymmetric' swing threshold where the threshold for inflows is different than the threshold for outflows.'') (internal citation omitted).

[165] Unlike the requirement that funds meet redemptions within 7 days, there is no requirement for funds to immediately invest cash inflows. *See* ICI Comment Letter I (''[R]eceipt of new cash in a portfolio may not be as disruptive or problematic as large net redemptions.''); Dechert Comment Letter (noting that there may be more significant issues regarding potential dilution for non-redeeming shareholders in connection with shareholder redemptions).

[166] We note that a fund is not obligated to accept subscriptions, and so thus may be able to better manage dilution due to purchases.

[167] *See, e.g.,* ICI Comment Letter I (''[F]unds may wish to apply more than one threshold to net redemptions (or purchases), and apply different swing factors depending on which threshold the net redemption (or purchases) exceeds. This could enhance the precision of a swing pricing methodology, allowing a fund to make larger downward adjustments to its NAV when it experiences larger net outflows.'') (internal citation omitted).

[168] *See* BlackRock Comment Letter (''Funds should also be permitted to set multiple swing threshold levels for a given fund, where each threshold could be associated with different swing factors. Such a sliding swing threshold would allow partial swing pricing to more precisely reflect different levels of costs associated with the disposition (purchase) of securities for different trade sizes.'') (internal citation omitted).

[169] As discussed in more detail below, however, a fund's swing factor(s) may not exceed two percent of NAV per share. *See infra* section II.A.3.e.

[170] *See* Comment Letter of the Federal Regulation of Securities Committee of the Section of Business Law of the American Bar Association (Feb. 11, 2016).

[171] *See* Eaton Vance Comment Letter.

[172] *See infra* footnote 276 and accompanying text.

[173] Rule 22c–1(a)(3)(ii)(D). *See also infra* section II.A.3.f. (discussing the board review requirements).

[174] *See infra* section II.A.3.f.

specify any circumstances that would prompt ad hoc review of the fund's swing threshold in addition to the periodic review required by the rule (as well as the process for conducting any ad-hoc reviews). We believe that funds should generally consider evaluating both market-wide and fund-specific developments affecting each of the rule 22c–1(a)(3)(i)(B) factors in developing comprehensive procedures for reviewing a fund's swing threshold.

Swing Threshold Considerations for Multiple Share Classes

The net purchase or net redemption activity of all share classes of a fund with multiple share classes is part of the determination of whether a fund has crossed its swing threshold. If a fund were to only include the transaction activity of a single share class, and were to swing one share class and not another, this would have the effect of having one share class pay transaction expenses incurred in the management of the fund's portfolio as a whole, expenses that are borne by all share classes and thus would generally be inconsistent with rule 18f–3.[175] Accordingly, a fund with multiple share classes may not selectively swing the NAV of certain share classes but not others.[176] Like a fund with only one share class, the purchase or redemption activity of certain shareholders (or a class of shareholders) within a multi-share-class fund could dilute the value of all shareholders' interests in the fund.[177] Further, because the economic activity causing dilution occurs at the fund level, it would not be appropriate to employ swing pricing at the share class level to target such dilution. We also note that because all share classes must utilize the same swing factor and ETFs cannot utilize swing pricing, funds structured to include ETFs as a share class would not be able to utilize swing pricing.[178]

d. Investor Flow Information

Critically important to the adoption of swing pricing is a fund's ability to obtain sufficient information about purchase and redemption activity that took place prior to striking the fund's NAV on a particular day in order to reasonably estimate whether it has crossed the swing threshold with high confidence, to determine whether swing pricing should be in effect that day. If the fund's applicable swing factor varies depending on the level of its net investor flows, sufficient investor flow information is also needed to determine the applicable swing factor that the fund will use to adjust its NAV. A fund using swing pricing will need to obtain reasonable estimates of investor flows daily, or the aggregate flows of money being invested in and redeemed out of the fund, for purposes of reasonably estimating with high confidence whether the fund's net purchases or net redemptions have crossed the swing threshold, thus resulting in an NAV adjustment under its swing pricing policies and procedures.[179]

We understand that the deadline by which a fund must strike its NAV may precede the time that a fund (or its pricing agent) receives final information concerning daily net investor transaction flows from the fund's transfer agent. As a result, funds engaging in swing pricing will likely need to develop processes and procedures to gather sufficient investor flow information from transfer agents that include transactions being conducted by intermediaries on behalf of fund investors.[180] This information could include actual transaction orders received by the transfer agent, as well as estimates of investor flows, which funds can use to reasonably estimate its aggregate daily net investor flows for swing pricing purposes.[181]

Reasonable Estimates

Several commenters asked for additional guidance regarding a fund's use of estimates in determining its net flows in order to determine whether a fund has crossed its swing threshold.[182] We acknowledge that full information about shareholder flows is not likely to be available to funds by the time such funds need to make the decision as to whether the swing threshold has been crossed,[183] but we do not believe that complete information is necessary to make a reasonable high confidence estimate.[184] Instead, a fund may determine its shareholder flows have crossed the swing threshold based on receipt of sufficient information about the fund shareholders' daily purchase and redemption transaction activity to allow the fund to reasonably estimate, with high confidence, whether it has crossed the swing threshold. The shareholder flow information used by funds may be individual, aggregated or netted orders and may include reasonable estimates where

[175] *See* rule 18f–3(a)(1)(ii) (stating that allocation of expenses related to the management of a fund's assets may not differ among a fund's share classes).

[176] One commenter indicated that ''swing pricing can be used successfully by the conventional share classes of a fund that also operates an ETF as a share class.'' *See* Vanguard Comment Letter. Because of the aforementioned 18f–3 concerns and the inability of ETFs to utilize swing pricing, we disagree. A swing pricing adjustment applied to certain share classes of a fund, but not applied to the ETF share class of that fund, would impermissibly allocate expenses related to the management of the fund's assets.

[177] *See* ALFI Survey 2015, *supra* footnote 42, at 4 (''If swing pricing is applied, all share classes of a fund swing in the same direction (and typically by the same basis point amount), as dilution occurs at the fund level rather than at the share class level.'').

[178] *See* section 18 of the Act.

[179] We have previously stated that a fund should adopt compliance policies and procedures that provide for monitoring shareholder trades or flows of money in and out of the fund for purposes of detecting market timing activity. *See* Compliance Programs of Investment Companies and Investment Advisers, Investment Company Act Release No. 26299 (Dec. 17, 2003) [68 FR 74714 (Dec. 24, 2003)] (''Rule 38a–1 Adopting Release''), at nn.66–69 and accompanying text. We also note the requirement that funds have shareholder information agreements under rule 22c–2 that require financial intermediaries to provide certain shareholder transaction data to funds upon their request, which may be helpful in estimating flows in some respects. *See* rule 22c–2.

[180] As indicated in the proposal, a fund may wish to implement formal or informal policies and procedures regarding the timely receipt of shareholder flow information, and to establish effective communication between the persons charged with implementing the fund's swing pricing policies and procedures, the fund's investment professionals, personnel charged with the calculating the fund's daily NAV, and the fund's transfer agent. *See* Proposing Release, *supra* footnote 6, at section III.F.2.a.

[181] Under the current system, redemption and subscription orders from shareholders are typically accepted by funds and their intermediaries on any given trading day up until 4 p.m. Eastern time. Intermediaries typically begin processing, aggregating and submitting transaction orders to fund transfer agents (where transactions are not NAV dependent) in the late afternoon. Funds generally publish their NAVs between 6 and 8 p.m. Eastern time (''ET''). Following the publication and delivery of such NAVs, both intermediaries and fund transfer agents complete their transaction processing and conduct their nightly processing cycles, which update applicable recordkeeping systems for the day's activities. *See* rule 2a–4 (allowing the adjustment in outstanding fund shares as a result of purchase and redemption activity to be reflected on T+1).

[182] *See* BlackRock Comment Letter; ICI Comment Letter I (noting that swing pricing in the U.S. will likely involve the use of estimates with respect to current day net flows (as well as when determining factors) and that the Commission should further clarify that it is comfortable with fund managers and their administrators using such estimates in a disciplined and documented manner when employing swing pricing). Similarly, another commenter asked the Commission to clarify that there is an element of estimation in evaluating whether a fund has crossed its threshold, inherent in the proposed reasonable inquiry standard. *See* SIFMA Comment Letter II.

[183] The deadline by which a fund must strike its NAV may precede the time that a fund receives final information concerning daily net flows from the fund's transfer agent or principal underwriter.

[184] A fund should not employ swing pricing if the fund is unable to obtain sufficient information about the fund shareholders' daily purchase and redemption activity on the relevant date at the time it calculates the fund's NAV. *See supra* section II.A.3.c. We understand that many funds in Europe that use swing pricing may typically receive as much as 90% of net purchase/redemption data prior to deciding whether to adjust the fund's NAV by a swing factor.

necessary[185] (made by funds and their intermediaries) and should exclude any purchases or redemptions that are made in kind and not in cash.[186]

As discussed below, we recognize in some cases, it may not currently be feasible for certain intermediaries to provide their actual orders (even in an aggregated or netted format) promptly enough for the fund to conduct swing pricing. However, we understand that a fund's reasonably estimated shareholder flows could include estimates for certain intermediary flows that are based on actual transaction orders received from investors prior to the fund's cut-off time, which would subsequently be submitted by intermediaries to the fund's principal underwriter and/or transfer agent for processing after receipt of the fund's final NAV. For example, in the European fund sector, swing pricing is feasible operationally as ''actual'' trade flows based on estimated prices (typically the prior day's NAV) and orders occurring on the trade date are available on a timely basis. Trading platforms collect all of that day's activity and supply it to the fund's transfer agent. An estimated fund price is then applied to generate estimated trade values for that trading day. We also note that where transaction orders are NAV dependent, the application of estimated fund prices (such as the prior day's NAV) to the current day's orders to derive estimated shareholder flow information could be conducted by intermediaries or fund transfer agents.[187] Additionally, a fund may require different levels or types of information from each of its intermediaries depending on a variety of factors.[188]

Funds should consider utilizing policies and procedures to make the necessary estimates.[189] Such policies and procedures could describe the process by which the fund obtains shareholder flow information (including flows obtained from intermediaries), as well as the amount and kind of transaction data that the fund believes necessary to obtain before making its estimate of total net flows in order to determine whether the swing threshold has been exceeded, and applying swing pricing that day.[190] Funds (and their intermediaries) may also wish to consider regular back-tests of their daily estimated net flows used in determining whether a swing threshold has been crossed based on complete or final data obtained later, and then update their estimation process over time based on the results of such back-tests. A fund may wish to consider whether having a process to back-test data, which would allow a fund to review whether the fund is appropriately considering and weighing the factors and, over time, may potentially improve the accuracy of the fund's estimation process. Back-testing data is a commonly utilized practice in the fund industry (and other industries) to continuously improve the quality of processes involving subjective judgments or estimates, and its use has been discussed in the context of swing pricing in Europe.[191]

We recognize that funds may take different approaches in determining whether they have sufficient flow data to make a reasonable high confidence estimate,[192] and that the completeness of data (such as the percentage of actual versus estimated net flow data), as well as the nature and types of estimates used may vary based on the particular circumstances of the fund. For example, a fund whose redemption levels have been very consistent in the past, and that has a large direct shareholder base that is made up of primarily small retail positions, may be better positioned to make a high confidence estimate of flows with less effort, than a fund that is primarily distributed through intermediaries, who has experienced volatile purchases and redemptions and has a mix of distribution partners and institutional and retail shareholders. Because many funds are primarily distributed through intermediaries, they will need to obtain sufficient information about shareholder flows (whether actual orders or estimated flows) in a timely manner to reasonably estimate with high confidence whether a fund should use swing pricing on a given day.

Operational Issues

Many commenters on the swing pricing proposal discussed the operational difficulties that exist today for funds in obtaining timely enough information from intermediaries about shareholder flow data to determine whether or not a swing threshold has been crossed.[193] These commenters discussed operational challenges to implementing swing pricing in the United States as compared to Europe, where many funds have successfully implemented swing pricing.[194] Commenters noted that omnibus account structures and existing processing arrangements with intermediaries limit the ability of many funds to receive sufficient flow information prior to the time that the fund's NAV must be calculated, thus impeding the use of swing pricing as an anti-dilution tool currently in the U.S.[195] These commenters also highlighted that certain intermediaries

[185] We understand that most intermediaries submit aggregated and/or netted transactions orders to funds. Such orders represent the transactions of underlying investors whose shares are held in omnibus accounts registered in the name of intermediaries (such as a broker-dealer, retirement plan record keeper, bank or trust) for the benefit of such shareholders on transfer agent recordkeeping systems for each share class in a fund. Intermediaries typically aggregate their individual customer daily transaction orders and also may net the total purchase and redemption orders, which are periodically transmitted for processing to fund transfer agents. *See* Investment Company Institute, *Navigating Intermediary Relationships,* (2009), at nn.3, 6–7, *available at https://www.ici.org/pdf/ppr_09_nav_relationships.pdf.*

[186] *See* rule 22c–1(a)(3)(i)(A).

[187] *See* GARP Comment Letter.

[188] Such factors might include the size of flows that ordinarily come through a particular intermediary, the nature of such orders (*i.e.,* subscriptions, redemptions, exchange transactions), or certain characteristics or additional information about the redeeming or purchasing shareholders and intermediaries conducting transaction processing (*e.g.,* large trade notifications). A fund may also choose to request flow data only from certain of its intermediaries if it determines that it can make a high confidence determination to swing its price with flow information provided by only a subset of its intermediaries (for example, if there are intermediaries that typically only conduct a very small volume of transaction activity with the fund).

[189] One commenter requested that we ''recognize that certain components of the swing pricing process will be based on estimates'' and suggested that we ''provide a safe harbor from liability for differences between estimates and what is observed ex-post if swing pricing procedures are followed properly.'' BlackRock Comment Letter. We decline to provide such a safe harbor given the facts and circumstances nature of this determination.

[190] As discussed in section II.A.3.g. below, if a fund, pursuant to reasonably designed policies and procedures, determined with reasonable high confidence that it should apply swing pricing based on estimated information obtained after reasonable inquiry, the fund would not need to treat the application of swing pricing as a pricing error if it turned out, after the fact based on final data, that the swing threshold had not been crossed; similarly, the fund would not need to treat the failure to apply swing pricing as a pricing error if it turned out, after the fact based on final data, that the swing threshold had been crossed.

[191] *See, e.g.,* ALFI Swing Pricing Guidelines 2015, *supra* footnote 88 (discussing the value of back-testing).

[192] *See infra* footnote 205.

[193] *See, e.g.,* CRMC Comment Letter; Invesco Comment Letter; ICI Comment Letter I; GARP Comment Letter.

[194] *See* CRMC Comment Letter; Dechert Comment Letter; ICI Comment Letter I; IDC Comment Letter.

[195] *See, e.g.,* BlackRock Comment Letter; Comment Letter of Financial Services Roundtable (Jan. 13, 2016) (''FSR Comment Letter''); J.P. Morgan Comment Letter; SIFMA Comment Letter II. Commenters also stated that the fund's agent (either the transfer agent or intermediaries authorized to distribute or transact fund shares) will take orders from shareholders for execution; typically until the fund's cut-off time (which is 4 p.m. ET for most U.S. funds). Thus, a large amount of flow information from intermediaries is currently provided to some funds after the close of business in the later evening hours, or the next business day after the investor transaction occurs (typically early morning on T+1), which is generally after a fund strikes its NAV. *Id.*

(*e.g.,* retirement plan record keepers and insurance companies) typically require the receipt of actual fund prices (NAVs) to initiate the processing of fund trades, thus posing difficulties in getting final actual orders from these distribution channels to funds before the NAV has been struck.[196] Some commenters expressed concerns regarding funds' ability to obtain estimated shareholder flow information if requested from intermediaries.[197] Several commenters also suggested that large fund complexes with more influence over their distribution partners could be more successful than small complexes in obtaining such information.[198] In addition, funds also expressed concerns that intermediaries may choose not to offer funds that choose to implement swing pricing, due to the increased processing and technology burdens that swing pricing would impose on intermediaries, a consideration that funds will evaluate as they determine whether to adopt swing pricing. Several commenters stated that, although swing pricing is used relatively widely in European jurisdictions, certain differences between U.S. and European fund operations make swing pricing easier to implement in Europe than in the U.S.[199]

Some commenters provided specific ideas about initiatives the Commission could pursue to mitigate operational challenges and help facilitate implementation of swing pricing for funds and investors. For example, they stated that the Commission could require (or encourage) intermediaries to provide shareholder flow estimates prior to the deadline by which a fund must strike its NAV.[200] Some commenters stated that the Commission also could require (or encourage) funds and intermediaries to implement earlier cut-off times to buy and sell fund shares, but many acknowledged the downsides associated with this option, including limiting investors' ability to transact in funds up until the close of the U.S. equity markets.[201] One commenter representing a group of asset management risk professionals suggested a detailed roadmap to altering current fund and intermediary processes that they suggested may represent a feasible approach to implementing swing pricing in the U.S.[202] Many commenters suggested that the Commission should address the operational challenges to swing pricing before it is implemented in the U.S and suggested delaying the effective date and/or implementation date of such new rules to allow the industry to work together to make the necessary changes to their infrastructure to resolve these concerns.[203]

The Commission acknowledges the operational challenges noted by commenters that will need to be addressed by industry participants. Because of these concerns, we believe the adoption of swing pricing in the U.S. as a new (optional) anti-dilution tool will likely require considerable lead time for many funds that will need to coordinate and implement the necessary operational changes with intermediaries and service providers in order to effectively conduct swing pricing for new or existing funds. Additionally, as noted by commenters, we understand that certain funds, intermediaries and service providers may incur substantial costs in doing so.[204]

We recognize that U.S. fund complexes differ widely in terms of their size, the types of funds they offer, the types of investors they serve (*e.g.,* retail and/or institutional), and their distribution models. Thus, we anticipate that there may be certain funds that could make the necessary adjustments and prepare to implement swing pricing sooner than other funds, because they have or may be able to more easily obtain sufficient net flow information. For example, we understand that certain funds with investors that primarily transact directly with the fund's principal underwriter or transfer agent, or that are primarily distributed through affiliates or broker-dealers (that could potentially provide timely flow data),[205] and/or do not have a substantial number of investors transacting in retirement plans or insurance products could more easily obtain sufficient net flow information. In addition, larger fund complexes with the ability to more easily get net flow information from their intermediaries, including those that have established large trade

[196] *See* Eaton Vance Comment Letter; GARP Comment Letter; ICI Comment Letter I; LPL Comment Letter; Charles Schwab Comment Letter; Comment Letter of Wells Fargo Funds Management, LLC (Jan. 13, 2016) (''Wells Fargo Comment Letter''). Commenters also pointed to the constraints of older (legacy) technology systems used by some service providers, which limit the ability of these intermediaries to deliver fund flow information prior to the time a fund strikes its NAV. *See* Dechert Comment Letter; Federated Comment Letter; GARP Comment Letter; SIFMA Comment Letter II. According to these commenters, these older systems batch process daily transactions received from fund investors throughout the evening, versus newer real-time or continuous and automatic systems that process and submit transactions to fund transfer agents throughout the day.

[197] *See, e.g.,* ICI Comment Letter I; Comment Letter of T. Rowe Price (Jan. 13, 2016) (''T. Rowe Comment Letter'') (expressing concerns regarding (i) funds' need to rely on estimated flows from intermediaries, (ii) the costs and burdens to provide sufficient estimated flows to allow a fund to accurately determine whether a swing threshold has been exceeded, and (iii) the potential for NAV errors). These issues are discussed throughout this section. As discussed below, commenters also encouraged the Commission to consider what changes to the regulatory framework are necessary to require intermediaries to provide accurate estimates of shareholder flows prior to funds striking their NAVs so that swing pricing can be an effective tool to mitigate potential dilution for shareholders.

[198] *See* CRMC Comment Letter; Dechert Comment Letter; ICI Comment Letter I; Comment Letter of Independent Directors Council (Jan. 13, 2016) (''IDC Comment Letter'').

[199] *See, e.g.,* BlackRock Comment Letter; GARP Comment Letter; Eaton Vance Comment Letter; ICI Comment Letter I. In particular, commenters maintained that European funds are better able to receive timely flow information than U.S. funds because there are multiple or earlier trading cut-off times in Europe and that there is greater use of currency-based orders in Europe, which contributes to confidence in the accuracy of fund flows.

[200] *See* CRMC Comment Letter; GARP Comment Letter; Invesco Comment Letter; T. Rowe Comment Letter.

[201] *See* GARP Comment Letter; PIMCO Comment Letter; Charles Schwab Comment Letter; SIFMA Comment Letter II. Some commenters noted that funds could be put at a competitive disadvantage to other types of investment products (*e.g.,* hedge funds and collective trusts) that continue to accept trades throughout the day, and others stressed the fact that there is a long history in the U.S. mutual fund market of providing investors with flexibility to submit redemption and subscription requests until 4 p.m. ET. *See, e.g.,* ICI Comment Letter I; GARP Comment Letter; Wells Fargo Comment Letter.

[202] *See* GARP Comment Letter. This roadmap involved action by funds and intermediaries to solve swing pricing operational issues by: (1) Maintaining the dealing (intermediary and transfer agent) cut-off time for fund redemptions and subscriptions at 4 p.m. ET, as is current market practice; (2) requiring funds' NAV publication time to be shifted from 6 p.m. ET to 8 p.m. ET; (3) requiring providers of fund flows to provide ''estimated'' trading flows occurring each day by 6 p.m. ET, which would be used to determine whether to adjust the fund's NAV per share and calculate the adjusted NAV. *Id.*

[203] *See, e.g.,* Blackrock Comment Letter; Dodge & Cox Comment Letter; SIFMA Comment Letter I; Vanguard Comment Letter.

[204] *See, e.g.,* ICI Comment Letter I (''Building and maintaining additional systems would be quite costly, and even assuming that intermediaries at large would rework their systems to support swing pricing, they can be expected to seek the substantial costs of doing so from funds.''); *see infra* section III discussing the potential costs and benefits. *See also* discussion throughout this section regarding funds' deliberative process in determining whether the costs and drawbacks of implementing swing pricing, including managing such operational challenges and any cost sharing requested by intermediaries, are justified by the anti-dilution and other benefits that may result as a consequence of implementing swing pricing.

[205] We understand through staff outreach, and based on the time transaction order volumes are received and processed through the National Securities Clearing Corporation (''NSCC''), that many broker-dealer firms would have the ability to submit most of their actual transaction orders within a relatively short timeframe after the fund's order cut-off time (typically 4 p.m. ET). *See* Division of Investment Management, Memorandum re: Meeting with Representatives of SIFMA (June 13, 2016) *available at https://www.sec.gov/comments/s7-16-15/s71615-152.pdf.*

notification processes,[206] may have the leverage to negotiate operational solutions and the resources to implement swing pricing sooner for certain funds, which may result in inefficient one-off solutions rather than coordinated industry-wide operational solutions that may reduce costs for investors overall.[207]

We understand that in order to implement swing pricing in an efficient manner, many funds will need time to develop the infrastructure needed to obtain shareholder flow information for investors transacting through intermediaries (including banks, broker-dealers, retirement plan administrators, or insurance companies or platforms), whose shares are held in omnibus accounts registered in the name of such intermediaries on fund transfer agent recordkeeping systems.[208] We also recognize that because intermediaries allow customer trades to take place up until the 4 p.m. cut-off time, and because of the limitations of many current systems,[209] many fund transfer agents do not currently have sufficient information to reasonably estimate net shareholder flow activity for funds without changes to current processes and systems to facilitate timely receipt of such information to conduct swing pricing.[210]

As noted above, we recognize that because the fund industry is diverse, it may take longer for certain funds to implement swing pricing than others. We also acknowledge that funds, intermediaries, and service providers use complex, integrated systems and technology, which supports the daily processing of shareholder transactions. We expect that implementing swing pricing will lead to process and systems changes to accommodate the additional processing that will be needed to support the provision of estimated shareholder flows to funds where necessary, and that such improvements may require additional capital investments to permit the implementation of swing pricing for funds that may choose to use it.[211] Importantly, we believe that an extended effective date, as discussed below, will allow most funds that may wish to implement swing pricing to work together with intermediaries and service providers in implementing efficient, cost effective, solutions to the operational challenges swing pricing presents that will assist in reducing overall costs and operational risks for industry participants, including funds and their investors.

Extended Effective Date

As discussed above, a number of commenters requested that we provide a delayed effective date of two years for implementation of swing pricing, to allow the industry to address the necessary changes to operations and systems and, as a consequence, help alleviate competitive concerns by allowing all funds time to become familiar with swing pricing.[212] These commenters explained that, with a delayed effective date, all funds would have the opportunity to develop swing pricing capabilities in an orderly manner, and it would provide time for efficient operational solutions to be developed to help mitigate the challenges of implementing swing pricing.

We acknowledge that, if swing pricing were to be effective immediately, a limited number of funds might have the ability (*e.g.,* based on level of resources and leverage with intermediaries) to implement swing pricing sooner than others, and that as a result potential benefits could be provided to long-term investors in such funds. However, as noted above, most commenters requested a two-year extended effective date to coordinate the implementation of industry-wide operational changes to conduct swing pricing, which would provide time for funds, service providers and the NSCC to develop and implement standardized processing solutions that could be leveraged more broadly by the industry. This would be in contrast to certain funds proceeding immediately with one-off solutions to receive shareholder flow information directly from intermediaries, which could be a more costly, less efficient and less secure processing solution over the long-term. We believe that the benefits to investors that likely would result from a coordinated industry effort, as suggested by commenters,[213] including

[206] It is our understanding that today many [larger] fund complexes require their intermediaries to provide advance notification of ''large trades'' (*e.g.,* such as for asset allocation or wrap product rebalancing transactions) several days in advance of such trades so funds may anticipate and plan for sizable redemptions and so the shareholder can avoid receiving a redemption in kind. We further understand that such large trade notification processes between funds and intermediaries are voluntary or may be specified in agreements. The industry is seeking to automate and standardized these communications, which are non-standard (often faxed) communications. *See BNY Mellon Automates Process for Brokers-Dealers to Notify Mutual Fund Complexes of Upcoming Large Trades,* PR Newswire (Oct. 13, 2015), *available at http://www.prnewswire.com/news-releases/bny-mellon-automates-process-for-broker-dealers-to-notify-mutual-fund-complexes-of-upcoming-large-trades-300158615.html.* Such large trade notification requirements are generally disclosed in a fund's statement of additional information pursuant to Item 23.

[207] We understand that such funds likely would negotiate receipt of actual orders or make arrangements to receive estimated shareholder flow information from intermediaries (for investor orders received by intermediaries in accordance with the funds' applicable end-of-day cut-off times) prior to the striking of the funds' NAVs.

[208] *See, e.g.,* GARP Comment Letter; ICI Comment Letter I; Charles Schwab Comment Letter; SIFMA Comment Letter II.

[209] *See, e.g.,* Dechert Comment Letter; GARP Comment Letter. We understand that the industry primarily utilizes batch processing to execute shareholder transaction orders received by intermediaries with funds or their transfer agents though the NSCC's Wealth Management Services platform. Such fund orders are typically transmitted (grouped together and processed) through one of many NSCC ''batch'' order cycles throughout the day and evening. Batch processing systems are also used by funds, intermediaries and service providers for processing and keeping records of shareholder details, including number of shares, on transfer agency, sub-transfer agency and intermediary recordkeeping systems.

[210] In Europe earlier trade cut-off times have evolved and fund transaction orders must be received by the fund administrator/transfer agent by the earlier cut-off time. This factor eases the burdens of estimating net flows for European funds that swing price. *See* ALFI Survey 2015, *supra* footnote 42, at 7 (''In terms of the operational process for partial swing, nine promoters stated that their decision to swing the NAV was based on estimated shareholder activity. Three promoters were able to rely on final shareholder activity. An organization's ability to rely on confirmed activity depended to a large extent on the cut off times of the transfer agent in relation to the valuation point of the fund.''); *see also e.g.,* BlackRock Comment Letter; GARP Comment Letter; Eaton Vance Comment Letter; ICI Comment Letter I.

[211] However, we note that the provision of such data likely would be facilitated through the industry fund transaction processing utility (the NSCC), and that once shareholder flow enhancements are established, any new NSCC capabilities, as well as those of service providers supporting funds' (and their intermediaries') swing pricing processes could be used by other funds that may be interested in implementing swing pricing.

[212] *See, e.g.,* Invesco Comment Letter; BlackRock Comment Letter; GARP Comment letter (each suggesting a delayed effective date of two years); *see also* SIFMA Comment Letter I; T. Rowe Comment Letter (each requesting a delayed effective date and noting that ''some fund managers already have extensive experience with swing pricing, while other fund managers will be approaching swing pricing for the first time and, hence, be at a disadvantage'').

[213] *See* BlackRock Comment Letter; GARP Comment Letter (each recommending that ''the Commission set the effective date of the swing pricing provisions to at least two years after the final rule is adopted'' because it ''will permit an orderly and industry-wide process to make the necessary changes''); *see also* Fidelity Comment Letter (encouraging ''industry-wide solutions'' to operational challenges associated with swing pricing); Vanguard Comment Letter (''[C]ertain operational hurdles common across the industry currently prevent funds from effectively implementing swing pricing . . . We believe that any potential solution to this problem will result from increased collaboration and communication between funds, their service providers, and intermediaries. However, any industry solution will necessarily take time to develop. Therefore, the Commission should delay implementation of the swing pricing rule until such time as intermediaries can demonstrate an ability to transmit accurate and complete order information to funds in a reliable, cost-effective, and timely manner. Once the

the mitigation of operational risks associated with non-standardized processing and the promotion of more reliable and secure transmission of standardized data in an efficient and cost-effective manner, would likely outweigh short-term benefits that could be provided to a limited number of investors if we did not implement an extended effective date.

As discussed above and in section II.C. below, we agree with these commenters and believe it is appropriate to adopt an extended effective date for swing pricing. We expect that the extended effective date will allow funds, intermediaries and service providers to work towards orderly, efficient, industry-wide solutions to the operational challenges swing pricing presents,[214] mitigating the costs of such solutions to funds and their investors as compared to the development (and possible eventual reconciliation) of numerous, disparate solutions to swing pricing's operational challenges that might be implemented, if swing pricing were to be effective immediately, by a small number of funds potentially seeking to be among the first to engage in swing pricing. We are persuaded by commenters that two years should provide sufficient time to develop such solutions in an efficient manner. We expect that our staff will keep us informed of the industry's progress by engaging with market participants (*e.g.,* fund complexes, intermediaries, and service providers) on the implementation of swing pricing in the U.S.

Potential Further Commission Action To Facilitate Swing Pricing

As discussed above, a number of commenters pointed to a variety of competitive concerns and operational challenges in implementing swing pricing, and several suggested that the Commission take additional actions to facilitate its adoption. We recognize the challenges associated with implementing swing pricing in the U.S., but continue to believe that swing pricing may provide significant benefits to investors for funds that choose to use it. As discussed above, some commenters urged the Commission to adopt rules that would require intermediaries to provide timely estimates of shareholder flows to funds that chose to implement swing pricing, or to encourage such action through non-regulatory means.[215] However, commenters did not provide details as to the form such a regulatory requirement would take, and some noted that any such requirement would likely have to extend to certain entities not typically subject to regulation by the Commission.[216] Any such regulatory requirement would also be limited by the economic reality that intermediaries are free to choose whether or not to sell fund shares to their customers, and a requirement that intermediaries provide shareholder flow data to funds may have the unintended consequence of leading certain intermediaries to choose to no longer sell funds that use swing pricing.

Other commenters suggested that the Commission could take action to require funds and intermediaries to implement earlier cut-off times to buy and sell fund shares (either through adoption of new rules or other means).[217] However many commenters recognized the significant downsides of such an approach, in that it would limit investors' ability to trade mutual funds until the markets close (a long-held expectation of mutual fund investors), and could put mutual funds at a competitive disadvantage with other investment products.[218] Still others took the approach of suggesting that the Commission seek input from industry or other regulators about what could be done to help facilitate adoption of swing pricing in the U.S. before taking further action.[219] Our staff has previously engaged in significant outreach to funds, intermediaries, and other regulators as we developed the swing pricing rule proposal, and we expect that such active dialogue will continue as swing pricing begins to be implemented.

Considering the diverse and varied recommendations on potential Commission action that we might take, as well as the potential limitations and downsides of the approaches that have been suggested to us, we are not proposing any further regulatory requirements to facilitate implementation of swing pricing at this time. As discussed previously, on balance, we believe that it is appropriate to permit usage of swing pricing as an optional tool subject to a two-year extended effective date at this time. We believe permitting this optional tool to be implemented for those funds that choose to do so may result in benefits for those funds and their investors if they believe the challenges of implementing swing pricing can be overcome and are justified by the resulting anti-dilution and other benefits associated with swing pricing. In addition, permitting the use of swing pricing encourages funds to begin working with intermediaries to overcome the operational challenges associated with swing pricing and may spur the development of efficient solutions that might not otherwise be created if swing pricing were not allowed.

e. The Swing Factor

We are adopting a requirement that a fund's swing pricing policies and procedures provide that, once the fund's level of net purchases or net redemptions has exceeded a swing threshold, the fund must adjust its NAV by an amount designated as the ''swing factor'' for that threshold.[220] ''Swing factor'' is defined as ''the amount, expressed as a percentage of the fund's net asset value and determined pursuant to the fund's swing pricing procedures, by which a fund adjusts its net asset value per share when the level of net purchases into or net redemptions from the fund has exceeded the fund's applicable swing threshold.'' [221] A fund's swing pricing policies and

industry is able to implement swing pricing effectively, we believe that swing pricing will be a valuable tool funds may use to supplement the liquidity risk management practices that we propose above.'').

[214] *See id.*

[215] *See* CRMC Comment Letter (''In order to create a level playing field for all funds, we instead urge the Commission to adopt rules requiring intermediaries to provide cash flow information prior to the deadline by which a fund is required to strike its NAV.''); *see also* GARP Comment Letter (''SEC swing pricing provisions should incorporate additional requirements for financial intermediaries (as defined in rule 22c–2) . . . to provide, at the request of a fund, timely estimates of the net purchase or redemption activity to support the fund's reasonable inquiry.''); Invesco Comment Letter (''We request that the Commission create a regulatory obligation that intermediaries provide trade information to fund sponsors on a time-table that allows all funds to use swing price. . . . The industry and our intermediaries are unlikely to make these changes voluntarily.''); T. Rowe Comment Letter (''we strongly encourage the SEC to consider what changes are necessary to its regulatory framework to require (or otherwise provide funds with the ability to influence) intermediaries to provide accurate estimates of purchase and redemption information prior to funds striking their NAVs so that swing pricing can be an effective tool to mitigate potential dilution.'').

[216] *See, e.g.,* ICI Comment Letter I. In addition, unless only newly organized funds chose to implement swing pricing, any such regulatory requirement would require provisions to deal with intermediaries that were unable or unwilling to provide such flow data, which might lead to situations where shareholders owning fund shares through such intermediaries would either need to switch intermediaries or redeem their shares (both of which may have negative consequences for investors) or allow such intermediaries to continue to keep shareholders in a fund that swing prices, which may result in funds being unable to implement swing pricing effectively.

[217] *See* GARP Comment Letter; PIMCO Comment Letter; Charles Schwab Comment Letter; SIFMA Comment Letter II.

[218] *See, e.g.,* ICI Comment Letter I; GARP Comment Letter; Wells Fargo Comment Letter.

[219] *See, e.g.,* Fidelity Comment Letter; Blackrock Comment Letter; Morningstar Comment Letter.

[220] Rule 22c–1(a)(3)(i)(A).

[221] Rule 22c–1(a)(3)(v)(B).

procedures are required to specify the process for how the swing factor will be determined.[222] In determining the swing factor, the person(s) responsible for administering swing pricing may take into account only the near-term costs expected to be incurred by the fund as a result of net purchases or net redemptions that occur on the day the swing factor is used, including spread costs, transaction fees and charges arising from asset purchases or asset sales to satisfy those purchases or redemptions, and borrowing-related costs associated with satisfying redemptions.[223]

A fund's swing pricing policies and procedures also must include an upper limit on the swing factor used, which may not exceed two percent of the fund's NAV per share.[224] The fund would be required to take into account certain considerations when determining the swing factor upper limit.[225] The swing factor upper limit is subject to new oversight provisions under the final rule, as further described below.

The policies and procedures shall also include the determination that the swing factor(s) used are reasonable in relationship to the fund's costs in meeting net shareholder subscriptions and redemptions.[226] We anticipate that, because these considerations could vary depending on facts and circumstances, the swing factor that funds will determine appropriate to use in adjusting its NAV also could vary.[227] A fund's policies and procedures for determining the swing factor should discuss how each of the considerations a fund is required to take into account under the rule will be used in determining the swing factor.

Setting the Swing Factor

Under the proposal, when setting its swing factor a fund would have been required to take into account two specific sets of considerations. Under the final rule amendments, a fund must take into account only one set of considerations in determining its swing factor(s), which has been modified in response to commenters. Under the final rule, the swing pricing administrator must take into account only the near-term costs expected to be incurred by the fund as a result of net purchases or net redemptions that occur on the day the swing factor is used, including spread costs, transaction fees and charges arising from asset purchases or asset sales to satisfy those purchases or redemptions, and borrowing-related costs associated with satisfying redemptions when determining the fund's swing factor(s).[228] As discussed below, the person(s) responsible for administering swing pricing must also determine that the swing factor used is reasonable in relationship to these costs. We have eliminated the consideration of market impact costs or changes in the value of assets purchased or sold as a result of net purchases or net redemptions. The required considerations are intended to limit a fund's ability to estimate the costs associated with purchase and redemption activity that could dilute the value of non-transacting shareholders' interests in the fund.[229]

i. Required Consideration of Certain Near-Term Costs

As noted above, as originally proposed, both sets of considerations were mandatory for setting a swing factor. In the Proposing Release, we requested comment on each of the considerations that a fund would be required to take into account in determining the swing factor, and specifically requested comment on whether any aspect of the proposed considerations should not be required. In response, some commenters argued that the proposed considerations for calculating a fund's swing factor should be guidance only.[230] On the other hand, one commenter expressed concern that the proposed rules would grant funds too much discretion in calculating the swing factor.[231]

We continue to believe that mandating funds to take into account certain near-term costs when setting the swing factor strikes an appropriate balance between providing funds an appropriate amount of discretion and requiring that relevant costs be considered when setting the swing factor. However, in response to commenter concerns, we have eliminated certain of the proposed considerations and have clarified that a fund may only take into account those considerations set forth in the rule.

The final rule specifies that the determination of a fund's swing factor must take into account only the *near-term* costs expected to be incurred by the fund as a result of net purchases or net redemptions that occur on the day the swing factor is used (emphasis added). The phrase "near-term" is meant to reflect that investing proceeds from net purchases or satisfying net redemptions could involve costs that may not be incurred by the fund for several days. The rule text specifies that the costs to be considered are those that are expected to be incurred by the fund as a result of the net purchase or net redemption activity that occurred on the day the swing factor is used; this specification is designed to help ensure that the only costs to be taken into account are those that are directly related to the purchases or redemptions at issue. Thus, while the term "near-term costs" does not envision a precise number of days, we believe that, in context, this term would not likely encompass costs that are significantly

[222] Rule 22c–1(a)(3)(i)(C).

[223] *Id.*

[224] Rule 22c–1(a)(3)(i)(C).

[225] *Id.*

[226] *Id.*

[227] As discussed previously in section II.A.3.c. above, under the final rule a fund could also have more than one swing threshold, with varying swing factors associated with each threshold. In determining multiple swing factors, the fund would take into account the same factors it would use in establishing a single swing factor, but evaluate them based on the relevant swing threshold.

[228] Rule 22c–1(a)(3)(i)(C).

[229] The costs that a fund would be required consider in determining its swing factor overlap significantly with costs that we understand funds that use swing pricing in other jurisdictions commonly consider when determining their swing factor. For example, the Luxembourg Swing Pricing Survey, Reports & Guidelines provides that the following should be considered when determining the swing factor: (i) The bid-offer spread of a fund's underlying portfolio assets; (ii) net broker commissions paid by the fund; (iii) custody transaction charges; (iv) fiscal charges (*e.g.,* stamp duty and sales tax); (v) any initial charges or exit fees applied to trades in underlying investment funds; and (vi) any swing factors or dilution amounts or spreads applied to underlying investment funds or derivative instruments. *See* ALFI Survey 2015, *supra* footnote 42, at 7, 15–16.

[230] *See* Dechert Comment Letter ("Generally, we believe that requiring funds to consider specific factors as part of the swing threshold and swing factor determinations is too rigid and prescriptive . . . Instead, we believe a better approach would be to outline in conceptual guidance the appropriate principles and factors a fund could consider in making the swing factor determinations."); *see also* ICI Comment Letter I ("[T]he SEC should permit funds to build their own methodologies, shaped broadly by SEC guidance within the adopting release."); Invesco Comment Letter (stating that, if a cost reflected in one of the proposed factors cannot be reasonably estimated, a fund should be able to exclude it from the swing factor calculation).

[231] *See* AFR Comment Letter ("The proposal includes substantial discretion concerning the threshold for swing pricing and the actual level of the swing pricing adjustment. We believe this discretion is excessive. If SEC oversight of swing pricing is lax, this discretionary process holds the risk of near-arbitrary redemption fees charged to investors, fees that could become effectively a form of gating during periods of market stress."). We believe that requiring funds to set a swing factor pursuant to board-approved policies and procedures that are administered by an investment adviser subject to a fiduciary duty, and requiring that the policies and procedures provide that the swing factor(s) used must be reasonable in relationship to these costs, serve as a counterbalance to allowing funds to set the swing factor, and should help mitigate the risk that a fund sets a punitive or arbitrary swing factor that would inappropriately disadvantage redeeming shareholders.

removed in time from the purchases or redemptions at issue.

The near-term costs required to be considered are limited to spread costs,[232] transaction fees and charges arising from purchasing or selling assets,[233] and borrowing-related costs associated with satisfying redemptions. We anticipate that the particular transaction fees and charges that a fund would likely consider, for example, would include mark-ups and mark-downs, brokerage commissions and custody fees, as well as other charges, fees, and taxes associated with portfolio asset purchases or sales (for example, transfer taxes and repatriation costs for certain foreign securities, or transaction fees associated with portfolio investments in other investment companies). A fund also must consider borrowing-related costs associated with satisfying redemptions, such as the interest charges or other costs paid if a fund were to draw on a line of credit or engage in interfund borrowing in order to pay redemptions. These borrowing costs, like the specific transaction costs associated with purchasing and selling portfolio assets, could dilute the value of the shares held by non-transacting shareholders, and also can leverage the fund.[234] A fund should consider near-term costs in developing its policies and procedures for determining a swing factor. The rule as adopted thus requires funds to incorporate an assessment of multiple sources of potential dilution when setting the swing factor.

ii. Elimination of Consideration of Market Impact Costs

Under the proposal, the costs a fund would have been required to consider would have included market impact costs [235] associated with the fund trading portfolio assets.[236] Many commenters addressing the proposed cost considerations indicated that we should not require a fund to consider market impact costs in determining its swing factor.[237] These commenters indicated that estimating market impact costs can be very difficult and requires an exercise of judgment that fund managers may not be comfortable undertaking. These commenters also noted that few funds in other jurisdictions that use swing pricing include market impact costs in their swing factors and indicated that estimated market impact costs would reduce swing factor precision.[238] We understand the difficulties in estimating market impact costs in other jurisdictions may also apply for some U.S. funds were we to require consideration of market impact costs when applying swing pricing here.[239] In light of concerns that many funds may not be able to readily estimate market impact costs, as well as concerns that subjective estimates of market impact costs could grant excessive discretion in the determination of a swing factor,[240] we have eliminated the consideration of market impact costs in setting the swing factor under the final rule. In making this determination, we have balanced our concerns regarding potential abusive practices against the fact that funds using swing pricing potentially may not capture all the costs that are likely to result from shareholder transactions on the trade date.

iii. Elimination of Consideration of Value of Assets Purchased or Sold

Under the proposed rule, a fund's policies and procedures for determining the swing factor would have been required to consider information about the value of assets purchased or sold by the fund as a result of the net purchases or net redemptions that occur on the day the swing factor is used to adjust the fund's NAV, if that information would not be reflected in the current NAV of the fund computed that day.[241] One commenter noted that obtaining this information on a timely basis may be difficult.[242] Another commenter objected to including this consideration, arguing that it is unclear and does not correspond to common swing pricing practices in Europe.[243] The commenter also suggested that taken literally, this consideration appears to reflect changes in prices attributable to a specific day, which is in tension with the proposal's treatment of a swing factor being allowed to be determined on a periodic basis.[244]

This consideration was meant to reflect the fact that a fund's NAV will generally not reflect changes in holdings of the fund's portfolio assets and changes in the number of the fund's outstanding shares until the first business day following the fund's receipt of the shareholder's purchase or redemption requests.[245] Thus, the price that a shareholder receives for his or her purchase or sale of fund shares customarily does not take into account market-related costs that arise even when the fund trades portfolio assets on the same day in order to meet shareholder purchases or redemptions. However, we recognize that requiring inclusion of such information may imply a level of precision in setting the swing factor tied to changes that occur each day that would undercut funds being able to set a swing factor on a periodic basis, with adjustments for more significant market movements or other more significant cost changes. Accordingly, we believe requiring consideration of such costs in setting the swing factor would be inappropriate at this time. In making this determination, we have balanced these concerns against the fact that funds using swing pricing potentially may not capture all the costs that are likely to

[232] *See* Proposing Release, *supra* footnote 6, at n.416 (defining "spread costs" as those "incurred indirectly when a fund buys a security from a dealer at the 'asked' price (slightly above current value) or sells a security to a dealer at the 'bid' price (slightly below current value). The difference between the bid price and the asked price is known as the 'spread.' ").

[233] "Transaction fees and charges" are defined in rule 22c–1(a)(3) to mean "brokerage commissions, custody fees, and any other charges, fees, and taxes associated with portfolio asset purchases and sales." Rule 22c–1(a)(3)(v)(E).

[234] *See* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8, at section III.B.2.c for discussion regarding lines of credit.

[235] *See* Proposing Release, *supra* footnote 6, at n.415 (defining "market impact costs" as those costs "incurred when the price of a security changes as a result of the effort to purchase or sell the security. Stated formally, market impacts are the price concessions (amounts added to the purchase price or subtracted from the selling price) that are required to find the opposite side of the trade and complete the transaction. Market impact cost cannot be calculated directly. It can be roughly estimated by comparing the actual price at which a trade was executed to prices that were present in the market at or near the time of the trade.").

[236] The proposed rule would have required a fund's policies and procedures for determining the swing factor to take into account all near-term costs that are expected to be incurred as a result of net purchases or net redemptions that occur on the day the swing factor is used to adjust the fund's NAV, including any market impact costs, spread costs, and transaction fees and charges arising from asset purchases or asset sales in connection with those purchases or redemptions, as well as any borrowing-related costs associated with satisfying those redemptions. *See* proposed rule 22c–1(a)(3)(i)(D)(1).

[237] *See, e.g.,* ICI Comment Letter I; Invesco Comment Letter; J.P. Morgan Comment Letter; T. Rowe Comment Letter.

[238] *Id. See also* ALFI Survey 2015, *supra* footnote 42, at 10 (indicating that 10% of survey respondents consider market impact costs).

[239] We note that some fund complexes may utilize technological tools, such as best execution systems, that estimate trading cost information, including market impact, but that not all funds may have access to these tools and the quality of these estimation systems may vary.

[240] *See* AFR Comment Letter (questioning the degree of discretion afforded to funds in setting the swing factor adjustment under the proposal).

[241] Proposed Rule 22c–1(a)(3)(i)(D)(2).

[242] *See* Invesco Comment Letter.

[243] *See* SIFMA Comment Letter II.

[244] *See infra* footnote 268 and accompanying paragraph.

[245] *See* Proposing Release, *supra* footnote 6 at n.412 and accompanying text.

result from shareholder transactions on the trade date.

Reasonable in Relation to Costs

The final rule now includes an explicit requirement that any swing factor used be reasonable in relation to the costs incurred by the fund. One commenter objected that as proposed, the swing pricing rule did not assign an explicit duty to fund sponsors or boards to limit NAV adjustments to amounts that are reasonable in relation to the estimated fund costs associated with the capital activity giving rise to the adjustment.[246] Another commenter was concerned that the substantial discretion provided in setting the swing factor could lead to potential abuse, and if set arbitrarily, could effectively serve as a form of gating.[247]

We believe that as required under the proposal, by requiring the swing factor be set based on the considerations discussed above, funds would have necessarily been evaluating the reasonableness of the swing factor and its relationship to costs (and their boards will provide oversight over this process, including through the approval of swing pricing policies and procedures).[248] We agree, however, that this requirement should be made explicit. Accordingly, we are requiring in the final rule to require that swing pricing policies and procedures include a requirement that the relationship between the swing pricing factor(s) used and the fund costs associated with the capital activity giving rise to the adjustment be reasonable in relationship to these costs.[249] We believe that requiring such an explicit requirement that a swing factor be reasonably related to the costs incurred by the fund should serve to address concerns of arbitrariness or potential abuse in the setting of a swing factor.

Upper Limit on Swing Factor

Under the final rule, the fund must establish an upper limit for the fund's swing factor, which may not exceed two percent of NAV per share. This swing factor upper limit (and any changes thereto) must be approved by the fund's board of directors. The proposal did not prescribe an upper limit or ''cap'' on the swing factor that a fund would be permitted to use, nor did it mandate that funds' swing policies and procedures establish such an upper limit. Instead, the proposed rule would have permitted a fund to adopt an upper limit on the swing factor as part of its swing pricing policies and procedures, and the fund's board would have been required to approve any such upper limit. We requested comment on whether the Commission should require an upper limit on the swing factor that a fund would be permitted to use and whether two percent or some other limit would be appropriate.

Commenter responses in this area were mixed. One commenter agreed that it was appropriate for the proposed swing pricing rules to permit, but not require, funds to adopt a swing factor cap.[250] Another commenter stated that the Commission had appropriately not prescribed an upper limit in the proposal.[251] Other commenters, however, expressed investor protection-related concerns regarding the proposed swing pricing rules, indicating that the rules lacked sufficient transparency regarding swing factors and/or that the rules ignored economic incentives that would cause funds to employ swing pricing overly aggressively.[252] One of these commenters argued that the discretion provided to funds in setting the swing factor ''could effectively form a gating during periods of market stress'' and that ''such de facto gating could harm investors.'' [253]

We are persuaded that the final rule must allow enough flexibility in the determination of a swing factor to keep the factor reasonably related to transaction costs. At the same time, however, we believe that it is appropriate to limit the swing factor that may be used to avoid placing an undue restriction or de facto gate on shareholders' ability to redeem their shares and to prevent potentially unfair treatment of shareholders and abusive practices. The Commission has limited redemption fees under rule 22c–2 to no more than two percent of the amount redeemed,[254] and in the context of money market funds, the Commission has given a money market fund's board the ability to impose a liquidity fee of no more than two percent.[255] In those cases, we sought to balance the fees imposed with shareholders' need to redeem without incurring disproportionate costs. In the context of swing pricing, placing an upper limit on the swing factor also provides transparency regarding the maximum amount that a shareholder could expect the share price that he or she receives upon purchase or redemption to be adjusted on account of swing pricing, even though it may result in a fund not recouping all of the transaction costs the fund may incur in connection with shareholder capital activity and thus not mitigating all dilution that may result from such activity. Additionally, an upper limit on the amount a fund adjusts its NAV could mitigate volatility and tracking error issues that could arise from the use of swing pricing.

Based on these considerations, we believe it is appropriate for the Commission to set a maximum amount for the swing factor, as we have done with redemption fees on funds and liquidity fees on money market funds, given our desire to balance the fair allocation of fund costs created by shareholder transaction activity with the redeemable nature of open-end funds. Nevertheless, we still consider it appropriate to require funds to establish an upper limit on the swing factor(s) the fund will use as part of their swing pricing policies and procedures, within the two percent of NAV per share confines, because for some funds a swing factor upper limit of less than two percent may be appropriate given that fund's redemption history and investment strategy.[256] Indeed, many funds may consider two percent of NAV per share to be a form of a ''default'' limit, but where the fund (with the approval of its board) can find that a lower limit is in the fund's best interest,

[246] *See* Eaton Vance Comment Letter.

[247] *See* AFR Comment Letter.

[248] *See supra* footnote 231 and accompanying paragraph.

[249] *See* rule 22c–1(a)(3)(i)(C).

[250] *See* HSBC Comment Letter (stating that a disclosed upper limit may provide useful guidance to investors, but arguing that ''[i]n periods of market stress, spreads and swing factors may widen and a hardcoded regulatory limit could be detrimental to existing investors.'').

[251] *See* Invesco Comment Letter.

[252] *See, e.g.,* AFR Comment Letter (arguing that the proposed swing pricing included excessive discretion regarding the level of the swing pricing adjustment); Eaton Vance Comment Letter (arguing that ''buyers and sellers would never know, or be able to reasonably estimate, even the approximate impact of swing pricing on their transaction prices'' and stating that ''[e]xposing transacting shareholders to undisclosed and uncapped transaction costs that may bear little or no relation to the associated fund costs does not strike us as a fair deal.'') (emphasis omitted).

[253] *See* AFR Comment Letter.

[254] *See* Redemption Fees Adopting Release, *supra* footnote 24, at 12 (stating that redemption fees in excess of two percent ''could harm ordinary shareholders who make an unexpected redemption as a result of a financial emergency'' and ''would in our judgment impose an undue restriction on the redeemability of shares required by the Act.'').

[255] *See* 2014 Money Market Fund Reform Adopting Release, *supra* footnote 38, at 95 (''[W]e are limiting the maximum liquidity fee that may be imposed by a fund to 2%. As with the default fee, we seek to balance the need for liquidity costs to be allocated to redemptions with shareholders' need to redeem absent disproportionate costs. We also believe setting a limit on the level of a liquidity fee provides notice to investors about the extent to which a liquidity fee could impact their investment. In addition, as recognized by at least one commenter, the staff has noted in the past that fees greater than 2% raise questions regarding whether a fund's securities remain 'redeemable.' '') (internal citation omitted).

[256] *See* rule 22c–1(a)(3)(i)(C).

similar to the approach we took regarding money market fund liquidity fees.[257] Because the upper limit would affect the swing factor a fund would use to adjust its NAV when net purchases or net redemptions exceed the fund's swing threshold, the fund is required to take into account the swing factor considerations when establishing a swing factor upper limit (while staying within the two percent maximum limit).[258]

We acknowledge that certain foreign jurisdictions that permit swing pricing do not place an upper limit on the swing factor that a fund may set. Instead, funds that use swing pricing within those jurisdictions may voluntarily limit the level of the swing factor to be applied, with such limits generally ranging from 1%–3%.[259] We also acknowledge that certain funds, particularly funds that invest in asset classes with higher spreads and other associated transaction costs, may be unable to recoup all transaction costs or mitigate all potential dilution associated with shareholders' capital activity if the maximum upper limit is set at two percent. However, we believe that capping the maximum swing factor upper limit at two percent will permit funds to pass on some of the transaction costs to purchasing and redeeming shareholders without imposing an undue restriction on the redeemability of shares required by the Act.

The final rule requires the fund's board to approve the fund's swing factor upper limit and any changes thereto.[260] A number of commenters objected to the proposed requirement that, if the fund set a swing factor upper limit, the board must approve the upper limit. These commenters argued that the fund adviser is best suited for setting any cap, because it requires in-depth knowledge of the day-to-day management and administration of the fund—activities performed by the adviser and other service providers and not the board.[261] On the other hand, one commenter stated that the proposal granted excessively broad discretion to fund managers to design the swing pricing procedures, and excessive discretion in setting the swing factor. This commenter feared that excessive discretion could result in unequal treatment of investors that was not fully justified by differences in the market impact of their fund transactions.[262]

After considering comments, we believe board approval of a fund's swing factor upper limit (and any changes thereto), combined with required review of a written report from the administrator describing, among other things, the administrator's review and assessment of the fund's swing factor upper limit, including information and data supporting this determination, will serve to limit the degree of discretion granted to fund management, while providing management with the flexibility to manage the day-to-day administration of swing pricing. Obtaining board oversight of the swing factor upper limit will help ensure that a fund establishes a swing factor upper limit that is in the best interests of the fund's shareholders. We also believe it is appropriate for the fund board to approve the fund's specific upper limit given the important balancing that it effects between the redeemable nature of the fund's shares against the fair allocation of fund costs from shareholder transaction activity—a balance between various shareholder interests that we believe the board is best situated to judge. Requiring board oversight of the swing factor upper limit is also consistent with the approach the Commission took in rule 22c–2 under the Act, where the fund board is required to approve any redemption fee that the fund establishes.[263] We further believe that the board review requirement serves to address the concerns of those commenters that suggested the board may not have the necessary information or expertise to approve the swing factor upper limit (and changes to the swing factor upper limit).[264]

Finally, we are also requiring funds to disclose the swing factor upper limit on Form N–1A and Form N–CEN. We believe that an adequate level of transparency about swing pricing is critical for investors to understand the risks associated with investing in a particular fund, and that requiring disclosure of a fund's swing factor upper limit will provide important transparency to fund shareholders regarding the maximum amount that a shareholder could expect the share price to be adjusted on account of swing pricing. We also believe that this transparency could serve as a check on funds that may seek to employ swing pricing overly aggressively.[265] Foreign domiciled funds that voluntarily limit the level of the swing factor to be applied typically disclose the swing factor upper limit in the fund's offering documents.[266]

Additional Considerations

A fund could take a variety of approaches to determining its swing factor, so long as the fund's process for how the swing factor is determined includes the considerations set forth in rule 22c–1(a)(3)(i)(C). For example, a fund may wish to set a ''base'' swing factor, and adjust it as appropriate if certain aspects required to be considered in determining the swing factor deviate from a range of pre-determined norms (for example, if spread costs generally exceed a certain pre-determined level). Alternatively or additionally, a fund that uses swing pricing may wish to incorporate into its policies and procedures a formula or algorithm that includes the required considerations for determining the swing factor.

With respect to the process for determining the swing factor, one commenter opined that the swing factor must be ''quantitative and automatable,'' [267] and another similarly suggested that the Commission should make clear that the swing factor may be determined on a periodic basis, rather than calculated anew each day that the swing factor is applied.[268] We agree that a swing factor could generally be determined on a periodic basis, as long as developments such as significant market developments prompt a quicker re-evaluation. We believe that these aspects of swing factor determination should be addressed by funds when designing their policies and procedures relating to swing pricing, and are reflected in the final rule.

[257] *See* rule 2a–7(c)(2)(ii) (if a money market fund's weekly liquid assets fall below ten percent of its total assets, the fund must institute a liquidity fee of 1% of value of shares redeemed, unless the fund's board of directors, including a majority of the directors who are not interested persons of the fund, determines that imposing the fee is not in the best interests of the fund or that a higher (not to exceed 2%) or lower fee level is in the best interest of the fund).

[258] Rule 22c–1(a)(3)(i)(C).

[259] ALFI Survey 2015, *supra* footnote 42 at 7 (noting, however, that approximately half of respondents that use swing pricing cap the level of the swing factor applied on certain asset classes, with equity, fixed income and multi-asset funds most commonly capped at two percent).

[260] *See* rule 22c–1(a)(3)(ii)(B).

[261] *See, e.g.,* BlackRock Comment Letter; CRMC Comment Letter; Dechert Comment Letter; FSR Comment Letter.

[262] *See* AFR Comment Letter.

[263] *See* rule 22c–2(a)(1). *See also supra* footnotes 24–31 and accompanying text.

[264] *See infra* section II.A.3.f.

[265] *See* Eaton Vance Comment Letter (''The Swing Pricing Proposal does not appear to recognize that fund sponsors will have an economic incentive to apply swing pricing aggressively, because doing so improves the competitiveness of the funds they manage by increasing reported returns.'').

[266] *Id.*

[267] *See* Invesco Comment Letter.

[268] *See* SIFMA Comment Letter II.

f. Governance, Oversight and Other Considerations

Although the final rule requires a fund that uses swing pricing to obtain approval of its swing pricing policies and procedures from the fund's board, including a majority of independent directors, in a change from the proposal, the final rule does not require the board to approve material changes to the policies and procedures. The rule provides that a fund's board-approved swing pricing policies and procedures must specify the process for how the fund's swing threshold(s), swing factor(s), and swing factor upper limit are determined. In addition, the final rule requires that the fund board approve the fund's swing threshold(s) and the upper limit on the swing factor(s) used by the fund, as well as any changes thereto. The rule requires that a fund's board designate the fund's investment adviser, officer or officers responsible for administering the fund's swing pricing policies and procedures.[269] Similar to the proposal, the final rule provides administration of the swing pricing policies and procedures must be reasonably segregated from portfolio management of the fund and may not include portfolio managers (although portfolio managers may provide data or other input used by those responsible for administering the policies and procedures). Finally, the fund board must also review a periodic written report prepared by the fund's swing pricing administrator that includes certain required information and the fund must meet certain recordkeeping requirements related to its swing pricing policies and procedures, as described below.

Board Role

As described above, consistent with the proposal, a fund's board of directors must approve two core elements of a fund's swing pricing program—the swing threshold(s) and the swing factor upper limit. The swing threshold establishes the point at which swing pricing begins to affect fund shareholders, and thus involves an important balancing of various shareholder interests. Similarly, the swing factor upper limit reflects a balancing of the redeemable nature of the fund's shares against the fair allocation of fund costs from shareholder transaction activity. In both cases, the board has an important role in balancing shareholder interests. This is consistent with the board's role in other contexts under the Act. For example, a fund's board has significant responsibility regarding valuation- and pricing-related matters.[270]

In addition, we believe that ongoing oversight of a fund's swing pricing program, which necessarily involves addressing a diverse range of issues, some technical, requires a calibrated balance between the role of the board and the role of management. Accordingly, under the final rule, a fund's board of directors must approve the fund's initial swing pricing policies and procedures, as proposed. However, in a change from the proposal, instead of the board approving any material changes to the swing pricing policies and procedures and instead of the fund performing a periodic review of the fund's swing threshold,[271] the board will provide its ongoing oversight of the fund's swing pricing by reviewing, no less frequently than annually, a written report prepared by the person(s) responsible for administering the fund's swing pricing policies and procedures. This written report must describe: (i) The swing pricing administrator's review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution; (ii) material changes to the policies and procedures since the date of the last report; and (iii) the swing pricing administrator's review and assessment of the fund's swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements of the rule, including a review and assessment of information and data supporting these determinations.[272]

In the proposal, we asked comment on the extent to which the board oversight requirements we proposed would ensure that a fund establishes policies and procedures that are in the interest of all fund shareholders.[273] A number of commenters believed that appropriate board oversight of swing pricing is key to ensuring proper administration of swing pricing in the interest of fund shareholders,[274] and many generally supported the proposed requirement for a fund's board to approve its swing pricing policies and procedures.[275] Several commenters suggested, in particular, that regular reports on the administration of swing pricing would help the board in its oversight role, and facilitate the appropriate use of swing pricing.[276] Another commenter suggested that the board should periodically review whether adjustments should be made to swing pricing policies and procedures.[277]

However, a number of commenters objected to the particular methods we proposed for ongoing board oversight of swing pricing, including the proposed requirement that the board specifically approve the fund's swing threshold and any swing factor cap that that the fund adopts.[278] These commenters argued that the fund adviser, rather than the board, is best suited for setting these parameters, because it requires in-depth knowledge of the day-to-day management and administration of the fund—activities performed by the adviser and other service providers and not the board. Commenters also argued that fund boards should not be required to approve material changes to a fund's policies and procedures, as obtaining approval from fund boards may unnecessarily constrain management, considering the infrequency of board meetings and the significant changes in markets that may occur between them.[279] On the other hand, one commenter stated that the proposal

[269] Rule 22c–1(a)(3)(ii)(C).

[270] *See, e.g.,* section 2(a)(41)(B) of the Act and rule 2a–4 thereunder (when market quotations are not readily available for a fund's portfolio securities, the Investment Company Act requires the fund's board of directors to determine, in good faith, the fair value of the securities); rule 2a–7(c)(1)(i) and rule 2a–7(g)(1)(i)(A)–(C) (a stable NAV money market fund that qualifies as a retail or government money market fund may use the amortized cost method of valuation to compute the current share price provided, among other things, the board of directors believes that the amortized cost method of valuation fairly reflects the market-based NAV and does not believe that such valuation may result in material dilution or other unfair results to investors or existing shareholders). *See also* rule 18f–3(d) (requiring the board, including a majority of independent directors, to find that a fund's multi-class plan is in the best interests of each share class individually and the fund as a whole, and providing that before any vote on a fund's multi-class plan, the directors are required to request and evaluate such information as may be reasonably necessary to evaluate the plan).

[271] *See supra* section II.A.3.c.

[272] *See* rule 22c–1(a)(3)(ii).

[273] *See* Proposing Release, *supra* footnote 6, at text following n.522.

[274] *See, e.g.,* Blackrock Comment letter; CRMC Comment Letter.

[275] *See* CRMC Comment Letter; CFA Comment Letter; HSBC Comment Letter; IDC Comment Letter; J.P. Morgan Comment Letter; MFDF Comment Letter; Charles Schwab Comment Letter.

[276] *See, e.g.,* Blackrock Comment letter (''The Swing Pricing Committee should report to the mutual fund board at regular scheduled intervals . . .''); CRMC comment letter (''[W]e believe that fund boards should be given visibility to such determinations [of the swing threshold and swing factor limit] through written reports . . .'').

[277] *See* Charles Schwab Comment Letter.

[278] *See, e.g.,* BlackRock Comment Letter; CRMC Comment Letter; Dechert Comment Letter; FSR Comment Letter.

[279] *See* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8, at section III.H.2 for a more detailed discussion regarding comments received regarding board approval of material changes to fund policies and procedures.

granted excessively broad discretion to fund managers to design the swing pricing procedures, and excessive discretion in setting the swing pricing threshold and factor, which this commenter feared could result in unequal treatment of investors not fully justified by differences in the market impact of their fund transactions.[280]

As discussed above, after considering comments, we believe requiring the board to approve a fund's swing threshold(s) and swing factor upper limit (and any changes thereto) is an important, targeted means to help ensure that a fund's swing pricing policies and procedures are in the best interests of fund shareholders. In addition, with respect to oversight beyond these discrete elements, we believe that board approval of swing pricing policies and procedures combined with required review of a report laying out information and analyses supporting how the important components of swing pricing are determined—the swing factor(s), swing threshold(s), and swing factor upper limit—appropriately balances the concerns of some commenters that the board should not be involved in the day-to-day administration of swing pricing with the concerns of other commenters that the rule should prevent excessive discretion granted to fund management and inappropriate treatment of fund shareholders. Although we consider the adviser better suited to administering the fund's swing pricing policies and procedures, we believe that requiring board approval of the policies and procedures and requiring board review of the administrator's report that includes certain required information are integral to an effective ongoing assessment of swing pricing. We also believe these requirements will help ensure that a fund establishes and implements swing pricing policies and procedures that are in the best interests of the fund's shareholders. As noted above, a fund's board has significant responsibility regarding valuation- and pricing-related matters,[281] and it is required to approve valuation and compliance-related policies and procedures.[282] Additionally, in the past we have stated that a fund's compliance policies and procedures, which must be approved by the fund's board (including a majority of independent directors), should include procedures for the pricing of portfolio securities and fund shares.[283] In particular, we note that rule 38a–1 requires that a board receive a written report on the operation of the policies and procedures that the fund has adopted that are reasonably designed to prevent violation of the federal securities laws, which would include rule 22c–1.

The report the board must review contains several important elements. These elements are designed to provide the board with the types of information that the board would consider relevant and likely request if required to approve material changes to the fund's swing pricing policies and procedures. As noted above, in light of comments, we are replacing the proposed requirement that the board approve all material changes to the swing pricing policies and procedures and the proposed requirement of a fund review of the swing threshold with required board review of the swing pricing administrator's report. First, the report must describe the swing pricing administrator's review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution. This will help the board satisfy its fiduciary role that the fund pricing process is operating in the best interest of fund shareholders. It also is similar to the requirements of rule 38a–1 [284] and thus should be a familiar process for funds and their boards. Second, the report must describe any material changes to the fund's swing pricing policies and procedures since the last report. Because the board is not required to approve these changes before they take effect, it is important that they nevertheless be informed of these changes to provide effective oversight of swing pricing. Finally, the final rule provides that a fund's swing pricing policies and procedures must specify the process used by the fund to determine the fund's swing threshold(s), swing factor(s), and swing factor upper limit, and that the swing pricing administrator's report must describe the administrator's review and assessment of the fund's swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements of the rule, including a review and assessment of information and data supporting these determinations. The swing threshold(s), swing factor(s), and swing factor upper limit are the key features of swing pricing practices and ultimately drive the prices at which fund shareholders will transact. Accordingly, providing boards with information on how these essential parameters are determined, and a review and assessment of how well these processes are leading to the right parameters, is important in enabling boards to satisfy their oversight role. In particular, this information may assist the board in its consideration of any recommended changes to the fund's swing threshold(s) or swing factor upper limit. These elements of the report—and the related board oversight—are also intended to address commenter concerns that the proposed swing pricing framework granted fund manager's excessive discretion in setting the swing threshold and swing factor, particularly given conflicting interests that fund personnel may have.[285] The board has traditionally provided oversight when there are potential conflicts at the fund.

We note that this report must include an assessment of the information and data supporting the fund's swing threshold(s), swing factor(s), and swing factor upper limit. We believe that the inclusion of this information in the board report should help provide the board sufficient information about the inputs used in swing pricing to provide proper oversight of the fund's swing pricing processes and further address the concerns of commenters noted

[280] *See* AFR Comment Letter.

[281] *See supra* footnote 270.

[282] *See, e.g.,* Accounting for Investment Securities by Registered Investment Companies, Accounting Series Release No. 118 (Dec. 23, 1970) (a board, consistent with its responsibility to determine the fair value of each issue of restricted securities in good faith, determines the method of valuing each issue of restricted securities in the company's portfolio, and the actual valuation calculations may be made by persons acting pursuant to the board's direction; the board must continuously review the appropriateness of the method used in valuing each issue of security in the company's portfolio); and Rule 38a–1 Adopting Release, *supra* footnote 179, at text accompanying n.46 (stating that rule 38a–1 requires fund directors to approve written compliance policies and procedures that require each fund to ''provide a methodology or methodologies by which the fund determines the fair value of the portfolio security'').

[283] *See* Rule 38a–1 Adopting Release, *supra* footnote 179, at nn.39–47 and accompanying text.

[284] *See* rule 38a–1(a)(3) and rule 38a–1(a)(4)(iii) (requiring that the fund's chief compliance officer provide a report to the fund's board, at least annually, covering certain specified matters relating to the fund's compliance program and requiring an annual review of the adequacy of the fund's compliance policies and procedures and the effectiveness of their implementation).

[285] Eaton Vance Comment Letter (''While the proposed rule specifies the factors that must be considered in establishing a fund's swing threshold and swing factor, it provides little guidance to fund sponsors and fund boards on how to balance the conflicting interests of continuing shareholders (benefiting from low swing thresholds and high swing factors) versus transacting shareholders (benefiting from high swing thresholds and low swing factors) in setting appropriate swing thresholds and applying reasonable swing factor adjustments each day that the swing threshold is exceeded.''); AFR Comment Letter (stating that ''[t]he proposal includes substantial discretion concerning the threshold for swing pricing and the actual level of the swing pricing adjustment. We believe this discretion is excessive.'').

above. The information and data supporting these determinations may take a variety of forms, such as reviews or back-tests of shareholder flows and transaction costs in relation to the swing threshold(s), swing factor(s), and swing factor upper limit used by the fund. Back-testing of swing thresholds and factors, for example, is used in swing pricing practices in Europe,[286] and we expect it may enhance the accuracy and effectiveness of swing pricing as a tool to mitigate potential shareholder dilution.

Overall, we believe that the board approval and oversight requirements in the final rule will help a fund establish and implement swing pricing policies and procedures that are in the best interests of the fund and its shareholders. Because fund directors have an obligation to act in the best interests of the fund,[287] approving policies and procedures that are designed to disadvantage shareholders would not be consistent with their fiduciary duties. In fulfilling these duties, while the board bears ultimate responsibility for meeting its obligations under its fiduciary duty and our rules, the board may choose, where consistent with the prudent discharge of its fiduciary duties, to make its determinations while relying on reports it receives under this rule and such other information and data as it determines appropriate from the person(s) administering the swing pricing program.[288]

Designation of Administrator

As under the proposal, the board will be required to designate the fund's adviser, officer, or officers responsible for the administration of the fund's swing pricing policies and procedures. As discussed above, multiple commenters supported the proposal's approach that the fund's board should not be required to administer the fund's swing pricing policies and procedures,[289] and instead should designate a swing pricing administrator.[290] One commenter, however, suggested that the fund's adviser, not the board, should be responsible for designating the person responsible for administering the fund's swing pricing policies and procedures.[291] We believe that it is appropriate and consistent with the board's historical role and its responsibilities under other of our rules for the board to be responsible for designating the administrator. We believe that having the board approve the administrator should help enhance board oversight of swing pricing and allow for boards to better understand who is responsible for administering it. Accordingly, we are retaining this requirement in the final rule.

We note that it is currently common industry practice for foreign domiciled funds that use swing pricing to appoint a committee to administer the fund's swing pricing operations.[292] A fund's board may wish to consider requiring the fund's swing pricing policies and procedures to be administered by a committee, and to specify the officers or functional areas that comprise the committee (taking into account any possible conflicts for the fund and the adviser related to swing pricing). The persons or committee tasked with swing pricing oversight may wish to meet periodically to determine the swing factor(s) the fund would use in a variety of circumstances, taking into account the considerations discussed above in section II.A.3.e. A fund may wish to consider delineating the frequency with which these persons would meet in its policies and procedures; for example, a fund's policies and procedures might specify that these persons shall meet periodically, such as monthly or quarterly, and more frequently if market conditions require.

Segregation From Portfolio Management Function

As proposed, the swing pricing rule would have required that the determination of the swing factor must be reasonably segregated from the portfolio management function of the fund. The final rule as adopted, is similar to the proposed requirement; however, it has been modified to provide that administration of a fund's swing pricing policies and procedures must be reasonably segregated from portfolio management of the fund and "may not include portfolio managers."[293] We noted in the Proposing Release that portfolio managers may have conflicts of interest with respect to setting the swing factor, and therefore did not believe that they should be involved in setting the swing factor. We believe that requiring segregation of functions (and clarifying in the rule text that portfolio managers may not be involved) with respect to the administration of swing pricing generally, and not just with respect to setting the factor, will provide better clarity of roles and reduce the possibility of conflicts of interest in the administration of swing pricing.

We believe that, because of the potential conflict of interest that a portfolio manager who may be compensated based on fund performance may have if they are involved in setting the swing factor (which if not set properly, may have the effect of increasing fund performance inappropriately rather than recouping the transaction costs associated with purchasing and redeeming shareholders' capital activity), portfolio managers should not be a part of the swing pricing administration.[294] For example, a fund's portfolio manager could have an incentive to determine a swing factor that is as low as possible, because the portfolio manager could be reluctant for the fund's short-term performance to deviate from the fund's benchmark or lag its peers; or set a swing factor that is too high to enhance the fund's performance relative to its benchmark or peers.[295]

Several commenters expressed support for the determination of the swing factor being reasonably segregated

[286] *See* JP Morgan Comment Letter (discussing back-testing of cash flow projections it performed in confirming the accuracy of its swing pricing determinations); ICI Comment Letter (noting that the ALFI guidelines require regular back-testing of a fund's swing threshold and swing factor).

[287] *See, e.g.,* Interpretive Matters Concerning Independent Directors of Investment Companies, Investment Company Act Release No. 24083 (Oct. 14, 1999) [64 FR 59877 (Nov. 3, 1999)] (discussing staff's views of directors' duties of care and loyalty).

[288] *See also* Letter of Michael Didiuk, Division of Investment Management, Securities and Exchange Commission, to Dorothy Berry, Chair, Independent Directors Council, and Jameson Baxter, Chair, Mutual Fund Directors Forum (Nov. 2, 2010), *available at https://www.sec.gov/divisions/investment/noaction/2010/idc-mfdf110210.pdf.*

[289] *See* Dechert Comment Letter; IDC Comment Letter; MFDF Comment Letter.

[290] *See* CFA Comment Letter; HSBC Comment Letter.

[291] *See* IDC Comment Letter.

[292] *See, e.g.,* BlackRock Fund Structures Paper, *supra* footnote 46; J.P. Morgan Asset Management Swing Pricing Paper, *supra* footnote 60; and Franklin Templeton Investments, *Swing pricing: Investor protection against fund dilution* (last visited Apr. 15, 2015), *available at http://www.franklintempletongem.com/downloadsServlet?docid=hm2t1yb7.*

[293] We recognize that smaller fund complexes may have different personnel choices available when determining who would be responsible for administering their funds' swing pricing policies and procedures. *See infra* section III.

[294] We recognize that this approach differs from that taken in the administration of rule 22e–4 (as it did in the proposal) and believe this difference is justified by the higher potential for conflicts of interest in regards to portfolio managers and swing pricing as compared to liquidity risk management generally. *See* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8 at section III.H.1.

[295] *See supra* section II.A.2.g (discussing performance reporting); *see also* Evergreen Order, *supra* footnote 128 (Commission found that a fund's portfolio management team withheld relevant negative information about certain fund holdings from a valuation committee, resulting in the fund substantially overstating its NAV for over one year).

from a fund's portfolio management function, which as described in the Proposing Release, would exclude portfolio managers from administration of swing pricing factor.[296] Accordingly, we are adopting the requirements summarized above. We recognize that it would be appropriate for a committee tasked with the administration of a fund's swing pricing policies and procedures, including the determination of the swing factor(s) the fund would use in a variety of circumstances, to obtain appropriate inputs from the fund's portfolio manager, which could be used by that committee in determining the swing factor. However, portfolio managers could not be members of the committee, nor could they decide how their inputs would be employed in the swing factor determination.

Fund Merger Considerations

We stated in the Proposing Release that, when funds merge, and at least one of the merging funds uses swing pricing, there are a number of considerations relating to swing pricing that the funds generally should consider when determining the terms of the merger.[297] Commenters did not address these views, which we reiterate here. The boards of merging funds should consider whether a swing factor should be used to adjust the value of the absorbed fund's assets, if the absorbing fund uses swing pricing and it is applied on the day of the merger.[298] Although the manager of the absorbing fund may need to sell certain of the assets of the absorbed fund following the merger (*e.g.,* for consistency with the absorbing fund's investment strategy, or to comply with certain regulatory requirements), we do not believe that the NAV of either the absorbing fund or the absorbed fund should be adjusted to counter any dilution resulting from these sales, because costs associated with these sales would result from the merger and would not be caused by shareholders' purchase or redemption activity. In light of potential complications arising when funds using swing pricing merge, the boards of merging funds may want to consider whether to temporarily suspend a fund's swing pricing policies and procedures ahead of the merger.[299] Similarly, the swing threshold of the absorbing fund generally should be reviewed following a merger, and the persons in charge of administering the absorbing fund's swing pricing policies and procedures should consider the effects of the merger when considering what swing factor would be appropriate to use if the fund's swing threshold is exceeded following the merger.[300]

Recordkeeping Requirements

Like under the proposal, the final rule requires a fund to maintain the swing pricing policies and procedures adopted by the fund that are in effect, or at any time within the past six years were in effect, in an easily accessible place.[301] Additionally, as proposed, we are expanding current rule 31a–2(a)(2), which requires a fund to keep records evidencing and supporting each computation of the fund's NAV,[302] to reflect the NAV adjustments based on a fund's swing pricing policies and procedures. Specifically, a fund that adopts swing pricing policies and procedures will be required to preserve records evidencing and supporting each computation of an adjustment to the fund's NAV based on the fund's swing pricing policies and procedures.[303] For each NAV adjustment, such records should generally include, at a minimum, the fund's unswung NAV, the level of net purchases or net redemptions that the fund encountered (and estimated) that triggered the application of swing pricing, the swing factor that was used to adjust the fund's NAV, relevant data supporting the calculation of the swing factor, and any back-testing data used by the fund in assessing the swing factor (and its relationship to near term costs expected to be incurred by the fund as a result of net purchases or net redemptions that occur on the day the swing factor(s) is used). The records required under the amendments to rule 31a–2(a)(2) are required to be preserved for at least six years from the date that the NAV adjustment occurred, the first two years in an easily accessible place.[304] The six-year period for a fund to maintain a copy of its swing pricing policies and procedures in rule 22c–1(a)(3) corresponds to the six-year recordkeeping period currently incorporated in rule 31a–2(a)(2). We believe that consistency in these retention periods is appropriate in order to permit a fund or Commission staff to review historical instances of NAV adjustments effected pursuant to the fund's swing pricing policies and procedures in light of the policies and procedures that were in place at the time the NAV adjustments occurred. Commenters generally found these proposed requirements appropriate, and we are adopting them as proposed.[305]

In addition, and based on the same rationale as that of the other aforementioned swing pricing-related recordkeeping requirements, the final rule requires a fund to maintain all written periodic reports provided to the board under rule 22c–1(a)(3)(ii)(D) relating to swing pricing for six years, the first two years in an easily accessible place.[306]

g. Impacts on Financial Statements, Performance Reporting, and Pricing Errors

The application of swing pricing will impact a fund's financial statements and disclosures in a number of areas, including a fund's statement of assets and liabilities, statement of changes in net assets, financial highlights, and the notes to the financial statements. While commenters were generally supportive of the swing pricing disclosures in the notes to the financial statements required by the proposal,[307] commenters did ask for clarification and suggested the Commission also consider the impact swing pricing disclosures

[296] *See* CRMC Comment Letter; CFA Comment Letter; HSBC Comment Letter.

[297] *See* Proposing Release, *supra* footnote 6, at n.533 and accompanying text.

[298] Directors overseeing fund mergers must take into account rule 17a–8 under the Act (which sets forth requirements for mergers of affiliated investment companies), if applicable, as well as any relevant state law requirements. Rule 17a–8 requires a board, including a majority of the independent directors, to consider the relevant facts and circumstances with respect to a merger of affiliated funds and determine that the merger is in the best interests of each of the merging funds and that the interests of the shareholders of both the fund being acquired and the acquiring fund are not being diluted. The board may want to consider the swing pricing policies and procedures of the merging funds including any appropriate modifications.

See ALFI Swing Pricing Guidelines 2015, *supra* footnote 88, at 19–20 (discussing issues associated with the use of swing pricing to adjust the value of the absorbed fund's assets).

[299] *See* Proposing Release, *supra* footnote 6, at n.536 and accompanying text.

[300] *See id.,* at text following n.536.

[301] Rule 22c–1(a)(3)(iii).

[302] *See* rule 31a–2(a)(2) (every registered investment company shall . . . ''[p]reserve for a period not less than six years from the end of the fiscal year in which any transactions occurred, the first two years in an easily accessible place . . . all schedules evidencing and supporting each computation of net asset value of the investment company shares'').

[303] *See* amendment to rule 31a–2(a)(2).

[304] *See id.*

[305] *See, e.g.,* HSBC Comment Letter (''[HSBC] AMG believes the recordkeeping requirements are sufficient.''). *But see* Voya Comment Letter (listing recordkeeping requirements as one of many aspects of the proposed rule that would make swing pricing too administratively burdensome to implement in a manner outweighed by swing pricing's benefits). We note that the rule amendments we adopt today permit, but do not require, a fund to implement swing pricing and allow a fund to weigh recordkeeping and other costs to administer swing pricing against swing pricing benefits as the fund deems appropriate.

[306] *See* rule 22c–1(a)(3)(iii).

[307] *See* ICI Comment Letter I.

will have on other aspects of financial statement reporting,[308] which we address below.

Statement of Assets and Liabilities

Today we are clarifying, after consideration of the comments received, that for funds that utilize swing pricing the statement of assets and liabilities would continue to be presented as currently required by Regulation S–X rule 6–04.19 [309] and U.S. Generally Accepted Accounting Principles or ''GAAP.'' Under Regulation S–X and GAAP, funds are required to state on the statement of assets and liabilities their NAV per share, which is defined as ''the amount of net assets attributable to each share of capital stock outstanding at the close of the period,'' [310] and which we refer herein to as the ''GAAP'' NAV. We proposed to amend rule 6–04.19 to require presentation of the NAV per share as adjusted pursuant to its swing pricing policies and procedures (if applicable), the ''Swung NAV,'' on the statement of assets and liabilities.[311] However, commenters questioned how the effects of swing pricing are captured within the financial reporting process and interact with the normal trade date reporting adjustments that go into a GAAP NAV.[312] Commenters also pointed out that a user of the financial statements would not be able to divide the net assets of the fund (or class) by the shares outstanding to arrive at the Swung NAV per share and that there was no proposed reconciliation of these amounts.[313] Generally, commenters suggested consideration of whether the GAAP NAV per share should be presented in addition to or in lieu of the Swung NAV, as proposed,[314] and asked for further clarification on how swing pricing would impact the financial highlights, including the total return calculations.[315]

One commenter also noted that, under the proposal, there would be a difference between the Swung NAV per share disclosed in accordance with proposed rule 6–04.19 and the GAAP NAV per share.[316] For a fund that chooses to implement swing pricing, the GAAP NAV would include both the effects of swing pricing throughout the period, if applicable, as well as any trade date financial reporting adjustments for portfolio transactions (including any related income, expense, gain and loss) and capital share transactions occurring on the balance sheet date. The Swung NAV would be the NAV that investors transacted at on the last day of the financial reporting period and would not include the GAAP trade date adjustments.[317] For funds that adopt swing pricing, if the NAV is swung on the last day of the reporting period it could be higher or lower than the GAAP NAV presented in the financial statements, depending on the direction of the swing. For example, as one commenter noted, if a fund on the last day of the financial reporting period (when considering subscriptions or redemptions that day) in calculating its daily NAV made a determination to adjust or swing the NAV according to its swing pricing policies and procedures, and applied the swing pricing factor to its unswung NAV of $10.00, which resulted in a Swung NAV of $9.90 (as a result of large redemptions), shareholder redemption (and subscription) transactions would be processed at the Swung NAV of $9.90 on the last day of the reporting period.[318] Assuming that the effect of processing transactions at $9.90 increases the fund's NAV to $10.01, and there were no other financial reporting trade date adjustments, the GAAP NAV would be $10.01.

To further clarify, for funds that implement swing pricing, the GAAP NAV would include any of the effects of swing pricing throughout the entire period (if applicable), and the Swung NAV (if it swings at period end) would represent the transactional NAV on the last day of the period, which has been adjusted by the swing factor.

Commenters questioned whether the GAAP NAV per share or the Swung NAV per share would be more meaningful to users of the financial statements.[319] After consideration of the concerns raised above, we believe that disclosure of the GAAP NAV per share (which will reflect the effects of swing pricing throughout the reporting period, if applicable), continues to be the appropriate disclosure on the statement of assets and liabilities as it allows users of the financial statements to understand the actual amount of net assets attributable to the fund's remaining shareholders at period end. The population of investors that typically transact as of the financial reporting date is generally less than those investors that do not transact and are still invested in the fund as of the financial reporting date. Therefore, we believe that the GAAP NAV is likely to be more meaningful to a larger population of shareholders.

Furthermore, users of the financial statements can easily recalculate the GAAP NAV per share on the statement of assets and liabilities by dividing the net assets of the fund (or share class) by the outstanding shares of the fund (or share class) as presented on the statement of assets and liabilities. As proposed, users of the financial statements would not have been able to recalculate the Swung NAV disclosed based on the information on the statement of assets and liabilities. Therefore, we are not adopting the proposed amendment to Regulation S–X rule 6–04.19 to require funds to disclose the Swung NAV on the Statement of Assets and Liabilities in lieu of or in addition to the GAAP NAV on the balance sheet, and funds will continue to disclose the GAAP NAV as currently required.

However, as we discuss below in the financial highlights section, we believe that transparency of the Swung NAV is still meaningful for investors and should be disclosed in the financial highlights section of the financial statements in addition to the GAAP NAV. Furthermore, while we are not

[308] *See* Comment Letter of Ernst & Young LLP (Jan. 14, 2016) (''EY Comment Letter''); Comment Letter of KPMG LLP (Jan. 26, 2016) (''KPMG Comment Letter''); Comment Letter of PricewaterhouseCoopers LLP (Jan. 13, 2016) (''PwC Comment Letter'').

[309] *See* 17 CFR 210.6–04, paragraph 19.

[310] *See* FASB ASC 946–10–20 for definition of NAV per share.

[311] *See* proposed amendments to section 210.6–04 of Regulation S–X; *see also,* Proposing Release, *supra* footnote 6, at section III.F.1.g.

[312] *See* KPMG Comment Letter; EY Comment Letter; PwC Comment Letter. *See also* EY Comment Letter; PwC Comment Letter (on whether the NAV should be adjusted for trade date activity). Rule 2a–4 of the Act permits registered investment companies to record security transactions as of one day after the trade date for purposes of determining net asset value. However, FASB ASC 946–320–25–1 notes that for financial reporting purposes, security transactions should be recorded on trade date. Consistent with current practice, trade date adjustments for portfolio transactions or capital share transactions occurring on the balance sheet date (otherwise known as ''as of'' adjustments) are included in the GAAP NAV per share.

[313] *See* KPMG Comment Letter.

[314] *See* Proposing Release, *supra* footnote 6, at section III.F.1.g.

[315] *See* EY Comment Letter; KPMG Comment Letter.

[316] *See* KPMG Comment Letter.

[317] We also note that today, without the use of swing pricing, there could be differences between the GAAP NAV and the transactional NAV calculated and used by funds to process investor orders, due to the fact that GAAP NAV is calculated as of T+0 for financial statement purposes (*i.e.,* includes trade date adjustments for portfolio investments and capital share activity as noted above) and fund complexes generally calculate NAV and transact on a T+1 basis in accordance with rule 2a–4. Thus, some of the adjustments between the GAAP NAV and the transactional NAV that currently exist are due to, among other things, the financial reporting adjustments for trade date (T+0) activity.

[318] *See* KPMG Comment Letter.

[319] *See* EY Comment Letter; KPMG Comment Letter.

requiring funds to present the Swung NAV on the balance sheet, this does not preclude funds or preparers of financial statements from including the Swung NAV on the balance sheet or elsewhere in the financial statements if funds believe such disclosures are beneficial for investors and provided there is an explanation of the differences between the Swung NAV and the GAAP NAV as presented.

Statement of Changes in Net Assets

As we noted in the Proposing Release, swing pricing also impacts disclosures of capital share transactions included in a fund's statement of changes in net assets.[320] A fund using swing pricing to adjust its NAV makes payments for shares redeemed and receives payments for shares purchased net of the swing pricing adjustment. Using the example above, if a fund had an unswung NAV of $10.00 on a given day before considering swing pricing and the Swung NAV after applying the swing factor pursuant to the fund's swing pricing policies and procedures was $9.90, shareholders would transact at $9.90 multiplied by the number of shares purchased or redeemed. The $0.10 difference between the swung and unswung NAV would be retained by the fund for its net redemptions to offset transaction and liquidity costs. This $0.10 difference per share should be accounted for as a capital transaction and not included as income to the fund, because it is an adjustment made to offset the near-term transactional and liquidity costs incurred as a result of satisfying shareholder transactions. Funds are required by Regulation S–X rule 6–09.4(b) to disclose the number of shares and dollar amounts received for shares sold and paid for shares redeemed.[321] Thus, for funds that implement swing pricing (and in the example above where transactions were processed using the swung NAV of $9.90 per share), Regulation S–X would require the dollar amount disclosed to be based on the transactional NAVs used to process investor subscriptions and redemptions, including those processed using Swung NAVs during the reporting period. Commenters generally agreed with this approach and noted that the statement of changes in net assets should reflect the actual amounts that would be received by the fund and that would be paid to its shareholders.[322]

Financial Highlights

We continue to believe, as we discussed in the proposal,[323] that a fund should include the impact of swing pricing in its financial highlights,[324] and the per share impact of amounts retained by the fund due to swing pricing should be included in the fund's disclosures of per share operating performance.[325] However, commenters also asked for clarification on how to present the cumulative impact of swing pricing on NAV throughout the year as opposed to the impact of swing pricing as of the financial reporting period end date. In response to these concerns, we are modifying our proposal and amending Item 13 of N–1A[326] to require disclosure of the Swung NAV per share, if applicable, as a separate line item below the ending GAAP NAV per share on the financial highlights.[327] We are also amending, as proposed, Item 13 of Form N–1A to specifically require that the per share impact of amounts related to swing pricing be disclosed below the total distributions line in a fund's financial highlights.[328] We are also requiring a general description of the effects of swing pricing on the fund's financial statements.[329] This presentation addresses commenters' questions around the impact of swing pricing throughout the year and as of the period end date, as the cumulative impact of swing pricing during the period will be presented within the financial highlight's GAAP NAV per share roll-forward as a separate line item under total distributions, and the impact of swing pricing as of the period end date, if any, would be disclosed by presenting the Swung NAV. One commenter noted that presenting two NAVs is conceptually consistent with the current requirement for closed-end funds.[330] Item 4 of Form N–2 requires closed-end funds to present both the net asset value at the end of the period as well as the per-share market value at the end of the period, which is a transaction price, in the per-share operating performance.

Performance Reporting

We proposed to require funds to calculate total return within the financial highlights and performance information based on the Swung NAV.[331] Commenters questioned whether total return should be based on other measures such as the GAAP NAV, which as clarified above, would include the cumulative effect of swing pricing along with financial reporting adjustments, or an unadjusted NAV, which would not include any of the effects of swing pricing.[332] Commenters had mixed responses on what total return was more meaningful to users of the financial statements. Some commenters agreed with the proposed approach of presenting total return using only the Swung NAV as it was consistent with how funds in Europe present total return, while acknowledging that it would require investor education in the U.S.[333] We note that certain European funds disclose both the swung and unswung[334] total returns for financial statement purposes. Other commenters pointed out that presenting total return based only on the Swung NAV introduced volatility unrelated to fund performance, and felt that performance benefits of swing pricing could lead to manipulation by managers and lead them to adopt aggressive swing policies.[335] Along the same lines, some commenters felt that total return based on an unadjusted NAV (that excludes the effects of swing pricing) may provide useful information for comparative purposes with other funds and benchmarks that do not use swing pricing.[336] Some commenters noted that total return calculated based on the GAAP NAV may also be meaningful for shareholders that remain in the fund and that did not transact or redeem shares during the year,[337] similar to the logic supporting presenting the GAAP NAV on the balance sheet.

After further consideration, we still believe that it is important for investors to understand the impact of swing pricing on the return they would have

[320] *See* Proposing Release, *supra* footnote 6, at section III.F.4.

[321] *See* 17 CFR 210.6–09.4(b).

[322] *See* EY Comment Letter; Invesco Comment Letter.

[323] *See supra* footnote 315.

[324] *See* Item 13 of Form N–1A.

[325] FASB ASC 946–205–50–7 requires specific per share information to be presented in the financial highlights for registered investment companies, including disclosure of the per share amount of purchase premiums, redemption fees, or other capital items.

[326] *See supra* footnote 315. Funds follow the instructions to Item 13 of Form N–1A for the Financial Highlights presentation in fund registration statements.

[327] *Id. See* Item 13(a) of Form N–1A.

[328] *Id.*

[329] *See infra* section II.A.3.g (Financial Statement Footnote Disclosure discussion).

[330] *See* EY Comment Letter.

[331] *See supra* footnote 315.

[332] *See* EY Comment Letter; KPMG Comment Letter.

[333] *See* ICI Comment Letter I; BlackRock Comment Letter.

[334] *See* ALFI Survey 2015, *supra* footnote 42 (defining ''unswung NAV'' as the NAV without application of a swing factor).

[335] *See* EY Comment Letter; Eaton Vance Comment Letter.

[336] *See* ICI Comment Letter I.

[337] *See* EY Comment Letter.

received for the period presented in the fund's financial statements, but we think this is best represented by the GAAP NAV, which does incorporate the effects of swing pricing if applicable throughout the period. Presenting a total return based on the transactional, or Swung NAV could introduce elements of variability depending on whether or not the fund had swung the NAV as of the last or first day in the reporting period. Thus, along the same lines for not requiring the Swung NAV on the balance sheet, we do not believe the total return based on the Swung NAV, if applicable, would provide any additional significant information to shareholders. Even those investors transacting as of the last day in the period would not receive the total return based on the Swung NAV for the period, except in a rare circumstance in which they had bought into the fund on the first day of the period and sold out of the fund on the last day of the period and swing pricing was implemented on those days.

Therefore, we believe presenting the total return based on the GAAP NAV in the financial highlights, which will include the cumulative effects of swing pricing, if applicable, is more meaningful to shareholders that remain in the fund as of the end of the reporting period. Thus, we are not adopting the proposed amendments to Form N–1A with respect to the calculation of total return within Instructions 3(a) and 3(d) to Item 13, and to Item 26, which also would have required disclosure of the total return based on the Swung NAV.

However, we are including an additional disclosure requirement related to performance data presented in the prospectus, if a fund's swing pricing policies and procedures were applied during any of the periods presented. This new disclosure would require a fund to include a general description of the effects of swing pricing on a fund's annual and average total returns for the applicable periods presented in a footnote.[338] We requested comment in the Proposing Release on whether funds should be required to disclose additional information regarding swing pricing on Form N–1A and, if so, what information should be disclosed. We also requested comment on whether we should require disclosure of more information on amounts retained by the fund because of swing pricing and certain additional information that would highlight the effect of swing pricing on the fund's returns. Several commenters recommended that the Commission require additional transparency regarding a fund's use of swing pricing.[339] The additional disclosure would provide transparency to investors by highlighting that the cumulative effect of swing pricing, where applicable, is reflected in the performance data presented for the fund.

Furthermore, while we are not requiring total return to be presented based on the Swung NAV within the financial statements, we are not prohibiting funds from disclosing the total return based on the Swung NAV outside of the financial statements in other performance information. We also acknowledge that presenting total return based on an unadjusted NAV could be useful for comparative purposes, but we note that it is a hypothetical measure not derived from the NAV that shareholders would have transacted at or the GAAP NAV as presented in the financial statements which is attributable to the fund's remaining shareholders. Therefore, while we do not believe an unadjusted NAV should be disclosed in the audited financial statements, we are not prohibiting funds from disclosing an unadjusted NAV outside of the financial statements in other performance information.[340]

Financial Statement Footnote Disclosure

Commenters were generally supportive of the swing pricing disclosures in the notes to the fund's financial statements that would have been required by the proposal.[341] We are adopting the requirement, as proposed, for a fund that adopts swing pricing policies and procedures to disclose in a footnote to its financial statements: (i) The general methods used in determining whether the fund's net asset value per share will swing, (ii) whether the fund's net asset value per share has swung during the period, and (iii) a general description of the effects of swing pricing on the fund's financial statements.[342] This would include a description of the differences between the ending US GAAP NAV and ending NAV adjusted for its swing policies and procedures, if applicable, as presented in the financial highlights included in the financial statements. Based on comments received as noted above, we continue to believe that this information will be useful in understanding the impact of swing pricing on a fund.

NAV Pricing Errors

Commenters noted that certain components of the swing pricing process will be based on estimates. Commenters were concerned that swing pricing could introduce a new source of pricing errors and potentially cause a fund to misstate its NAV if these estimates were materially incorrect. These concerns primarily relate to estimating daily net investor transaction flows that would be used to determine whether a fund's swing threshold has been exceeded, which would require adjusting the fund's NAV in accordance with the fund's swing pricing policies and procedures.[343] Certain commenters called for additional Commission guidance regarding circumstances that would constitute pricing errors under the swing pricing rules, as proposed.[344] Other commenters suggested that the Commission provide guidance and/or adopt a ''safe harbor'' or a standard of liability with respect to any pricing errors that could result from a fund's use of flow estimates to determine whether to adjust the fund's NAV for swing pricing.[345] Several commenters also noted that certain components of the swing pricing process, such as thresholds and factors, will incorporate some degree of estimation in determining when transaction costs (incurred as a result of the disposition or purchase of fund assets associated with net flows) will have a material impact on the fund.[346]

We believe fund management with oversight by the fund's board of directors is in the best position to tailor and oversee any error correction policies that may relate to conducting swing pricing for a fund. Accordingly, we believe funds should consider how their error correction policies and procedures will address swing pricing to the extent necessary to address the use of reasonable estimates related to swing pricing,[347] including appropriate

[338] Item 4(b)(2)(ii) and Item 4(b)(2)(iv)(E) of Form N–1A.

[339] *See* Eaton Vance Comment Letter; AFR Comment Letter.

[340] Item 26 (b)(6) of Form N–1A, *Non-Standardized Performance Quotation,* notes that a fund may calculate performance using any other, non-standardized historical measure of performance (not subject to any prescribed method of computation) if the measurement reflects all elements of return. Funds should consider this provision when contemplating presentation of a total return based on an unadjusted NAV that does not reflect the effects of swing pricing for the period presented.

[341] *See* ICI Comment Letter I.

[342] *See supra* footnote 315; *see also* rule 6–03(n) of Regulation S–X.

[343] *See* BlackRock Comment Letter.

[344] *See, e.g.,* Dechert Comment Letter.

[345] *See, e.g.,* BlackRock Comment Letter; MFS Comment Letter; Charles Schwab Comment Letter; SIFMA Comment Letter III.

[346] *Id.*

[347] *See supra* section II.A.3.d. (discussing the use of reasonable estimates in determining net transaction flows for swing pricing). The rule as adopted permits the person(s) responsible for administering the fund's swing pricing policies and

parameters around what constitutes an error with respect to their swing pricing policies and procedures.

Funds should consider making any estimates with respect to the different swing pricing components (*e.g.,* net flows, thresholds and factors) utilizing reasonable processes and procedures. Such estimates generally should be based on sufficient and appropriate information.[348] We recognize that funds may take different approaches in determining such estimates, based on the particular circumstances of the fund and in developing formal or informal policies and procedures. Funds also may wish to conduct back-testing of estimated fund flows and other estimates using complete or final data to refine their estimation processes as appropriate over time and help ensure that estimates utilized for swing pricing are reasonable.

We acknowledge the concerns expressed above about the use of estimates, including that a fund following its swing pricing policies and procedures could gather sufficient information in order to make a reasonable estimate of investor flows in good faith in determining whether or not it has crossed the swing threshold with high confidence, which subsequently is determined to differ from its actual fund flows. For example, differences in actual versus estimated net flows could arise from adjustments subsequently made to certain transactions processed, or because certain fund flows were not included in the estimates received at the point the fund decided to swing or not swing the fund's NAV, or by using the prior day's NAV to estimate certain price-dependent transaction orders.[349] We believe that as long as the fund has followed reasonable practices, policies and procedures in gathering sufficient information in determining whether net investor flows (which may include reasonable estimates) have exceeded the applicable threshold used for swing pricing, such differences would not in and of itself result in a determination of a NAV pricing error requiring reprocessing of transactions or a financial statement adjustment to the fund's NAV.

A fund should follow its error correction policies, which likely would include a quantitative and qualitative analysis of the facts and circumstances of a particular scenario to determine whether a pricing error has occurred. In the context of swing pricing, such errors may result from inputs used, or the application of the decision to swing price or not, or when applying a factor in calculating the swung NAV. For example, differences in estimated net investor flows versus final flow data could result from a processing error, such as inadvertent exclusion of significant estimated flow data provided to the fund's transfer agent by an intermediary, impacting the fund's decision to swing or not on a particular day (or days). Or an error could occur in applying an incorrect swing factor to a fund's NAV, for example, if a fund's swing pricing policies and procedures incorporate multiple thresholds and factors. As with any other NAV calculation or processing error, the fund generally should consider these types of errors and whether it would be appropriate to adjust the fund's NAV and reprocess in accordance with their error correction policies.

Auditor's Role in Examining the Use of Swing Pricing

Certain commenters also expressed concerns with the auditor's role in evaluating the application of swing pricing, including that auditors do not have the expertise to assess the reasonableness of the swing threshold and the swing factor that are being used by a fund.[350] We agree that assessing the reasonableness of the swing threshold and the swing factor is the responsibility of the swing pricing administrator overseen by the board of directors. We do not believe the auditor should have the responsibility to assess the reasonableness of the swing threshold and swing factor provided there is no indication of noncompliance with the Commission's rule.[351] However, we believe that verifying that the swing policies and procedures have been approved by the fund's board and have been consistently applied, in all material respects, by the fund throughout the period, including as of the balance sheet date, is within the scope of an auditor's engagement and expertise.

B. Disclosure and Reporting Requirements Regarding Swing Pricing

Receiving relevant information about the operations of a fund and its principal investment risks is important to investors in choosing the appropriate fund for their risk tolerances. We are adopting, substantially as proposed, with some modifications in response to comments, amendments to Form N–1A that require funds that use swing pricing to provide an explanation of the fund's use of swing pricing; including what it is, the circumstances under which the fund will use swing pricing, and the effects of using swing pricing.[352] A fund that uses swing pricing will also be required to disclose the upper limit the fund has set on the swing factor.[353] These form amendments are in addition to amendments to Form N–1A and Regulation S–X discussed above regarding financial and performance reporting related to swing pricing.[354] We are also adopting a requirement that a fund report on Form N–CEN information regarding the use of swing pricing, including a fund's swing factor upper limit.[355]

1. Amendments to Form N–1A

Form N–1A is used by open-end funds, including money market funds and ETFs, to register under the Investment Company Act and to register offerings of their securities under the Securities Act. Form N–1A currently requires a fund to describe its procedures for pricing fund shares, including an explanation that the price of fund shares is based on the fund's NAV and the method used to value fund shares.[356] If the fund is an ETF, an explanation that the price of fund shares is based on market price is required.[357] As discussed above, under rule 22c–1(a)(3), a fund (with the exception of a money market fund or ETF) is permitted, under certain circumstances, to use swing pricing to adjust its current NAV as an additional tool to lessen dilution of the value of outstanding redeemable securities through

procedures, in determining whether the fund's level of net purchase or net redemptions has exceed the applicable threshold, to make a determination based on receipt of sufficient information about a fund's daily shareholder flows to allow the fund to reasonably estimate whether it has crossed the swing threshold(s) with high confidence, and may include reasonable estimates where necessary.

[348] *See id.*

[349] *See id.*

[350] *See* EY Comment Letter; KPMG Comment Letter.

[351] However, in evaluating the application of swing pricing the auditor must still comply with applicable professional standards (*e.g.,* PCAOB Auditing Standard (''AS'') No. 8, *Audit Risk,* AU sec. 316, *Consideration of Fraud in a Financial Statement Audit,* and AU sec. 317, *Illegal Acts by Clients*). This includes considering and addressing instances of noncompliance of which the auditor becomes aware, which includes but is not limited to indications of potential fraudulent practices.

[352] *See* Item 6(d) of Form N–1A.

[353] *See id.*

[354] *See* Item 4(b)(2)(ii); Item 4(b)(2)(iv)(E); Item 6(d); and Instructions to Item 13 of Form N–1A; *see also* rule 6–02(n); and rule 6–04.19 of Regulation S–X. We are also amending rule 6–02(e) of Regulation S–X to define the term ''swing pricing'' to have the meaning given in rule 22c–1(a)(3)(v)(C).

[355] *See* Item C.21 of Form N–CEN.

[356] *See* Item 11(a)(1) of Form N–1A.

[357] *Id.*

shareholder purchase and redemption activity.[358]

We are adopting, with some modifications from what was proposed, amendments to Item 6 of Form N–1A to account for this swing pricing procedure. Specifically, Item 6, as amended, requires a fund that uses swing pricing to explain the fund's use of swing pricing; including its meaning, the circumstances under which the fund will use it, and the effects of swing pricing on the fund and investors. Item 6, as amended, will also require a fund that uses swing pricing to disclose the swing factor upper limit it has set with respect to the fund's use of swing pricing.[359] For a fund that invests in other funds (*e.g.,* a fund-of-funds, a master-feeder fund) and those other funds use swing pricing, the fund is required to include a statement that its NAV is calculated based on the NAVs of the funds in which the fund invests, and that the prospectuses for those funds explain the circumstances under which those funds will use swing pricing and the effects of using swing pricing.

Together with the changes described above regarding financial and performance reporting on Form N–1A,[360] we believe these disclosures will improve public understanding regarding a fund's use of swing pricing as well as the potential advantages and disadvantages of using swing pricing to manage dilution arising from shareholder purchase and redemption activity. In particular, the disclosure regarding a fund's swing factor upper limit will provide transparency regarding the maximum amount that a shareholder could expect the share price that he or she receives upon purchase or redemption to be adjusted on account of swing pricing.

Some commenters expressed general support for the proposed swing pricing prospectus disclosure requirements, explaining that swing pricing disclosures would provide investors with important general information about why and under what circumstances a fund would adjust its NAV and would complement existing Form N–1A disclosure requirements on how fund shares are priced.[361] One of these commenters, however, recommended that the Commission clarify what statements concerning swing pricing should be included in a fund's prospectus and require any additional information about swing pricing be disclosed in a fund's statement of additional information.[362] Other commenters, however, supported swing pricing disclosure requirements, as proposed, without any request for additional guidance from the Commission.[363] In response to these comments, we have modified the proposed Item 6 disclosure to require a fund that uses swing pricing to provide *an explanation of swing pricing* as well as its effects.[364] We agree with commenters that these requirements will provide investors with important general information about swing pricing.[365] Existing disclosure requirements in the prospectus and statement of additional information related to the pricing of fund shares, would apply to a fund's use of swing pricing.[366]

As we proposed, we have determined not to require funds to disclose their swing pricing threshold or swing factor in their prospectus disclosures on Form N–1A. Some commenters supported this determination and, for example, expressed concerns that public disclosures of a fund's swing pricing threshold or swing factor could result in unfair trading practices, thereby creating a new type of material non-public information (*i.e.,* the trading intent of other shareholders).[367] One commenter recommended that the Commission prohibit funds from selectively disclosing swing thresholds to certain investors to prevent potential gaming where, for example, larger shareholders may attempt to take advantage of pricing adjustments when a swing threshold is crossed.[368] We share commenters' concerns regarding unfair trading, gaming, and other negative fund and market impacts that could occur if swing pricing thresholds were shared with the public and recommend that a fund consider these concerns (and determine that disclosure of a fund's swing threshold is in the best interests of the fund) before disclosing this information in its prospectus or elsewhere. Indeed, funds and advisers to funds generally should take into consideration the potential for gaming into account and any other potential consequences before making any such disclosure.[369] As noted above, we are requiring a fund to disclose the swing factor upper limit to provide shareholders with additional transparency regarding a fund's use of swing pricing and the potential impact of that usage.

2. New Item in Form N–CEN

We proposed a new reporting item under Part C of Form N–CEN to allow the Commission and other users to track a fund's use of swing pricing.[370] We are adopting this reporting requirement substantially as proposed but with a modification to require funds to disclose the fund's swing factor upper limit.[371] Specifically, a fund, other than a money market fund or ETF, is required to disclose whether it engaged in swing pricing during the reporting period, and if so, the swing factor upper limit set by the fund.[372] This disclosure will inform our staff and potential users about

[358] *See supra* section II.B.

[359] *See* Item 6(d) of Form N–1A.

[360] *See supra* section II.A.3.g. (discussing amendments to Item 4(b)(2)(ii), Item 4(b)(2)(iv)(E), Item 6(d), Instructions to Item 13).

[361] *See, e.g.,* ICI Comment Letter I; *see also* CFA Comment Letter.

[362] *See* CFA Comment Letter.

[363] *See* Charles Schwab Comment Letter (recommending swing pricing policies be disclosed in the fund's prospectus and easily accessible to the public online); *see also* ICI Comment Letter I.

[364] *See* Item 6(d) of Form N–1A. We are also making a technical revision to Item 6(d) to clarify that, if applicable, funds investing in other funds are required to state that prospectuses of the underlying funds provide swing pricing information only where underlying funds are using swing pricing.

[365] *See, e.g.,* Instruction to Item 11(a)(1) of Form N–1A (disclosure requirements regarding a fund's use of fair value pricing).

[366] *See, e.g.,* Item 11(a)(1) of Form N–1A (requiring a description of the procedures for pricing fund shares, including an explanation that the price of fund shares is based on a fund's NAV and the method used to value fund shares); and Item 11(a)(2) of Form N–1A (requiring a statement as to when calculations of NAV are made and that the price at which a purchase or redemption is effected is based on the next calculation of NAV after the order is placed); *see also* Item 23 of Form N–1A (requiring in the statement of additional information a description of the method followed or to be followed by a fund in determining the total offering price at which its shares may be offered to the public and the method(s) used to value the fund's assets).

[367] *See* Federated Comment Letter.

[368] *See* CFA Comment Letter.

[369] *See, e.g.,* In re Alliance Capital Management, L.P., Investment Advisers Act Release No. 2205A (Jan. 15, 2004) (settled action) (finding a mutual fund adviser willfully violated section 204A of the Advisers Act by failing to establish, maintain, and enforce written policies and procedures reasonably designed to prevent the misuse of material, nonpublic information by releasing material, nonpublic information about the portfolio holdings of certain mutual funds to select market timers in those funds and thereby defrauding mutual fund investors).

[370] *See* Proposing Release, *supra* footnote 6, at section III.G.3.

[371] *See* Item C.21 of Form N–CEN. Under the proposal, questions regarding swing pricing were included as part of proposed Item C.44 of Form N–CEN. *See id.* We have modified the numbering convention for items within Form N–CEN from the proposal to be consistent with Form N–CEN as adopted in the Investment Company Reporting Modernization Adopting Release. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 11. Reporting requirements regarding lines of credit, interfund lending, and interfund borrowing (which were included in the same item as swing pricing in the proposal), are now part of Item C.20 of Form N–CEN. *See* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8, at section III.M.3.a.

[372] Item C.21 of Form N–CEN.

whether funds use swing pricing as a tool to mitigate dilution of the value of outstanding redeemable securities through shareholder purchase and redemption activity and the potential maximum amount the fund's price may be swung. While several commenters expressed general support for the Form N–CEN reporting requirements included in the proposal,[373] we received no comments on this aspect of the proposal.

C. Effective and Compliance Dates

1. Swing Pricing Rule

Rule 22c–1(a)(3) permits (but does not require) a fund (with the exception of a money market fund or ETF) to adopt swing pricing policies and procedures. The Commission is delaying the effective date of rule 22c–1(a)(3) until 24 months after the date this release is published in the **Federal Register**. In the Proposing Release, the Commission stated that a fund could rely on the rule as soon as the fund could comply with the rule and related records, financial reporting, and prospectus disclosure requirements.[374] As discussed in section II.A.3. above, we agree with the commenters who suggested that funds, service providers and intermediaries may need to work through operational issues,[375] and believe that delaying the effectiveness of swing pricing may allow for the creation of industry-wide operational solutions in a more efficient manner and that therefore providing an extended effective date may more effectively facilitate the adoption of swing pricing. In light of the extended effective date and discretionary nature of swing pricing, we believe that a compliance period is unnecessary.

2. Amendments to Form N–1A and Regulation S–X and New Item in Form N–CEN

In the Proposing Release, the Commission expected to require all initial registration statements on Form N–1A, and all post-effective amendments that are annual updates to effective registration statements on Form N–1A, filed six months or more after the effective date, to comply with the proposed amendments to Form N–1A.[376] Few commenters discussed the Form N–1A amendments. One commenter agreed that 6 months was sufficient to comply with the amendments;[377] another commenter requested 30 months to comply.[378] Because we do not expect that funds will require significant amounts of time to prepare the additional disclosures regarding swing pricing,[379] and we believe that a fund should disclose the use of swing pricing to investors before it is used, the compliance date for the amendments to Form N–1A discussed herein is the same as the effective date for rule 22c–1(a)(3). Likewise, we believe the additional disclosures regarding swing pricing within the financial statements related to the Regulation S–X amendments discussed above should be included in any financial statements in which swing pricing is implemented on or after the effective date. We note that only funds using swing pricing are required to provide the Form N–1A and financial statement disclosure amendments we are adopting today as part of this Release.

For Form N–CEN, we proposed a compliance date of 18 months after the effective date to comply with the new reporting requirements.[380] No commenters specifically addressed the compliance date for the reporting requirements applicable to swing pricing, but several commenters expressed concerns about operational limitations and requested 30 months for all entities to comply with the new reporting requirements on Form N–CEN.[381] As with the amendments to Form N–1A, the compliance date for the new reporting requirements related to swing pricing on Form N–CEN will be the same as the effective date for rule 22c–1(a)(3).

III. Economic Analysis

A. Introduction and Primary Goals of Regulation

1. Introduction

As discussed above, the Commission is adopting regulatory changes to permit funds to use swing pricing under rule 22c–1(a)(3) and to require new disclosures regarding swing pricing (collectively, the "swing pricing regulations"). In summary, and as discussed in greater detail in section II above, the swing pricing regulations include:

- Final rule 22c–1(a)(3) will permit (but not require) a fund (except a money market fund or ETF) to establish and implement swing pricing policies and procedures that would, under certain circumstances, require the fund to use swing pricing to adjust its current NAV to lessen potential dilution of the value of outstanding redeemable securities caused by shareholder purchase and redemption activity. A fund that engages in swing pricing will be subject to certain disclosure and reporting requirements. Relative to the proposed rule, the final rule provides funds greater flexibility in setting multiple swing thresholds and threshold-specific swing factors, but imposes certain additional conditions, primarily a cap for the swing factor and limitations on how the swing factor can be set.
- Amendments to Form N–1A and Regulation S–X and an item on new Form N–CEN will require enhanced fund disclosure and reporting regarding swing pricing.
- Amendments to rule 31a–2 will require a fund that chooses to use swing pricing to create and maintain a record of support for each computation of an adjustment to the NAV of the fund's shares based on the fund's swing policies and procedures.

The Commission is sensitive to the economic effects of the swing pricing regulations, including the benefits and costs as well as the effects on efficiency, competition, and capital formation. The economic effects are discussed below in the context of the primary goals of the swing pricing regulations.

2. Primary Goals

The primary goals of the swing pricing regulations are to promote investor protection by allowing a fund, if it chooses, to use swing pricing to mitigate potential dilution of non-transacting shareholders' interests that could occur when the fund incurs costs as a result of other investors' purchase or redemption activity.[382] To the extent that such costs are not borne by redeeming or subscribing shareholders when exiting or entering a fund, such shareholders have no incentive to consider transaction costs that occur when the fund needs to sell or buy

[373] *See, e.g.,* CFA Comment Letter; Federated Comment Letter; SIFMA Comment Letter II; Vanguard Comment Letter.

[374] Proposing Release, *supra* footnote 6, at section III.H.

[375] *See, e.g.,* BlackRock Comment Letter; CRMC Comment Letter; Fidelity Comment Letter; ICI Comment Letter I.

[376] *See* Proposing Release, *supra* footnote 6, at section III.H. The proposal included amendments to Form N–1A related to swing pricing, as well as amendments to Form N–1A related to a fund's redemption practices. *See id.*

[377] *See* ICI Comment Letter I.

[378] *See* Vanguard Comment Letter.

[379] *See* Proposing Release, *supra* footnote 6, at section III.H.

[380] *Id.* The proposal included new items on Form N–CEN related to a fund's lines of credit, interfund lending, and interfund borrowing. *See also* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8, at section III.L.3.

[381] *See* Cohen & Steers Comment Letter; Fidelity Comment Letter; ICI Comment Letter I; Vanguard Comment Letter.

[382] We use the term "non-transacting shareholder" to reference shareholders that either remain in the fund or are already in the fund as opposed to redeeming or subscribing shareholders.

assets because they can do so at the daily NAV. Swing pricing allows a fund to address this dilution effect by allocating certain of the fund's anticipated transaction costs to redeeming and subscribing shareholders. Furthermore, because redeeming shareholders do not bear the cost of exiting a fund, shareholders might have an incentive for early redemptions in times of liquidity stress because of a first-mover advantage, which could result in further dilution of non-transacting shareholders' interests.[383] To the extent that such a first-mover advantage triggers the sale of less liquid portfolio investments at discounted or even fire sale prices, correlated investments and funds and other investors holding these and correlated investments will be negatively impacted.[384] For reasons discussed in detail below, we believe that the ability for a fund to adopt swing pricing policies and procedures should mitigate the risk of potential shareholder dilution and decrease the incentive for early redemption in times of liquidity stress.

Swing pricing regulations also are meant to address the significant growth in the assets managed by funds with strategies that focus on holding relatively less liquid investments (such as fixed income funds, including emerging market debt funds, open-end funds with alternative strategies, and emerging market equity funds), which could incur significant trading costs and hence could give rise to increased dilution effects from redeeming and subscribing shareholders in those funds.[385] Furthermore, there has also been considerable growth in assets managed by funds that exhibit characteristics, for example high investor flow volatility, that also could give rise to increased dilution effects.[386] Collectively, these industry trends emphasize the importance of allowing funds to choose to use swing pricing.

B. Economic Baseline

The swing pricing regulations will affect, directly or indirectly, all funds and their investors, investment advisers and other service providers, all issuers of the portfolio securities in which funds invest, and other market participants potentially affected by fund and investor behavior. The economic baseline of the swing pricing regulations includes funds' current practices regarding swing pricing as well as the recent development of the fund industry.

1. Funds' Current Practices Regarding Swing Pricing

Commission rules and guidance do not currently address the ability of an open-end fund to use swing pricing to mitigate potential dilution of fund shareholders, and U.S. registered funds do not currently use swing pricing. However, as discussed above, certain foreign funds currently do use swing pricing.[387] We understand that some fund complexes that include U.S. registered funds also include foreign-domiciled funds that currently use swing pricing.

2. Fund Industry Developments Related to Swing Pricing

a. Overview

Below we discuss the size and growth of the U.S. fund industry generally, as well as the growth of various investment strategies within the industry. We show that the fund industry has grown significantly in the past two decades, and, during this period, funds with international strategies, fixed income funds, and funds with alternative strategies have grown particularly quickly. Generally, funds with these strategies are more likely to invest in assets that are less liquid, for example, when compared to domestic large capitalization equity, and therefore redeeming and subscribing investors are more likely to dilute non-transacting investors' interests. We also examine trends regarding the volatility of fund flows, discussing in particular those types of funds that demonstrate notably volatile flows. Because funds with larger flow volatility can experience higher levels of redemptions and subscriptions, which can dilute the interests of non-transacting shareholders, assessing trends regarding flow volatility can provide information about sectors of the fund industry that could be particularly susceptible to dilution effects.

b. Size and Growth of the U.S. Fund Industry and Various Investment Strategies Within the Industry

Open-end funds and ETFs manage a significant and growing amount of assets in U.S. financial markets. As of the end of 2015, there were 10,633 open-end funds (excluding money market funds, but including ETFs), as compared to 5,279 at the end of 1996.[388] The assets of these funds were $15.0 trillion in 2015, having grown from about $2.63 trillion in 1996.[389]

U.S. equity funds represent the greatest percentage of U.S. open-end fund industry assets.[390] As of the end of 2015, excluding ETFs, money market funds and variable annuities, open-end U.S. equity funds held 44.7% of U.S. fund industry assets. The investment strategies with the next-highest percentages of U.S. fund industry assets are foreign equity funds (16.7%), general bond funds (13.2%), and mixed strategy funds (12.3%).[391] Funds with alternative strategies [392] only represent a small percentage of the U.S. fund industry assets, but as discussed below, the number of alternative strategy funds and the assets of this sector have grown considerably in recent years.[393]

While the overall growth rate of funds' assets has been generally high (about 7.2% per year, between the years 2000 and 2015 [394]), it has varied significantly by investment strategy.[395] U.S. equity funds' assets grew substantially in terms of dollars from the end of 2000 to 2015,[396] but this sector's assets as a percentage of total U.S. fund industry assets decreased from about 65% to about 45% during

[383] *See supra* footnote 20 and accompanying text; *infra* sections III.B.1. and III.B.2.

[384] *See* Proposing Release, *supra* footnote 6, at n.54.

[385] *See supra* section II.C.1.*; infra* section III.B.2; *see also* Paul Hanouna, Jon Novak, Tim Riley & Christof Stahel, *Liquidity and Flows of U.S. Mutual Funds,* Division of Economic and Risk Analysis White Paper (Sept. 2015) (''DERA Study''), at 6–9, *available at https://www.sec.gov/dera/staff-papers/white-papers/liquidity-white-paper-09-2015.pdf* (''DERA Study''). Relevant statistics from the DERA Study were updated through 2015 using the CRSP US Mutual Fund Database.

[386] *See infra* section III.B.2.

[387] *See supra* footnotes 41–44 and accompanying text.

[388] *See* Investment Company Institute, 2016 Investment Company Fact Book (2016) *(''2016 ICI Fact Book''), available at https://www.ici.org/pdf/2016_factbook.pdf,* at 22, 176, 183. Specifically, as of the end of 2015, there were 9,039 open-end mutual funds (including funds that invest in other funds) and 1,594 ETFs. There were approximately 50 ETFs that invest in other ETFs, which are not included in our figures.

[389] *See id.,* at 174, 182.

[390] DERA Study, *supra* footnote 385, at Table 1.

[391] *Id.* The figure for general bond funds does not include assets attributable to foreign bond funds (1.9%), U.S. corporate bond funds (0.8%), U.S. government bond funds (1.4%), and U.S. municipal bond funds (4.7%).

[392] Alternative funds are funds that seek total returns through the use of alternative investment strategies, including but not limited to equity market neutral, long/short equity, global macro, event driven, credit focus strategies.

[393] *Id.,* at 7–8.

[394] *Id.,* at Table 2.

[395] The figures in this paragraph and the following paragraph, discussing the variance in growth rate of funds' assets by investment strategy, exclude ETF assets.

[396] U.S. equity funds held about $5.6 trillion as the end of 2015, compared to about $2.9 trillion at the end of 2000. DERA Study, *supra* footnote 385, at Table 2.

that same period.[397] Like U.S. equity funds, the assets of U.S. corporate bond funds, government bond funds, and municipal bond funds also increased in terms of dollars from 2000 to 2015, but each of these sectors' assets as a percentage of the fund industry decreased during this period.[398] On the other hand, the assets of foreign equity funds, general bond funds, and foreign bond funds increased steadily and substantially as a percentage of the fund industry over the same period.[399] For example, foreign equity funds increased steadily from 10.6% of total industry assets in 2000 to 16.7% in 2015. And within these three investment strategies, certain investment subclasses (emerging market debt and emerging market equity) have grown particularly quickly from 2000 to 2015.[400] The overall growth rate of funds' assets between the years 2000 and 2015 was greater for index funds (12.3%) than actively managed funds (4.9%).[401]

The assets of funds with alternative strategies [402] also have grown rapidly in recent years. From 2005 to 2015, the assets of alternative strategy funds grew from $366 million to $310 billion, and from the end of 2011 to the end of 2013, the assets of alternative strategy funds grew by an average rate of almost 80% each year. However, as discussed above, funds with alternative strategies remain a relatively small portion of the U.S. fund industry as a percentage of total assets.[403]

c. Significance of Fund Industry Developments

The industry developments discussed above are notable for several reasons. The growth of funds generally over the past few decades demonstrates that investors have increasingly come to rely on investments in funds to meet their financial needs.[404] These trends also demonstrate growth in particular types of funds that may entail increased concerns about dilution of non-transacting shareholder interests. In particular, there has been significant growth in high-yield bond funds, emerging market debt funds, and funds with alternative strategies, which generally invest in less liquid assets. Commissioners and Commission staff have previously spoken about the need to focus on potential liquidity risks relating to fixed income assets and fixed income funds,[405] and within this sector, funds that invest in high-yield bonds could be subject to greater liquidity risk as they invest in lower-rated bonds that tend to be less liquid than investment grade fixed income securities.[406] Similarly, emerging market debt funds may invest in relatively illiquid securities with lengthy settlement periods.[407] Likewise, funds with alternative strategies may hold portfolio investments that are relatively illiquid.[408] Moreover, Commission staff economists have found that both foreign bond funds (including emerging market debt funds) and alternative strategy funds have historically experienced relatively more volatile flows than the average mutual fund,[409] which would indicate the possibility of increased dilution effects from redeeming and subscribing shareholders in these funds.

One commenter has argued that flow volatility, which staff economists have used as a measure of liquidity risk, does not necessarily translate into liquidity risk.[410] While we agree that flow volatility is not the sole determinant of liquidity risk for a fund, flow volatility reflects flows out of and into funds and hence is associated with transactions in fund investment assets, which can dilute non-transacting shareholders' interest.

C. Benefits and Costs, and Effects on Efficiency, Competition, and Capital Formation

Taking into account the goals of the final swing pricing regulations and the economic baseline, as discussed above, this section discusses the benefits and costs of the swing pricing regulations, as well as the potential effects of the swing pricing regulations on efficiency, competition, and capital formation. This section also discusses the disclosure,

---

[397] *Id.,* at Table 2.

[398] *Id.* U.S. corporate bond funds held about $95 billion at the end of 2015, as opposed to $66 billion in 2000; these funds' assets as a percentage of the U.S. fund industry decreased from 1.5% in 2000 to 0.8% in 2015. U.S. government bond funds held about $174 billion at the end of 2015, as opposed to $91 billion in 2000; these funds' assets as a percentage of the U.S. fund industry decreased from 2.1% in 2000 to 1.4% in 2015. U.S. municipal bond funds held about $592 billion at the end of 2015, as opposed to $278 billion in 2000; these funds' assets as a percentage of the U.S. fund industry decreased from 6.3% in 2000 to 4.7% in 2015.

[399] *Id.* Foreign equity funds held about $2.1 trillion in 2015, as opposed to $465 billion in 2000. U.S. general bond funds held about $1.7 trillion at the end of 2015, as opposed to $240 billion in 2000; these funds' assets as a percentage of the U.S. fund industry increased from 5.4% in 2000 to 13.2% in 2015. Foreign bond funds held about $244 billion at the end of 2015, as opposed to $19 billion in 2000; these funds' assets as a percentage of the U.S. fund industry increased from 0.4% in 2000 to 1.9% in 2015.

[400] *Id.,* at 9. Emerging market debt and emerging market equity funds held about $289 billion at the end of 2015, as opposed to $20 billion in 2000. The assets of emerging market debt funds and emerging market equity funds grew by an average of 18.1% and 19.8%, respectively, each year from 2000 through 2015.

These investment subclasses represent a small portion of the U.S. mutual fund industry (the combined assets of these investment subclasses as a percentage of the U.S. fund industry was 2.3% at the end of 2015).

[401] *See* 2016 ICI Fact Book, *supra* footnote 388, at 174, 218.

[402] While there is no clear definition of ''alternative'' in the mutual fund space, an alternative mutual fund is generally understood to be a fund whose primary investment strategy falls into one or more of the three following buckets: (i) Non-traditional asset classes (for example, currencies or managed futures funds); (ii) non-traditional strategies (such as long/short equity, event driven); and/or (iii) less liquid assets (such as private debt). Their investment strategies often seek to produce positive risk-adjusted returns that are not closely correlated to traditional investments or benchmarks, in contrast to traditional mutual funds that historically have pursued long-only strategies in traditional asset classes.

[403] *See supra* footnote 393 and accompanying text.

[404] *See* Proposing Release, *supra* footnote 6, at section II.A.

[405] *Id.,* at n.62 and accompanying text.

[406] The Commission and Commission staff have cautioned that high yield securities may be considered to be illiquid, depending on the facts and circumstances. *See* Periodic Repurchases by Closed-End Management Investment Companies; Redemptions by Open-End Management Investment Companies and Registered Separate Accounts at Periodic Intervals or with Extended Payment, Investment Company Act Release No. 18869 (July 28, 1992) [57 FR 34701 (Aug. 6, 1992)]; *see also* SEC Investor Bulletin, What Are High-Yield Corporate Bonds?, SEC Pub. No. 150 (June 2013), *available at http://www.sec.gov/investor/alerts/ib_high-yield.pdf* (noting that high-yield bonds may be subject to more liquidity risk than, for example, investment-grade bonds). *But see* BlackRock, *Who Owns the Assets? A Closer Look at Bank Loans, High Yield Bonds and Emerging Market Debt,* Viewpoint (Sept. 2014) (''Who Owns the Assets?''), *available at https://www.blackrock.com/corporate/en-fi/literature/whitepaper/viewpoint-closer-look-selected-asset-classes-sept2014.pdf* (discussing the liquidity characteristics of high-yield bond funds in depth, and noting that these funds have weathered multiple market environments, and are generally managed with multiple sources of liquidity).

[407] *See, e.g.,* Comment Letter of the Global Foreign Exchange Division to the European Commission and the European Securities and Markets Authority re: Consistent Regulatory Treatment for Incidental Foreign Exchange (FX) Transactions Related to Foreign Securities Settlement—''FX Security Conversions'' (Mar. 25, 2014), *available at www.gfma.org/Initiatives/Foreign-Exchange-(FX)/GFMA-FX-Division-Submits-Comments-to-the-HKMA-on-the--Treatment-of-Securities-Conversion-Transactions-under-the-Margin-and-Other-Risk-Mitigation-Standards* (''Typically, the settlement cycle for most non-EUR denominated securities is trade date plus three days ('T+3'). Accordingly, the bank custodian or broker-dealer would enter into a FX transaction on a T+3 basis as well. In some securities markets, for example in South Africa, the settlement cycle can take up to seven days (T+7).''). *But see* Who Owns the Assets?, *supra* footnote 406 (noting that emerging market debt funds tend to hold a portion of their assets in developed market government bonds (providing further liquidity), generally establish limits on less liquid issuers, and generally maintain allocations to cash for liquidity and rebalancing purposes).

[408] *See* Proposing Release, *supra* footnote 6, at nn.71–72 and accompanying text.

[409] DERA Study, *supra* footnote 385, at 16–24.

[410] Comment Letter of Investment Company Institute (May 17, 2016).

reporting, and recordkeeping requirements regarding swing pricing and reasonable alternatives to rule 22c–1(a)(3).

1. Requirements of Rule 22c–1(a)(3)

Under rule 22c–1(a)(3), a fund (with the exception of a money market fund or ETF) would be permitted to establish and implement swing pricing policies and procedures that would, under certain circumstances, require the fund to use swing pricing to adjust its current NAV as an additional tool to lessen potential dilution of the value of outstanding redeemable securities caused by shareholder purchase or redemption activity. In order to use swing pricing under the rule, a fund would be required to establish and implement swing pricing policies and procedures.[411] These policies and procedures must: (i) Provide that the fund will adjust its NAV by amounts designated as the ''swing factor(s)'' once the level of net purchases or net redemptions from the fund has exceeded specified strictly positive percentage(s) of the fund's net asset value known as the ''swing threshold(s)''; [412] (ii) specify the process for how the fund's swing threshold(s) are determined, considering certain specified factors; [413] and (iii) specify the process for how the swing factor(s) are determined, which must include the establishment of an upper limit on the swing factor(s) used, taking into account certain considerations and not exceeding a maximum of two percent of the fund's NAV per share.[414]

A fund's board, including a majority of the fund's independent directors, will be required to approve the fund's swing pricing policies and procedures, which policies and procedures must specify the process for setting swing thresholds, swing factor(s), and swing factor upper limits.[415] In addition, the board must approve the fund's swing threshold(s) and swing factor upper limit (including any changes thereto).[416] The board also will be required to designate the fund's investment adviser or officers responsible for administration of the fund's swing pricing policies and procedures.[417] Additionally, the board will be required to review, no less frequently than annually, a written report prepared by the swing pricing administrator that describes: (i) Its review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution; (ii) any material changes to the fund's swing pricing policies and procedures since the date of the last report; and (iii) its review and assessment of the fund's swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements of the rule, including the information and data supporting these determinations.[418]

A fund that adopts swing pricing policies and procedures will be required to keep certain records, including its swing pricing policies and procedures and a written copy of the periodic report provided to the board,[419] as well as records of support for each computation of an adjustment to the fund's NAV based on the fund's swing pricing policies and procedures.[420] A fund that engages in swing pricing will be required to make certain disclosures, including disclosure of the fund's swing factor upper limit, on Form N–1A and Form N–CEN.[421] A fund that uses swing pricing will also be required to reflect its use of swing pricing in its financial statements and on Form N–1A.[422]

The final rule modifies the proposal's swing pricing provisions in several ways that may have economic consequences, including: (1) Funds may establish multiple swing thresholds, each with a separate corresponding swing factor, and these factors can differ for subscriptions and redemptions; (2) a fund's board is still required to approve the fund's swing pricing policies and procedures, but the final rule also requires that the policies and procedures specify the process for determining a swing threshold(s), factor(s), and swing factor upper limit; (3) funds must report the upper limit of the swing factor(s)—but not swing factor(s) or threshold(s)—on Form N–CEN and in their prospectus, along with disclosure of the effects of swing pricing; (4) the fund board must approve the fund's swing threshold(s) and an upper limit on the swing factor(s) that are used by a fund (which may not exceed two percent of NAV per share), and any changes to the swing threshold or swing factor upper limit; and (5) the board must periodically review a written report from the swing pricing administrator that describes: (a) The swing pricing administrator's review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution; (b) any material changes to the fund's swing pricing policies and procedures since the date of the last report; and (c) the swing pricing administrator's review and assessment of the fund's swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements of the rule, including the information and data supporting these determinations.

a. Benefits

We believe rule 22c–1(a)(3) will promote investor protection by providing funds with a tool to reduce the potentially dilutive effects of shareholder purchase or redemption activity. Rule 22c–1 under the Investment Company Act, the ''forward pricing'' rule, requires a fund to price its shares based on the current market prices of its portfolio assets next computed after receipt of an order to buy or redeem shares.[423] Swing pricing may allow funds to more fairly distribute transactions costs, resulting from either subscriptions or redemptions, to the investors who initiate those transactions. For example, net redemptions may require a fund to sell a portion of its assets. Any difference between the sale price of these assets (which may occur on or after the redemption date depending on when fund flows are received) and the price at which they are valued when the fund's NAV is struck on the redemption date (which may not yet reflect transactions executed on that date under rule 2a–4) is shared across all fund shareholders. Non-transacting shareholders may benefit or suffer depending on this difference, but on average are likely to experience dilution because of the trading costs incurred when assets are sold. Similarly, while net subscriptions do not require a fund to purchase assets immediately, non-transacting shareholders will share the costs of investing the subscription proceeds if and when that occurs, and these costs will not be reflected in the NAV on the subscription date.

While swing pricing does not eliminate non-transacting investors' exposure to this dilution risk—for example, it is possible the swung adjusted NAV on a given day under or overestimates the costs incurred by the fund, or that the fund would not be able to swing in an amount sufficient to recoup all transactions costs because of

[411] Proposed rule 22c–1(a)(3)(i).

[412] Rule 22c–1(a)(3)(i)(A).

[413] Rule 22c–1(a)(3)(i)(B).

[414] Rule 22c–1(a)(3)(i)(C).

[415] Rule 22c–1(a)(3)(ii)(A).

[416] Rule 22c–1(a)(3)(ii)(B).

[417] Rule 22c–1(a)(3)(ii)(C).

[418] Rule 22c–1(a)(3)(ii)(D).

[419] Rule 22c–1(a)(3)(iii).

[420] Amendment to rule 31a–2(a)(2).

[421] *See* Item 4(b)(2)(ii), Item 4(b)(2)(iv)(E), and Item 6(d) of Form N–1A; Item C.21 of Form N–CEN.

[422] *See* Item 13 of Form N–1A and amendments to Regulation S–X.

[423] *See* rule 22c–1(a).

the swing factor upper limit, or that costs related to redemptions or subscriptions other than the costs permitted to be considered in setting the swing factor are incurred—to the extent that funds are able to effectively calibrate their swing factors, non-transacting investors should, on average, pay a reduced share of the trading costs imposed on the fund by redeeming and subscribing investors on days when swing pricing is triggered. Swing pricing provides funds with an additional tool to pass estimated near-term costs stemming from shareholder purchase or redemption activity on to the shareholders associated with that activity, and could therefore lessen dilution of non-transacting shareholders and limit any possible redemptions motivated by a potential first-mover advantage.

Commission rules and guidance do not currently address the ability of a fund to use swing pricing to mitigate potential dilution of fund shareholders, and the Commission's current valuation guidance could raise questions about making such a NAV adjustment. The swing pricing rule provides the regulatory framework that a fund can optionally apply to adjust its NAV in order to effectively pass on estimated trading costs to purchasing or redeeming shareholders, and requires a fund that conducts swing pricing to do so in accordance with policies, procedures, and other restrictions designed to promote all shareholders' interests. Because we cannot prospectively measure the extent to which the swing pricing policies and procedures that a fund may adopt would mitigate potential dilution, we are unable to quantify the total potential benefits discussed in this section.[424] However, analysis by fund groups of their funds domiciled in regions that allow swing pricing indicates that return performance is significantly improved for funds that use swing pricing,[425] which is consistent with a reduction in dilution, though some commenters did point out that swing pricing can lead to an improvement in fund performance even if the swing pricing policy is unrelated to costs incurred by the fund.[426]

Relative to the proposal, the final rule's additional flexibility in defining swing pricing policies—the options to employ multiple swing thresholds with attendant swing factors—should allow a fund to more accurately reflect its estimated trading costs when the fund chooses to swing its NAV, and may encourage funds that otherwise would not have employed swing pricing to use it, potentially reducing investor dilution further.

Requiring the fund to set an upper limit (which may not exceed two percent of NAV per share) on the swing factor(s), as the final rule does, could reduce the benefits of swing pricing to non-transacting investors in that funds are less able to use swing pricing to reallocate all of the costs of transactions to redeeming or subscribing shareholders, because costs would exceed the upper limit. However, transacting investors could benefit from an upper limit (and the required disclosure of an upper limit), in that there would be a maximum cost that they could face were they to purchase or redeem shares on a day when the fund swings its NAV and hence reduce some of the uncertainty when making the decision to enter or exit a fund.

The final rule's limitation on the types of costs that can be considered in setting a swing factor has similar trade-offs: The benefits of swing pricing to non-transacting shareholders are constrained, given that certain costs that are incurred as a result of the redemption or subscription activity could not be allocated to transacting investors. However, transacting shareholders could benefit from the limitation, in that the fund would have less flexibility to allocate to transacting investors costs that are less directly related to the fund's actual transaction costs. Constraining a fund's flexibility in this manner could limit potential abusive uses of swing pricing (*e.g.,* swinging in an amount greater than the costs of redemptions or subscriptions in order to artificially enhance fund returns). The final rule's express requirement that the swing factor reasonably relate to the cost of meeting subscriptions or redemptions could similarly help protect transacting investors against potential abusive uses of swing pricing.

Finally, investors should benefit from the increased accountability that the final rule provides in requiring a fund's board to approve swing pricing policies and procedures, approve the fund's swing factor upper limit (which may not exceed two percent of NAV per share), approve the fund's swing threshold(s), and approve any changes to a fund's swing factor upper limit or swing threshold(s). The final rule also requires the fund board to periodically review a written report from the swing pricing administrator describing: (i) Its review of the adequacy of the swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution; (ii) any material changes to the fund's swing pricing policies and procedures since the date of the last report; and (iii) its review and assessment of the fund's swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements of the rule, including the information and data supporting these determinations. Given that our rule permits the use of swing pricing for the first time in the U.S., additional board attention to the fund's swing pricing practices could be beneficial. Similarly, board review of a report that reviews and assesses the fund's swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements of the rule, including the information and data supporting these determinations, could raise the quality and rigor of funds' formulating these important determinations, which also benefits investors.

Commenters generally agreed with the proposal's assessment of swing pricing's potential benefits, but they also brought up technological and operational hurdles that could impede its implementation by most funds, which we discuss below. Without a change in industry practice, the operational issues cited by commenters may prevent the benefits of swing pricing from being achieved by some funds, but it is still likely that a small fraction of funds will be able to implement it, and the rule does not require funds to use swing pricing (it is a discretionary tool). Additionally, sufficiently high investor demand for implementing swing pricing after the rule is adopted may spur market-wide operational innovations which reduce these operational hurdles.

One commenter stated that the nature by which swing pricing reallocates costs was a ''zero-sum game'' across different investors (subscribing, redeeming, and non-transacting) and that in aggregate swing pricing reduces shareholder value after incurring the costs of operating the policy.[427] While it is true that swing pricing does transfer costs across different investors, the goal of swing pricing is to allow for a more fair allocation of these costs. Swing pricing is optional, so funds can decide whether a more fair allocation of costs justifies

[424] There is no database currently available that identifies whether a foreign-domiciled fund uses swing pricing or the structure of a fund's swing pricing program (*e.g.,* full swing pricing versus partial swing pricing).

[425] *See* BlackRock Fund Structures Paper, *supra* footnote 46. The study does not show the extent to which the costs assessed to transacting investors via swing pricing accurately reflect realized trading costs.

[426] Eaton Vance Comment Letter.

[427] Eaton Vance Comment Letter.

the operational costs associated with implementing swing pricing. The same commenter also suggested that depending on the ratio of purchases to redemptions for a given net fund flow, swing pricing does not allow non-transacting shareholders to capture all of the proceeds recovered from transacting shareholders when the NAV is swung, and shows using its own historical fund flows that this reduction can be significant (ranging as high as 91% when a swing threshold of zero was used). We acknowledge that swing pricing may not allow all of the costs assessed to transacting shareholders to be returned to the fund, though any reallocation of costs from transacting to non-transacting shareholders reduces dilution. Because swing pricing is optional, funds can determine whether this type of benefit reduction is likely given their historical fund flow patterns and whether the net reduction in shareholder dilution is expected to justify the costs of implementing swing pricing.

b. Costs

Generally, implementing swing pricing may increase a fund's return volatility and could increase the tracking error relative to a fund's benchmark. However, the impact of swing pricing on volatility and tracking error should decrease as a function of the time over which returns and tracking errors are measured: For example, the impact of swing pricing on daily return volatility and tracking error will likely be much greater than the impact on monthly volatility and tracking error. Enabling funds to have multiple swing thresholds and factors, as well as limiting swing factors to be at most 2% of the funds NAV, also potentially lessens swing pricing's impact on volatility and tracking error.

In addition, swing pricing exposes transacting investors to additional uncertainty about the price at which their fund shares will ultimately be purchased or redeemed relative to the economic baseline. For example, under existing regulations, investors who submit purchase or redemption orders on a given date face uncertainty about the price they will transact at until the NAV is next struck. Under the adopted rule, investors face an additional source of uncertainty surrounding the eventual price they will transact at because this price will also depend on net fund flows on the trade date and any resultant NAV adjustment via swing pricing protocols. They may end up transacting at a better (*e.g.,* if they are subscribing on a day the NAV is adjusted downwards) or worse (*e.g.,* if they are redeeming on a day the NAV is adjusted downwards) price, but they are facing an additional source of uncertainty relative to current practices. This uncertainty is limited in that investors will know the fund's swing factor upper limit. Investors will not be able to purposefully take advantage of swing pricing to obtain a better price without knowledge of contemporaneous intraday flows and a fund's swing thresholds, neither of which funds are required to publicly disclose and will not be required to disclose under the rule.

If a fund's swing threshold(s) and factor(s) are accurately calibrated to reflect the costs incurred as a result of significant net subscriptions and redemptions, the increased execution price risk faced by investors who transact in a fund should be offset by a decrease in the dilution that non-transacting investors would otherwise face if the fund's NAV was never adjusted. The rule's limitation on a swing factor's maximum size may reduce the extent to which funds that face higher trading costs are able to reflect those costs in their swing factor(s), but it also reduces the execution risk faced by investors who transact in these funds. We acknowledge commenter concerns that estimating the trading costs associated with various redemption levels is not trivial, and swing pricing programs are unlikely to anticipate trading costs perfectly, so a given fund's swing factor may overstate or understate the expected transaction costs associated with a given transaction.[428] For example, the rule requires a fund to apply a swing factor when its net flows cross a certain threshold, but the actual costs to be incurred will vary with other factors such as the fund's portfolio on the date the NAV is swung, the trades they decide to execute to meet a given redemption, or any macroeconomic factors that affect bid-ask spreads. If a swing factor underestimates or is unable to capture the true trading costs for a fund, non-transacting shareholders of the fund will still benefit from swing pricing, but to a lesser extent. If a fund overestimates its swing factor, non-transacting shareholders will be enriched by its swing pricing program (and the fund's NAV will reflect it), but this increase in wealth will be at the expense of transacting shareholders, who are paying more than the true cost of their transactions. To the extent that a fund cannot perfectly estimate the swing factors appropriate for it, the fund may have an incentive to overestimate these factors because it will increase observed fund performance. Given the limited swing pricing disclosures a fund must make, it may also be difficult for investors to determine if the swing factor has charged them in excess of true trading costs, and may make it difficult for investors to disentangle true fund performance from swing pricing effects.

Several of the provisions of the final rule could mitigate any incentive a fund has to overestimate its swing factor: (i) Requiring board approval of a fund's swing pricing policies and procedures, which must specify the processes used to determine the swing threshold(s), swing factor(s), and swing factor upper limit; (ii) requiring board approval of the swing threshold(s) and swing factor upper limit, as well as any changes to these quantities; (iii) adding an express requirement that swing factors be reasonably related to the near-term costs resulting from subscriptions and redemptions and limiting the near-term costs that may be considered in determining the swing factor(s); (iv) requiring the establishment of an upper limit on the swing factor(s) used, which may not exceed two percent of NAV per share; (v) requiring that the investment adviser, officer, or officers responsible for administrating a fund's swing pricing policies and procedures must be reasonably segregated from portfolio management of the fund, and may not include portfolio managers; and (vi) requiring the board to periodically review a written report prepared by the swing pricing administrator that describes: (a) Its review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution; (b) any material changes to the fund's swing pricing policies and procedures since the date of the last report; and (c) its review and assessment of the fund's swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements of the rule, including the information and data supporting these determinations.

Each fund that chooses to adopt swing pricing policies and procedures pursuant to rule 22c–1(a)(3) will incur one-time costs to develop and implement the policies and procedures, as well as ongoing costs relating to administration of the policies and procedures, as will intermediaries and third party service providers. To the extent that fund advisers, intermediaries, and other service providers are able to pass their costs along to funds, we believe it is likely that these costs will also be passed on,

[428] Eaton Vance Comment Letter.

at least in part, to fund investors.[429] As discussed above, while U.S. registered funds do not currently use swing pricing to mitigate potential dilution, certain foreign funds affiliated with U.S. fund families currently do use swing pricing.[430] In the proposal, we stated that U.S. registered funds in fund complexes that also include foreign-domiciled funds that use swing pricing may incur relatively lower costs to implement swing pricing policies and procedures pursuant to the rule. However, several commenters pointed out that fundamental differences exist between fund operations in the U.S. and Europe, including the more timely arrival of flow information in Europe due to earlier trading cut-off times, a higher portion of direct-sold funds in Europe, and the more prevalent use of currency-based orders in Europe (which removes the need for flow estimation cycles).[431] We acknowledge that these differences mean that it is less likely funds will be able to leverage preexisting systems from other jurisdictions, though they may still be able to leverage their general expertise with swing pricing in other countries in developing appropriate policies and procedures. They are still likely to face the same operational hurdles as other funds in obtaining timely fund flow information in the U.S.

Commenters also expressed concern that the analysis of costs did not consider the substantial costs and technology and operational hurdles that must be resolved for intermediaries to provide the net flow information necessary to perform swing pricing.[432] We agree that there may be significant costs for many fund complexes and intermediaries to implement swing pricing and have revised our estimates of the implementation costs discussed below to incorporate commenter suggestions. At the same time, commenters also suggested ways that funds, intermediaries, and other third parties could coordinate to make the implementation of swing pricing feasible, and stated that they believed the long-term benefits of swing pricing outweighed the one-time costs of enabling swing pricing in the U.S.[433]

The final rule's swing pricing provisions are being adopted with a two-year extended effective date, which, as discussed above, several commenters requested. With respect to costs, the extended effective date may result in more efficient industry-wide approaches to providing funds with timely flow estimates in determining whether and by how much their NAVs will be adjusted on a given date. For example, if funds and intermediaries are able to coordinate with each other to develop standards and timing conventions for how data is transmitted to enable the timely estimation of flows instead of developing ad-hoc individual processes, the aggregate costs of implementing swing pricing are likely to be lower on a per fund basis. However, to the extent individual funds or intermediaries do not participate on a coordinated approach, progress on a more efficient collective solution to swing pricing's operational challenges may be hindered and the extended effective date may simply postpone the adoption of swing pricing relative to an immediate effective date. On the other hand, if swing pricing were made effective immediately and a significant portion of funds wanted to adopt it, market pressures could spur industry-wide solutions and innovations that reduce implementation costs and make swing pricing operationally feasible for a broader group of funds.

The costs of implementing swing pricing policies and procedures could vary depending on the level of liquidity risk facing the fund, as well as the sources of the fund's liquidity risk. To determine a fund's swing threshold, rule 22c–1(a)(3) would require a fund to consider certain of the factors required to be considered as part of the liquidity risk assessment required under rule 22e–4.[434] Therefore, the costs associated with developing policies and procedures for determining the swing threshold could also vary according to similar factors that could cause differences in the costs to funds associated with rule 22e–4.[435]

As noted above, commenters suggested the proposal underestimated the activities required for a fund, in conjunction with its intermediaries, to implement swing pricing. We acknowledge that the adoption of swing pricing could cause significant costs to be incurred by intermediaries (which are discussed below) and by funds in terms of the systems and processes they need to develop to receive timely flow data from intermediaries. A fund that adopts swing pricing will incur costs associated with the following activities: (i) Developing swing pricing policies and procedures that include all of the elements required under the rule,[436] as well as policies and procedures relating to the recordkeeping requirements associated with swing pricing;[437] (ii) planning, coding, testing, and installing any system modifications for receiving, estimating, aggregating and transmitting sufficient shareholder flow information for the fund's transfer agent and pricing agent, in order to determine if the fund's NAV should be adjusted pursuant to the fund's swing pricing policies and procedures; (iii) integrating and implementing the fund's swing pricing policies and procedures, as well as policies and procedures relating to the financial reporting and recordkeeping requirements associated with swing pricing; (iv) developing any relevant compliance, control and testing procedures; (v) establishing procedures for the periodic review and back-testing of swing threshold(s), swing factor(s), swing factor upper limit, and flow estimates; (vi) preparing training materials and administering training sessions for staff in affected areas; (vii) board approval of the fund's swing pricing policies and procedures, which specify the processes used to determine the swing threshold(s), swing factor(s), and swing factor upper limit; (viii) board approval of the fund's swing threshold(s) and swing factor upper limit, and any changes to the swing threshold(s) and swing factor upper limit; and (ix) board periodic review of the written report prepared by the swing pricing administrator.

The proposal estimated the one-time costs of implementing a swing pricing program as being in the range of $1.3 million to $2.25 million per fund complex by assuming costs were similar to those associated with the fees and

[429] Commenters suggested this as well, *see* BlackRock Comment Letter; GARP Comment Letter; Charles Schwab Comment Letter.

[430] *See supra* section II.A.1.

[431] *See, e.g.,* ICI Comment Letter I; T. Rowe Comment Letter; IDC Comment Letter; PIMCO Comment Letter; GARP Comment Letter; Blackrock Comment Letter; Invesco Comment Letter.

[432] Dechert Comment Letter; Eaton Vance Comment Letter; ICI Comment Letter I; IDC Comment Letter; Invesco Comment Letter; J.P. Morgan Comment Letter; Charles Schwab Comment Letter; T. Rowe Comment Letter.

[433] *See, e.g.,* GARP Comment Letter.

[434] *See* rule 22c–1(a)(3)(i)(B). Specifically, the requirement for a fund to consider: (i) The size, frequency, and volatility of historical net purchases and net redemptions of fund shares during normal and stressed periods, (ii) the fund's investment strategy and the liquidity of the fund's portfolio investments, and (iii) the fund's holdings of cash and cash equivalents, and borrowing arrangements and other funding sources overlap with certain of the proposed liquidity risk assessment factors. *See* rule 22e–4(b)(iii)(A), (B), and (D). *See also* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8, at section III.B.

[435] *See* Liquidity Risk Management Programs Adopting Release, *supra* footnote 8, at section IV.C.1.c.

[436] Rule 22c–1(a)(3)(i).

[437] Rule 22c–1(a)(3)(iii); rule 31a–2(a)(2).

gates provision of the Commission's 2014 money market reform rule. The only alternative estimate of swing pricing implementation costs came from a commenter who stated that its experience complying with the money market reform rule suggested those estimates were severely understated, and that it believed that implementing a swing pricing program would be four to five times more costly than the proposal's estimate.[438] We extrapolate from this commenter's estimate to obtain estimates for all fund complexes, producing estimated one-time costs ranging from $2.4 million to $48.5 million per fund complex to implement swing pricing, with an average cost per fund complex of $3.4 million.[439] These costs estimates should be considered an upper bound for two reasons: (1) They assume a fund complex implements swing pricing for all of its funds; (2) they assume a fund develops all systems and processes associated with swing pricing in-house, but if third-party solutions become available funds may be able to reduce some of their swing pricing implementation costs.

In the proposal, we estimated that the ongoing costs of adopting a swing policy would range from 5% to 15% of the one-time costs. We recognize that, relative to our discussion of costs in the proposal, funds will have to maintain substantial systems and procedures to estimate fund flows, and believe it's reasonable to increase this range from 5% to 32.5%.[440] Again using the fund-by-fund cost approach above based on a commenter's estimate of the one-time costs, we estimate that ongoing costs to fund complexes would range from $120,000 to $15.8 million, with the average fund having costs in the range of $170,000 to $1.1 million. The low end of the range might be achieved by small complexes that are direct-sold, whereas the high end of the range could correspond to very large fund complexes that primarily distribute their funds through a wide variety of intermediaries and use swing pricing for many of their funds. These estimated costs are attributable to the following activities, as applicable to each of the funds within the complex that adopts swing pricing policies and procedures: (i) Costs associated with monitoring whether the fund's net purchases or net redemptions cross the swing threshold (which could include costs associated with obtaining shareholder flows from its transfer agent, including sufficient information on flows from the funds intermediaries, in order to reasonably estimate its daily net flows) (implicated by rule 22c–1(a)(3)(i)(A)); (ii) adjusting the fund's NAV when the fund's net purchases or net redemptions cross the swing thresholds, including costs associated with determining the swing factors that would be used to adjust the fund's NAV when the fund's swing thresholds are exceeded (rule 22c–1(a)(3)(i)(A), rule 22c–1(a)(3)(i)(C)); (iii) periodic review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution, as well as periodic review of fund's swing threshold(s), swing factor(s) and swing factor upper limit, and related board reporting requirements (rule 22c–1(a)(3)(ii)(D)); (iv) systems maintenance; (v) compliance costs and the back-testing of flow estimation procedures; (vi) additional staff training; and (vii) recordkeeping (rule 22c–1(a)(3)(iii), amendments to rule 31a–2(a)(2)).[441] Funds would also incur costs if they began distributing their fund through new intermediaries, as they would need to integrate that intermediary into the systems used to determine if fund flows have exceeded a swing threshold. We note that for purposes of our PRA analysis, we estimate that, relative to the proposal, half as many fund complexes (84 fund complexes) will implement swing pricing.[442] Based on this estimate and our estimate of the average per fund complex cost above, we estimate that the aggregate cost to implement swing pricing will be $286 million.[443]

While the proposal incorporated the costs to intermediaries and other third-party service providers into its estimates at the fund complex level, we recognize, based on the operational issues raised by commenters, that these parties will incur significant separate costs to make swing pricing feasible. Specifically, new processes and procedures will need to be established across a wide variety of intermediaries and service providers to gather and transmit sufficient flow information prior to the striking of the fund's NAV. Costs will be incurred by fund transfer agents, pricing agents, intermediaries and service providers to facilitate the movement of flow data to funds earlier in the evening. This will include new estimated flow data that will need to be generated by retirement plans and third-party administrators as intermediaries that will likely be sent via new files and processing cycles through the NSCC. Further changes to transaction processing and nightly processing may occur if the delivery of fund NAVs is pushed to later in the evening to accommodate swing pricing. Compressing processing times could increase risk and costs if there is less time for intermediaries to confirm transactions with funds and update shareholder records on a timely basis.

Commenters did not provide estimates for the costs that swing pricing will cause intermediaries to incur, which are likely to vary widely depending on the specific role each intermediary plays in the process of providing funds with the flow information swing pricing policies are dependent upon. For example, a small retirement plan that only needs to transmit data in a more timely fashion as a result of swing pricing might incur one-time costs in the tens of thousands of dollars to upgrade its systems, while a central fund transaction processing utility such as the NSCC might incur costs similar in magnitude to the largest fund complexes (in the tens of millions of dollars) to build systems that reliably process flow data for a broad range of their participants. Intermediaries such as broker-dealers and retirement plan administrators that use the services of the utility may incur costs in the middle of this range (in the hundreds of thousands to the millions of dollars) to enable the processing of flow data from any smaller intermediaries or clients they service in addition to any share of

[438] Charles Schwab Comment Letter.

[439] The commenter, Charles Schwab Investment Management, has 52 funds. A multiple of 4–5 times the proposals estimate produces a range of $5.2 million to $11.25 million, and we assume the commenter's costs are in the middle of that range at $8 million. Assuming a fixed cost of 30%, and that costs beyond that scale with the number of funds, we arrive at an estimated one-time costs for each fund complex, and calculate the minimum, maximum, and average across those fund complexes.

[440] *See* Invesco Comment Letter. The commenter estimated that the asset classification requirement of proposed rule 22e–4 would involve one-time costs of $2 million and ongoing costs of $650,000. This ongoing cost estimate represents 32.5% of the one-time cost estimate associated with that proposed requirement. *See also* Investment Company Liquidity Risk Management Programs, *supra* footnote 8, at n. 1097 and surrounding discussion. We assume swing pricing programs will, at the high end, involve on-going costs that are the same proportion of one-time costs (32.5%).

[441] We anticipate that, depending on the personnel (and/or third-party service providers) involved in the activities associated with administering a fund's swing pricing policies and procedures, certain of the estimated ongoing costs associated with these activities could be borne by the fund, and others could be borne by the adviser.

[442] *See infra* footnote 489 and surrounding discussion regarding the revision to the number of funds expected to implement swing pricing in the PRA analysis.

[443] *See supra* footnote 439 and surrounding discussion regarding cost estimates on a per fund complex basis. The aggregate cost is estimated as 84 fund complexes × $3.4 million = $286 million.

NSCC costs they pay.[444] Similarly, we would expect ongoing costs for a given entity to be a percentage of the entity's one-time costs, in the range of 10% to 25%.[445] To the extent intermediaries are able to pass on these costs to funds, it is likely that investors will ultimately pay some share of the expenses intermediaries incur in the form of higher operating expenses or management fees. Given these additional costs, each fund will need to determine whether the higher operational costs of swing pricing—including both external costs passed on from intermediaries and internal costs associated with their own systems, policies, and procedures—are justified by swing pricing's anti-dilutive benefits.

Commenters also emphasized that those costs went beyond needing to create systems, policies, and procedures. They suggested that total costs include potential damage to investors, investment advisers, and service providers that would occur if operational requirements are not able to be effectively implemented because of current practices in the U.S. fund market.[446] We recognize that if funds use inaccurate estimates of daily flows because actual values are not available before funds must strike their NAV, then a fund may swing its price unnecessarily or fail to swing its price when necessary. Under the final rule, a fund is required to ''reasonably estimate whether it has crossed the swing threshold with high confidence,'' which should reduce the probability that a fund swings its NAV based on inaccurate flow information and, in cases where this does happen, does not require the fund to consider it a NAV error as long as the flow estimates used were of ''high confidence.''

Relative to the proposal, the final rule also changes the role of a fund's board in its oversight of any swing pricing program. Under the final rule, the board is required to approve the swing pricing policies and procedures, which must specify the process for determining swing threshold(s), swing factor(s) and their upper limits, but is not required to approve all material changes to the fund's swing pricing policies and procedures. The fund board is also required to approve a fund's swing factor upper limit and its swing threshold(s). In order to facilitate these obligations, the final rule also requires the board to periodically review a written report prepared by the swing pricing administrator that includes certain required information. The revised cost estimates above use a commenter's cost estimates of adopting swing pricing under the proposal, which we assume included the board's obligations to approve swing threshold(s), any swing factor upper limit, swing pricing policies and procedures, and any material changes to those policies and procedures. The final rule's inclusion of a requirement that the fund's board periodically review a written report from the swing pricing administrator will impose certain additional costs: (i) The costs incurred by the administrator in performing the analysis underlying the written report, including a review of the reasonableness of the swing threshold(s), swing factor(s), and upper limit; (ii) the cost of preparing the report itself; and (iii) the cost of the board's time to review the written report. While these activities are more explicitly required by the final rule, some of their associated costs, such as those associated with any analysis and document preparation as part of the proposal's periodic review requirements, as well as any time associated with board review of material changes, would have been incurred under the proposal. In addition, the final rule does not require board approval of all material changes to a fund's swing pricing policies and procedures, reducing costs relative to the proposal. On balance, we therefore believe that the revised costs estimates of the proposal above, which incorporate commenter feedback, are still reasonable estimates of the final rule's costs.

c. Effects on Efficiency, Competition, and Capital Formation

Rule 22c–1(a)(3) permits a fund, under certain circumstances, to adjust its NAV to effectively pass on the estimated costs stemming from shareholder purchase or redemption activity to the shareholders associated with that activity. Adjusting a fund's NAV in this way could reduce dilution to non-transacting shareholders arising from trading costs. We therefore believe that the rule could increase the efficiency of cost allocation among shareholders of funds that adopt swing pricing policies and procedures, provided that a fund's swing thresholds and swing factors are appropriately calculated.

If investors believe swing pricing to be valuable, funds that decide to implement swing pricing will be at a competitive advantage. Fund complexes currently using swing pricing in other jurisdictions may be at a slight advantage due to their familiarity with swing pricing procedures, but, as noted above, they will still face the same operational hurdles as other funds in obtaining timely fund flow information in the U.S. Similarly, funds that are predominantly sold directly or primarily through an affiliated broker-dealer may not be as impacted by these operational difficulties, and may be able to implement swing pricing more quickly. In addition, some funds may decide to forgo using swing pricing due to concerns that some intermediaries will not offer their funds due to the increased operational burden swing pricing places on those intermediaries.

The extended effective date reduces these competitive effects and provides funds not currently using swing pricing in other jurisdictions and funds that are not sold directly sufficient time to develop and implement their own swing pricing programs in conjunction with any broad industry efforts to provide fund flow data on a timely basis. Alternatively, if the rule's swing pricing provisions became effective immediately, while some funds would have an initial competitive advantage, if a significant portion of funds wanted to adopt swing pricing, market pressures could spur innovations that made swing pricing feasible for a broader groups of funds. We are unable to assess the relative likelihoods of these two potential outcomes.

Commenters also suggested that smaller fund complexes are less likely to have the resources necessary to implement swing pricing, may have less leverage in obtaining flow information from their distribution partners, and that if investors prefer funds that use swing pricing, smaller fund complexes would be at a competitive disadvantage.[447] We acknowledge that small funds (as well as other types of funds such as those that are not primarily sold directly or through an affiliated broker-dealer) may be at an

[444] The low end of this estimate, which is more likely to apply to broker-dealers than retirement plan administrators, is of the same order of magnitude as the costs to intermediaries associated with processing and reporting transactions in other SEC rulemakings. *See, e.g.* Regulation SBSR—Reporting and Dissemination of Security-Based Swap Information, Exchange Act Release No. 74245 (Feb. 11, 2015) [80 FR 14739 (Mar. 19, 2015)] (estimating the one-time costs for trade execution platforms and registered clearing agencies to develop transaction processing systems and report transaction-level information to swap data repositories).

[445] There could also be additional costs incurred by more ancillary parties. For example, data providers that disseminate or third parties that analyze fund NAV may have to update their operations.

[446] Dechert Comment Letter; Federated Comment Letter; ICI Comment Letter I; IDC Comment Letter; J.P. Morgan Comment Letter.

[447] Dechert Comment Letter; ICI Comment Letter I; IDC Comment Letter; Charles Schwab Comment Letter; T. Rowe Comment Letter.

initial disadvantage, and note that the delayed extended effective date should provide some fund complexes sufficient time and resources to overcome their initial competitive disadvantage before any fund can actually use swing pricing. For example, the extended effective date could provide third parties with time to develop tools to help smaller fund complexes perform swing pricing. However, it is possible that some fund complexes will not be able to effectively implement swing pricing, and to the extent investors prefer funds that use swing pricing, those fund complexes will be at a competitive disadvantage.

We anticipate that rule 22c–1(a)(3) could indirectly foster capital formation by bolstering investor confidence. Investors may be more inclined to invest in funds if they understand that funds will be able to use swing pricing to prevent the purchase or redemption activity of certain investors from diluting the interests of other investors (particularly long-term investors, who represent the majority of fund shareholders). To the extent that swing pricing increases investment returns to investors, particularly long-term investors, this could incentivize investment in funds that use swing pricing. If rule 22c–1(a)(3) enhances investor confidence in funds, investors are more likely to invest in funds, so to the extent that investors are not already invested in the capital markets (*e.g.,* via direct ownership of stocks or bonds), the rule could make additional assets available for investment in the capital markets.

To the extent that investors care about short-term volatility, they may be discouraged from investing in funds that use swing pricing because it will generally increase daily volatility and benchmark tracking error on those days when the NAV is swung. However, if a fund's swing thresholds and factors are properly calibrated, long-term tracking error relative to the fund's benchmark should improve. Additionally, as discussed above, investors might be slightly less inclined to transact in funds that use swing pricing because of the additional uncertainty it introduces surrounding the NAV at which their shares will ultimately be purchased or redeemed, as this NAV now depends on that day's net fund flows in addition to variations in the prices of the fund's portfolio positions. Investors also may be less inclined to invest in funds that use swing pricing if they are not confident that the fund's swing factors and thresholds appropriately reflect costs associated with transacting in the fund; specifically, a fund that uses a swing pricing program which overstates trading costs will effectively impose the equivalent of hidden purchase and redemption fees on transacting investors, which will increase the fund's NAV and benefit non-transacting shareholders at their expense. Investors will not be able to directly evaluate whether a fund's swing pricing policy is reasonably linked to its costs, and will only be able to determine how much of a fund's performance is attributable to swing pricing if funds voluntarily choose to publicly disclose both their swung and unswung NAVs on a daily basis. However, the additional restrictions in the final rule that are designed to reduce the ability of funds to overestimate swing factors to increase observed fund performance, should reduce such concerns and have a positive effect on capital formation. Because we do not have the information necessary to determine how investors will perceive swing pricing, or how they will evaluate the relative benefits or detriments of investing in funds that use swing pricing, we are unable to draw conclusions about the precise effects of rule 22c–1(a)(3) on capital formation. Moreover, the requirement for funds that use swing pricing to disclose the swing factor upper limit will provide transparency to investors regarding the maximum amount that a shareholder could expect the share price that he or she receives upon purchase or redemption to be adjusted on account of swing pricing.

The final rule enables funds to use multiple swing thresholds, and allows for different swing factors corresponding to each threshold, subject to a swing factor upper limit that may not exceed two percent of NAV per share, which increases a fund's ability to tailor swing pricing to the specific trading costs it anticipates incurring when facing significant net fund flows. To the extent that funds accurately reflect these costs in their swing pricing programs, and that the expense of operating a swing pricing program does not significantly increase fund expenses, this should improve the efficiency of trading cost allocation between transacting and non-transacting investors. The final rule's increased flexibility could, at the margin, lead to an increase in the use of swing pricing by funds that would not have otherwise employed it under the proposed rule's provisions; to the extent that investors perceive swing pricing as being a desirable feature of certain funds, and the extent to which they have assets that are not already invested in the capital markets, this could enhance capital formation relative to the proposed rule.

2. Disclosure and Reporting Requirements Regarding Swing Pricing

a. Disclosure and Reporting Requirements

We are adopting amendments to Form N–1A and Regulation S–X as well as adopting a new item to Form N–CEN to enhance fund disclosure and reporting regarding swing pricing. Specifically, amendments to Form N–1A will require a fund to explain the fund's use of swing pricing, including an explanation of what swing pricing is, the circumstances under which it will use swing pricing, and the effects of using swing pricing.[448] A fund that uses swing pricing will also be required to disclose the swing factor upper limit,[449] and include a general description of the effects of swing pricing on a fund's annual and average total returns for the applicable periods.[450] The GAAP NAV reported on the balance sheet of a fund's financial statements will include the effects of swing pricing throughout the reporting period, but it will not explicitly reveal instances where the fund NAV was adjusted or the magnitudes of those adjustments.[451] A new item on Form N–CEN will require a fund to report whether the fund engages in swing pricing and, if so, the fund's swing factor upper limit.[452]

The final form amendments differ from the proposal in several ways that may have potential economic consequences. Specifically, funds that use swing pricing will be required to disclose the swing factor upper limit on

[448] Item 6(d) of Form N–1A.

[449] *Id.*

[450] Item 4(b)(2)(ii) and Item 4(b)(2)(iv)(E) of Form N–1A.

[451] Form N–1A as amended requires a fund to disclose both its GAAP NAV as well as its Swung NAV (if it swings at period end) in the financial highlights section of the fund's financial statements and the financial highlights information in the fund's registration statement. *See* Item 13(a) of Form N–1A. The financial highlights section, which details per share operating performance (by share class), rolls forward the GAAP NAV per share from beginning to end of period. The roll forward will require disclosure of the per share cumulative impact of amounts related to swing pricing (during the period) as a separate line item below the total distributions line in the roll forward. Funds also are required to disclose whether the fund's net asset value per share has swung during the period in the notes to the financial statements. Investors will not be able to fully disentangle the effects of swing pricing on fund performance from these figures, but Commission staff will have access to complete records of daily NAV adjustments and could look at the effects of swing pricing as part of the examination process. As noted above, the Commission is not prohibiting funds from disclosing an unadjusted NAV outside of the financial statements in other performance information, which may be useful information in understanding the impact of swing pricing on a fund.

[452] Item C.21 of Form N–CEN.

Form N–1A and Form N–CEN, and will be required to include a general description of the effects of swing pricing on a fund's annual and average total returns for the applicable periods on Form N–1A. Any significant economic effects of these changes are discussed below.

b. Benefits

The disclosure and reporting requirements will increase shareholders' understanding of particular funds' swing pricing policies, which should assist investors in making investment choices that better match their risk tolerances. For example, disclosure of the swing factor upper limit will inform investors as to the maximum amount of costs they could be charged if they were to redeem or subscribe on a day where the fund is swinging its NAV in response to redemptions or subscriptions, respectively. Similarly, disclosures about the effects of swing pricing on a fund's annual and average total returns should help investors understand the extent to which fund performance may have been impacted by the fund's use of swing pricing. However, as discussed above, while we are not requiring disclosure in the financial statements of the fund's total return based on the Swung NAV, we are not prohibiting funds from disclosing this information along with the total return based on the unswung NAV outside of the financial statements.[453] Finally, the presumption against disclosure of the swing factor or threshold should help protect against harm to investors that could potentially result from gaming of the fund's swing pricing, although as discussed above, the likelihood of gaming is mitigated by the lack of public availability of real-time flow data.

Because we cannot predict the extent to which the requirements will enhance investors' awareness of funds' swing pricing and its impact on investors, we are unable to quantify the potential benefits discussed in this section.

c. Costs

Funds will incur costs to comply with the disclosure and reporting requirements regarding swing pricing. Commenters' responses to the estimates of these costs are discussed in the PRA discussion below, and we have updated all estimates in this section to reflect changes in the PRA.[454]

We estimate that the one-time costs to comply with the amendments to Form N–1A for funds that choose to employ swing pricing will be approximately $648 per fund (plus printing costs).[455] Based on this estimate we further estimate that the total one-time costs for funds that chose to employ swing pricing will be approximately $307,152 for all funds.[456] We estimate that each of these funds will incur an ongoing cost associated with compliance with the amendments to Form N–1A of approximately $324 each year to review and update the disclosure regarding swing pricing.[457] Based on these estimates we further estimate that the total ongoing annual costs for funds that chose to employ swing pricing will be approximately $153,576 for all funds.[458] In addition, we expect that there will be minor costs associated with the related amendments to Regulation S–X, which are discussed above.

We estimate compliance with the new item of Form N–CEN related to swing pricing will involve an annual hourly burden which is discussed in the PRA discussion below.[459] We estimate that 10,633 funds will be required to file responses on Form N–CEN.[460] We estimate that 9,039 funds will be required to file responses to Item C.21 of Form N–CEN regarding swing pricing.[461] We estimate an average annual hourly burden associated with providing additional responses to Form N–CEN as a result of the additional reporting requirement will be approximately .5 hours per fund, for a total average annual burden of 4,519.5 hours.[462] We do not estimate any change to the external costs associated with the proposed Form N–CEN

d. Effects on Efficiency, Competition, and Capital Formation

We believe the disclosure and reporting requirements on Form N–1A and Form N–CEN could increase informational efficiency by providing additional information about a fund's use of swing pricing. To the extent that investors better understand a fund's swing pricing, including the upper limit of the swing factor, they can trade off the benefit from dilution protection with the increase in return volatility, as discussed above, when deciding on investing in a fund that choses to use swing pricing. To the extent that investors invest in funds that adopt swing pricing because of these disclosure and reporting requirements, the new disclosure and reporting requirements will also increase capital formation. However, we do not believe that this effect will be significant because such investors are more likely already investing in other funds and hence any reallocation will be a ''zero-sum game.''

Increased investor awareness of funds' swing pricing policies, including swing factor upper limits, improve the investors' ability to compare funds that elect to use swing pricing with each other as well as with funds that do not elect to implement swing pricing. Such a comparison could improve competition among funds, which could benefit investors. While this competition could unintentionally increase incentives for funds to overestimate the swing factors to improve and compete on performance, the additional safeguards required by the final rule should prevent such a negative impact.

D. Reasonable Alternatives

The following discussion addresses significant alternatives to the final swing pricing regulations. More detailed alternatives to the individual elements of the swing pricing regulations are discussed in detail above.[463]

Instead of permitting, but not requiring, funds to adopt swing pricing policies and procedures under rule 22c–1(a)(3), the Commission could have

[453] See *infra* section II.A.iii.g.

[454] *See infra* section IV.

[455] This estimate is based on the following calculation: 2 hours (2 hour to update registration statement to include swing pricing-related disclosure statements) × $324 (blended rate for a compliance attorney ($340) and a senior programmer ($308)) = $648. This figure incorporates the costs we estimated for each fund to update its registration statement to include the required disclosure about the fund's use of swing pricing, including an explanation of what swing pricing is, an explanation of the circumstances under which it will use swing pricing, the effects of using swing pricing; the fund's swing factor upper limit; and disclosures about the effects of swing pricing on a fund's annual and average total returns. The costs associated with these activities are all paperwork-related costs and are discussed in more detail *infra* at section IV.E.

[456] This estimate is based on the following calculation: 948 hours × $324 (blended rate for a compliance attorney ($340) and a senior programmer ($308)) = $307,152. The costs associated with these activities are all paperwork-related costs and are discussed in more detail *infra* at section IV.E.

[457] This estimate is based on the following calculations: 1 hours × $324 (blended hourly rate for a compliance attorney ($340) and a senior programmer ($308)) = $324. The costs associated with these activities are all paperwork-related costs and are discussed in more detail *infra* at section IV.E.

[458] This estimate is based on the following calculation: 474 hours × $324 (blended hourly rate for a compliance attorney ($340) and a senior programmer ($308)) = $153,576. The costs associated with these activities are all paperwork-related costs and are discussed in more detail *infra* at section IV.E.

[459] *See infra* section IV.

[460] *See* 2016 ICI Fact Book, *supra* footnote 388, at 22, 176, 183.

[461] *See supra* footnote 388.

[462] This estimate is based on the following calculation: 9,039 funds × .5 hour = 4,519.5 hours.

[463] *See supra* sections II.A and II.B.

adopted a rule that would require all funds, or funds with certain strategies, to adopt swing pricing policies and procedures. This alternative approach would have the benefit of establishing a uniform regulatory framework to prevent potential shareholder dilution, and might lower the per fund cost of implementing swing pricing due to economies of scale. But because funds differ notably in terms of their particular circumstances and risks, as well as with respect to the tools funds use to manage risks relating to liquidity and shareholder purchases and redemptions, we decided to adopt a rule that would permit swing pricing as a voluntary tool for funds. The adopted approach will allow funds to weigh the advantages of swing pricing (*e.g.,* improved allocation of trading costs) against potential disadvantages (*e.g.,* the potential for swing pricing to increase the volatility of a fund's NAV in the short term and its operational costs). Some commenters advocated for the Commission to require all funds to adopt swing pricing policies and procedures,[464] but most commenters supported the permissive (not mandatory) approach.[465]

While rule 22c–1(a)(3) enables partial swing pricing (that is, a NAV adjustment would not be permitted unless net purchases or redemptions exceed a positive threshold set by the fund), the Commission instead could have adopted a rule that would permit full swing pricing (that is, a NAV adjustment would occur any time the fund experiences net purchases or net redemptions, or equivalently allowed zero percent thresholds). Full swing pricing would result in *any* estimated costs associated with purchases or redemptions being passed along to the shareholders whose actions created those costs, whereas the partial swing pricing contemplated by the rule will only allocate costs related to purchase and redemption activity to purchasing or redeeming shareholders when net purchases or net redemptions exceed the fund's positive swing threshold. Most commenters supported permitting only ''partial'' swing pricing,[466] but some commenters did suggest that funds should have the option to use full swing pricing.[467] Nevertheless, we believe that the partial swing pricing policy choice is, on balance, preferable to the full swing pricing option. We expect that partial swing pricing, as opposed to full swing pricing, will reduce any performance volatility potentially associated with swing pricing and could reduce operational costs associated with swinging a fund's NAV (*e.g.,* record keeping requirements) when fund flows are not significant enough to cause significant shareholder dilution. Also, the use of partial swing pricing recognizes that purchases or redemptions below a certain threshold are less likely to require a fund to trade portfolio assets, and therefore a NAV adjustment might be less appropriate if purchases or redemptions might not result in costs associated with asset purchases or sales (in which case, a NAV adjustment could unfairly penalize purchasing or redeeming shareholders).

We considered permitting funds to use swing pricing only to adjust their NAV downward in the event that net redemptions exceeded a particular threshold, as there may be more significant issues regarding potential dilution for non-transacting shareholders in connection with shareholder redemptions, because funds are obligated to satisfy redemption requests pursuant to section 22(e) of the Act. In this regard, we note that unlike redemptions, funds may reserve the right to decline purchase requests. For example, a fund may decline purchase requests from shareholders who engaged in frequent trading, and it also may decline large purchase requests that would negatively impact the fund. However, the final rule contemplates that funds will use swing pricing to adjust their NAV upward or downward because we believe that swing pricing could be a useful tool in mitigating dilution associated with shareholder purchase activity as well as shareholder redemption activity.

We considered exempting investors with small investments in a fund from the NAV adjustments permitted under rule 22c–1(a)(3). However, we believe that the costs of exempting those investors from the NAV adjustment could be significant, particularly the operational costs that could result from the relatively complex process of applying the NAV adjustment only to some investors and not to others. Exempting small investors from the NAV adjustment also may not be beneficial to a fund because such exemption could lead to large investors engaging in gaming behavior—that is, structuring their investments in funds using multiple small accounts—in order to use the exemption. This could contravene the purpose of the exemption and be costly for funds to detect. In addition, while small investors' trading activity might not incur significant costs individually, their aggregate trading in the fund could incur costs, just as it would if they were trading directly in, for example, the stock market, and it would not be fair to impose those collectively generated costs on non-transacting shareholders.

Some commenters suggested that redemption fees may have a better combination of potential cost and benefits compared to swing pricing.[468] Redemption fees are already permissible under existing rules, subject to certain conditions, so swing pricing is an alternative tool funds can use to mitigate dilution.[469] To the extent they are permissible under existing rules, purchase fees allow funds to recoup the costs associated with fund subscriptions in the same way redemption fees recoup costs associated with fund redemptions. Both swing pricing and purchase and redemption fees can pass on trading-related costs to transacting shareholders, but they accomplish this in different ways. The specific implementation of a redemption fee can vary—funds can impose a constant fee that applies to all redemptions or can apply it more selectively to transactions of a given size in order to reduce dilution of the fund's outstanding shares. In theory, purchase fees can be applied in a similar manner.

The key characteristic of a redemption or purchase fee, relative to swing pricing, is that it is imposed on a given investor's transaction independent of other investors' transactions in a fund, which means, for example, that investors may pay a fee even when their transactions do not result in significant net flows or any corresponding dilution for the fund's non-transacting investors. On the other hand, swing pricing allows funds to condition when they recover costs from transacting investors on the net flows to their fund on a given trading date, which could allow funds to more fairly allocate the actual costs created by investor flows and prevent shareholder dilution. As with redemption and purchase fees, it is still possible that investors pay a cost via the swing factor that ends up being larger

[464] Barnard Comment Letter; Invesco Comment Letter.

[465] *See* CFA Comment Letter; Dechert Comment Letter; ICI Comment Letter I; IDC Comment Letter; J.P. Morgan Comment Letter; Morningstar Comment Letter.

[466] Many commenters implicitly agreed with only permitting partial swing pricing, but some explicitly agreed with only permitting partial swing pricing. CFA Comment Letter; SIFMA Comment Letter II.

[467] *See* Dechert Comment Letter; Federated Comment Letter; HSBC Comment Letter; MFS Comment Letter.

[468] ICI Comment Letter I; PIMCO Comment Letter.

[469] As discussed above, funds are currently permitted under rule 22c–2 to impose redemption fees under certain circumstances. *See also* Redemption Fees Adopting Release, *supra* footnote 24.

than the costs they impose on the fund—for example, if the discount at which assets are sold to cover redemptions turn out to be smaller than what was anticipated on the redemption date—but if funds are able to properly calibrate their swing factors, investors should end up paying the ex-ante expected cost associated with a given level of fund flows. The extent to which swing pricing is able to recover the expected costs associated with a given transaction is limited by the maximum swing factor size of 2% of a fund's NAV, but redemption fees are subject to the same limitation. Purchase fees and redemption fees, relative to swing pricing, have the benefit of being simple for investors to understand, they do not produce the same short-term volatility and tracking error concerns as swing pricing, and they provide more transparency to potential investors regarding the expected performance impact of anti-dilutive measures on a fund's NAV (the proceeds from both redemption fees and swing pricing eventually make their way into the NAV).

If purchase or redemption fees are made contingent on the size of a transaction, a fund may be able to tailor these fees to transactions that are more likely to impose costs on non-transacting investors. For example, a large redemption may make it more likely that a fund experiences significant net redemptions on a given day. Targeting purchase and redemption fees in this manner could allow a fund to achieve some of the benefits of swing pricing without its potentially redistributive effects.[470] For example, if a fund experiences gross subscriptions of 10 shares and gross redemptions of 20 shares on a given day, and recovers trading costs from redeeming investors via swing pricing, roughly half of those proceeds will be returned to non-transacting shareholders in the fund (the other half goes to subscribers), and some dilution will still occur. To the extent that fund flows on that day are driven by large redemptions, a targeted redemption fee may allow a fund to assess estimated costs to redeeming investors while returning all proceeds to the fund.

In terms of direct costs, redemption fees may require more coordination with a fund's service providers because these fees need to be imposed on an investor-by-investor basis—which may be particularly difficult with respect to omnibus accounts. While there are funds that currently utilize redemption fees and have built systems to support them, these redemption fees are generally constant fees that are not tailored to the costs of a given redemption. Swing pricing, on the other hand, will require some funds and intermediaries to create new systems and operational procedures (discussed above), but once those are in place swing pricing will be incorporated in the process by which a fund strikes its NAV, and will not require any additional investor-specific infrastructure to assess trading costs to them.

Finally, a closely related alternative to swing pricing that the Commission could have adopted would be to permit funds to employ dual pricing, which has been used in certain European funds.[471] Instead of swinging the NAV in one direction based on net flows and establishing a single price at which investors transact, dual pricing would allow the fund to set a ''spread'' around the fund's true NAV: A bid price at which the fund redeems shares and an offer price at which the fund issues new shares. This spread could be set in a manner similar to the rule's swing factor (*e.g.,* based on a threshold of net flows), or on an ad-hoc basis based on the fund's portfolio and any relevant market conditions on the trade date. Dual pricing is an alternative that shares many costs and benefits with the rule's swing pricing component. The major benefit of dual pricing relative to the rule is that it does not allow one type of fund investor to benefit at the expense of another. For example, under swing pricing, if the NAV is adjusted downwards when a fund experiences net redemptions, any subscribing investors are able to purchase the fund at a discount at the expense of some of the redeeming investors, and this reduces the proceeds that are recovered by non-transacting shareholders in the fund. Under the same scenario with dual pricing, subscribers do not receive a discount (if anything, they may pay a premium which benefits non-transacting shareholders), and all of the proceeds from redeeming investors are returned to the fund. The primary cost of dual pricing relative to the rule is that it may impose additional requirements and risks on fund intermediaries, service providers, and other third parties as they now need to handle two NAVs on each trade date. Furthermore, to the extent that dual pricing is implemented using a constant spread around a fund's NAV, it may not be able to reflect the costs associated with fund redemptions or subscriptions on a given day as well as swing pricing.

IV. Paperwork Reduction Act Analysis

A. Introduction

The amendments to rule 22c–1 contain ''collections of information'' within the meaning of the Paperwork Reduction Act of 1995 (''PRA'').[472] In addition, the amendments to rule 31a–2, Regulation S–X and Form N–1A will impact the collections of information burden under those rules and form.[473] The new reporting requirements on Form N–CEN will impact the collections of information burden associated with the form described in the Investment Company Reporting Modernization Adopting Release.[474]

The titles for the existing collections of information are: ''Rule 31a–2 Records to be preserved by registered investment companies, certain majority-owned subsidiaries thereof, and other persons having transactions with registered investment companies'' (OMB Control No. 3235–0179); and ''Form N–1A under the Securities Act of 1933 and under the Investment Company Act of 1940, Registration Statement of Open-End Management Investment Companies'' (OMB Control No. 3235–0307). In the Investment Company Reporting Modernization Adopting Release, we submitted new collections of information for Form N–CEN.[475] The title for the new collections of information is: ''Form N–CEN Under the Investment Company Act, Annual Report for Registered Investment Companies.''

We are submitting new collections of information for the amendments to rule 22c–1 under the Investment Company Act of 1940. The title for the new collections of information will be: ''Rule 22c–1 Under the Investment Company Act of 1940, Pricing of redeemable securities for distribution, redemption and repurchase.'' The Commission is submitting these collections of information to the OMB for review in accordance with 44 U.S.C. 3507(d) and 5 CFR 1320.11. An agency may not conduct or sponsor, and a person is not

[470] *See supra* footnote 427 and related discussion on distributional issues with swing pricing.

[471] *See* BlackRock Fund Structures Paper, *supra* footnote 46 for a high level comparison of some of the differences between dual pricing and swing pricing.

[472] 44 U.S.C. 3501 through 3521.

[473] The paperwork burden from Regulation S–X is imposed by the rules and forms that relate to Regulation S–X and, thus, is reflected in the analysis of those rules and forms. To avoid a PRA inventory reflecting duplicative burdens and for administrative convenience, we have previously assigned a one-hour burden to Regulation S–X.

[474] *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 11, at section IV.A.

[475] *See id.*

required to respond to, a collection of information unless it displays a currently valid control number.

The Commission is adopting amendments to rule 22c–1, rule 31a–2, Regulation S–X, and Form N–1A. The Commission also is adopting a new item to Form N–CEN. The amendments are designed to prevent potential dilution of interests of fund shareholders in light of shareholder purchase and redemption activity and enhance disclosure and Commission oversight of funds' use of swing pricing. We discuss below the collection of information burdens associated with these reforms. In the Proposing Release, the Commission solicited comment on the collection of information requirements and the accuracy of the Commission's statements in the Proposing Release.

B. Rule 22c–1

We are adopting, largely as proposed, amendments to rule 22c–1 that will enable a fund (with the exception of a money market fund or ETF) to choose to use ''swing pricing'' as a tool to mitigate shareholder dilution.[476] This will be a new collection of information under the PRA. We believe that rule 22c–1 will promote investor protection by providing funds with an additional tool to mitigate the potentially dilutive effects of shareholder purchase or redemption activity and provide a set of operational standards that will allow funds to gain comfort using swing pricing as a new means of mitigating potential dilution.[477]

In order to use swing pricing under rule 22c–1, as amended, a fund is required to establish and implement swing pricing policies and procedures that meet certain requirements.[478] The policies and procedures must specify the process for how the fund's swing threshold(s) and swing factor(s) are determined, which must include the establishment of an upper limit on the swing factor(s) used (which may not exceed two percent of NAV per share).[479] The amendments require a fund's board of directors to approve the fund's swing pricing policies and procedures, as well as the fund's swing threshold and swing factor upper limit (and any changes to the swing threshold or swing factor upper limit).[480] The fund's board is also required to review, no less frequently than annually, a written report prepared by the persons responsible for administering swing pricing that describes: (i) Its review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution; (ii) any material changes to the fund's swing pricing policies and procedures since the date of the last report; and (iii) its review and assessment of the fund's swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements of the rule, including the information and data supporting these determinations.[481] A fund is required to maintain the fund's swing pricing policies and procedures and a written copy of the periodic report provided to the board.[482] The requirements that funds adopt policies and procedures, obtain board approval and periodic review, provide a written report to the board, and retain certain records related to swing pricing are collections of information under the PRA. The respondents to amended rule 22c–1 will be open-end management investment companies (other than money market funds or ETFs) that engage in swing pricing. Compliance with rule 22c–1(a)(3) will be mandatory for any fund that chooses to use swing pricing to adjust its NAV in reliance on the amendments. The information required under rule 22c–1 regarding swing pricing when provided to the Commission in connection with staff examinations and investigations and oversight programs will be kept confidential subject to the provisions of applicable law.

In the Proposing Release, we estimated that 167 fund complexes include funds that would adopt swing pricing policies and procedures pursuant to the rule.[483] For purposes of the PRA analysis, we estimated that each fund complex would incur a one-time average burden of 24 hours to document swing pricing policies and procedures. Under the proposal, rule 22c–1 would have required fund boards initially to approve the swing pricing policies and procedures (including the swing threshold) and any material changes to them, and we estimated a one-time burden of five hours per fund complex associated with the fund board's review and approval of swing pricing policies and procedures. Amortized over a 3-year period, we estimated that this would be an annual burden per fund complex of about 10 hours. Accordingly, we estimated that the total burden associated with the preparation and approval of swing pricing policies and procedures by those fund complexes that we believed would use swing pricing would be 4,843 hours.[484] We also estimated that it would cost a fund complex $21,710 to document, review and initially approve these policies and procedures, for a total cost of $3,625,570.[485]

As discussed above, many commenters expressed general concerns about the operational and technology costs associated with swing pricing and recommended that the Commission consider the substantial costs and technology challenges that need to be overcome to implement swing pricing.[486] One commenter expressed the belief that the Commission significantly underestimated the costs associated with developing and implementing the systems and procedures necessary to comply with rule 22c–1 swing pricing requirements and stated that its implementation costs for swing pricing would likely be four or five times more costly than the Commission's estimates in the proposal.[487] We appreciate the information provided by the commenter and, in consideration of their comment, have extrapolated from this commenter's estimate increased cost estimates for the amendments to rule 22c–1 adopted today.[488]

[476] *See supra* section II.A. *See also* rule 22c–1(a)(3).

[477] *See supra* section II.A.

[478] *See* rule 22c–1(a)(3)(i).

[479] *See* rule 22c–1(a)(3)(i)(B) and (C).

[480] *See* rule 22c–1(a)(3)(ii)(A) and (B).

[481] *See* rule 22c–1(a)(3)(ii)(D).

[482] *See* rule 22c–1(a)(3)(iii).

[483] *See* Proposing Release, *supra* footnote 6, at n. 766 and accompanying text.

[484] This estimate was based on the following calculation: (24 + 5) hours × 167 fund complexes = 4,843 hours.

[485] These estimates were based on the following calculations: 12 hours × $198 (hourly rate for a senior accountant) = $2,376; 12 hours × $455.5 (blended hourly rate for assistant general counsel ($426) and chief compliance officer ($485)) = $5,466; 3 hours × $4,400 (hourly rate for a board of 8 directors) = $13,200; 2 hours (for a fund attorney's time to prepare materials for the board's determinations) × $334 (hourly rate for a compliance attorney) = $668; ($2,376 + $5,466 + $13,200 + $668) = $21,710; $21,710 × 167 fund complexes = $3,625,570. The hourly wages used were from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1800-hour work-year and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead. *See also infra* footnote 492 (discussing basis for estimated hourly rate for a board of directors).

[486] *See supra* section II.A.2. *See also e.g.,* Dechert Comment Letter; Eaton Vance Comment Letter; ICI Comment Letter I; IDC Comment Letter; Invesco Comment Letter; J.P. Morgan Comment Letter; Charles Schwab Comment Letter; T. Rowe Comment Letter.

[487] *See* Charles Schwab Comment Letter (stating that the Commission based its estimated costs to establish and implement swing pricing policies and procedures in part on the costs associated with implementing the fees and gates provisions of the 2014 money market fund reform rule and that, in the commenter's experience, the implementation costs for the money market fund reform rule were severely understated).

[488] *See supra* section III.C.1.b.

The Commission has modified the estimated increase in burden hours associated with a fund documenting its swing pricing policies and procedures in consideration of commenters' concerns that such burdens were underestimated as well as modifications made to the proposal and updates to data figures that were utilized in the Proposing Release. We estimate that 84 fund complexes, rather than 167 fund complexes (half as many fund complexes as estimated in the proposal), include funds that will adopt swing pricing policies and procedures pursuant to the rule.[489] While one commenter suggested that the burden to comply with the amendments to rule 22c–1 would be four or five times more costly than in the proposal, we believe that with respect to the PRA analysis, the estimated burdens for documenting swing pricing procedures will not be as high as the commenter's estimate of the costs associated with the entire implementation of swing pricing policies and procedures. Based on our review of the adopted requirements, we estimate that each fund complex will incur a one-time average burden of 48 hours, rather than 24 hours, to document swing pricing policies and procedures. We further estimate that each fund complex will spend 2 hours, on average, preparing the required written report to the board. Since a fund board will approve the fund's swing pricing policies and procedures, swing threshold, and swing factor upper limit as well as review, no less frequently than annually, a written report that includes certain required information, we estimate a one-time burden of 7 hours, rather than 5 hours per fund complex associated with the fund board's review and approval of swing pricing policies and procedures.

Amortized over a 3-year period, we estimate that this will be an annual burden per fund complex of about 19 hours, rather than 10 hours.[490] Accordingly, we estimate that the total burden associated with the preparation and approval of swing pricing policies and procedures by those fund complexes that we believe will use swing pricing will be 4,788 hours, rather than 4,843 hours.[491] We also estimate that it will cost a fund complex $35,496, rather than $21,710, to document, review and initially approve these policies and procedures, for a total cost of $2,981,664, rather than $3,625,570.[492]

We are adopting, as proposed, amendments to rule 22c–1 to require a fund that uses swing pricing to maintain the fund's swing policies and procedures that are in effect, or at any time within the past six years were in effect, in an easily accessible place.[493] In a modification to the proposal, we also are requiring a fund to retain a written copy of the periodic report provided to the board prepared by the swing pricing administrator that describes, among other things, the swing pricing administrator's review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution and any back-testing performed.[494] The retention of these records is necessary to allow the staff during examinations of funds to determine whether a fund is in compliance with its swing pricing policies and procedures and with rule 22c–1, as amended.

In the Proposing Release, we estimated that the burden would be three hours per fund complex to retain the proposed swing pricing records, with 1.5 hours spent by a general clerk and 1.5 hours spent by a senior computer operator. We estimated a time cost per fund complex of $216.[495] We estimated that the total for recordkeeping related to swing pricing would be 501 hours, at an aggregate cost of $36,072 for all fund complexes that we believe include funds that would adopt swing pricing policies and procedures.[496] Amortized over a three-year period, we believed that the hour burdens and time costs associated with the proposed amendments to rule 22c–1, including the burden associated with the requirements that funds adopt policies and procedures, obtain board approval and retain certain records related to swing pricing, would result in an average aggregate annual burden of 2,115 hours and average aggregate time costs of $1,244,595.[497] We estimated that there were no external costs associated with this collection of information.

We did not receive any comments on the estimated hour and cost burdens for this record retention requirement. The Commission has modified the estimated increase in annual burden hours and total time costs that will result from the amendments based on the modification to the proposal to require funds to retain a written copy of the annual report provided to the board from the swing pricing administrator. We have also modified the estimated increase in annual burden hours and total time costs in light of updated data concerning funds and fund personnel salaries. We estimate that the burden will be four hours, rather than three hours, per fund complex to retain these records, with 2 hours, rather than 1.5 hours, spent by a general clerk and 2 hours, rather than 1.5 hours, spent by a senior computer operator. Based on updates to the industry data figures that were utilized in the Proposing Release, we estimate a time cost per fund complex of $292, rather than $216.[498] We estimate that the total for recordkeeping related to swing pricing will be 336 hours, rather than 501 hours, at an aggregate cost of $24,528, rather than $36,072, for all fund complexes that we believe include

[489] *See supra* section III.C.1.b. As we discussed in section III.C.1.b, commenters noted a variety of challenges associated with the immediate implementation of swing pricing. Accordingly, we have revised our estimated number of fund complexes that will implement swing pricing within the three-year period discussed below. Additionally, the two-year extended effective date means that no fund may implement swing pricing until the third year, which will likely further reduce the number of funds for purposes of this estimate.

[490] This estimate is based on the following calculations: 48 hours + 2 hours + 7 hours ÷ 3 = 19 hours.

[491] This estimate is based on the following calculation: (48 + 2 + 7) hours × 84 fund complexes = 4,788 hours.

[492] These estimates are based on the following calculations: 24 hours × $201 (hourly rate for a senior accountant) = $4,824; 24 hours × $463 (blended hourly rate for assistant general counsel ($433) and chief compliance officer ($493)) = $11,112; 4 hours × $4,465 (hourly rate for a board of 8 directors) = $17,860; 5 hours (for a fund attorney's time to prepare materials for the board's determinations) × $340 (hourly rate for a compliance attorney) = $1,700; ($4,824 + $11,112 + $17,860 + $1,700) = $35,496; $35,496 × 84 fund complexes = $2,981,664. The hourly wages used are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead. The staff previously estimated in 2009 that the average cost of board of director time was $4,000 per hour for the board as a whole, based on information received from funds and their counsel. Adjusting for inflation, the staff estimates that the current average cost of board of director time is approximately $4,465.

[493] *See* rule 22c–1(a)(3)(iii).

[494] *See id.*

[495] This estimate was based on the following calculations: 1.5 hours × $57 (hourly rate for a general clerk) = $85.5; 1.5 hours × $87 (hourly rate for a senior computer operator) = $130.5. $85.5 + $130.5 = $216.

[496] These estimates were based on the following calculations: 3 hours × 167 fund complexes = 501 hours. 167 fund complexes × $216 = $36,072.

[497] These estimates were based on the following calculations: 4,843 hours (year 1) + (3 × 501 hours) (years 1, 2 and 3) ÷ 3 = 2,115 hours; $3,625,570 (year 1) + (3 × $36,072) (years 1, 2 and 3) ÷ 3 = $1,244,595.

[498] This estimate is based on the following calculations: 2 hours × $58 (hourly rate for a general clerk) = $116; 2 hours × $88 (hourly rate for a senior computer operator) = $176. $116 + $176 = $292.

funds that would adopt swing pricing policies and procedures.[499]

Amortized over a three-year period, we believe that the hour burdens and time costs associated with the amendments to rule 22c–1, including the burden associated with the requirements that funds adopt policies and procedures, obtain board approval, and periodic review of an annual written report from the swing pricing administrator, and retain certain records and written reports related to swing pricing, will result in an average aggregate annual burden of 1,932 hours, rather than 2,115 hours, and average aggregate time costs of $1,018,416, rather than $1,244,595.[500] We continue to estimate that there are no external costs associated with this collection of information.

C. Rule 31a–2

Section 31(a)(1) of the Investment Company Act requires registered investment companies and certain of their majority-owned subsidiaries to maintain and preserve records as prescribed by Commission rules. Rule 31a–1 under the Act specifies the books and records that must be maintained. Rule 31a–2 under the Act specifies the time periods that entities must retain certain books and records, including those required to be maintained under rule 31a–1. The retention of records, as required by rule 31a–2, is necessary to ensure access by Commission staff to material business and financial information about funds and certain related entities. This information is used by the staff to evaluate fund compliance with the Investment Company Act and regulations thereunder. The Commission currently estimates that the annual burden associated with rule 31a–2 is 220 hours per fund, with 110 hours spent by a general clerk at a rate of $52 per hour and 110 hours spent by a senior computer operator at a rate of $81 per hour.[501] The current estimate of the total annual burden for all funds to comply with rule 31a–2 is approximately 766,480 hours at an estimated cost of $50,970,920.[502]

We are adopting amendments to rule 31a–2 to require a fund that chooses to use swing pricing to create and maintain a record of support for each computation of an adjustment to the NAV of the fund's shares based on the fund's swing policies and procedures.[503] This collection of information requirement is mandatory for any fund that chooses to use swing pricing to adjust its NAV in reliance on the adopted amendments to rule 22c–1. To the extent that the Commission receives confidential information in connection with staff examinations and investigations and oversight programs pursuant to this collection of information, such information will be kept confidential, subject to the provisions of applicable law.

In the proposal, we estimated that approximately 947 funds would use swing pricing and that each fund that uses swing pricing generally would incur an additional burden of 1 hour per year in order to comply with the proposed amendments to rule 31a–2.[504] Accordingly, we estimated that the total average annual hour burden associated with the proposed amendments to rule 31a–2 would have been an additional 947 hours at a cost of $68,169.[505]

Based on updates to industry data figures that were utilized in the Proposing Release and the reduction in our estimate of the number of funds in fund complexes that will choose to use swing pricing, for purposes of the PRA analysis, we estimate that approximately 474 funds (half as many funds as proposed) will use swing pricing.[506] In light of the concerns expressed by commenters that the Commission underestimated the operational costs associated with swing pricing discussed above,[507] we estimate that each fund that uses swing pricing generally will incur an additional burden of 3 hours, rather than 1 hour per year in order to comply with the amendments to rule 31a–2. Accordingly, we estimate that the total average annual hour burden associated with the amendments to rule 31a–2 will be an additional 1,422 hours, rather than 947 hours, at a cost of $103,806, rather than $68,169.[508]

The Commission currently estimates that the average external cost of preserving books and records required by rule 31a–2 is approximately $70,000 per fund at a total cost of approximately $243,880,000 per year,[509] but that funds would already spend approximately half this amount to preserve these same books and records, as they are also necessary to prepare financial statements, meet various state reporting requirements, and prepare their annual federal and state income tax returns. Therefore, the Commission estimated that the total annual cost burden for all funds as a result of compliance with rule 31a–2 is approximately $121,940,000.[510] In the proposal, we estimated that the annual external cost burden of compliance with the information collection requirements of rule 31a–2 would increase by $300 per fund that engages in swing pricing, for an increase in the total annual cost burden of $284,100.[511] We are modifying this figure in response to commenters' general concerns that the Commission as underestimated the operational costs associated with swing pricing and the reduction in the number of funds we estimate will use swing pricing, as discussed above. We estimate that the annual external cost burden of compliance with the information collection requirements of rule 31a–2 would increase by $600 per fund, rather than $300 per fund that engages in swing pricing, for an increase in the total annual cost burden of $284,400, rather than $284,100.[512]

D. Form N–CEN

On May 20, 2015, we proposed to amend rule 30a–1 to require all funds to file reports with certain census-type

[499] These estimates are based on the following calculations: 4 hours × 84 fund complexes = 336 hours. 84 fund complexes × $292 = $24,528.

[500] These estimates are based on the following calculations: (4,788 hours (year 1) + (3 × 336 hours) (years 1, 2 and 3)) ÷ 3 = 1,932 hours; ($2,981,664 (year 1) + (3 × $24,528) (years 1, 2 and 3)) ÷ 3 = $1,018,416.

[501] The estimated salary rates were derived from SIFMA's Office Salaries in the Securities Industry 2011, modified to account for an 1800-hour work-year and multiplied by 2.93 to account for bonuses, firm size, employee benefits, and overhead.

[502] These estimates were based on the following calculations: 220 hours × 3,484 funds (the estimated number of funds the last time the rule's information collections were submitted for PRA renewal in 2012) = 766,480 total hours; 776,480 hours ÷ 2 = 383,240 hours; 383,240 × $52/hour for a clerk = $19,928,480; 383,240 × $81 rate per hour for a computer operator = $31,042,440; $19,928,480 + $31,042,440 = $50,970,920 total cost.

[503] Proposed amendment to rule 31a–2(a)(2).

[504] *See* Proposing Release, *supra* footnote 6, at section V.D.

[505] These estimates were based on the following calculations: 1 hour × 947 funds = 947 total hours; 474 hours × $57 rate per hour for a general clerk = $27,018; 473 hours × $87 rate per hour for a senior computer operator = $41,151; $27,018 + $41,151 = $68,169 total cost.

[506] *See also, supra* footnote 489 and accompanying text.

[507] *See, e.g.,* Dechert Comment Letter; Eaton Vance Comment Letter; J.P. Morgan Comment Letter; T. Rowe Comment Letter.

[508] These estimates are based on the following calculations: 3 hour × 474 funds = 1,422 total hours; 711 hours × $58 rate per hour for a general clerk = $41,238; 711 hours × $88 rate per hour for a senior computer operator = $62,568; $41,238 + $62,568 = $103,806 total cost.

[509] This estimate is based on the following calculation: 3,484 funds (the estimated number of funds the last time the rule's information collections were submitted for PRA renewal in 2012) × $70,000 = $243,880,000.

[510] *See* Submission of OMB Review; and Comment Request, Extension: Rule 31a–2, OMB Control No. 3235–0179, Securities and Exchange Commission, 77 FR 66885 (Nov. 7, 2012).

[511] This estimate was based on the following calculation: 947 funds × $300 = $284,100.

[512] This estimate is based on the following calculation: 474 funds × $600 = $284,400.

information on proposed Form N–CEN with the Commission on an annual basis. Proposed Form N–CEN would have been a collection of information under the PRA, and was designed to facilitate the Commission's oversight of funds and its ability to monitor trends and risks. The collection of information under Form N–CEN would be mandatory for all funds, and responses would not be kept confidential.

In the Investment Company Reporting Modernization Proposing Release, we estimated that the average annual hour burden per response for proposed Form N–CEN for the first year would be 32.37 hours and 12.37 hours in subsequent years.[513] Amortizing the burden over three years, we estimated that the average annual hour burden per fund per year would be 19.04 and the total average annual hour burden would be 59,900 hours.[514] We also estimated that all applicable funds would incur, in the aggregate, external annual costs of $1,748,637, which would include the costs of registering and maintaining LEIs for funds.[515]

We are adopting, substantially as proposed, a new reporting item on Form N–CEN to require funds to report information regarding swing pricing.[516] Specifically, the new item on Form N–CEN will require funds (other than money market funds and ETFs) to report whether they used swing pricing during the reporting period and, if so, the fund's swing factor upper limit.[517]

In the Proposing Release, we estimated that 8,734 funds would be required to file responses on Form N–CEN. We estimated that the average annual hour burden per additional response to Form N–CEN as a result of the proposed new reporting requirements would be 0.5 hour per fund per year for a total average annual hour burden of 4,367 hours.[518] We did not estimate any change to the external costs associated with proposed Form N–CEN.

We did not receive any comments on these estimated hour and cost burdens. The Commission has modified the estimated increase in annual burden hours and total time costs based on the modification to the proposal to address separately in this Release the requirement to report whether a fund used swing pricing during the reporting period and require funds report the swing factor upper limit if swing pricing was used during the reporting period. The estimated increase in annual burden hours and total time costs also has been modified in light of updated data concerning funds and fund personnel salaries. We estimate that 9,039 funds will be required to file responses to Item C.21 of Form N–CEN regarding swing pricing.[519] For these funds, we estimate that the average annual hour burden per additional response to Form N–CEN as a result of the adopted swing pricing-related additions to Form N–CEN will be 0.5 hour per fund per year for a total average annual hour burden of 4,519.5 hours.[520] We do not estimate any change to the external costs associated with proposed Form N–CEN.

E. Form N–1A

Form N–1A is the registration form used by open-end investment companies. The respondents to the amendments to Form N–1A adopted today are open-end management investment companies registered or registering with the Commission. Compliance with the disclosure requirements of Form N–1A is mandatory, and the responses to the disclosure requirements are not confidential. We currently estimate for Form N–1A a total hour burden of 1,579,974 hours, and the total annual external cost burden is $124,820,197.[521]

We are adopting amendments to Form N–1A that require funds that use swing pricing to disclose that they use swing pricing, and, if applicable, an explanation of what swing pricing is, the circumstances under which swing pricing is used, and the effects of using swing pricing.[522] Funds that use swing pricing will also be required to disclose the swing factor upper limit.[523] We also are adopting amendments to Form N–1A that require funds to include, if applicable, a footnote that describes the effects of swing pricing on the fund's annual total return bar chart and average annual total returns table, and additional disclosures in the prospectus financial highlights with respect to the per share impact of amounts related to swing pricing in the NAV per-share roll-forward, as well as the Swung NAV per share.[524] [525]

We believe that requiring funds to provide this additional disclosure regarding swing pricing will provide Commission staff, investors, and market participants with improved information about the conditions under which swing pricing procedures will be used to mitigate the effects of dilution as a result of shareholder purchase or redemption activity.

Form N–1A generally imposes two types of reporting burdens on investment companies: (i) The burden of preparing and filing the initial registration statement; and (ii) the burden of preparing and filing post-effective amendments to a previously effective registration statement (including post-effective amendments filed pursuant to rule 485(a) or 485(b) under the Securities Act, as applicable). In the Proposing Release, we estimated that each fund would incur a one-time burden of an additional 2 hours,[526] at a time cost of an additional $637,[527] to draft and finalize the required disclosure and amend its registration statement in response to the proposed Form N–1A disclosure requirements. In aggregate, we estimated that funds would incur a one-time burden of an

[513] Investment Company Reporting Modernization Proposing Release, *supra* footnote 11, at n.762 and accompanying text.

[514] *Id.* at n.765 and accompanying text.

[515] In the Investment Company Reporting Modernization Adopting Release, we continue to estimate that the average annual hour burden per response for Form N–CEN for the first year will be 32.37 hours and 12.37 hours in subsequent years. Amortizing the burden over three years, we continue to estimate that the average annual burden per fund year will be 19.04 hours but that the total aggregate annual hour burden will be 59,272 hours, rather than 59,900 in light of updates to the industry data figures that were utilized in the Investment Company Reporting Modernization Proposing Release. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 11, at section IV.B.1.

[516] In the Proposing Release, we also proposed to add to Form N–CEN a requirement for funds to report information concerning lines of credit, interfund lending, and interfund borrowing. We are adopting those reporting requirements and discuss related PRA burdens and costs in the Liquidity Risk Management Programs Adopting Release. *See supra* footnote 8, at section V.G.

[517] *See* Item C.21 of Form N–CEN.

[518] This estimate was based on the following calculation: 8,734 funds × 0.5 hours = 4,367 hours.

[519] *See supra* footnote 388.

[520] This estimate is based on the following calculation: 9,039 funds × .5 hour = 4,519.5 hours.

[521] These estimates are based on the last time the rule's information collections were submitted for PRA renewal in 2014.

[522] *See* Item 6(d) of Form N–1A.

[523] *See id.*

[524] *See supra* section II.B. *See also* Item 4(b)(2)(ii); Item 4(b)(2)(iv)(E); Item 13(a); and Instructions 2(d) and (e) of Item 13(a).

[525] *See supra* section II.B. In the Proposing Release, we also proposed to amend Form N–1A to require funds to disclose additional information concerning the procedures for redeeming a fund's shares. We are adopting those disclosure requirements and discuss related PRA burdens and costs in the Liquidity Risk Management Programs Adopting Release. *See supra* footnote 8, at section V.H.

[526] This estimate was based on the following calculation: 1 hour to update registration statement to include swing pricing-related disclosure statements + 1 hour to update registration statement disclosure about redemption procedures = 2 hours.

[527] This estimate was based on the following calculation: 2 hours × $318.5 (blended rate for a compliance attorney ($334) and a senior programmer ($303)) = $637.

additional 17,468 hours,[528] at a time cost of an additional $5,563,558,[529] to comply with the Form N–1A disclosure requirements originally proposed. We estimated that amortizing the one-time burden over a three-year period would result in an average annual burden of an additional 5,823 hours at a time cost of an additional $1,854,519.[530]

In the Proposing Release, we also estimated that each fund would incur an ongoing burden of an additional 0.25 hours, at a time cost of an additional $80,[531] each year to review and update the proposed disclosure in response to Item 11 and Item 28 of Form N–1A regarding the pricing and redemption of fund shares and the inclusion of credit agreements as exhibits, respectively. In aggregate, we estimated that funds would incur an annual burden of an additional 2,184 hours,[532] at a time cost of an additional $695,604,[533] to comply with the proposed Form N–1A disclosure requirements.

In the Proposing Release, we further estimated that amortizing these one-time and ongoing hour and cost burdens over three years would result in an average annual increased burden of approximately 0.50 hours per fund,[534] at a time cost of $265.42 per fund.[535]

In total, we estimated in the Proposing Release that funds would incur an average annual increased burden of approximately 8,007 hours,[536] at a time cost of approximately $2,550,123,[537] to comply with the proposed Form N–1A disclosure requirements. We did not estimate any change to the external costs associated with the proposed amendments to Form N–1A.

One commenter stated that the cost estimates under the proposal were overly optimistic, including as an example our estimated $637 cost per fund to implement the proposed Form N–1A disclosure requirements.[538] As discussed above, the amendments to Form N–1A, discussed in this Release, concern disclosure requirements related to swing pricing only. We recognize that certain disclosure requirements related to swing pricing have been modified from the proposal and that these disclosure requirements were not contemplated in the burden hours and costs we estimated in the Proposing Release. For example, we are adopting a requirement that a fund include in its financial highlights presentation in Form N–1A two NAV calculations (*i.e.,* the Net Asset Value adjusted for GAAP and the Net Asset Value adjusted pursuant to Swing Pricing, End of Period) rather than a single Swung NAV as proposed.[539] We are also adopting a requirement that funds include a general description of the effects of swing pricing on the fund's annual total returns bar chart and average annual total returns table if swing pricing policies and procedures were applied during any of the periods represented.[540] We are also requiring funds that use swing pricing to disclose the swing factor upper limit.[541] In addition, we recognize that one commenter suggested that we had understated the cost estimates associated with amendments to Form N–1A although they did not provide alternative quantitative estimates.[542]

The Commission has modified the estimated increase in annual burden hours and total time costs that will result from the amendments to Form N–1A based on the modifications to the proposal discussed in this Release. Furthermore, we have considered the concern expressed by one commenter that the burdens and costs estimated in the proposal were overly optimistic. We also have estimated an increase in the aggregate annual burden hours that will result from the amendments to Form N–1A in light of updated data regarding the number of funds subject to the disclosure requirements.

In the Proposing Release, we estimated that approximately 947 funds would use swing pricing.[543] Based on updates to industry data figures that were utilized in the Proposing Release and the reduction in our estimate of the number of funds in fund complexes that will choose to use swing pricing, for purposes of the PRA analysis, we estimate that approximately 474 funds (half as many funds as proposed) will use swing pricing.[544] We estimate that each fund will incur a one-time burden of an additional 2 hours, rather than 1 hour, to draft and finalize the required swing pricing-related disclosures and amend its registration statement accordingly,[545] but at a time cost of an additional $648, rather than $637,[546] based on updated data concerning funds and fund personnel salaries. In aggregate, we estimate that funds will incur a one-time burden of an additional 948 hours,[547] rather than 17,468 hours, at a time cost of an additional $307,152,[548] rather than $5,563,558, to comply with the Form N–1A disclosure requirements as adopted. We estimate that amortizing the one-time burden over a three-year period will result in an average annual burden of an additional 316 hours, rather than 5,823 hours at a time cost of an additional $102,384, rather than $1,854,519.[549]

In addition, we estimate that each fund will incur an ongoing burden of an additional one hour, but at a time cost of an additional $324,[550] each year to review and update disclosures required in response to the amendments to Form N–1A related to swing pricing. In

[528] This estimate was based on the following calculations: 2 hours × 8,734 funds = 17,468 hours.

[529] This estimate was based on the following calculation: 17,468 hours × $318.50 (blended rate for a compliance attorney ($334) and a senior programmer ($303)) = $5,563,558.

[530] This estimate was based on the following calculation: 17,468 hours ÷ 3 = 5,823 average annual burden hours; $5,563,558 burden costs ÷ 3 = $1,854,519 average annual burden cost.

[531] This estimate was based on the following calculations: 0.25 hours × $318.50 (blended hourly rate for a compliance attorney ($334) and a senior programmer ($303)) = $79.63.

[532] This estimate was based on the following calculation: 0.25 hours × 8,734 funds = 2,183.5 hours.

[533] This estimate was based on the following calculation: 2,184 hours × $318.50 (blended hourly rate for a compliance attorney ($334) and a senior programmer ($303)) = $695,604.

[534] This estimate was based on the following calculation: 1 burden hour (year 1) + 0.25 burden hour (year 2) + 0.25 burden hour (year 3) ÷ 3 = 0.50 hours.

[535] This estimate was based on the following calculation: $637 (year 1 monetized burden hours) + $79.63 (year 2 monetized burden hours) + $79.63 (year 3 monetized burden hours) ÷ 3 = $265.42.

[536] This estimate was based on the following calculation: 5,823 hours + 2,184 hours = 8,007 hours.

[537] This estimate was based on the following calculation: $1,854,519 + $695,604 = $2,550,123.

[538] *See* FSR Comment Letter (noting that changes to a fund's disclosure typically involve a number of stakeholders and several rounds of drafting and review, such that costs associated with even modest changes to fund disclosure can have a serious cost component). With the exception of this comment, we did not receive comments on the estimated hour and costs burdens associated with the disclosure amendments to Form N–1A under the proposal.

[539] *See* Item 13 of Form N–1A. *See also supra* section II.B.

[540] *See* Item 4(b)(2)(ii) and Item 4(b)(2)(iv)(E) of Form N–1A.

[541] *See* Item 6(d) of Form N–1A.

[542] *See* FSR Comment Letter.

[543] *See* Proposing Release, *supra* footnote 6, at section V.D.

[544] *See supra* footnote 489.

[545] This estimate is based on the following calculation: 2 hours to update registration statement to include swing pricing-related disclosure statements.

[546] This estimate is based on the following calculation: 2 hours × $324 (blended rate for a compliance attorney ($340) and a senior programmer ($308)) = $648.

[547] This estimate was based on the following calculations: 2 hours × 474 funds) = 948 hours.

[548] This estimate is based on the following calculation: 948 hours × $324 (blended rate for a compliance attorney ($340) and a senior programmer ($308)) = $307,152.

[549] This estimate is based on the following calculation: 948 hours ÷ 3 = 316 average annual burden hours; $307,152 burden costs ÷ 3 = $102,384 average annual burden cost.

[550] This estimate is based on the following calculations: 1 hour × $324 (blended hourly rate for a compliance attorney ($340) and a senior programmer ($308)) = $324.

aggregate, we estimate that funds will incur an annual burden of an additional 474 hours,[551] at a time cost of an additional $153,576,[552] to comply with the Form N–1A disclosure requirements related to swing pricing adopted today.

Furthermore, we estimate that amortizing these one-time and ongoing hour and cost burdens over three years will result in an average annual increased burden of approximately 1.33 hours per fund,[553] but at a time cost of $432 per fund.[554]

In total, we estimate that funds will incur an average annual increased burden of approximately 790 hours,[555] at a time cost of approximately $255,960,[556] to comply with the Form N–1A disclosure requirements related to swing pricing adopted today. We do not estimate any change to the external costs associated with these amendments to Form N–1A.

V. Final Regulatory Flexibility Act Analysis

This Final Regulatory Flexibility Analysis has been prepared in accordance with section 3 of the Regulatory Flexibility Act (''RFA'').[557] It relates to amendments to rule 22c–1, rule 31a–2, Form N–1A, and Form N–CEN. We prepared an Initial Regulatory Flexibility Analysis (''IRFA'') in conjunction with the Proposing Release in September 2015.[558] The Proposing Release included, and solicited comment, on the IRFA.

A. Need for the Rule

Under current pricing methods, shareholder purchase and redemption activity could dilute the value of non-transacting shareholders' interests in some funds. The Commission is adopting amendments to rule 22c–1 to permit a fund to use ''swing pricing,'' the process of adjusting a fund's NAV to effectively pass on to purchasing and redeeming shareholders more of the costs stemming from their trading activity. We believe that rule 22c–1 will promote investor protection by providing funds with an additional tool to mitigate the potentially dilutive effects of shareholder purchase or redemption activity and provide a set of operational standards that will allow funds to gain comfort using swing pricing as a new means of mitigating potential dilution. Swing pricing may also provide funds with an additional tool to manage liquidity risks. In addition, the Commission is adopting related recordkeeping and disclosure requirements to enhance disclosure and Commission oversight of funds' use of swing pricing. Each of these objectives is discussed in detail in section III above.

B. Significant Issues Raised by Public Comment

In the Proposing Release, we requested comment on the IRFA, requesting in particular comment on the number of small entities that would be subject to the proposed swing pricing rules and whether the proposed swing pricing rules would have any effects that have not been discussed. We requested that commenters describe the nature of any effects on small entities subject to the proposed swing pricing rules and provide empirical data to support the nature and extent of such effects. We also requested comment on the estimated compliance burdens of the proposed swing pricing rules and how they would affect small entities. We received a number of comments related to the impact of our proposal on small entities, with some commenters expressing concern that certain large fund complexes with more influence over their distribution partners (or with more resources/internal processes in place to support swing pricing) would be more successful than small fund complexes in obtaining intraday flow information and implementing swing pricing.[559] We believe this effect on small fund complexes may be mitigated if fund service providers implement the operational changes necessary to support swing pricing for all funds that they service. Based on staff outreach, we understand that fund service providers are more likely to implement operational changes in this manner than they are to implement operational changes selectively for certain funds. We also note that funds will be permitted, but will not be required, to implement swing pricing.

C. Small Entities Subject to the Rule

An investment company is a small entity if, together with other investment companies in the same group of related investment companies, it has net assets of $50 million or less as of the end of its most recent fiscal year.[560] Commission staff estimates that, as of December 31, 2015, there were 78 small open-end investment companies (within 76 fund complexes) that would be considered small entities; this number includes open-end ETFs.

D. Projected Reporting, Recordkeeping, and Other Compliance Requirements

1. Swing Pricing

Amendments to rule 22c–1 permit, but do not require, all registered open-end funds (except money market funds and ETFs), including small entities, to use swing pricing, provided that it adopts policies and procedures that include certain elements and are approved by the fund's board.[561] A fund's swing pricing policies and procedures must provide that the fund is required to adjust its NAV per share by an amount known as the ''swing factor'' once the level of net purchases or net redemptions has exceeded a set, specified percentage of the fund's NAV known as the ''swing threshold.''[562] A fund is required to consider certain factors in determining its swing threshold,[563] and to take into account certain considerations in determining the swing factor.[564] In addition, a fund is required to establish an upper limit on the swing factor(s) used, which may not exceed two percent of NAV per share. The fund's board is required to approve the fund's swing pricing policies and procedures, as well as the fund's swing factor upper limit and swing threshold(s) and any changes to the upper limit or threshold(s). The fund's board is also required to periodically review a written report prepared by the persons responsible for administering swing pricing that includes certain required information.[565] A fund that adopts swing pricing policies and procedures also would be subject to certain recordkeeping requirements under proposed amendments to each of rule 22c–1 and rule 31a–2. We estimate that the annual external cost burden of

[551] This estimate is based on the following calculation: 1 hour × 474 funds = 474 hours.

[552] This estimate is based on the following calculation: 474 hours × $324 (blended hourly rate for a compliance attorney ($340) and a senior programmer ($308)) = $153,576.

[553] This estimate is based on the following calculation: 2 burden hours (year 1) + 1 burden hour (year 2) + 1 burden hour (year 3) ÷ 3 = 1.33 hours.

[554] This estimate is based on the following calculation: $648 (year 1 monetized burden hours) + $324 (year 2 monetized burden hours) + $324 (year 3 monetized burden hours) ÷ 3 = $432.

[555] This estimate is based on the following calculation: 316 hours + 474 hours = 790 hours.

[556] This estimate is based on the following calculation: $102,384 + $153,576= $255,960.

[557] 5 U.S.C. 604.

[558] *See* Proposing Release, *supra* footnote 6, at section VI.

[559] *See* CRMC Comment Letter; Dechert Comment Letter; ICI Comment Letter I; IDC Comment Letter.

[560] *See* rule 0–10(a) under the Act.

[561] *See supra* section II.A.

[562] A fund may have multiple, escalating swing factors, with each factor associated with a different swing threshold, subject to the two percent upper limit. *See supra* section II.A.3.c.

[563] *Id.*

[564] *See supra* section II.A.3.e.

[565] *See supra* section II.A.3.f.

compliance with these recordkeeping requirements would increase by $600 per fund that engages in swing pricing.[566] Because the amendments permit, but do not require a fund to adopt swing pricing policies and procedures, there is no compliance date associated with this rule. We are providing a two-year effective date for the new swing pricing amendments, however, to provide time for funds, their intermediaries and service providers to make any operational changes necessary to implement swing pricing.[567] By providing a uniform extended effective date, all eligible funds will have time to develop swing pricing capabilities (should they choose to do so) and competitive advantages among funds may be mitigated.

As discussed above, we estimate that, on average, a fund complex would incur one-time costs ranging from $2.4 million to $48.5 million, depending on the fund complex's particular circumstances, to adopt swing pricing policies and procedures and comply with related record retention requirements, as well as ongoing annual costs ranging from $120,000 to $15.8 million per year associated with the new swing pricing (and related recordkeeping) regulations.[568] We estimate that 12 small fund complexes, rather than 24 small fund complexes (half as many small fund complexes as estimated in the proposal), include funds that will adopt swing pricing policies and procedures pursuant to the rule.[569] We further estimate that these small fund complexes would incur one-time and ongoing costs on the low end of the estimated range as compared to the high end of the estimated range (one-time costs of approximately $2.4 million and ongoing costs of approximately $120,000 per year for each small fund complex).

2. Disclosure and Reporting Requirements Regarding Swing Pricing

The swing pricing rules include amendments to Form N–1A and additions to Form N–CEN that are intended to enhance fund disclosure and reporting regarding a fund's use of swing pricing. In particular, the amendments to Form N–1A require funds that use swing pricing to disclose that they use swing pricing, and, if applicable, an explanation of what swing pricing is, the circumstances under which swing pricing is used, the effects of using swing pricing, and the upper limit the fund has set on the swing factor.[570] The amendments to Form N–1A also require funds to disclose on their balance sheet the NAV as adjusted pursuant to swing pricing policies and procedures.[571] The amendments to Regulation S–X requires a fund to disclose both its GAAP NAV per share and the Swung NAV per share as adjusted pursuant to the fund's swing pricing policies and procedures (if applicable). The new item in Form N–CEN requires disclosure regarding whether a fund engaged in swing pricing during the reporting period and, if so, the fund's swing factor upper limit. We estimate that 78 funds are small entities that would be required to comply with the proposed disclosure and reporting requirements.[572]

As discussed above, we estimate that each fund, including funds that are small entities, will incur a one-time burden of an additional 2 hours,[573] at a time cost of an additional $648 (plus printing costs), to comply with the amendments to Form N–1A.[574] We also estimate that each fund, including small entities, will incur an ongoing burden of an additional 1 hour, at a time cost of approximately an additional $324 each year associated with compliance with the amendments to Form N–1A.[575] We do not estimate any change to the external costs associated with the amendments to Form N–1A.

As discussed above, we also estimate that the average annual hour burden per additional response to Form N–CEN as a result of the adopted swing pricing additions to Form N–CEN will be 0.5 hour per fund per year.[576] We do not estimate any change to the external costs associated with Form N–CEN.[577]

E. Agency Action To Minimize Effect on Small Entities

The Regulatory Flexibility Act directs the Commission to consider significant alternatives that would accomplish the stated objective, while minimizing any significant impact on small entities. Alternatives in this category would include: (i) Establishing different compliance or reporting standards that take into account the resources available to small entities; (ii) clarifying, consolidating, or simplifying the compliance requirements under the rules and amendments for small entities; (iii) using performance rather than design standards; and (iv) exempting small entities from coverage of the rules and amendments, or any part of the rules and amendments.

The Commission does not presently believe that the swing pricing rules would require the establishment of special compliance requirements or timetables for small entities. The swing pricing rules are specifically designed to reduce any unnecessary burdens on all funds (including small funds). To establish special compliance requirements or timetables for small entities may in fact disadvantage small entities by encouraging larger market participants to focus primarily on the needs of larger entities when making the operational changes envisioned by the swing pricing rules, and possibly ignoring the needs of smaller funds.

With respect to further clarifying, consolidating, or simplifying the compliance requirements of the swing pricing rules, using performance rather than design standards, and exempting small entities from coverage of the swing pricing rules or any part of the swing pricing rules, we believe additional such changes would be impracticable. Small entities are as vulnerable to the risk of dilution of the interests of fund shareholders as larger funds. We believe that the swing pricing rules are necessary to help mitigate these risks. Exempting small funds from coverage under the swing pricing rules or any part of the swing pricing rules could compromise the effectiveness of the swing pricing rules or any part of the swing pricing rules.

VI. Statutory Authority and Text of Amendments

The Commission is adopting amendments to rule 22c–1 under the authority set forth in sections 22(c) and 38(a) of the Investment Company Act [15 U.S.C. 80a–22(c) and 80a–37(a)]. The Commission is adopting amendments to rule 31a–2 under the authority set forth in section 31(a) of the Investment Company Act [15 U.S.C. 80a–31(a)]. The Commission is adopting amendments to Form N–1A, Regulation S–X, and proposed Form N–CEN under the authority set forth in the Securities Act, particularly section 19 thereof [15 U.S.C. 77a *et seq.*], the Trust Indenture Act, particularly, section 19 thereof [15 U.S.C. 77aaa *et seq.*], the Exchange Act, particularly sections 10, 13, 15, and 23, and 35A thereof [15 U.S.C. 78a *et seq.*],

[566] *See supra* footnote 512 and accompanying text.

[567] *See supra* section II.A.1.

[568] *See supra* footnote 439 and accompanying paragraph.

[569] *See supra* footnote 489 and accompanying text.

[570] *See supra* section II.B.

[571] *Id.*

[572] Commission staff estimate as of December 31, 2015.

[573] *See supra* footnote 526 and accompanying text.

[574] *See supra* footnote 527 and accompanying text.

[575] *See supra* footnote 531 and accompanying text.

[576] *See supra* footnote 520 and accompanying paragraph.

[577] *Id.*

and the Investment Company Act, particularly, sections 8, 30, and 38 thereof [15 U.S.C. 80a *et seq.*].

Text of Rules and Forms

List of Subjects

17 CFR Part 210

Accounting, Investment companies, Reporting and recordkeeping requirements, Securities.

17 CFR Parts 270 and 274

Investment companies, Reporting and recordkeeping requirements, Securities.

For the reasons set out in the preamble, title 17, chapter II of the Code of Federal Regulations is amended as follows:

PART 210—FORM AND CONTENT OF AND REQUIREMENTS FOR FINANCIAL STATEMENTS, SECURITIES ACT OF 1933, SECURITIES EXCHANGE ACT OF 1934, INVESTMENT COMPANY ACT OF 1940, INVESTMENT ADVISERS ACT OF 1940, AND ENERGY POLICY AND CONSERVATION ACT OF 1975

■ 1. The authority citation for part 210 continues to read as follows:

Authority: 15 U.S.C. 77f, 77g, 77h, 77j, 77s, 77z–2, 77z–3, 77aa(25), 77aa(26), 77nn(25), 77nn(26), 78c, 78j–1, 78*l,* 78m, 78n, 78o(d), 78q, 78u–5, 78w, 78*ll,* 78mm, 80a–8, 80a–20, 80a–29, 80a–30, 80a–31, 80a–37(a), 80b–3, 80b–11, 7202 and 7262, unless otherwise noted.

■ 2. Amend § 210.6–02 by adding paragraph (e) to read as follows:

§ 210.6–02 Definition of certain terms.

* * * * *

(e) *Swing pricing.* The term *swing pricing* shall have the meaning given in § 270.22c–1(a)(3)(v)(C) of this chapter.

■ 3. Section 210.6–03, as revised elsewhere in this issue of the **Federal Register**, is further amended by adding paragraph (m) to read as follows:

§ 210.6–03 Special rules of general application to registered investment companies and business development companies.

* * * * *

(m) *Swing pricing.* For a registered investment company that has adopted swing pricing policies and procedures, state in a note to the company's financial statements:

(1) The general methods used in determining whether the company's net asset value per share will swing;

(2) Whether the company's net asset value per share has swung during the year; and

(3) A general description of the effects of swing pricing.

PART 270—RULES AND REGULATIONS, INVESTMENT COMPANY ACT OF 1940

■ 4. The authority citation for part 270 continues to read, in part, as follows:

Authority: 15 U.S.C. 80a–1 *et seq.,* 80a–34(d), 80a–37, 80a–39, and Pub. L. 111–203, sec. 939A, 124 Stat. 1376 (2010), unless otherwise noted.

* * * * *

■ 5. Amend § 270.22c–1 by adding paragraph (a)(3) to read as follows:

§ 270.22c–1 Pricing of redeemable securities for distribution, redemption and repurchase.

(a) * * *

(3) Notwithstanding this paragraph (a), a registered open-end management investment company (but not a registered open-end management investment company that is regulated as a money market fund under § 270.2a–7 or an exchange-traded fund as defined in paragraph (a)(3)(v)(A) of this section) (a ''fund'') may use swing pricing to adjust its current net asset value per share to mitigate dilution of the value of its outstanding redeemable securities as a result of shareholder purchase or redemption activity, provided that it has established and implemented swing pricing policies and procedures in compliance with the paragraphs (a)(3)(i) through (v) of this section.

(i) The fund's swing pricing policies and procedures must:

(A) Provide that the fund must adjust its net asset value per share by a single swing factor or multiple factors that may vary based on the swing threshold(s) crossed once the level of net purchases into or net redemptions from such fund has exceeded the applicable swing threshold for the fund. In determining whether the fund's level of net purchases or net redemptions has exceeded the applicable swing threshold(s), the person(s) responsible for administering swing pricing shall be permitted to make such determination based on receipt of sufficient information about the fund investors' daily purchase and redemption activity (''investor flow'') to allow the fund to reasonably estimate whether it has crossed the swing threshold(s) with high confidence, and shall exclude any purchases or redemptions that are made in kind and not in cash. This investor flow information may consist of individual, aggregated, or netted orders, and may include reasonable estimates where necessary.

(B) Specify the process for how the fund's swing threshold(s) shall be determined, considering:

(1) The size, frequency, and volatility of historical net purchases or net redemptions of fund shares during normal and stressed periods;

(2) The fund's investment strategy and the liquidity of the fund's portfolio investments;

(3) The fund's holdings of cash and cash equivalents, and borrowing arrangements and other funding sources; and

(4) The costs associated with transactions in the markets in which the fund invests.

(C) Specify the process for how the swing factor(s) shall be determined, which must include: The establishment of an upper limit on the swing factor(s) used, which may not exceed two percent of net asset value per share; and the determination that the factor(s) used are reasonable in relationship to the costs discussed in this paragraph. In determining the swing factor(s) and the upper limit, the person(s) responsible for administering swing pricing may take into account only the near-term costs expected to be incurred by the fund as a result of net purchases or net redemptions that occur on the day the swing factor(s) is used, including spread costs, transaction fees and charges arising from asset purchases or asset sales resulting from those purchases or redemptions, and borrowing-related costs associated with satisfying redemptions.

(ii) The fund's board of directors, including a majority of directors who are not interested persons of the fund must:

(A) Approve the fund's swing pricing policies and procedures;

(B) Approve the fund's swing threshold(s) and the upper limit on the swing factor(s) used, and any changes to the swing threshold(s) or the upper limit on the swing factor(s) used;

(C) Designate the fund's investment adviser, officer, or officers responsible for administering the swing pricing policies and procedures (''person(s) responsible for administering swing pricing''). The administration of swing pricing must be reasonably segregated from portfolio management of the fund and may not include portfolio managers; and

(D) Review, no less frequently than annually, a written report prepared by the person(s) responsible for administering swing pricing that describes:

(*1*) Its review of the adequacy of the fund's swing pricing policies and procedures and the effectiveness of their implementation, including the impact on mitigating dilution;

(2) Any material changes to the fund's swing pricing policies and procedures since the date of the last report; and

(*3*) Its review and assessment of the fund's swing threshold(s), swing factor(s), and swing factor upper limit considering the requirements of paragraphs (a)(3)(i)(B) and (C) of this section, including the information and data supporting the determination of the swing threshold(s), swing factor(s), and swing factor upper limit.

(iii) The fund shall maintain the policies and procedures adopted by the fund under this paragraph (a)(3) that are in effect, or at any time within the past six years were in effect, in an easily accessible place, and shall maintain a written copy of the report provided to the board under paragraph (a)(3)(ii)(C) of this section for six years, the first two in an easily accessible place.

(iv) Any fund (a ''feeder fund'') that invests, pursuant to section 12(d)(1)(E) of the Act (15 U.S.C. 80a–12(d)(1)(E)), in another fund (a ''master fund'') may not use swing pricing to adjust the feeder fund's net asset value per share; however, a master fund may use swing pricing to adjust the master fund's net asset value per share, pursuant to the requirements set forth in this paragraph (a)(3).

(v) For purposes of this paragraph (a)(3):

(A) *Exchange-traded fund* means an open-end management investment company (or series or class thereof), the shares of which are listed and traded on a national securities exchange, and that has formed and operates under an exemptive order under the Act granted by the Commission or in reliance on an exemptive rule adopted by the Commission.

(B) *Swing factor* means the amount, expressed as a percentage of the fund's net asset value and determined pursuant to the fund's swing pricing policies and procedures, by which a fund adjusts its net asset value per share once a fund's applicable swing threshold has been exceeded.

(C) *Swing pricing* means the process of adjusting a fund's current net asset value per share to mitigate dilution of the value of its outstanding redeemable securities as a result of shareholder purchase and redemption activity, pursuant to the requirements set forth in this paragraph (a)(3).

(D) *Swing threshold* means an amount of net purchases or net redemptions, expressed as a percentage of the fund's net asset value, that triggers the application of swing pricing.

(E) *Transaction fees and charges* means brokerage commissions, custody fees, and any other charges, fees, and taxes associated with portfolio asset purchases and sales.

* * * * *

■ 6. Section 270.31a–2 is amended by revising paragraph (a)(2) to read as follows:

§ 270.31a–2 Records to be preserved by registered investment companies, certain majority-owned subsidiaries thereof, and other persons having transactions with registered investment companies.

(a) * * *

(2) Preserve for a period not less than six years from the end of the fiscal year in which any transactions occurred, the first two years in an easily accessible place, all books and records required to be made pursuant to paragraphs (b)(5) through (12) of § 270.31a–1 and all vouchers, memoranda, correspondence, checkbooks, bank statements, cancelled checks, cash reconciliations, cancelled stock certificates, and all schedules evidencing and supporting each computation of net asset value of the investment company shares, including schedules evidencing and supporting each computation of an adjustment to net asset value of the investment company shares based on swing pricing policies and procedures established and implemented pursuant to § 270.22c–1(a)(3), and other documents required to be maintained by § 270.31a–1(a) and not enumerated in § 270.31a–1(b).

* * * * *

PART 274—FORMS PRESCRIBED UNDER THE INVESTMENT COMPANY ACT OF 1940

■ 7. The general authority citation for part 274 continues to read, in part, as follows, and the sectional authorities for §§ 274.101 and 274.130 are removed:

Authority: 15 U.S.C. 77f, 77g, 77h, 77j, 77s, 78c(b), 78*l*, 78m, 78n, 78o(d), 80a–8, 80a–24, 80a–26, 80a–29, and Pub. L. 111–203, sec. 939A, 124 Stat. 1376 (2010), unless otherwise noted.

* * * * *

§ 274.11A [Amended]

■ 8. Amend Form N–1A (referenced in § 274.11A) by:

■ a. In Item 4(b)(2)(ii) adding a sentence regarding the effects of swing pricing and in Item 4(b)(2)(iv) adding paragraph (E)

■ b. In Item 6 adding paragraph (d);

■ c. In Item 13, adding ''Capital Adjustments Due to Swing Pricing'' after ''Total Distributions'' to the list in paragraph (a);

■ d. In Item 13, adding ''Net Asset Value, adjusted pursuant to swing pricing, End of Period'' after ''Net Asset Value, End of Period''.

■ e. In Item 13, Instruction 2., adding paragraphs (d) and (e).

The additions read as follows:

Note: The text of Form N–1A does not, and this amendment will not, appear in the Code of Federal Regulations.

Form N–1A

* * * * *

Item 4. Risk/Return Summary: Investments, Risks, and Performance

* * * * *

(b) * * *

(2) * * *

(ii) If swing pricing policies and procedures were applied during any of the periods, include a general description of the effects of swing pricing on the Fund's annual total returns for the applicable period(s) presented in a footnote to the bar chart.

* * * * *

(b) * * *

(2) * * *

(iv) * * *

(E) If swing pricing policies and procedures were applied during any of the periods, include a general description of the effects of swing pricing on the Fund's average annual total returns for the applicable period(s) presented.

Item 6. Purchase and Sale of Fund Shares

* * * * *

(d) If the Fund uses swing pricing, explain the Fund's use of swing pricing; including what swing pricing is, the circumstances under which the Fund will use it, the effects of swing pricing on the Fund and investors, and provide the upper limit it has set on the swing factor. With respect to any portion of a Fund's assets that is invested in one or more open-end management investment companies that are registered under the Investment Company Act, the Fund shall include a statement that the Fund's net asset value is calculated based upon the net asset values of the registered open-end management investment companies in which the Fund invests, and, if applicable, state that the prospectuses for those companies explain the circumstances under which they will use swing pricing and the effects of using swing pricing.

* * * * *

Item 13. Financial Highlights Information

* * * * *

Instructions * * *

2. *Per Share Operating Performance.* * * *

* * * * *

(d) The amount shown at the Capital Adjustments Due to Swing Pricing caption should include the per share impact of any amounts retained by the Fund pursuant to its swing pricing policies and procedures, if applicable.

(e) The amounts shown at the Net Asset Value, as adjusted pursuant to swing pricing, End of Period caption should be the Fund's net asset value per share as adjusted pursuant to its swing pricing policies and procedures on the last day of the reporting period, if applicable.

* * * * *

§ 274.101 [Amended]

■ 9. Form N–CEN (referenced in § 274.101), as revised elsewhere in this issue of the **Federal Register**, is further amended by:

■ a. In Part C, adding Item C.21.

The addition read as follows:

Form N–CEN

Annual Report for Registered Investment Companies

* * * * *

Part C. Additional Questions for Management Investment Companies

* * * * *

Item C.21. Swing pricing. For open-end management investment companies, respond to the following:

d. Did the Fund (if not a Money Market Fund, Exchange-Traded Fund, or Exchange-Traded Managed Fund) engage in swing pricing? [Yes/No]

i. If so, what was the swing factor upper limit?

* * * * *

By the Commission.

Dated: October 13, 2016.

Brent J. Fields,

Secretary.

[FR Doc. 2016–25347 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

FEDERAL REGISTER

Vol. 81 Friday,

No. 223 November 18, 2016

Part IV

Securities and Exchange Commission

17 CFR Parts 270 and 274

Investment Company Liquidity Risk Management Programs; Final Rule

SECURITIES AND EXCHANGE COMMISSION

17 CFR Parts 270 and 274

[Release Nos. 33–10233; IC–32315; File No. S7–16–15]

RIN 3235–AL61

Investment Company Liquidity Risk Management Programs

AGENCY: Securities and Exchange Commission.

ACTION: Final rule.

SUMMARY: The Securities and Exchange Commission is adopting new rules, a new form and amendments to a rule and forms designed to promote effective liquidity risk management throughout the open-end investment company industry, thereby reducing the risk that funds will be unable to meet their redemption obligations and mitigating dilution of the interests of fund shareholders. The amendments also seek to enhance disclosure regarding fund liquidity and redemption practices. The Commission is adopting new rule 22e–4, which requires each registered open-end management investment company, including open-end exchange-traded funds (''ETFs'') but not including money market funds, to establish a liquidity risk management program. Rule 22e–4 also requires principal underwriters and depositors of unit investment trusts (''UITs'') to engage in a limited liquidity review. The Commission is also adopting amendments to Form N–1A regarding the disclosure of fund policies concerning the redemption of fund shares. The Commission also is adopting new rule 30b1–10 and Form N–LIQUID that generally will require a fund to confidentially notify the Commission when the fund's level of illiquid investments that are assets exceeds 15% of its net assets or when its highly liquid investments that are assets fall below its minimum for more than a specified period of time. The Commission also is adopting certain sections of Forms N–PORT and N–CEN that will require disclosure of certain information regarding the liquidity of a fund's holdings and the fund's liquidity risk management practices.

DATES: *Effective Dates:* This rule is effective January 17, 2017 except for the amendments to Form N–CEN (referenced in 17 CFR 274.101) which are effective June 1, 2018.

Compliance Dates: The applicable compliance dates are discussed in section III.M. of this final rule.

FOR FURTHER INFORMATION CONTACT: Zeena Abdul-Rahman, John Foley, Andrea Ottomanelli Magovern, Naseem Nixon, Amanda Hollander Wagner, Senior Counsels; Thoreau Bartmann, Melissa Gainor, Senior Special Counsels; or Kathleen Joaquin, Senior Financial Analyst, Investment Company Rulemaking Office, at (202) 551–6792, Ryan Moore, Assistant Chief Accountant, or Matt Giordano, Chief Accountant at (202) 551–6918, Office of the Chief Accountant, Division of Investment Management, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–8549.

SUPPLEMENTARY INFORMATION: The Securities and Exchange Commission (the ''Commission'') is adopting new rules 22e–4 [17 CFR 270.22e–4] and 30b1–10 [17 CFR 270.223], under the Investment Company Act of 1940 [15 U.S.C. 80a–1 *et seq.*] (''Investment Company Act'' or ''Act''); new Form–N–LIQUID [referenced in 17 CFR 274.30b1–10] under the Investment Company Act; amendments to Form–N–1A [referenced in 17 CFR 274.11A] under the Investment Company Act and the Securities Act of 1933 (''Securities Act'') [15 U.S.C. 77a *et seq.*]; and adopting sections to Form N–PORT [referenced in 17 CFR 274.150] and Form N–CEN [referenced in 17 CFR 274.101] under the Investment Company Act.[1]

Table of Contents

I. Introduction

Redeemability is a defining feature of open-end investment companies.[2] At the time the Act was adopted, this feature was recognized as unique to open-end investment companies,[3] and the Act's classification of management investment companies as either open-end (''open-end funds'' or ''funds'')[4] or

[1] Unless otherwise noted, all references to statutory sections are to the Investment Company Act, and all references to rules under the Investment Company Act are to Title 17, Part 270 of the Code of Federal Regulations [17 CFR 270].

[2] *See* Investment Trusts and Investment Companies: Letter from the Acting Chairman of the SEC, A Report on Abuses and Deficiencies in the Organization and Operation of Investment Trusts and Investment Companies (1939), at n.206 (''[T]he salient characteristic of the open-end investment company . . . was that the investor was given a right of redemption so that he could liquidate his investment at or about asset value at any time that he was dissatisfied with the management or for any other reason.''). An open-end investment company is required by law to redeem its securities on demand from shareholders at a price approximating their proportionate share of the fund's net asset value (''NAV'') next calculated by the fund after receipt of such redemption request.

[3] *See* Investment Trusts and Investment Companies: Hearings on S. 3580 before a Subcomm. of the Senate Comm. on Banking and Currency, 76th Cong., 3d Sess. (1940) (''1940 Senate Hearings Transcript''), at 453 (Statement of Mahlon E. Traylor) (''Open-end companies are unlike any other type of investment company, principally because of the highly important distinguishing feature that their shareholders can, by contract right, withdraw their proportionate interest at will simply by surrendering their shares to the company for redemption at liquidating value.'').

[4] In-Kind ETFs (as defined below) are included when we refer to ''funds'' or ''open-end funds'' throughout this Release, except in the sections discussing classifying the liquidity of a fund's portfolio positions and the highly liquid investment minimum requirement, from which In-Kind ETFs are excepted. We have done this for conciseness

closed-end, upon which several of the Act's other provisions depend, turns on whether the investment company's shareholders have the right to redeem their shares on demand. When the Investment Company Act was enacted, it was understood that redeemability meant that an open-end fund had to have a liquid portfolio.[5] Since the 1940s, the Commission has stated that open-end funds should maintain highly liquid portfolios and recognized that this may limit their ability to participate in certain transactions in the capital markets.[6] Section 22(e) of the Act enforces the shareholder's right of prompt redemption in open-end funds by compelling such funds to make payment on shareholder redemption requests within seven days of receiving the request. Potential dilution of shareholders' interests in open-end funds also was a significant concern of Congress when drafting the Act and was among the noted abuses that led to the enactment of the Act, as reflected in sections 22(a) and (c).[7]

Although the Investment Company Act provides funds with a seven-day window to pay proceeds upon an investor's redemption, the settlement period for open-end fund redemptions has shortened considerably over the years. There are several reasons for shorter settlement periods, including broker-dealer settlement cycle requirements,[8] evolving industry standards, and technological advances in the settlement infrastructure.[9] In addition, many funds state in their prospectuses that investors can ordinarily expect to receive redemption proceeds in shorter periods than seven days.[10] At the same time, open-end funds have experienced significant growth,[11] markets have grown more complex, and funds pursue more complex investment strategies, including fixed income and alternative investment strategies focused on less liquid asset classes. These trends have made the role of fund liquidity and liquidity management more important than ever in reducing the risk that a fund will be unable to meet its obligations to redeeming shareholders or other obligations under applicable law, while also minimizing the impact of those redemptions on the fund (*i.e.,* mitigating investor dilution). Furthermore, recent events have demonstrated the significant adverse consequences to remaining investors in a fund when it fails to adequately manage liquidity.[12]

We remain committed, as the primary regulator of open-end funds, to designing regulatory programs that respond to the risks associated with the increasingly complex portfolio composition and operations of the asset management industry. In developing the proposed rules, Commission staff engaged with large and small fund complexes to better understand funds' management of liquidity risk. Through these outreach efforts our staff has learned that, while some funds and their managers have developed extensive liquidity risk management programs, others have dedicated significantly fewer resources, attention and focus to managing liquidity risk in a formalized way. We believe that it is in the interest of funds and fund investors to create a regulatory framework that would reduce the risk that a fund will be unable to meet its redemption obligations and minimize dilution of shareholder interests by promoting stronger and more effective liquidity risk management across open-end funds.

We sought to address these goals with the proposal on fund liquidity risk management that we published in late 2015.[13] This proposal would have required funds to: establish liquidity risk management programs, including classifying and monitoring each portfolio asset's level of liquidity and designating a minimum amount of highly liquid investments; provide additional reporting to us; and enhance disclosure to investors regarding the liquidity of fund portfolios and how funds manage liquidity risk and redemption obligations. In order to

and we recognize that these naming conventions differ from the text of rule 22e–4. Additionally, while a money market fund is an open-end management investment company, money market funds are not subject to the rules and amendments we are adopting (except certain amendments to Form N–CEN and Form N–1A) and thus are not included when we refer to ''funds'' or ''open-end funds'' in this Release except where specified.

[5] *See* Investment Trusts and Investment Companies: Hearings on H.R. 10065 before a Subcomm. of the House Comm. on Interstate and Foreign Commerce, 76th Cong., 3d Sess. 112 (1940), at 57 (Statement of Robert E. Healy) (''due to the right of the stockholder to come in and demand a redemption, the [open-end fund] has to keep itself in a very liquid position. That is, it has to be able to turn its securities into money on very short notice.'').

[6] *See* Investment Trusts and Investment Companies: Report of the Securities and Exchange Commission (1942), at 76 (''Open-end investment companies, because of their security holders' right to compel redemption of their shares by the company at any time, are compelled to invest their funds predominantly in readily marketable securities. Individual open-end investment companies, therefore, as presently constituted, could participate in the financing of small enterprises and new ventures only to a very limited extent.'').

[7] *See* 1940 Senate Hearings Transcript, *supra* footnote 3, at 37, 137–145 (stating that, among the abuses that served as a backdrop for the Act, were ''practices which resulted in substantial dilution of investors' interests'', including backward pricing by fund insiders to increase investment in the fund and thus enhance management fees, but causing dilution of existing investors in the fund).

[8] Open-end funds that are redeemed through broker-dealers must meet redemption requests within three business days because broker-dealers are subject to rule 15c6–1 under the Securities Exchange Act of 1934 (the ''Exchange Act''), which establishes a three-day (T + 3) settlement period for security trades effected by a broker or a dealer.

[9] Generally, settlement time frames for mutual fund shares have been shortening for decades. *See* Open-End Fund Liquidity Risk Management Programs; Swing Pricing; Re-Opening of Comment Period for Investment Company Reporting Modernization Release, Investment Company Act Release No. 31835 (Sept. 22, 2015) [80 FR 62274 (Oct. 15, 2015)] (''Proposing Release''), at section II.C.2. *See also, e.g.,* T+2 Industry Steering Committee, Shortening the Settlement Cycle: The Move to T+2 (2015), at n.18, *available at http://www.ust2.com/pdfs/ssc.pdf* (''In today's environment . . . open-end mutual funds settle through NSCC generally on a T+1 basis (excluding certain retail trades which typically settle on T+3).''). *See also* Amendment to Securities Transaction Settlement Cycle, Securities Exchange Act Release No. 34–78962 (September 29, 2016) [81 FR 69240 (October 05, 2016)].

[10] *See, e.g.,* Fidelity Commonwealth Trust rule 485(b) Registration Statement (June 29, 2016), *available at https://www.sec.gov/Archives/edgar/data/205323/000137949116004602/filing776.htm* (''Normally, redemptions will be processed by the next business day, but it may take up to seven days to pay the redemption proceeds if making immediate payment would adversely affect the fund.''); PIMCO Funds rule 485(b) Registration Statement (Feb. 26, 2016), *available at https://www.sec.gov/Archives/edgar/data/810893/000119312516481663/d149399d485bpos.htm#chapter_7_3686* (''Redemption proceeds will normally be mailed to the redeeming shareholder within three calendar days . . . [but] may take up to seven days.'').

[11] As of the end of 2015, there were 10,633 open-end funds (excluding money market funds, but including ETFs), as compared to 5,279 at the end of 1996. *See* Investment Company Institute, 2016 Investment Company Fact Book (2016) *(''2016 ICI Fact Book''), available at https://www.ici.org/pdf/2016_factbook.pdf.*

[12] For example, during the pendency of our proposal, the Third Avenue Focused Credit Fund, a non-diversified open-end fund, adopted a plan of liquidation, and requested and obtained exemptive relief to suspend shareholder redemptions, following a period of heavy redemption requests that the fund stated reduced the fund's portfolio liquidity. The Third Avenue Focused Credit Fund has yet to complete the liquidation of fund assets. Additionally, the fund reported that, as a result of the continuous liquidation of securities without reinvestment, the fund became increasingly more concentrated, which negatively impacted performance. *See* Third Avenue Trust and Third Avenue Management LLC, Investment Company Act Release No. 31943 (Dec. 16, 2015) (''Third Avenue Temporary Order''); Third Avenue Focused Credit Fund Semi-Annual Report to Shareholders (April 30, 2016), *available at: http://thirdave.com/wp-content/uploads/2016/06/Q2-2016-TFCIX-Semi-Annual-Report.pdf* (''The Fund is considerably more concentrated than it has ever been. As we have been liquidating securities and not recycling the cash, the top 10 holdings have increased from 32.6% at March 31, 2015 to approximately 67% of the Fund. We are increasingly dependent on the top 10 names to drive performance.''). *See also infra* footnotes 81–84 and accompanying text.

[13] *See* Proposing Release, *supra* footnote 9.

provide funds with an additional tool to mitigate potential dilution and to manage fund liquidity, the proposal included amendments to rule 22c–1 under the Act to permit funds (except money market funds and ETFs) to use ''swing pricing,'' a process of adjusting the NAV of a fund's shares to pass on to purchasing or redeeming shareholders more of the costs associated with their trading activity.[14]

We received more than 70 comment letters on the proposal.[15] The majority of commenters generally supported a requirement that funds adopt a formal, written liquidity risk management program that is risk oriented and principles based, although many provided suggestions and alternatives for us to consider.[16] Many commenters objected to certain aspects of the proposal, particularly the liquidity classification requirement, the three-day liquid asset minimum, and the requirement that funds publicly disclose the liquidity of each portfolio position.[17] Several commenters specifically supported applying the liquidity risk management requirements to all open-end funds, with the exception of money market funds.[18] Others expressed concerns with regard to ETFs, and recommended that the Commission exclude ETFs that primarily satisfy purchase and redemption orders in kind from the liquidity risk management requirements or develop a more tailored liquidity risk management program applicable to ETFs.[19]

Today, after consideration of the many comments we received, we are adopting the proposal with a number of modifications to enhance the effectiveness and workability of the rule's liquidity risk management requirements. The Commission is adopting new rule 22e–4, which will require each fund to adopt and implement a written liquidity risk management program designed to assess and manage the fund's liquidity risk, which will be overseen by the fund's board. As discussed in more detail below, the Commission is modifying from the proposal some of the liquidity risk management program elements, including reducing the liquidity classification categories from six to four, providing tailored program requirements for ETFs, and revising the fund board oversight requirements.

The new rule contains a highly liquid investment minimum requirement, which is similar to the proposed three-day liquid asset minimum. However, instead of barring a fund from purchasing securities other than highly liquid investments if the fund falls below its minimum as proposed for the three-day liquid asset minimum, under the adopted rules, if the fund falls below its highly liquid investment minimum, it would: (1) Report that occurrence to the fund board at its next scheduled meeting; (2) if it is below the minimum for more than a brief period of time, report the occurrence to the board and, on Form N–LIQUID, to the Commission within one business day; and (3) develop and provide to the board a plan for restoring the minimum within a reasonable period of time.

We also are adopting a 15% limitation on funds' purchases of illiquid investments, largely as proposed, but the definition of investments considered illiquid and subject to this 15% limit has been enhanced and substantially harmonized with the classification system we are adopting today. Additionally, the Commission is adopting new reporting Form N–LIQUID, which will require a fund to confidentially notify the Commission within one business day if the fund's illiquid investment holdings exceed 15% of its net assets or if its highly liquid investments fall below its minimum for more than a brief period of time. Furthermore, much as proposed, the Commission is adopting reporting and disclosure requirements under Form N–CEN, Form N–PORT, and Form N–1A regarding liquidity risk and liquidity risk management. In response to commenters' concerns, a number of the additional reporting items on Form N–PORT will be non-public.[20]

Taken together, these reforms are designed to provide investors with increased protection regarding how liquidity in their open-end funds is managed, thereby reducing the risk that funds will be unable to meet redemption or other legal obligations, and mitigating dilution of the interests of fund shareholders. These reforms also are intended to give investors better information to make investment decisions, and to give the Commission better information to conduct comprehensive monitoring and oversight of an ever-evolving fund industry.

II. Background

A. Open-End Funds

As we discussed in the Proposing Release, individual and institutional investors increasingly have come to rely on investments in open-end funds to meet their financial needs and access the capital markets. At the end of 2015, 54.9 million households, or 44.1 percent of all U.S. households owned funds.[21] Funds allow investors to pool their investments with those of other investors so that they may together benefit from fund features such as professional investment management, diversification, and liquidity. Fund shareholders share the gains and losses of the fund, and also share its costs.[22]

[14] We note that we are adopting swing pricing, and associated changes to Form N–PORT and N–CEN in a companion release. *See* Investment Company Swing Pricing, Investment Company Act Release No. 32316 (Oct. 13, 2016) (''Swing Pricing Adopting Release''). All comments on the proposed swing pricing rules and associated issues are discussed in that release.

[15] The comment letters on the Proposing Release (File No. S7–16–15) are *available at http://www.sec.gov/comments/s7-16-15/s71615.shtml.*

[16] *See, e.g.,* Comment Letter of Investment Company Institute (Jan. 13, 2016) (''ICI Comment Letter I''); Comment Letter of BlackRock Inc. (Jan. 13, 2016) (''BlackRock Comment Letter''); Comment Letter of Charles Schwab Investment Management (Jan. 13, 2016) (''Charles Schwab Comment Letter'').

[17] *See, e.g.,* ICI Comment Letter I (arguing that the six-category asset classification scheme and three-day liquid asset minimum are problematic and encourage a ''one-size-fits-all'' approach rather than a risk-based approach to liquidity management); Charles Schwab Comment Letter (arguing that public disclosure of the liquidity of each portfolio position may confuse and mislead investors).

[18] *See, e.g.,* Comment Letter of HSBC Global Asset Management (Jan. 13, 2016) (''HSBC Comment Letter'') (supporting the exclusion of closed-end funds and money market funds from the liquidity risk management requirements); Charles Schwab Comment Letter (supporting the application of the risk management requirements to ETFs).

[19] *See, e.g.,* ICI Comment Letter I; BlackRock Comment Letter (suggesting that the Commission should develop a separate and comprehensive rule addressing the different types of ETFs and their respective risks). The comments we received addressing exchange-traded managed funds (''ETMFs'') suggested that the Commission treat ETMFs in the same manner as ETFs and did not recommend any further unique treatment of ETMFs. *See* Comment Letter of the American Bar Association (Feb. 11, 2016); Comment Letter of Financial Services Roundtable (Jan. 13, 2016) (''FSR Comment Letter'').

[20] If any provision of these rules, or the application thereof to any person or circumstance, is held to be invalid, such invalidity shall not affect other provisions or application of such provisions to other persons or circumstances that can be given effect without the invalid provision or application.

[21] *See* 2016 ICI Fact Book, *supra* footnote 11, at 12.

[22] There are currently four primary kinds of open-end funds: Money market funds, mutual funds other than money market funds, ETFs, and ETMFs. Money market funds are a special kind of mutual fund that complies with the requirements of rule 2a–7 under the Act. ETFs registered with the Commission are organized either as open-end management investment companies or unit investment trusts. *See* section 4(2) of the Act (defining ''unit investment trust'' as an investment company which (A) is organized under a trust indenture, contract of custodianship or agency, or similar instrument, (B) does not have a board of directors, and (C) issues only redeemable securities, each of which represents an undivided interest in a unit of specified securities, but does not include a voting trust). Most ETFs are organized as open-end management investment companies and, except

As noted above, investors in mutual funds can redeem their shares on each business day and, by law, must receive approximately their *pro rata* share of the fund's net assets (or its cash value) within seven calendar days after receipt of a redemption request.[23] Under the Act's definition of redeemable security, open-end funds have the right to redeem shareholders in cash or in kind (that is, by delivering certain assets from the fund's portfolio, rather than cash, to a redeeming shareholder).[24] However, while funds often reserve the right to redeem in kind for certain redemption requests, the majority of mutual funds redeem only in cash for a variety of reasons, including the limited ability and/or unwillingness of fund shareholders to receive securities rather than cash.[25]

ETFs also offer investors an undivided interest in a pool of assets.[26] ETF shares, similar to listed stocks, are bought and sold throughout the day by investors on an exchange through a broker-dealer.[27] In addition, like mutual funds, ETFs provide redemption rights on a daily basis, but, pursuant to exemptive orders, such redemption rights may be exercised only by certain large market participants—typically broker-dealers—called ''authorized participants.'' [28] When an authorized participant transacts with an ETF to purchase and sell ETF shares, these share transactions are structured in large blocks called ''creation units.'' Most ETFs are structured so that an authorized participant will purchase a creation unit with a ''portfolio deposit,'' which is a basket of assets (and sometimes cash) that generally reflects the composition of the ETF's portfolio.[29] After purchasing a creation unit, an authorized participant may hold the ETF shares or sell (or lend) some or all of them to investors in the secondary market. Similarly, for most ETFs, when an authorized participant wishes to redeem ETF shares, it presents a creation unit of ETF shares to the ETF for redemption and receives in return a ''redemption basket,'' the contents of which are publicly declared by the ETF before the beginning of the trading day.[30]

ETMFs are a hybrid between a traditional mutual fund and an ETF.[31] Like ETFs, ETMFs have shares listed and traded on a national securities exchange; directly issue and redeem shares in creation units only; impose fees on creation units issued and redeemed to authorized participants to offset the related costs to the ETMFs; and primarily utilize in-kind transfers of portfolio deposits in issuing and redeeming creation units. Like mutual funds, ETMFs are bought and sold at prices linked to NAV and seek to maintain the confidentiality of their current portfolio positions.

B. The Role of Liquidity in Open-End Funds

1. Introduction

A hallmark of open-end funds is that they must be able to convert some portion of their portfolio holdings into cash on a frequent basis because they issue redeemable securities, and are required by section 22(e) of the Investment Company Act to make payment to shareholders for securities tendered for redemption within seven days of their tender (although some funds may reserve the right to make redemptions in kind for certain redemption requests). As a practical matter, many investors expect to receive redemption proceeds in fewer than seven days as some mutual funds represent in their prospectuses that they will generally pay redemption proceeds on a next business day basis.[32] Given the statutory and regulatory requirements for meeting redemption requests, as well as any potential liability for representations made to investors regarding payment of redemption proceeds, a mutual fund must adequately manage the liquidity of its portfolio so that redemption requests can be satisfied in a timely manner.

Sufficient liquidity of ETF portfolio positions also is important. Many ETFs typically make in-kind redemptions of creation units, which can mitigate the need for ETFs to maintain cash compared to mutual funds, particularly if the in-kind redemptions are of a representative basket of the ETF's

---

where specified, when we refer to ETFs in this Release, we are referring to ETFs that are organized as open-end management investment companies.

[23] *See* section 2(a)(32) of the Act (defining a ''redeemable security'' as any security, other than short-term paper, that entitles its holder to receive approximately his proportionate share of the issuer's current net assets, or the cash equivalent thereof), and section 22(e) of the Act (providing, in part, that no registered investment company shall suspend the right of redemption, or postpone the date of payment upon redemption of any redeemable security in accordance with its terms for more than seven days after tender of the security absent specified unusual circumstances). *See also* rule 22c–1 (requiring that redeemable securities be transacted ''at a price based on the current net asset value of such security which is next computed after receipt of a tender of such security for redemption or of an order to purchase or sell such security'').

[24] Prior to the adoption of the Act, open-end funds largely redeemed fund shares in cash and, as such, a redeemable security was generally understood to mean a security that was redeemable for cash. *See, e.g.,* Investment Trusts and Investment Companies: Senate Report 1775 on S. 4108, 76th Cong., 3d Sess. (1940), at 2 (''[a redeemable security] is, a security which provides that the holder may tender it to the company at any time and *receive a sum of money* approximating the current market value of his proportionate interest in the company's assets.''[emphasis added]). However, section 2(a)(32) has traditionally been interpreted to give funds the option of redeeming their shares in cash or in kind. *See, e.g.,* Investment Trusts and Investment Companies: Report of the Securities and Exchange Commission Part I (1939) at 21 (''A company is of the 'open-end' type if a shareholder has the right to require the company to purchase or redeem or cause the purchase or redemption of the shares representing his proportionate interest in the company's properties, or the cash equivalent of such interest.''); *see also* Adoption of (1) Rule 18f–1 Under the Investment Company Act of 1940 to Permit Registered Open-End Investment Companies Which Have the Right to Redeem In Kind to Elect to Make Only Cash Redemptions and (2) Form–N–18F–1, Investment Company Act Release No. 6561 (June 14, 1971) [36 FR 11919 (June 23, 1971)] (''Rule 18f–1 and Form N–18F–1 Adopting Release'') (stating that the definition of ''redeemable security'' in section 2(a)(32) of the Investment Company Act ''has traditionally been interpreted as giving the issuer the option of redeeming its securities in cash or in kind.'').

[25] *See* Comment Letter of Invesco Advisers, Inc. (Jan. 13, 2016) (''Invesco Comment Letter'') (''The primary problem with using redemptions in kind to meet large redemptions is the willingness and ability of the redeeming entity to receive securities instead of cash.''). *See also* Money Market Fund Reform; Amendments to Form PF, Investment Company Act Release No. 30551 (June 5, 2013) [78 FR 36834, (June 19, 2013)] (''2013 Money Market Fund Reform Proposing Release''), at n.473 and accompanying text (stating that ''[m]any commenters believed that requiring in-kind redemptions would be technically unworkable due to complex valuation and operational issues that would be imposed on both the fund and on investors receiving portfolio securities.'').

[26] Since 2003, the number of ETFs traded in U.S. markets has increased by more than 2,200 funds, and the assets held by ETFs have increased from $151 billion at the end of 2003 to $2.1 trillion at the end of 2015. *See* 2016 ICI Fact Book, *supra* footnote 11, at 60.

[27] *See* Exchange-Traded Funds, Investment Company Act Release No. 28193 (Mar. 11, 2008) [73 FR 14618 (Mar. 18, 2008)] (''ETF Proposing Release'').

[28] Authorized participants may purchase and redeem ETF shares at the ETF's NAV from the ETF.

[29] The ETF publicly declares the contents of the portfolio deposit before the beginning of the trading day. *See* Request for Comment on Exchange-Traded Products, Securities Exchange Act Release No. 75165 (June 12, 2015) [80 FR 34729 (June 17, 2015)] (''2015 ETP Request for Comment''), at nn.19–20 and accompanying text.

[30] *See* ETF Proposing Release, *supra* footnote 27, at n.24 and accompanying text.

[31] The Commission approved ETMFs in 2014 and the first ETMFs have since been launched. *See* Eaton Vance Management, *et al.,* Investment Company Act Release No. 31333 (Nov. 6, 2014) (notice of application) (''ETMF Notice'') and In the Matter of Eaton Vance Management, *et al.,* Investment Company Act Release No. 31361 (Dec. 2, 2014) (order) (''ETMF Order''). Given the similarities between ETFs and ETMFs and that the new requirements will apply to ETMFs as they do to ETFs, this Release generally includes ETMFs in the term ''ETF'' and separately mentions ETMFs only if appropriate. *See supra* footnote 19.

[32] *See supra* footnote 10; *see also supra* footnote 8 (noting that open-end funds that are redeemed through broker-dealers must meet redemption requests within three business days due to the application of rule 15c6–1 under the Exchange Act).

portfolio assets that do not alter the ETF's liquidity profile. However, transferring illiquid or less liquid instruments to the redeeming authorized participants could result in a liquidity cost to the authorized participants or other market participants, which could increase the cost of their participation and interfere with their role in the ETF arbitrage mechanism, resulting in the ETF trading at increased bid-ask spreads and/or a premium or discount to its NAV and ultimately impacting investors.[33] Declining liquidity in an ETF's basket assets also could affect the ability of an authorized participant or other market participants to readily assemble the basket for purchases of creation units and to sell securities received upon redemption of creation units.

In addition, all ETFs reserve the right to satisfy redemption requests in cash rather than in kind, but the extent to which ETFs satisfy redemption requests in cash varies. While many ETFs redeem in cash only rarely, some ETFs ordinarily redeem authorized participants in cash. ETFs that elect to redeem authorized participants in cash in more than a *de minimis* amount, like mutual funds, would need to ensure that they have adequate portfolio liquidity (in conjunction with any other liquidity sources) to meet shareholder redemptions.

As noted above, ETMFs have features of both mutual funds and ETFs. As ETMFs would redeem their shares on a daily basis from authorized participants, ETMFs would need to hold sufficiently liquid assets to meet such redemptions to the extent that the ETMFs satisfy the redemption requests in cash. As with ETFs, however, the ETMFs' practice of making in-kind redemptions could mitigate the need to maintain cash. Further, as ETMF market makers would not engage in the same kind of arbitrage as ETF market makers because the pricing of the ETMF shares is linked to the fund's NAV (subject to execution costs), the liquidity of an ETMF's portfolio is more relevant to an ETMF's ability to meet redemptions and the amount of execution costs than to an arbitrage function.

2. Statutory and Regulatory Requirements

An open-end fund's failure to maintain sufficiently liquid assets or otherwise manage liquidity implicates multiple provisions of the Act, as well as other federal securities laws and regulations. Section 2(a)(32) of the Act,[34] when read together with sections 4(2) and 5(a),[35] creates an obligation on open-end funds and UITs to provide shareholders with approximately their proportionate share of NAV upon the presentation of a redemption request. Section 22(e) of the Act provides in turn that the right of redemption may not be suspended and payment of redemption proceeds may not be postponed for more than seven days after tender of a redeemable security absent specified unusual circumstances.[36]

For decades, the Commission has recognized that because open-end funds hold themselves out at all times as being prepared to meet these statutory redemption requirements, they have a responsibility to manage the liquidity of their investment portfolios in a manner consistent with those obligations and any other related representations.[37] Thus, long-standing Commission guidelines contain a liquidity standard that generally limits an open-end fund's aggregate holdings of ''illiquid assets'' to no more than 15% of the fund's net assets (the ''15% guideline'').[38] Under the 15% guideline, a portfolio security or other asset is considered illiquid if it cannot be sold or disposed of in the ordinary course of business within seven days at approximately the value at which the fund has valued the investment.[39] The 15% guideline has generally caused funds to limit their exposures to particular types of securities that cannot be sold within seven days and that the Commission and staff have indicated may be illiquid, depending on the facts and circumstances, such as private equity securities and certain other privately placed or restricted securities[40] as well as certain instruments or transactions not maturing in seven days or less, including term repurchase agreements.[41]

---

[33] A significant amount of illiquid securities in an ETF's portfolio can make arbitrage opportunities more difficult to evaluate because it would be difficult for market makers to price, trade, and hedge their exposure to the ETF. *See infra* footnote 843 and accompanying text. Commenters noted that the effective functioning of this arbitrage mechanism has been pivotal to the operation of ETFs. *See* ICI Comment Letter I.

[34] *See supra* footnote 23.

[35] Section 4(2) of the Act defines a ''unit investment trust'' as an investment company which, among other things, ''issues only redeemable securities.'' Section 5(a) of the Act defines an ''open-end company'' as a ''management company which is offering for sale or has outstanding any redeemable security of which it is the issuer''.

[36] Section 22(e) of the Act permits open-end funds to suspend redemptions and postpone payment for redemptions already tendered for any period during which the New York Stock Exchange (''NYSE'') is closed (other than customary weekend and holiday closings) and in three additional situations if the Commission has made certain determinations. First, a fund may suspend redemptions for any period during which trading on the NYSE is restricted, as determined by the Commission. Second, a fund may suspend redemptions for any period during which an emergency exists, as determined by the Commission, as a result of which it is not reasonably practicable for the fund to: (i) Liquidate its portfolio securities, or (ii) fairly determine the value of its net assets. Third, a fund may suspend redemptions for such other periods as the Commission may by order permit for the protection of fund shareholders. The Commission has rarely issued orders permitting the suspension of redemptions for periods of restricted trading or emergency circumstances but has issued orders ''for such other periods'' under section 22(e)(3) on a few occasions. *See, e.g.,* In the Matter of The Reserve Fund, on behalf of two of its series, the Primary Fund and the U.S. Government Fund, Investment Company Act Release No. 28386 (Sept. 22, 2008) [73 FR 55572 (Sept. 25, 2008)]; In the Matter of Municipal Lease Securities Fund, Inc., Investment Company Act Release No. 17245 (Nov. 29, 1989); Third Avenue Temporary Order, *supra* footnote 12. Money market funds are able to suspend redemptions in certain limited circumstances. *See* rule 22e–3 under the Act; *see also* the Proposing Release, *supra* footnote 9, at n.155.

[37] *See* Statement Regarding ''Restricted Securities'', Investment Company Act Release No. 5847 (Oct. 21, 1969) [35 FR 19989 (Dec. 31, 1970)] (''Restricted Securities Release'') (''Because open-end companies hold themselves out at all times as being prepared to meet redemptions within seven days, it is essential that such companies maintain a portfolio of investments that enable them to fulfill that obligation. This requires a high degree of liquidity in the assets of open-end companies because the extent of redemption demands or other exigencies are not always predictable.''); *see also* Resale of Restricted Securities; Changes to Method of Determining Holding Period of Restricted Securities Under Rules 144 and 145, Investment Company Act Release No. 17452 (Apr. 23, 1990) [55 FR 17933 (Apr. 30, 1990)] (''Rule 144A Release'') (adopting rule 144A under the Securities Act of 1933 (the ''Securities Act'')).

[38] Revisions of Guidelines to Form N–1A, Investment Company Act Release No. 18612 (Mar. 12, 1992) [57 FR 9828 (Mar. 20, 1992)] (''Guidelines Release''), at section III (''If an open-end company holds a material percentage of its assets in securities or other assets for which there is no established market, there may be a question concerning the ability of the fund to make payment within seven days of the date its shares are tendered for redemption. The usual limit on aggregate holdings by an open-end investment company of illiquid assets is 15% of its net assets.''). The Guidelines Release modified prior Commission guidance that set a 10% limit on illiquid assets for open-end funds. *See* Restricted Securities Release, *supra* footnote 37.

[39] Guidelines Release, *supra* footnote 38; *see also* ETF Proposing Release, *supra* footnote 27; Valuation of Debt Instruments and Computation of Current Price Per Share by Certain Open-End Investment Companies (Money Market Funds), Investment Company Act Release No. 13380 (July 11, 1983) [48 FR 32555 (July 18, 1983)] (''Money Market Funds Release''); *see also* Rule 144A Release, *supra* footnote 37.

[40] *See* Restricted Securities Release, *supra* footnote 37. Securities offered pursuant to rule 144A under the Securities Act may be considered liquid under the 15% guideline depending on certain factors. *See* Rule 144A Release, *supra* footnote 37.

[41] *See* Periodic Repurchases by Closed-End Management Investment Companies; Redemptions by Open-End Management Investment Companies

Relatedly, the Commission has recognized that the liquidity management practices of open-end funds implicate certain antifraud provisions of the securities laws.[42] For example, section 34(b) of the Act makes it unlawful for any person to make any untrue statement of a material fact in any document filed with the Commission or transmitted pursuant to the Act, or the keeping of which is required by section 31(a) of the Act, or to omit to state any fact necessary in order to prevent the statements made therein, in light of the circumstances under which they were made, from being materially misleading.[43]

In addition, section 206(4)[44] of the Investment Advisers Act of 1940 (''Advisers Act'') and rule 206(4)–8 thereunder make it unlawful for any adviser to an investment fund to engage in any act, practice, or course of business which is fraudulent, deceptive, or manipulative.[45] Additionally, section 10(b) of the Exchange Act and rule 10b–5 thereunder make it unlawful, among other things, for any person, in connection with the purchase or sale of securities, to employ any device, scheme, or artifice to defraud or to make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made not misleading, or engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any persons. Finally, section 17(a) of the Securities Act similarly makes it unlawful for any person in the offer or sale of any securities or any security-based swap agreement by the use of any means or instruments of transportation or communication in interstate commerce or by use of the mails, directly or indirectly, to employ any device, scheme, or artifice to defraud, to obtain money or property by means of any untrue statement of a material fact or any omission to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading, or to engage in any transaction, practice, or course of business which operates or would operate as a fraud or deceit upon the purchaser.[46]

As the Commission has previously noted, an open-end fund ''represents to investors, in its prospectus, that it will, as required by section 22(e) of the Act, redeem its securities at approximate net asset value within seven days after tender.''[47] Similarly, an open-end fund that is redeemed through broker-dealers generally represents to investors that it will redeem its securities within three days, as required by rule 15c6–1.[48] Failure by a fund to maintain a sufficiently liquid portfolio or to otherwise manage liquidity risk calls into question the fund's ability to fulfill the representations (explicit or implicit) made in its prospectus regarding its ability to meet its redemption obligations, as well as its status as an open-end fund. Such failure thus potentially exposes the fund, the investment adviser that manages the fund, and the persons responsible for the sale of the fund's securities to the possible application of the antifraud

and Registered Separate Accounts at Periodic Intervals or with Extended Payment, Investment Company Act Release No. 18869 (July 28, 1992) [57 FR 34701 (Aug. 6, 1992)] (''Interval Fund Proposing Release''). The Commission has not established a set of required factors that must be considered when assessing the liquidity of these or other types of securities under the 15% guideline. However, in the context of rule 144A securities, the Commission had provided ''examples of factors that would be reasonable for a [fund's] board of directors to take into account'' but which would not necessarily be determinative. *See* Rule 144A Release, *supra* footnote 37. These factors include: The frequency of trades and quotations for the security; the number of dealers willing to purchase or sell the security and the number of other potential purchasers; dealer undertakings to make a market in the security; and the nature of the security and the nature of the marketplace in which it trades, including the time needed to dispose of the security, the method of soliciting offers, and the mechanics of transfer.

[42] *See* Restricted Securities Release, *supra* footnote 37 (''To the extent a material percentage of the assets of an open-end company consist of restricted securities which cannot publicly be sold without registration under the Securities Act, the ability of the company to comply with the provisions of the Investment Company Act relating to redemption, and to fulfill the implicit representations made in its prospectus with respect thereto, may be adversely affected. In any such situation, the investment company concerned and the persons responsible for the sale of its securities should give careful consideration to the possible application of the provisions of section 10(b) of the Exchange Act and Rule 10b–5 thereunder.''); *see also* Money Market Funds Release, *supra* footnote 39 (explaining that because ''most money market funds promise investors that they will receive proceeds much sooner'' than seven days and ''experience a greater and perhaps less predictable volume of redemption transactions than do other investment companies,'' they ''must have sufficient liquidity to meet redemption requests on a more immediate basis''). The Commission has considered the failure to take risk-limiting measures in other contexts to implicate antifraud provisions as well. *See* Adoption of Revisions to Rules Regulating Money Market Funds, Investment Company Act Release No. 18005 (Feb. 20, 1991) (''The Commission believes that there is a significant danger of misleading investors if an investment company holds itself out as a money market fund when it engages in investment strategies not consistent with the risk-limiting conditions of rule 2a–7. It is therefore necessary and appropriate in the public interest and for the protection of investors for the Commission to adopt a new paragraph (b) of rule 2a–7 prohibiting an investment company from holding itself out as a 'money market fund' unless it meets the risk-limited conditions of rule 2a–7.'').

[43] Exercising authority under section 34(b) and sections 9(b), 38(a), and 42 of the Act, the Commission adopted paragraph (b) of rule 2a–7 in 1997, which provides that ''it shall be an untrue statement of a material fact within the meaning of section 34(b) of the Act for a registered investment company . . . to hold itself out to investors as a money market fund or the equivalent of a money market fund'' unless the fund complies with rule 2a–7. Under rule 2a–7, money market funds must maintain sufficient liquidity to meet reasonably foreseeable redemptions, generally must invest at least 10% of their portfolios in assets that can provide daily liquidity and at least 30% of their portfolios in assets that can provide weekly liquidity, and may not acquire any illiquid security if, immediately after the acquisition, the money market fund would have invested more than 5% of its total assets in illiquid securities. Rule 2a–7. Additionally, the Commission adopted amendments to rule 2a–7 in 2014 that, among other things: (i) Give boards of directors of money market funds discretion to impose a liquidity fee or temporarily suspend the right of redemption if a fund's weekly liquidity level falls below the required regulatory threshold; and (ii) require all non-government money market funds to impose a liquidity fee if the fund's weekly liquidity level falls below a designated threshold of 10%, unless the fund's board determines that imposing such a fee is not in the best interests of the fund. *See* Money Market Fund Reform; Amendments to Form PF, Investment Company Act Release No. 31166 (July 23, 2014) [79 FR 47736 (Aug. 14, 2014)] (''2014 Money Market Fund Reform Adopting Release'').

[44] Section 206(4) of the Advisers Act grants the Commission authority, by rules and regulations, to define and prescribe means reasonably designed to prevent such acts, practices, and courses of business as are fraudulent, deceptive, or manipulative.

[45] Additionally, section 206(1) of the Advisers Act makes it unlawful for an adviser to employ any device, scheme or artifice to defraud any client or prospective client, and section 206(2) makes it unlawful for an adviser to engage in any transaction, practice or course of business which operates as a fraud or deceit upon any client or prospective client. *See* Prohibition of Fraud by Advisers to Certain Pooled Investment Vehicles, Investment Advisers Act Release No. 2628 (August 3, 2007) [72 FR 44756 (August 9, 2007)], at n.3 and accompanying text.

[46] *See* In the Matter of Evergreen Investment Management Company, LLC and Evergreen Investment Services, Inc., Investment Company Act Release No. 28759 (June 8, 2009) (settled order) (''Evergreen Order'') (settlement of allegations that a mutual fund and its underwriter violated, and its adviser aided and abetted violations of, section 22(c) of the Act and rule 22c–1(a) through purchases and redemptions at materially overstated NAV. The order found that the fund's adviser materially misrepresented the fund's performance and NAV in reviewing and approving the fund's prospectus in violation of section 34(b) of the Act.).

[47] Restricted Securities Release, *supra* footnote 37.

[48] *See also* Proposing Release, *supra* footnote 9, at II.C.2 (''We also have observed that some open-end funds disclose in their prospectuses that they generally will satisfy redemption requests in even shorter periods of time than T + 3, including on a next-business-day basis.''). As the Commission has previously noted, most money market funds disclose that they will pay redemptions even more quickly, often on the same day that the request is received by the fund, and thus ''must have sufficient liquidity to meet redemption requests on a more immediate basis.'' Money Market Funds Release, *supra* footnote 39.

provisions of the securities laws referenced above.[49]

In addition to the foregoing concerns, an insufficiently liquid portfolio implicates provisions of the Act and regulations thereunder concerning fund valuation.[50] A fund's ability to properly value its portfolio securities is important, primarily because, under the Act, fund shareholders are entitled to their proportionate share of the fund's NAV upon redemption. Section 2(a)(41) of the Act and rule 2a–4 thereunder provide that in determining NAV, funds must value ''securities for which market quotations are readily available'' at current market value, and must value all other securities and assets at ''fair value as determined in good faith by the board of directors.'' Illiquid or less liquid assets are less likely to have readily available market quotations, and thus are more likely to require a fair value determination. Determining the fair value of illiquid or less liquid assets consistent with section 2(a)(41) and rule 2a–4 can pose a number of challenges, some of which the Commission has previously described in the context of the acquisition of restricted securities,[51] and improper valuation of such assets could result in liability under the antifraud provisions.[52] The difficulties valuing illiquid or less liquid securities also implicate section 22(c) and rule 22c–1, which requires the use of the next-determined NAV for pricing purchases and redemptions. Transactions in such securities are more likely to be effected at prices that differ from fair value and, therefore, may result in increasing risk of investor dilution.[53]

A separate and independent issue arising from the failure to maintain a sufficiently liquid portfolio is the risk of shareholder dilution associated with improper fund pricing. Thus, section 22(a),[54] when read together with section 22(c),[55] gives the Commission broad powers to regulate the pricing of redeemable securities for the purpose of eliminating or reducing so far as reasonably practicable any dilution of the value of the outstanding fund shares. In its 1969 guidance on restricted securities, the Commission observed that a fund with significant holdings of restricted securities may have to engage in private sales on short notice to meet redemption obligations, which could result in the fund ''receiving less than its carrying value of the restricted securities.''[56] That, in turn, would ''result in a preference in favor of the redeeming shareholders and a diminution of the NAV per share of shareholders who have not redeemed,'' further highlighting the need for funds to maintain ''a high degree of liquidity'' given the unpredictability of redemption demands or other exigencies.[57] Similarly, here, as a general matter, to the extent a fund's portfolio is made up of a large amount of illiquid or less liquid securities, the fund may face difficulties meeting shareholder redemption requests while at the same time protecting the value of the shares of existing shareholders from dilution. Limited liquidity may hinder the portfolio manager's ability to defensively reposition the fund in anticipation of shifting or volatile markets because asset sales necessary to effectuate those shifts can be executed only with substantial liquidity costs. If limited liquidity in the fund's portfolio limits which assets the fund can sell to meet redemptions, such limited liquidity also could even result in the fund straying from its investment objective. Accordingly, a fund that does not effectively manage its liquidity risk may become constrained in its portfolio management, to the detriment of its investors and contrary to the way the fund represents its investment strategy to the public.[58] Therefore, when constructing a fund's portfolio of securities, it is essential for the fund to take into account the importance of maintaining a portfolio that is liquid enough to fulfill the fund's obligations under these provisions.[59]

As previously discussed, in addition to the seven-day redemption requirement in section 22(e), rule 15c6–1 under the Exchange Act also affects the timing of open-end fund redemptions because the rule requires broker-dealers to settle securities transactions, including transactions in open-end fund shares, within three business days after the trade date. Furthermore, rule 22c–1 under the Act, the ''forward pricing'' rule, requires funds, their principal underwriters, and dealers to sell and redeem fund shares

[49] *See* Restricted Securities Release, *supra* footnote 37; Proposing Release, *supra* footnote 9, at n.77 (''Disclosures by open-end funds are subject to the antifraud provisions of the federal securities laws. Therefore there may be liability under these provisions if a fund fails to meet redemptions with seven days or any shorter time disclosed in the fund's prospectus or advertising materials.'') (citing section 17(a) of the Securities Act, section 10(b) of the Exchange Act and rule 10b–5 under the Exchange Act, and section 34(b) of the Exchange Act); *id.* at n.109 (''[F]unds' redemption obligations are also governed by any disclosure to shareholders that a fund has made about the time within which it will meet redemption requests, as disclosures by open-end funds are subject to the antifraud provisions of the federal securities laws.''); *id.* at III.C (''We believe that assessing and managing liquidity risk in a comprehensive manner is critical to a fund's ability to honor redemption requests within the seven-day period required under section 22(e) . . . as well as within any shorter time period disclosed in the fund's prospectus or advertising materials or required for purposes of rule 15c6–1.''); *id.* at III.C.3.d (requesting public comment on whether liquid asset minimum requirements tighter than three days may be warranted ''given that there may be liability under the antifraud provisions of the federal securities laws if a fund fails to meet redemptions within any shorter time disclosed in the fund's prospectus or advertising materials.'').

[50] *See* Restricted Securities Release, *supra* footnote 37 (describing the ''serious problems of valuation'' arising from fund acquisition of restricted securities); Guidelines Release, *supra* footnote 38 (noting that a fund ''must maintain a high degree of portfolio liquidity'' to meet the requirements under section 22(e), rule 22c–1(a) and rule 2a–4).

[51] *See* Restricted Securities Release, *supra* footnote 37 at n.1 and accompanying text for a discussion of the various valuation challenges facing purchasers and sellers of restricted securities.

[52] *See* Restricted Securities Release, *supra* footnote 37. As the Commission explained there, ''[t]he offering price of securities issued by a management investment company is premised upon the net asset value of such shares as determined pursuant to [section 2(a)(41)] of the Act and Rule 2a–4 thereunder and is so represented in its prospectus.'' Consequently, ''the improper valuation of restricted securities held by such a company would distort the net asset value of the shares being offered or, in the case of an open-end company, redeemed, and would therefore constitute a fraud and deceit within the meaning of section 10(b) and Rule 10b–5.'' *See also infra* footnote 66.

[53] *See* Restricted Securities Release, *supra* footnote 37, at n.1 (''the valuation of restricted securities by reference to the market price for unrestricted securities of the same class assumes that the market price for unrestricted securities of the same class is representative of the fair value of the securities. This may not be the case when the market for the unrestricted securities is very thin, *i.e.,* only a limited volume of shares are available for trading.'').

[54] Section 22(a) authorizes securities associations registered under section 15A of the Exchange Act to prescribe rules related to the method of computing purchase and redemption prices of redeemable securities and the minimum time period that must elapse after the sale or issue of such securities before any resale or redemption may occur, for the purpose of ''eliminating or reducing so far as reasonably practicable any dilution of the value of other outstanding securities of such company or any other result of such purchase, redemption, or sale which is unfair to holders of such other outstanding securities.''

[55] Section 22(c) authorizes the Commission to make rules and regulations applicable to registered investment companies and to principal underwriters of, and dealers in, the redeemable securities of any registered investment company, whether or not members of any securities association, to the same extent, covering the same subject matter, and for the accomplishment of the same ends as are prescribed in section 22(a) in respect of the rules which may be made by a registered securities association governing its members.

[56] *See* Restricted Securities Release, *supra* footnote 37.

[57] *Id.*

[58] *See* Restricted Securities Release, *supra* footnote 37 (''It is desirable that an open-end company retain maximum flexibility in the choice of portfolio securities which, on the basis of their relative investment merits, could best be sold where necessary to meet redemptions.'').

[59] *Id.*

at a price based on the current NAV next computed after receipt of an order to purchase or redeem fund shares, even though fund assets may be sold in subsequent days in order to meet redemption obligations.[60]

With the exception of money market funds subject to rule 2a–7 under the Act,[61] the Commission has not promulgated rules requiring open-end funds to invest in a minimum level of liquid assets.[62] As discussed above, the Commission has historically taken the position that, in order to comply with section 22(e) and other applicable legal provisions, open-end funds should maintain a high degree of portfolio liquidity to ensure that their portfolio securities and other assets can be sold and the proceeds used to satisfy redemptions in a timely manner.[63] In addition to a fund's ''general responsibility to maintain a level of portfolio liquidity that is appropriate under the circumstances,'' the Commission has stated that open-end funds must engage in ongoing portfolio liquidity monitoring to determine whether an adequate level of portfolio liquidity is being maintained in light of their redemption obligations.[64]

Registered investment companies and their investment advisers are subject to rules under the Act and the Advisers Act requiring them to adopt and implement written compliance policies and procedures reasonably designed to prevent various violations of laws and regulations. Rule 38a–1 under the Act requires registered investment companies to adopt and implement written policies and procedures reasonably designed to prevent violations of the federal securities laws by the fund, including policies and procedures that provide for the oversight of compliance by certain of the fund's service providers, including the fund's investment adviser; the rule also requires board approval and review of the service providers' compliance policies and procedures. Additionally, rule 206(4)–7 under the Advisers Act requires registered investment advisers to adopt and implement written compliance policies and procedures reasonably designed to prevent violations of the Advisers Act and the rules thereunder by the adviser or any of its supervised persons. Such compliance policies and procedures should be appropriately tailored to reflect each firm's particular compliance risks.[65] For example, an open-end fund holding a significant portion of its assets in securities with long settlement periods or that trade infrequently may be subject to relatively greater liquidity risks than other open-end funds, and should appropriately tailor its policies and procedures in light of its particular risks and circumstances. The Commission has brought enforcement actions under the compliance rules against funds and their advisers for failures to adopt and/or implement policies and procedures reasonably designed to prevent violations relating to, for example, disclosure, valuation, and pricing for assets with limited liquidity.[66]

Thus, funds and their advisers already are required to adopt and implement written compliance policies and procedures reasonably designed to prevent violations of various provisions implicated by fund liquidity, including those provisions identified above. The liquidity risk management program requirements of rule 22e–4, which we are adopting here, in effect will provide more specific and enhanced requirements in certain areas already generally covered by the compliance program rules.

In short, there are a number of statutory and regulatory provisions across the federal securities laws that bear on redemptions and the potential dilution of shareholders' interests. New rule 22e–4 advances the purposes of the Act by enhancing the ability of funds to meet their redemption obligations, reducing the risk of shareholder dilution, and reducing the potential for antifraud violations.[67]

[60] *See infra* footnotes 73–76 and accompanying text for a discussion of why this calculation method is permitted under rule 22c–1 and rule 2a–4.

[61] *See supra* footnote 43.

[62] However, the Commission has issued guidelines concerning funds' portfolio liquidity. *See supra* footnote 38 and accompanying text.

[63] *See* Restricted Securities Release, *supra* footnote 37; *see also* Rule 144A Release, *supra* footnote 37.

[64] Guidelines Release, *supra* footnote 38, at n.11 (''[T]he Commission expects funds to monitor portfolio liquidity on an ongoing basis to determine whether, in light of current circumstances, an adequate level of liquidity is being maintained. For example, an equity fund that begins to experience a net outflow of assets because investors increasingly shift their money from equity to income funds should consider reducing its holdings of illiquid securities in an orderly fashion in order to maintain adequate liquidity.''). Therefore, under current SEC guidance, a fund experiencing net outflows may wish to consider managing its illiquid asset holdings to maintain adequate liquidity. Similarly, a fund may need to determine whether it is appropriate to take certain actions when the fund has determined that a previously liquid holding has become illiquid due to changed circumstances. *See also* Rule 144A Release, *supra* footnote 37, at n.61.

[65] In the compliance rules adopting release, the Commission highlighted certain, non-exclusive examples of particular areas to be addressed in funds' and advisers' policies and procedures. For example, it stated that funds or advisers should adopt policies and procedures regarding valuation and the pricing of portfolio securities and fund shares, as well as the processing of fund shareholder transactions in accordance with rule 22c–1. *See* Compliance Programs of Investment Companies and Investment Advisers, Investment Company Act Release No. 26299 (Dec. 17, 2003) [68 FR 74714 (Dec. 24, 2003)] (''Rule 38a–1 Adopting Release'') (''These pricing requirements are critical to ensuring fund shares are purchased and redeemed at fair prices and that shareholder interests are not diluted.''). The Commission also identified ''portfolio management processes'' as an issue that should be covered in the compliance policies and procedures of a fund or its adviser and indicated that each fund should tailor its policies and procedures to address the fund's particular compliance risks. *See id.,* at n.82 (noting that the chief compliance officer's annual report should discuss the fund's particular compliance risks and any changes that were made to the policies and procedures to address newly identified risks). The Commission further identified ''the accuracy of disclosures made to investors, clients, and regulators'' as an issue to be covered.

[66] *See* In re Citigroup Alternative Investments LLC & Citigroup Glob. Markets Inc., Investment Advisers Act Release No. 4174 (Aug. 17, 2015) (settled order) (hedge fund adviser failed to adopt policies and procedures to prevent misrepresentations to private fund investors about fund performance and liquidity and violated rule 206(4)–7); In re J. Kenneth Alderman, CPA, *et al.,* Investment Company Act Release No. 30557 (Jun. 13, 2013) (settled order) (respondent directors failed to exercise their responsibilities with respect to adoption and implementation of valuation policies and procedures by mutual funds holding securities with reduced liquidity and caused funds' violations of rule 38a–1); In re UBS Glob. Asset Mgmt. (Americas) Inc., Investment Company Act Release No. 29920 (Jan. 17, 2012) (settled order) (mutual fund adviser failed to implement fair value pricing procedures with respect to subordinated fixed income securities without an active market and violated rule 38a–1); In re Morgan Asset Mgmt., Inc., *et al.,* Investment Company Act Release No. 29704 (June 22, 2011) (settled order) (mutual fund adviser failed to implement valuation procedures in pricing fixed income securities backed by subprime mortgages and violated rule 38a–1).

[67] One commenter argued that the Commission lacks the statutory authority to issue rule 22e–4. Comment Letter of Justin Banks (Jan. 13, 2016) (''Banks Comment Letter'') (considering the authority conferred by sections 22(c), 22(e), and 38 of the Act, although we note that in referring to our authority under section 38, the commenter actually quoted and addressed the text of section 39 of the Act.). We disagree. The Commission has ample authority under the Act, including sections 22(c), 22(e), and 38(a), as well as under the antifraud provisions of the federal securities laws, to require that open-end funds maintain adequate liquidity and adopt responsible liquidity risk management policies and procedures. *See supra* section II.B.2. Section 38(a), in particular, gives the Commission authority to issue rules, regulations, and orders ''as are necessary or appropriate to the exercise of the powers conferred upon the Commission elsewhere in this title.'' As discussed above, the liquidity risk management program required under rule 22e–4 is necessary and appropriate to reduce the risk that funds will be unable to meet their redemption obligations, to improve industry-wide liquidity risk management practices, to mitigate potential dilution of the interests of non-redeeming shareholders, and to increase the likelihood that funds are able to fulfill representations made in their prospectuses and advertising materials and implicit in their open-end status.

3. Liquidity Management by Open-End Funds

Portfolio managers consider a variety of factors in addition to liquidity when constructing a fund's portfolio, including but not limited to the fund's investment strategies, economic and market trends, portfolio asset credit quality, and tax considerations. Nevertheless, meeting redemption obligations is fundamental for open-end funds, and funds must manage liquidity in order to meet these obligations.[68] Several factors influence how liquidity management by open-end funds affects the equitable treatment of investors in a fund, investor redemption behavior, and potentially the orderly operation of the markets when fulfilling redemption obligations.

First, it is important to consider how a fund meets redemptions. When a fund receives redemption requests from shareholders, and the fund does not have cash on hand to meet those redemptions,[69] the fund may sell portfolio assets to generate cash to meet the redemptions and generally has the discretion to determine which assets will be sold.[70] It is possible that a fund would choose to sell its most liquid assets first. This method of selling is limited to some degree by the investment strategies of the fund, and a fund pursuing this method of meeting redemptions to any significant degree may need to adjust its portfolio so that the fund continues to follow its investment strategies. A fund that chooses to sell its most liquid assets to meet fund redemptions may minimize the effect of the redemptions on short-term fund performance for redeeming and remaining shareholders, but may leave remaining shareholders in a potentially less liquid and riskier fund until the fund adjusts the portfolio.[71] An ETF redeeming in kind with its most liquid assets first would similarly leave remaining shareholders in a potentially less liquid and riskier fund. In contrast to meeting redemptions by selling its most liquid assets first, a fund alternatively could choose to meet redemptions by selling, to the best of its ability, a ''strip'' of the fund's portfolio (*i.e.,* a cross-section or representative selection of the fund's portfolio assets).[72] Funds also could choose to meet redemptions by selling a range of assets in between its most liquid, on one end of the spectrum, and a perfect *pro rata* strip of assets, on the other end of the spectrum. Similarly, an ETF redeeming in kind could use a *pro rata* strip of assets. Additionally, funds could choose to opportunistically pare back or eliminate holdings in a particular asset or sector to meet redemptions.

Second, the effect of redemptions on shareholders is determined by how and when those redemptions affect the price of the fund's shares. Under rule 22c–1, all investors who redeem from an open-end fund on any particular day must receive the NAV next calculated by the fund after receipt of such redemption request.[73] As most funds, with the exception of money market funds, calculate their NAV only once a day, this means that redemption requests received during the day receive the end of day NAV, typically calculated as of 4 p.m. Eastern time.[74] When calculating a fund's NAV, however, rule 2a–4 requires funds to reflect changes in holdings of portfolio securities and changes in the number of outstanding shares resulting from distributions, redemptions, and repurchases no later than the first business day following the trade date.[75] We allowed this calculation method to provide funds with additional time and flexibility to incorporate last-minute portfolio transactions into their NAV calculations on the business day following the trade date, rather than on the trade date.[76] As a practical matter, this calculation method also gave broker-dealers, retirement plan administrators, and other intermediaries additional time to receive transactions submitted before the cut-off time on the trade date, which then may be reflected in the fund's NAV on the business day following the trade date.

Nevertheless, we recognize that trading activity and other changes in portfolio holdings associated with meeting redemptions may occur over multiple business days following the redemption request. If these activities occur (and their associated costs are reflected in NAV) in days following redemption requests, the costs of providing liquidity to redeeming investors could be borne by the remaining investors in the fund, thus potentially diluting the interests of non-redeeming shareholders.[77] The less liquid the fund's portfolio holdings, the greater these liquidity costs can become.[78]

There can be significant adverse consequences to remaining investors in a fund that does not adequately manage liquidity.[79] As noted above, the

[68] See Comment Letter of Investment Company Institute on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001(''FSOC Notice'') (Mar. 25, 2015) (''ICI FSOC Notice Comment Letter'') (''For mutual funds, the central importance of meeting redemptions means that liquidity management is a key element of regulatory compliance, investment risk management, and portfolio management—and a constant area of focus. Even before launching a mutual fund, the fund manager and fund board consider whether the fund's proposed investments and strategies are suitable for the mutual fund structure, including whether it will be able to satisfy applicable regulatory requirements on an ongoing basis. If not, the manager may decide to offer that strategy through a different vehicle (*e.g.,* a closed-end fund or a private fund).''). *See also supra* footnotes 2, 3, and 5–7.

[69] A fund can have cash on hand to meet redemptions from cash held in the fund's portfolio, cash received from investor purchases of fund shares, interest payments and dividends on portfolio securities, or maturing bonds. *See, e.g.,* Comment Letter of Fidelity Investments on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015) (''Fidelity FSOC Notice Comment Letter''), at n.17 (''[S]ecurities do not need to be sold every time a redemption order is placed. Sale of fund assets is necessary only when gross redemptions significantly exceed net inflows.'').

[70] A fund may also obtain cash by other available means such as bank lines of credit, but funds infrequently utilize this method to meet redemptions. *See* Proposing Release, *supra* footnote 9, at n.35 and accompanying text. *See also infra* footnote 262 and accompanying text for a discussion of the use of interfund lending as an alternative source of cash for funds.

[71] *See* Proposing Release, *supra* footnote 9, at n.37 and accompanying text.

[72] There are practical limitations on a fund's ability to sell a *pro rata* slice of its portfolio, such as minimum trade sizes, transfer restrictions, illiquid assets, tax complications from certain sales, and avoidance of odd lot positions.

[73] The process of calculating or ''striking'' the NAV of the fund's shares on any given trading day is based on several factors, including the market value of portfolio securities, fund liabilities, and the number of outstanding fund shares, among others.

[74] Commission rules do not require that a fund calculate its NAV at a specific time of day. Current NAV must be computed at least once daily, subject to limited exceptions, Monday through Friday, at the specific time or times set by the board of directors. *See* rule 22c–1(b)(1).

[75] Rule 2a–4(a)(2)–(3).

[76] *See* Adoption of Rule 2a–4 Defining the Term ''Current Net Asset Value'' in Reference to Redeemable Securities Issued by a Registered Investment Company, Investment Company Act Release No. 4105 (Dec. 22, 1964) [29 FR 19100 (Dec. 30, 1964)].

[77] The transaction costs associated with redemptions can vary significantly, with some costs having a more immediate impact on shareholders than others. For example, during times of heightened market volatility and wider bid-ask spreads for the fund's underlying holdings, selling the fund's investments to meet redemptions will necessarily result in costs to the fund, which in turn may negatively impact investors who chose to redeem in the days immediately following the stress event. The impact of such costs on the remaining fund investors can vary depending on when a shareholder chooses to redeem. *See, e.g.,* Comment Letter of Mutual Fund Directors Forum on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 6.

[78] *See, e.g.* Comment Letter of Morningstar, Inc. (Jan. 13, 2016) (''Morningstar Comment Letter''). *See also* Proposing Release, *supra* footnote 9, at n.45 and accompanying text.

[79] *See, e.g.,* Jason Greene & Charles Hodges, *The Dilution Impact of Daily Fund Flows on Open-end Mutual Funds,* 65 J. of Fin. Econ. 131 (2002)

proportion of illiquid assets held by a fund can increase if the fund sells its more liquid portfolio assets to meet redemptions. This in turn could adversely affect the fund's risk profile and cause the fund to have difficulty meeting future shareholder redemptions.[80] For example, during the pendency of our proposal, the Third Avenue Focused Credit Fund, a non-diversified open-end fund, adopted a plan of liquidation, and requested and obtained exemptive relief to suspend shareholder redemptions.[81] The Commission noted that the fund represented that, at the time the fund and its investment adviser requested exemptive relief, it had experienced a significant level of redemption requests over the prior six-month period that reduced the fund's portfolio liquidity, as well as a significant decline in its NAV.[82] The fund's board authorized the plan of liquidation after it determined that additional redemptions would have to be made at prices that would unfairly disadvantage the fund's remaining shareholders.[83] This event highlights the extent to which shareholders can be harmed when a fund holding portfolio assets that entail significant liquidity risk does not adequately anticipate the effects of market deterioration and increased shareholder redemptions.[84] Furthermore, if a fund finds that it can sell portfolio assets only at prices that incorporate a significant discount to the assets' stated value, the discounted sale prices can materially affect the fund's NAV.

These factors in fund redemptions—either individually or in combination—can create incentives in times of liquidity stress in the markets for shareholders to redeem quickly to avoid further losses (or a ''first-mover advantage'').[85] If shareholder redemptions are motivated by this first-mover advantage, they can lead to increasing outflows, and as the level of outflows from a fund increases, the incentive for remaining shareholders to redeem may also increase. Additionally, a fund experiencing large outflows as a result of redemptions may be exposed to predatory trading activity in the securities it holds.[86] Regardless of whether investor redemptions are motivated by a first-mover advantage or other factors, there can be significant adverse consequences to remaining investors in a fund when it fails to adequately manage liquidity.[87] This underlines the importance of fund liquidity management for advancing investor protection by reducing the risk that a fund would be unable to meet redemption obligations without significant dilution of remaining investors' interests in the fund.

There also is a potential for adverse effects on the markets when open-end funds fail to adequately manage

(''Greene & Hodges'') (''Active trading of open-end funds has a meaningful economic impact on the returns of passive, nontrading shareholders, particularly in U.S.-based international funds. The overall sample of domestic equity funds shows no dilution impact, but we find an annualized negative impact of 0.48% in international funds (and nearly 1% for a subsample of funds whose daily flows are particularly large).'').

[80] *See, e.g.,* In re Heartland Advisors, Inc., *et al.,* Investment Company Act Release No. 28136 (Jan. 25, 2008) (''Heartland Release'') (settled order) (finding that certain high-yield bond funds experienced liquidity problems (caused in part by adviser's unwillingness to sell bond holdings at prices below which the funds had valued them) and, as a result, the funds borrowed heavily against a line of credit to meet fund redemption requests, and investors redeemed fund shares at prices that benefited redeeming shareholders at the expense of remaining and new investors).

[81] *See* Third Avenue Temporary Order, *supra* footnote 12. *But see infra* footnote 209 and accompanying text. We note that there is no assurance that the Commission would grant similar relief in the future. *See also* ICI Comment Letter I (''Third Avenue Focused Credit Fund experienced a significant level of redemption requests and an ongoing reduction in the liquidity of its portfolio securities, which consisted largely of junk bonds . . . The SEC granted a temporary order under section 22(e)(3) after expressing concerns with a board-approved plan of liquidation that provided for distribution to shareholders of the fund's remaining net cash and a separate transfer of the fund's other assets into a liquidating trust.''); BlackRock Comment Letter (''[A]s recently demonstrated by the issues meeting redemption requests that were experienced by the Third Avenue Focused Credit Fund, a small and highly concentrated portfolio can present its own liquidity challenges.''); *see also infra* footnote 84.

[82] Third Avenue Temporary Order, *supra* footnote 12. At the time that the fund adopted its plan of liquidation, the fund had experienced $1.1 billion in estimated net outflows for the year to date through December 9, 2015, which was more than 145% of the fund's total net assets as of that date. Furthermore, in November 2015, the fund experienced a total of $317 million in estimated net redemptions and the fund's retail class NAV per share fell from $7.82 to $7.09.

[83] *Id. See also* Third Avenue Management, Press Release: Third Avenue Management Obtains Exemptive Relief for Focused Credit Fund (Dec. 16, 2015), *available at: http://thirdave.com/news/press-release-third-avenue-management-obtains-exemptive-relief-for-focused-credit-fund/* (''As a result of the [SEC] exemptive order, redemptions are suspended for all shareholders, and . . . the [fund's adviser] will be able to conduct an orderly liquidation without having to resort to forced selling of securities at reduced or disadvantaged prices.'').

[84] *See* Comment Letter of Americans for Financial Reform (Jan. 13, 2016) (''AFR Comment Letter'') (''By all accounts, Third Avenue was holding the great majority of its assets in illiquid distressed debt and had very limited cash reserves, a strategy that can increase returns but at the price of greatly increased risks for investors . . . While the Third Avenue fund may be an outlier in terms of the sheer volume of illiquid assets it holds, evidence also indicates that larger and more significant funds are also testing the bounds of previous SEC guidance on liquidity, and are holding a large fraction of potentially illiquid assets. If such funds come under selling pressure, the need to dispose of such assets could add to market stress in ways that have a negative impact on corporate credit and the real economy, as well as potentially harming investors.''); *see also* Heartland Release, *supra* footnote 80.

[85] *See infra* footnotes 1086–1088 and accompanying text for a discussion of the first-mover advantage and its negative consequences. *But see* Comment Letter of Nuveen Investments on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015) (''Nuveen FSOC Notice Comment Letter''), at 10 (stating that there is no evidence that shareholders are actually motivated by a first-mover advantage); Comment Letter of BlackRock on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015) (''BlackRock FSOC Notice Comment Letter''), at 17 (stating that although incentives to redeem may exist, this does not necessarily imply that investors will in fact redeem *en masse* in times of market stress, but also noting that a well-structured fund ''should seek to avoid features that could create a 'first-mover advantage' in which one investor has an incentive to leave'' before others); Comment Letter of Association of Institutional Investors on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 10–11 (''The empirical evidence of historical redemption activity, even during times of market stress, supports the view that either (i) there are not 'incentives to redeem' that are sufficient to overcome the asset owner's asset allocation decision or (ii) that there are disincentives, such as not triggering a taxable event, that outweigh the hypothesized 'incentives to redeem.' ''); Comment Letter of The Capital Group Companies on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 8 (''We also do not believe that the mutualization of fund trading costs creates any first mover advantage.''); ICI FSOC Notice Comment Letter, *supra* footnote 68, at 7 (''Investor behavior provides evidence that any mutualized trading costs must not be sufficiently large to drive investor flows. We consistently observe that investor outflows are modest and investors continue to purchase shares in most funds even during periods of market stress.''). *See also* discussion of the potential first-mover advantage in the Proposing Release, *supra* footnote 9, at n.49.

[86] *See, e.g.,* Joshua Coval & Erik Stafford, *Asset Fire Sales (and Purchases) in Equity Markets,* 86 J. Fin. Econ. 479 (2007) (''Coval & Stafford'') (''Funds experiencing large outflows tend to decrease existing positions, which creates price pressure in the securities held in common by distressed funds. Similarly, the tendency among funds experiencing large inflows to expand existing positions creates positive price pressure in overlapping holdings. Investors who trade against constrained mutual funds earn significant returns for providing liquidity. In addition, future flow-driven transactions are predictable, creating an incentive to front-run the anticipated forced trades by funds experiencing extreme capital flows.''); Teodor Dyakov & Marno Verbeek, *Front-Running of Mutual Fund Fire-Sales,* 37 J. of Bank. and Fin. 4931 (2013) (''Dyakov & Verbeek'') (''We show that a real-time trading strategy which front-runs the anticipated forced sales by mutual funds experiencing extreme capital outflows generates an alpha of 0.5% per month during the 1990–2010 period . . . Our results suggest that publicly available information of fund flows and holdings exposes mutual funds in distress to predatory trading.''). *See* discussion of predatory trading concerns in the Proposing Release, *supra* footnote 9, at nn.805–809 and accompanying text.

[87] *See* Proposing Release, *supra* footnote 9, at n.37.

liquidity.[88] For example, if liquid asset levels are insufficient to meet redemptions, funds may sell less-liquid portfolio assets at discounted or even fire sale prices. These sales can produce significant negative price pressure on those assets and correlated assets. Accordingly, redemptions and funds' liquidity risk management can affect not just the remaining investors in the fund, but any other investors holding these assets. Depending on the asset and the level of stress, such liquidity stress on the assets held in the fund has the potential to transmit stress to other funds or portions of the market as well.[89]

C. Recent Developments in the Open-End Fund Industry

Recent industry developments have underlined our focus on the importance of sufficient liquidity and liquidity risk management practices in open-end funds.[90] These developments include significant growth in assets of, and shareholder inflows into, open-end funds with fixed income strategies and alternative strategies since 2008 and the evolution of settlement periods and redemption practices utilized by open-end funds. We will discuss each of these developments in turn.

1. Fixed Income Funds and Alternative Funds

We have observed significant growth in cash flows into, and assets of, fixed income mutual funds and fixed income ETFs (excluding ETMFs).[91] As growth in fixed income fund assets was occurring, we increased our focus on fixed income market structure, publishing a report on the municipal securities markets in 2012 and holding a roundtable focused on the fixed income markets in 2013.[92] In addition, Commissioners and Commission staff have spoken about the need to focus on potential risks relating to the fixed income markets and their underlying liquidity.[93] Commission staff also has focused on the nature of liquidity risk management in fixed income funds, including by selecting fixed income funds as an examination priority in 2014, 2015, and 2016.[94]

We also have observed significant growth in alternative mutual funds over the last decade.[95] Although the assets of open-end funds pursuing alternative strategies accounted for a relatively small percentage of the mutual fund market as of December 2014, the growth of assets in these funds has been substantial. Assets of open-end funds with alternative strategies grew from approximately $365 million at the end of 2005 to approximately $334 billion at the end of 2014.[96]

Unlike alternative mutual funds and ETFs, private funds (such as hedge funds and private equity funds) and closed-end funds pursuing similar alternative strategies can invest in portfolio assets that are relatively illiquid without generating the same degree of redemption risk for the fund because investor redemption rights are often limited.[97] In addition, investor expectations of private funds' redemption rights differ from the redemption expectations of typical retail investors in open-end funds.[98] For example, investors in private equity funds typically commit their capital for the life of the fund.[99]

In contrast, alternative strategy mutual funds and ETFs have no such ability to tailor investor redemption rights based on the liquidity profile of the funds' portfolios. Yet some of these funds seek to pursue similar investment strategies as hedge funds and other private funds, while still being bound

[88] *See, e.g.,* See Comment Letter of Americans for Financial Reform on the FSOC Notice (Mar. 27, 2015) (''AFR FSOC Notice Comment Letter'') (citing evidence that ''bond fire sales by mutual funds during the financial crisis created direct economic harm to real economy companies, reducing investment and profitability over a period of years.''); Fidelity FSOC Notice Comment Letter, *supra* footnote 69, at 18 (''Managing liquidity levels to fulfill [a fund adviser's] fiduciary obligations benefits [redeeming and remaining] shareholders as well as the broader financial markets.'').

[89] *See* Proposing Release, *supra* footnote 9, at n.54.

[90] We note that, up until 1970, open-end funds had limited investments in the bond market. *See* Protecting Investors: A Half Century of Investment Regulation (May 1992) for a discussion of the regulatory and market developments that occurred between 1940 and 1992.

[91] Assets in these funds grew from $1.5 trillion at the end of 2008 to $3.6 trillion at the end of 2015, with net inflows exceeding $1.4 trillion during that period. These figures were obtained from staff analysis of Morningstar Direct data, and are based on fund categories defined by Morningstar. While mutual funds holding U.S. equities continue to make up the largest category of funds in terms of fund assets, their share of the total industry assets has declined from 65.2% in 2000 to 44.7% in 2015. DERA Study, *infra* footnote 95, at Table 2. The statistics in the DERA Study were calculated through the end of 2014. Commission staff used the CRSP US Mutual Fund Database to update them as of the end of 2015.

[92] *See* Securities and Exchange Commission, Transcript: Roundtable on Fixed Income Markets (Apr. 16, 2013), *available at https://www.sec.gov/spotlight/fixed-income-markets/2013-04-16-fixed-income-markets-transcript.txt* (discussing, among other topics, liquidity characteristics and risks in the municipal bond and corporate bond markets); Securities and Exchange Commission, Report on the Municipal Securities Market (July 31, 2012), *available at https://www.sec.gov/news/studies/2012/munireport073112.pdf* (discussing, among other topics, the low liquidity, opacity and fragmentation of the municipal securities market).

[93] *See* Proposing Release, *supra* footnote 9, at n.62.

[94] *See, e.g.,* IM Guidance Update No. 2014–01, Risk Management in Changing Fixed Income Market Conditions (Jan. 2014) (''2014 Fixed Income Guidance Update''), *available at https://www.sec.gov/divisions/investment/guidance/im-guidance-2014-1.pdf*; National Exam Program, Office of Compliance Inspections and Examinations, Examination Priorities for 2016 (2016), *available at https://www.sec.gov/about/offices/ocie/national-examination-program-priorities-2016.pdf* (''Amidst the changes in fixed income markets over the past several years, we will examine advisers to mutual funds, ETFs, and private funds that have exposure to potentially illiquid fixed income securities. We will also examine registered broker-dealers that have become new or expanding liquidity providers in the marketplace. These examinations will include a review of various controls in these firms' expanded business areas, such as controls over market risk management, valuation, liquidity management, trading activity, and regulatory capital''); National Exam Program, Office of Compliance Inspections and Examinations, Examination Priorities for 2015 (2015) (''National Exam Program 2015 Examination Priorities''), *available at http://www.sec.gov/about/offices/ocie/national-examination-program-priorities-2015.pdf* (''With interest rates expected to rise at some point in the future, we will review whether mutual funds with significant exposure to interest rate increases have implemented compliance policies and procedures and investment and trading controls sufficient to ensure that their funds' disclosures are not misleading and that their investments and liquidity profiles are consistent with those disclosures.''); National Exam Program, Office of Compliance Inspections and Examinations, Examination Priorities for 2014 (2014), *available at http://www.sec.gov/about/offices/ocie/national-examination-program-priorities-2014.pdf* (''The staff will monitor the risks associated with a changing interest rate environment and the impact this may have on bond funds and related disclosures of risks to investors.'').

[95] Paul Hanouna, Jon Novak, Tim Riley & Christof Stahel, *Liquidity and Flows of U.S. Mutual Funds,* Division of Economic and Risk Analysis White Paper (Sept. 2015) (''DERA Study''), at 7–8, *available at https://www.sec.gov/dera/staff-papers/white-papers/liquidity-white-paper-09-2015.pdf* . While there is no clear definition of ''alternative'' in the mutual fund space, an alternative mutual fund is generally understood to be a fund whose primary investment strategy falls into one or more of the three following buckets: (i) Non-traditional asset classes (for example, currencies or managed futures funds); (ii) non-traditional strategies (such as long/short equity, event driven); and/or (iii) less liquid assets (such as private debt). Their investment strategies often seek to produce positive risk-adjusted returns that are not closely correlated to traditional investments or benchmarks, in contrast to traditional mutual funds that historically have pursued long-only strategies in traditional asset classes.

[96] *See* Proposing Release, *supra* footnote 9 at nn.64–66 and accompanying text. *See also id.*

[97] A private fund is an issuer that would be an investment company, as defined in section 3 of the Investment Company Act, but for the exclusion from the definition of ''investment company'' in section 3(c)(1) or 3(c)(7) of the Act. Section 202(a)(29) of the Advisers Act.

[98] Hedge Funds often contain ''lock-up'' provisions and impose gates, suspensions of redemptions, and side pockets to manage liquidity stress. *See* Proposing Release, *supra* footnote 9, at n.69 and accompanying text.

[99] *See* Comment Letter of the Private Equity Growth Capital Council on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015).

by the redemption obligations applicable to open-end funds. Accordingly, our staff has been focused on the liquidity of alternative strategy mutual funds and ETFs (excluding ETMFs), as well as the nature of liquidity and redemption risks faced by investors in these funds given their legal right to be paid the proceeds of any redemption request within seven days and a fund's representations about payment in less than seven days.[100] Certain observations by the Commission's Division of Economic and Risk Analysis (''DERA'') have lent further support to our focus on liquidity risk management practices in this industry segment, as DERA's analysis has shown that alternative strategy mutual funds demonstrate cash flows that are significantly more volatile than other strategies, indicating that these funds may face higher levels of redemptions, and thus higher liquidity risk.[101] Volatility in flows places additional importance on liquidity risk management to prevent some of the consequences from a failure to adequately manage liquidity discussed in section II.B.2 above. The final rules and rule amendments build off of many of the observations we and our staff have made through efforts examining the growth in funds and ETFs with fixed income strategies and alternative strategies.

2. Evolution of Settlement Periods and Redemption Practices

Practices relating to securities trade settlement periods and the timing of the payment of redemption proceeds to investors also have evolved considerably over the decades since the Commission last addressed liquidity needs in open-end funds.[102] Due to the adoption of rule 15c6–1 under the Exchange Act in 1993, the standard settlement time frame declined from five business days (T+5) to three business days (T+3).[103] Furthermore, while standard settlement periods for securities trades in many markets have tended to fall significantly over the last several decades—and investor expectations that redemption proceeds will be paid promptly after redemption requests have risen—settlement periods for other securities held in large amounts by certain funds have not fallen correspondingly. For example, some bank loan funds do not consider most of their portfolio holdings to be illiquid and generally represent in their disclosures that they comply with the Commission's current guidelines,[104] even though the settlement periods associated with some bank loans and participations may extend beyond the period of time the fund would be required to meet shareholder redemptions. This creates a potential mismatch between the timing of the receipt of cash upon sale of these assets and the payment of cash for shareholder redemptions.[105]

Overall, the evolution of the market towards shorter settlement periods—and corresponding fund disclosures—combined with open-end funds holding certain securities with longer settlement periods have raised concerns for us about whether fund portfolios are sufficiently liquid to support a fund's ability to meet its redemption and other legal obligations.

D. Overview of Current Practices

Over the last several years, Commission staff has observed through a variety of different events the current liquidity risk management practices at a cross-section of fund complexes with varied investment strategies. The staff has observed that liquidity risk management techniques may vary across funds, including funds within the same fund complex, in light of unique fund characteristics, including, for example, the nature of a fund's investment objectives or strategies, the composition of the fund's investor base, and historical fund flows. These observations collectively have shown the staff that, even with various unique characteristics, many open-end funds and fund complexes have implemented procedures for assessing and managing the liquidity of their portfolio assets.[106]

Specifically, some of the funds observed by the staff assess their ability to sell particular assets within various time periods (typically focusing on one-, three-, and/or seven-day periods).[107] In conducting this analysis, these funds may take into account relevant market, trading, and other factors, and monitor whether their initial liquidity determination should be changed based on changed market conditions. This process helps these funds determine their ability to meet redemption requests without significant dilution in various market conditions within the disclosed period for payment of redemption proceeds.

Funds observed by the staff that have implemented procedures for assessing the liquidity of their portfolio assets also often have developed controls to manage fund portfolio liquidity risk and the risk of changing levels of shareholder redemptions, such as holding certain amounts of the fund's portfolio in highly liquid investments, setting minimum cash reserves, and establishing committed back-up lines of credit or interfund lending facilities.[108] A few of the funds observed by staff conduct stress testing relating to the availability of liquid assets to cover possible levels of redemptions.[109] Some of these funds' advisers also have periodic discussions with their boards of directors about how the funds approach liquidity risk management and what emerging risks they are observing relating to liquidity risk. The staff has observed that some of the funds with the more thorough liquidity risk management practices have appeared to be able to better meet periods of higher than typical redemptions without significantly altering their risk profile or materially affecting their performance, and thus with less dilutive impacts.

Conversely, the Commission is concerned that some funds employ liquidity risk management practices that are substantially less rigorous. Some funds observed by the staff do not take different market conditions into account when evaluating portfolio asset liquidity, and do not conduct any ongoing liquidity monitoring. Some funds do not incorporate any independent oversight of fund liquidity risk management outside of the portfolio management process.[110] Staff has observed that some of these funds, when faced with higher than normal redemptions, experienced particularly

[100] *See* Proposing Release, *supra* footnote 9, at n.72.

[101] *See* DERA Study, *supra* footnote 95.

[102] *See supra* footnotes 7–9 and accompanying text.

[103] The decline in the securities trading settlement period from T+5 to T+3 prompted funds that were sold through broker-dealers to satisfy redemption requests within three business days. *See supra* footnote 32.

[104] *See supra* section II.B.3.

[105] *See* discussion of this timing mismatch of the Proposing Release, *supra* footnote 9, at n.79 and accompanying text.

[106] There are varying degrees of formality in the adoption and implementation of these procedures. Several commenters also discussed existing liquidity risk management practices. *See, e.g.,* Blackrock Comment Letter; ICI Comment Letter I; Comment Letter of Vanguard (Jan. 6, 2016) (''Vanguard Comment Letter'').

[107] *See* 2014 Fixed Income Guidance Update, *supra* footnote 94 (noting that fund advisers ''generally assess overall fund liquidity and funds' ability to meet potential redemptions over a number of periods'' and discussing certain steps that fund advisers may consider taking given potential fixed income market volatility); *see also* Proposing Release, *supra* footnote 9, at n.151 and accompanying text.

[108] *See* Proposing Release, *supra* footnote 9, at n.100 and accompanying text.

[109] *See* Proposing Release, *supra* footnote 9, at n.101.

[110] *See* Proposing Release, *supra* footnote 9, at n.102.

poor performance compared with their benchmark and some even experienced an adverse change in the fund's risk profile, each of which can increase the risk of investor dilution as well as the risk that the fund will be unable to meet those redemptions.

Finally, the Commission learned through staff outreach that many funds treat their risk management process for assessing the liquidity profile of portfolio assets, and the incorporation of market and trading information, as entirely separate from their assessment of assets under the 15% guideline. The former process is typically conducted on an ongoing basis through the fund's risk management function, through the fund's portfolio management function, or through the fund's trading function (or a combination of the foregoing), while assessment of assets under the 15% guideline is more typically conducted upon purchase of an asset through the fund's compliance or ''back-office'' functions, with little indication that information generated from the risk management or trading functions informs the compliance determinations. This functional divide may be a by-product of the limitations of the 15% guideline as a stand-alone method for comprehensive liquidity risk management, a situation that our final liquidity risk management program framework is meant to address.[111]

Overall, our staff outreach has increased our understanding of some of the valuable liquidity risk management practices employed by some firms as a matter of prudent risk management. This outreach also has shown us the great diversity in liquidity risk management practices that raises concerns regarding various funds' ability to meet their redemption and other legal obligations and minimize the effects of dilution under certain conditions. Collectively, these observations have informed our understanding of the need for an enhanced minimum baseline requirement for fund management of liquidity risk.

E. Rulemaking Adoption Overview

Against this background, today we are adopting a set of reforms designed to promote effective liquidity risk management throughout the open-end fund industry and thereby reduce the risk that funds will not be able to meet redemption or other legal obligations and mitigate potential dilution of the interests of fund shareholders. We believe that limitations on illiquid holdings and more effective liquidity risk management among funds would, in turn, result in significant investor protection benefits and enhance the fair and orderly operation of the markets.[112] The final amendments also seek to enhance reporting and disclosure regarding fund liquidity and redemption practices.

First, we are adopting new rule 22e–4, which requires each registered open-end fund, including open-end ETFs but not including money market funds, to adopt and implement a written liquidity risk management program reasonably designed to assess and manage the fund's liquidity risk.[113] The new rule requires a fund's liquidity risk management program to incorporate certain specified elements. These include: (i) Assessment, management, and periodic review of the fund's liquidity risk; (ii) classification of the liquidity of each of the fund's portfolio investments,[114] as well as at-least-monthly reviews of the fund's liquidity classifications; (iii) determining and periodically reviewing a highly liquid investment minimum—the percentage of its net assets that the fund invests in highly liquid investments that are assets; (iv) limiting the fund's investment in illiquid investments that are assets to no more than 15% of the fund's net assets; and (v) for funds that engage in, or reserve the right to engage in, redemptions in kind, the establishment of policies and procedures regarding how they will engage in such redemptions in kind.

The liquidity risk assessment requirement generally provides a broad, principles-based foundational framework for a fund's liquidity risk management program, including a requirement that the fund assess whether its investment strategy is appropriate for an open-end fund. The final rule also provides for a tailored program for ETFs, requiring them to consider additional factors as part of their liquidity risk assessment and management that reflect potential liquidity-related concerns that could arise from the structure and operation of ETFs, and excepting ETFs that redeem in kind (''In-Kind ETFs'') from the classification and highly liquid investment minimum requirements.[115] The final rule also provides that funds whose assets primarily consist of highly liquid investments need not adopt a highly liquid investment minimum.[116] Additionally, rule 22e–4 will not apply to closed-end funds, and will apply to principal underwriters and depositors of UITs only to a limited degree, as discussed further below. The classification requirement will provide important liquidity profile information to the Commission and investors and reflects that liquidity may be viewed as falling on a spectrum rather than a binary conclusion that an investment is either ''liquid'' or ''illiquid.''[117] The highly liquid investment minimum requirement is aimed at decreasing the

[111] *See supra* section II.B.2 for a discussion of the limitations of the 15% guideline.

[112] *See infra* section IV.C.

[113] *See* rule 22e–4(b). Rule 22e–4, as adopted today, defines ''liquidity risk'' as the risk that a fund could not meet requests to redeem shares issued by the fund without significant dilution of remaining investors' interests in the fund.

[114] As discussed in more detail below, rule 22e–4 as adopted requires a fund to classify each of the fund's portfolio *investments,* including investments that are liabilities of the fund (*e.g.,* certain out-of-the-money derivatives transactions). *See infra* footnote 480 and accompanying text. As proposed rule 22e–4 would have required each fund to classify the liquidity of its portfolio positions (or portions of a position in a particular asset), but did not specifically address the treatment of a fund's holdings that are liabilities. Thus, in this Release, we use the term ''assets'' when referring to the proposed classification requirement and comments on the proposed requirement, and the term ''investments'' when referring to the adopted classification requirement.

[115] Under the final rule, each ''In-Kind ETF,'' or an ETF that meets redemptions through in-kind transfers of securities, positions, and assets other than a *de minimis* amount of cash, will be subject to the tailored program requirement. *See* rule 22e–4(a)(9) (definition of ''In-Kind Exchange Traded Fund'' or ''In-Kind ETF''); rule 22e–4(b)(1)(i)(D) (incorporating additional factors that an ETF would be required to consider as applicable as part of its liquidity risk assessment and management that reflect liquidity-related risks that could be particularly relevant to the ETF). Under rule 22e–4(a)(5), the term ''fund'' is defined to exclude an In-Kind ETF. As a result, rule 22e–4(b)(1)(ii) and rule 22e–4(b)(1)(iii), which apply to funds as defined in rule 22e–4(a)(5), exclude In-Kind ETFs from the classification and highly liquid investment minimum requirements, respectively.

[116] *See* rule 22e–4(b)(1)(iii) (applying the highly liquid investment minimum requirement only to a fund that does not primarily hold assets that are highly liquid investments).

[117] The Commission is adopting a classification framework consisting of four liquidity categories based on the number of days within which it is determined that the investment is reasonably expected to be convertible to cash (or, in the case of the least-liquid categories, sold or disposed of) without the conversion (or, in the case of the least-liquid categories, sale or disposition) significantly changing the market value of the investment. More specifically, as discussed below, rule 22e–4 would require a fund to classify each of its portfolio investments into one of the following liquidity categories: *Highly liquid* investments (category based on fund's reasonable expectation that an investment can be converted to cash within three business days); *moderately liquid* investments (category based on fund's reasonable expectation that an investment can be converted to cash within four to seven calendar days); *less liquid* investments (category based on fund's reasonable expectation that an investment can be sold or disposed of in seven calendar days but the settlement is reasonably expected to be greater than seven calendar days); and *illiquid* investments (category based on fund's reasonable expectation that an investment cannot be sold or disposed of within seven calendar days).

likelihood that funds would be unable to meet their redemption obligations.

Rule 22e–4 includes board oversight provisions related to the liquidity risk management program. Specifically, a fund's board will approve, but not design, the fund's liquidity risk management program, as well as the fund's designation of the fund's investment adviser or officers as responsible for administering the day-to-day aspects of the fund's liquidity risk management program.[118] A fund also will be subject to board reporting requirements to the extent that its investments in assets that are highly liquid investments fall below its minimum or its assets that are illiquid investments rise above 15% of its net assets.[119] We anticipate that the new program requirement will result in investor protection benefits, as improved liquidity risk management could decrease the chance that a fund could meet its redemption obligations only with significant dilution of remaining investors' interests or changes to the fund's risk profile.

Rule 22e–4, by requiring funds to limit illiquidity and manage liquidity, should reduce the potential likelihood and extent of dilution of non-transacting shareholders that otherwise could result from redemptions effected at prices determined in accordance with rules 22c–1 and 2a–4. Thus, rule 22e–4, although it is numbered with reference to section 22(e), has a broader scope and also should separately help rule 22c–1 operate so as to reduce dilution, as contemplated by sections 22(a) and (c).

Second, we are adopting certain public disclosure- and confidential reporting-related rules and amendments to provide shareholders and other users with additional information with respect to funds' liquidity risk profile as well as assist the Commission in its monitoring efforts. Specifically, we are adopting reporting requirements on Form N–PORT that will require a fund to report monthly position-level liquidity classification information and its highly liquid investment minimum to the Commission on a confidential basis.[120] Form N–PORT will also require a fund to publicly disclose the aggregated percentage of its portfolio representing each of the four classification categories adopted by the Commission as of the end of each of its fiscal quarters.[121]

We are adopting new rule 30b1–10 and Form N–LIQUID to require a fund to confidentially notify the Commission when the fund's illiquid investment holdings exceed 15% of its net assets or if its amount of highly liquid investments declines below its highly liquid investment minimum for more than a brief period of time. We also are adopting amendments to Form N–1A to require a fund to publicly disclose certain information regarding the fund's redemption procedures. Finally, we are adopting requirements for funds to provide information on Form N–CEN about funds' use of lines of credit and interfund lending.

We anticipate that these new requirements will facilitate the Commission's risk and compliance monitoring efforts by providing greater transparency regarding the liquidity characteristics of fund portfolio holdings, as well as its ability to monitor and assess compliance with rule 22e–4. While Form N–PORT and Form N–CEN are primarily designed to assist the Commission, we believe that the requirements to publicly disclose certain information will also help investors and other potential users utilize information on particular funds' liquidity-related risks and redemption policies, which in turn may assist investors in making more informed investment choices.[122] As further discussed below, we believe that these reporting requirements strike the right balance between protecting the funds from certain adverse effects that could arise from public disclosure of detailed portfolio liquidity information with the need to provide shareholders and other users with improved information about funds' liquidity risk profile.

III. Discussion

A. Program Requirement and Scope of Rule 22e–4

Today the Commission is adopting rule 22e–4 under the Investment Company Act. This rule will require each registered open-end management investment company, including open-end ETFs but not including money market funds, to establish a written liquidity risk management program. Rule 22e–4 will not apply to closed-end funds, and will apply to UITs only to a limited degree, as discussed further below.

1. Liquidity Risk Management Program

Rule 22e–4 generally will require each registered open-end management investment company to establish a written liquidity risk management program. The majority of commenters generally supported the proposed requirement for each fund to adopt a formal, written liquidity risk management program,[123] although many commenters objected to certain aspects of the proposal and suggested modifications to certain proposed program elements, as discussed in more detail below. Other commenters opposed the proposed written program requirement, asserting that funds have a history of successfully managing their liquidity and that the proposed requirement was thus unnecessary.[124] We continue to believe, as discussed in the Proposing Release, that the program requirement will produce significant investor protection benefits, in light of the fact that funds are not currently subject to specific requirements under

[118] Rule 22e–4(b)(2).

[119] Rule 22e–4(b)(1)(iii)(A)(3) and rule 22e–4(b)(1)(iv).

[120] We are adopting Form N–PORT today in a companion release. *See* Investment Company Reporting Modernization, Investment Company Act Release No. 32314 (October 13, 2016) (''Investment Company Reporting Modernization Adopting Release'') We discuss the Form N–PORT reporting requirements related to rule 22e–4 in this Release, including the requirements that a fund report: (i) The liquidity classification assigned to each portfolio position (which may be based on asset type to the extent discussed below); (ii) the asset type label that the fund has assigned to each portfolio position, using any asset type labeling scheme the fund employs in its own portfolio management systems; and (iii) the fund's highly liquid investment minimum.

[121] This information will be reported monthly on Form N–PORT, but it will be disclosed to the public only for the third month of each fiscal quarter with a 60-day delay.

[122] *See, e.g.,* Comment Letter of Markit on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015) (''[W]e believe that liquidity and redemption risk contained in asset management products can be mitigated by providing risk managers or investors of pooled investment vehicles better information about the liquidity risk associated with pool investments so that they can price it more accurately. This could be done through, among other things, disclosures of the 'prudent valuation' (accounting for pricing uncertainty) of the fund's investments and the implementation of appropriate liquidity risk management policies and procedures.'').

[123] *See, e.g.,* Comment Letter of Alternative Investment Management Association (Jan. 13, 2016) (''AIMA Comment Letter''); Comment Letter of Capital Research and Management Company (Jan. 13, 2016) (''CRMC Comment Letter''); Comment Letter of Cohen & Steers (Jan. 13, 2016) (''Cohen & Steers Comment Letter''); Comment Letter of Dechert LLP (Jan. 13, 2016) (''Dechert Comment Letter''); Comment Letter of Fidelity Management & Research Company (Jan. 13, 2016) (''Fidelity Comment Letter''); Comment Letter of Association of the Bar of the City of New York (Jan. 13, 2016) (''NYC Bar Comment Letter''); Comment Letter of Securities Industry and Financial Markets Association (Jan. 13, 2016) (Comments on Proposal to Require Liquidity Risk Management Programs and Related Liquidity Disclosures) (''SIFMA Comment Letter I''); Comment Letter of T. Rowe Price (Jan. 13, 2016) (''T. Rowe Comment Letter'').

[124] *See* Comment Letter of Cove Street Capital (Oct. 8, 2015) (''Cove Street Comment Letter''); Comment Letter of Jim H. Francis (Nov. 4, 2015); Comment Letter of Jordana Keefer (Jan. 7, 2016) (''Keefer Comment Letter''); Comment Letter of Don G. Powell (Oct. 5, 2015); Comment Letter of John Wahh (Oct. 1, 2015) (''Wahh Comment Letter'').

the federal securities laws or Commission rules obliging them to manage their liquidity risk. Outreach by Commission staff has identified practices at some funds that raise concerns regarding funds' ability to meet their redemption obligations and lessen the effects of dilution.[125] The Commission is thus adopting, as proposed, a requirement for each fund to adopt and implement a written liquidity risk management program.[126] However, we note that the program requirement we are adopting incorporates modifications to most of the proposed program elements.[127]

A fund may, as it determines appropriate, expand its liquidity risk management procedures and related disclosure concerning liquidity risk beyond the required program elements.[128] While a fund would be required to adhere to certain requirements—such as the requirement to classify the liquidity of a fund's portfolio investments and determine a highly liquid investment minimum[129]—in other respects, the proposed program requirements would permit each fund to tailor its liquidity risk management program to the fund's particular risks and circumstances. Commenters stressed that many funds are currently engaged in operational practices that are designed to support fund liquidity and the redeemability of fund shares.[130] Commenters also noted that funds' approaches to liquidity risk management should, and currently do, differ markedly depending on their individual risks.[131] We believe that the program requirement will permit funds that already have programs that satisfy the rule requirements to continue to engage in the liquidity risk management practices that they have found to be effective. However, the program requirement's common obligations should strengthen liquidity risk management across the fund industry, while also providing important transparency into funds' liquidity profiles and risk management practices.

2. Scope of Rule 22e–4 and Related Disclosure and Reporting Requirements

The liquidity risk management program requirements of rule 22e–4, as well as related disclosure and reporting requirements, will apply to all registered open-end funds, except money market funds.[132] Rule 22e–4 will apply to open-end ETFs, but incorporates tailored program requirements to reflect their particular liquidity-related risks.[133] The final rule also excludes from the highly liquid investment minimum requirement funds whose portfolios consist primarily of highly liquid investments. Closed-end funds are excluded from the scope of rule 22e–4,[134] and UITs are not subject to the rule's general program requirement, although each UIT's principal underwriter or depositor will be required to determine, on or before the date of the initial deposit of portfolio securities into the UIT, that the portion of illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues.[135] We discuss these scope determinations in more detail below.

a. Inclusion of Funds With All Investment Strategies and Inclusion of ETFs Within the Scope of Rule 22e–4

We are not excluding funds with any particular strategies from the scope of rule 22e–4.[136] We proposed to apply rule 22e–4 to all open-end funds (except money market funds) regardless of the fund's investment strategy, stating that even funds with investment strategies that have historically entailed little liquidity risk could experience liquidity stresses in certain environments.[137] We also stated that different types of funds within the same broad investment strategy could demonstrate different levels of liquidity and relatedly, different levels of liquidity risk.

Some commenters expressed concern about the costs of some of the proposed requirements relative to the liquidity risks typically associated with certain investment strategies,[138] as well as concerns about burdensome effects of some particular requirements for certain strategies.[139] Other commenters, however, generally supported a program requirement that applies to all registered open-end funds, regardless of the fund's investment strategy.[140] We believe the modifications to the proposal we are adopting (in particular, changes to the classification requirement and the proposed three-day liquid asset minimum requirement) appropriately address commenters' concerns and reflect support that some commenters provided for a program requirement that applies to all registered open-end funds.

As noted above, rule 22e–4 will apply to open-end ETFs, although we are adopting certain tailored program requirements for ETFs.[141] Some commenters objected to all or certain proposed program requirements applying to ETFs.[142] We respond in detail to these comments in section III.J below. We note, however, that while ETFs' liquidity risks can differ from the liquidity risks faced by other open-end funds, ETFs still have liquidity-related risks that could affect their shareholders, as well as the broader markets in which they operate. The tailored requirements that we are

[125] *See* Proposing Release, *supra* footnote 9, at section IV.C.1.b.

[126] *See* rule 22e–4(b).

[127] As discussed throughout this Release, we believe that these modifications respond appropriately to specific concerns noted by commenters and help to increase the effectiveness of the program requirement in advancing the Commission's goals, while at the same time reducing associated burdens.

[128] *See supra* footnotes 113–115 and accompanying text for a description of the required program elements.

[129] In-Kind ETFs are excepted from the classification and highly liquid investment minimum requirements. *See infra* section III.J. In addition, funds whose portfolios consist primarily of highly liquid investments would not be required to determine a highly liquid investment minimum. *See infra* section III.D.5.

[130] *See, e.g.,* ICI Comment Letter I; BlackRock Comment Letter; Invesco Comment Letter; Vanguard Comment Letter.

[131] *See, e.g.,* ICI Comment Letter I; Dechert Comment Letter; Vanguard Comment Letter.

[132] Although money market funds are excluded from the scope of rule 22e–4, they will be subject to the amendments to Form N–1A and Form N–CEN. *See infra* section III.A.2.a (''Inclusion of Funds with All Investment Strategies and Inclusion of ETFs within the Scope of Rule 22e–4''); section III.A.2.b (''Inclusion of Funds of All Sizes within the Scope of Rule 22e–4''); and section III.A.2.e (''Exclusion of Money Market Funds from the Scope of Rule 22e–4'').

[133] *See infra* section III.J.

[134] *See infra* section III.A.2.c (''Exclusion of Closed-End Funds from the Scope of Rule 22e–4'').

[135] *See infra* section III.K.

[136] *But see infra* section III.D.5 (discussing exclusion of In-Kind ETFs as well as funds that primarily hold highly liquid investments from the highly liquid investment minimum requirement).

[137] *See* Proposing Release, *supra* footnote 9, at nn.123–125 and accompanying text.

[138] *See, e.g., infra* footnote 1107 and accompanying text.

[139] For example, some commenters expressed concerns about the extent to which the proposed liquidity classification factors were applicable to certain investment strategies, particularly funds that invest in fixed income or other OTC assets (*see, e.g.,* Comment Letter of Federated Investors, Inc. (Jan. 13, 2016) (''Federated Comment Letter''); Comment Letter of Government Finance Officers Association (Jan. 13, 2016) (''GFOA Comment Letter''); Comment Letter of Nuveen Fund Advisors, LLC (Jan. 13, 2016) (''Nuveen Comment Letter''); Comment Letter of OppenheimerFunds (Jan. 13, 2016) (''Oppenheimer Comment Letter'')). Commenters also expressed concerns about the extent to which a three-day liquid asset minimum requirement could impede an index fund's ability to track its index (*see, e.g.,* BlackRock Comment Letter; HSBC Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I).

[140] *See, e.g.,* CRMC Comment Letter; Comment Letter of Eaton Vance Investment Managers (Jan. 13, 2016) (''Eaton Vance Comment Letter I'').

[141] We note that rule 22e–4 only applies to ETFs that are structured as open-end funds. For ease of reference, however, unless indicated otherwise, when we refer to ETFs we mean open-end ETFs only.

[142] *See infra* footnotes 839–841 and accompanying text.

adopting for ETFs respond to commenters' suggestions that the Commission tie these funds' liquidity risk management obligations to the particular risks that they face, as well as our assessment of how these funds' risks could most appropriately be addressed.[143]

b. Inclusion of Funds of All Sizes Within the Scope of Rule 22e–4

Also, as proposed, we are not excluding any fund from the scope of rule 22e–4 on the basis of size or adopting different liquidity requirements for relatively small funds. As discussed in the Economic Analysis section below, smaller funds tend to demonstrate relatively high flow volatility, and thus we believe they should be subject to the same liquidity risk management requirements as other funds.[144] Conversely, some commenters argued that the proposed classification requirement could unduly burden larger funds by inappropriately making these funds appear to be less liquid than they actually are, and we have incorporated certain modifications to the proposed classification requirement that we believe respond to these concerns, as discussed below.[145]

c. Exclusion of Closed-End Funds From the Scope of Rule 22e–4

As proposed, rule 22e–4 would have excluded closed-end investment companies from the scope of rule 22e–4. As discussed in detail in the Proposing Release, closed-end funds' liquidity needs are different from those of open-end funds, because closed-end funds generally do not issue redeemable securities and are not subject to sections 22(c) and 22(e) of the Investment Company Act.[146] Although closed-end interval funds do have to comply with certain liquidity standards under rule 23c–3 and therefore must manage their liquidity risk, we are not subjecting them to rule 22e–4 because they are already required to adopt written liquidity procedures under rule 23c–3(b)(10)(iii).[147] Closed-end interval funds may be better able to anticipate their liquidity needs than open-end funds because closed-end interval funds do not permit daily redeemability, closed-end interval funds must limit the size and timing of repurchase offers, and rule 23c–3 requires shareholders who wish to tender their shares pursuant to a repurchase offer to provide advance notice thereof to such funds.[148] Commenters uniformly agreed that closed-end funds should be excluded from the scope of rule 22e–4 and we continue to believe that closed-end funds (including closed-end interval funds) should be excluded from the rule's scope.

d. Separate Requirements for UITs Under Rule 22e–4

As proposed, the scope of rule 22e–4 did not include UITs.[149] As adopted today, the rule will require a limited liquidity review under which the UIT's principal underwriter or depositor determines, on or before the date of the initial deposit of portfolio securities into the UIT, that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues.[150] UITs and their principal underwriters and depositors will not, however, be subject to any of the rule's other liquidity risk management program requirements.

While one commenter supported excluding UITs from the scope of rule 22e–4,[151] several other commenters argued that ETFs structured as UITs should be subject to the same rule requirements as ETFs structured as open-end funds.[152] We respond in detail to these comments in section III.K below, including discussing how we believe the requirement to determine that a UIT's illiquid investment holdings are consistent with the redeemable nature of the UIT's securities responds to commenters' concerns.

e. Exclusion of Money Market Funds From the Scope of Rule 22e–4

Finally, as proposed, money market funds are excluded from the scope of rule 22e–4. Money market funds are currently subject to extensive requirements concerning the liquidity of their portfolio assets that are more stringent in many respects than the requirements of rule 22e–4, due to the historical redemption patterns of money market fund investors and the characteristics of the assets held by money market funds.[153] Money market funds also are already subject to broad liquidity-related disclosure and reporting requirements,[154] and they have certain tools at their disposal to manage heavy redemptions that are not available to other open-end funds.[155] For these reasons, we did not include money market funds within the scope of the proposed rule, and commenters uniformly agreed that money market funds should be excluded from the rule's scope.[156] We continue to believe that money market funds should be excluded from the scope of rule 22e–4.

B. Assessment, Management, and Review of Liquidity Risk

Section 22(e) of the Investment Company Act requires a registered investment company[157] to make payment to shareholders for securities tendered for redemption within seven days of their tender.[158] The legislative history of the Act indicates that shareholder dilution was a significant concern of the Act's framers.[159] An open-end fund's ability to pay redeeming shareholders within this seven-day period without significant dilution is directly related to its liquidity. Thus, assessing and managing liquidity risk in a comprehensive manner is critical to an open-end fund's capacity to honor redemption requests within this seven-day period, as well as within any shorter time period disclosed in the fund's prospectus or advertising materials, while mitigating dilution.

Today we are adopting a new liquidity risk assessment and management framework for funds. Specifically, rule 22e–4 requires a fund to assess, manage, and periodically review its liquidity risk, considering certain factors as applicable. As discussed in more detail below, the requirements we are adopting incorporate a definition of ''liquidity risk'' that focuses on whether a fund can meet redemption requests without significant dilution of remaining investors' interests rather than, as proposed, whether the fund can meet redemption requests without materially

[143] *See infra* section III.J.

[144] *See infra* footnote 1160 and accompanying text.

[145] *See infra* section III.C.3.b.

[146] *See* Proposing Release, *supra* footnote 9, at nn.132–135 and accompanying text. Certain closed-end funds (''closed-end interval funds'') do elect to repurchase their shares at periodic intervals pursuant to rule 23c–3 under the Investment Company Act.

[147] *See* Proposing Release, *supra* footnote 9, at n.134.

[148] *See id.,* at text following n.135.

[149] *See* Proposing Release, *supra* footnote 9, at section III.A.2.

[150] *See* rule 22e–4(c). The rule also requires UITs to maintain a record of that determination for the life of the UIT and for five years thereafter.

[151] *See* ICI Comment Letter I.

[152] *See, e.g.,* Comment Letter of Anonymous (Jan. 13, 2016) (''Anonymous Comment Letter I''); BlackRock Comment Letter.

[153] *See* Proposing Release, *supra* footnote 9, at nn.145–150 and accompanying text.

[154] *See id.,* at nn.151–152 and accompanying text.

[155] *See id.,* at nn.153–155 and accompanying text.

[156] *See, e.g.,* CRMC Comment Letter; Eaton Vance Comment Letter I; ICI Comment Letter I; Comment Letter of Voya Investment Management (Jan. 12, 2016) (''Voya Comment Letter'').

[157] *See supra* footnote 4 and accompanying text.

[158] *See supra* footnote 36.

[159] *See supra* footnote 7 and accompanying text.

affecting the fund's NAV.[160] We are also adopting certain changes to the proposed factors that a fund would consider in assessing and managing its liquidity risk. These changes aim to simplify and streamline the proposed liquidity risk assessment and management factors, and reflect additional considerations that the Commission, along with certain commenters, believes could entail heightened liquidity risk. Notably, the proposed requirement to consider a fund's investment strategy and portfolio liquidity in assessing and managing liquidity risk now incorporates the instruction that this consideration includes whether the investment strategy is appropriate for an open-end fund, as well as whether the strategy involves a relatively concentrated portfolio or large positions in particular issuers.[161] Additionally, the proposed requirement to consider a fund's short-term and long-term cash flow projections has been simplified to eliminate the five separate sub-considerations relevant to this factor that were incorporated in the proposed rule, but which now are discussed as guidance in this Release.[162]

We proposed liquidity risk assessment and management program requirements with the primary goals of reducing the risk that funds would be unable to meet redemption and other legal obligations, minimizing dilution, and elevating the overall quality of liquidity risk management across the fund industry while at the same time providing funds with reasonable flexibility to adopt policies and procedures that would be most appropriate to assess and manage their liquidity risk.[163] As we discuss throughout this section, we believe that the modified requirements we are adopting today continue to reflect these goals, while promoting a more efficient and workable framework.

1. Definition of ''Liquidity Risk''

Rule 22e–4, as adopted today, defines ''liquidity risk'' as the risk that a fund could not meet requests to redeem shares issued by the fund without significant dilution of remaining investors' interests in the fund.[164] This definition is largely similar to the proposed definition of ''liquidity risk,'' that is, the risk that a fund could not meet requests to redeem shares issued by the fund that are expected under normal conditions, or are reasonably foreseeable under stressed conditions, without materially affecting the fund's NAV.[165] However, in response to comments, the revised definition substitutes the phrase ''without significant dilution of remaining investors' interests in the fund'' for the phrase ''without materially affecting the fund's net asset value.'' The definition also does not include references to redemption requests that are expected under normal conditions or reasonably foreseeable under stressed conditions. Instead, the final definition simply refers to ''requests to redeem.'' We believe our modifications to the liquidity risk factors used to assess a fund's liquidity risk, as discussed below, make any reference to market conditions within the definition of liquidity risk unnecessary, confusing, and duplicative.[166]

a. Evaluating Risk of Significant Dilution of Remaining Investors' Interests

Multiple commenters objected to the proposed inclusion of any NAV-impact standard in the definition of ''liquidity risk.'' One commenter argued that including the concept of ''without materially affecting the fund's net asset value'' in the definition of liquidity risk would inappropriately merge liquidity and valuation, which are subject to different regulatory and compliance controls.[167] Many commenters also objected that including such a price concept in the definition of ''liquidity risk'' would incorrectly indicate that market impact can be accurately identified and measured separate from market price movements generally.[168] These commenters argued that many factors (including market volatility, portfolio composition, and trade execution and activity) influence the price at which a fund transacts in a security as well as the levels of cash the fund holds, and thus it is difficult to identify the effects of the fund's transaction activity on the fund's NAV. Finally, some commenters argued that the inclusion of a NAV-impact standard in the definition of ''liquidity risk'' could lead investors to believe that appropriate liquidity risk management will protect their investments from declining in value.[169]

While we agree that liquidity and valuation are distinct concepts, we consider these concepts as having certain inter-relationships. First, liquidity risk in an open-end fund inherently involves an assessment of the liquidity of the fund's investments. Common definitions of investment liquidity include consideration of the value impact or costs from trading that investment.[170] Second, our staff has observed in its outreach many occasions when a fund was unwilling to transact

[160] *See infra* section III.B.1.a.

[161] *See infra* section III.B.2.a.

[162] *See infra* section III.B.2.b.

[163] *See* Proposing Release, *supra* footnote 9, at paragraph following n.261.

[164] When determining whether a fund's liquidity risk will cause significant dilution for purposes of this definition, a fund should consider the impact of liquidity risk on the total net assets of the fund and the adverse consequences such dilution will have on all the fund's remaining shareholders. Furthermore, as discussed above, a fund's inability to meet redemption requests may cause harm to shareholders. *See, e.g., supra* footnotes 81–84 and accompanying text for a discussion of the suspension of shareholder redemptions in the Third Avenue Focused Credit Fund following a period of heavy redemptions that the fund stated reduced the fund's portfolio liquidity.

[165] *See* proposed rule 22e–4(a)(7); *see also* Proposing Release, *supra* footnote 9, at text accompanying n.255.

[166] *See* rule 22e–4(b)(1)(i).

[167] *See* SIFMA Comment Letter I.

[168] *See, e.g.,* Comment Letter of Credit Suisse (Jan. 13, 2016) (''Credit Suisse Comment Letter''); Comment Letter of Dodge & Cox (Jan. 21, 2016) (''Dodge & Cox Comment Letter''); Comment Letter of MFS Investment Management (Jan. 13, 2016) (''MFS Comment Letter''); SIFMA Comment Letter I; Comment Letter of Investment Company Institute (May 17, 2016) (''ICI Comment Letter III'') (encouraging the Commission to adopt a definition of liquidity risk that incorporates language related directly to dilution rather than value impact on the NAV).

[169] *See, e.g.,* ICI Comment Letter I; MFS Comment Letter; SIFMA Comment Letter I.

[170] *See, e.g.,* Radhakrishnan Gopalan, *et al., Asset Liquidity and Stock Liquidity,* 47 J. Fin & Quant. Anal. 333 (2012), *available at http://apps.olin.wustl.edu/faculty/gopalan/asset_stock_liquidity.pdf* (''An asset is liquid if it can be converted into cash quickly and at a low cost.''); Yakov Amihud & Haim Mendelson, *Liquidity, Asset Prices, and Financial Policy, 47 Fin. Anal. J.* 56 (1991), *available at http://www.jstor.org/stable/4479488?seq=1#page_scan_tab_contents* (''An asset is liquid if it can be bought or sold at the current market price quickly and at low cost.'').

In addition, we note that many funds disclose liquidity risk as a principal investment risk in their prospectuses, and these disclosures often reference possible adverse value impacts from selling fund investments under certain conditions. *See, e.g.,* Schwab Strategic Trust rule 485(b) Registration Statement (June 30, 2016), *available at https://www.sec.gov/Archives/edgar/data/1454889/000119312516632635/d203200d485bpos.htm* (''Liquidity Risk. The fund may be unable to sell certain securities, such as illiquid securities, readily at a favorable time or price, or the fund may have to sell them at a loss.''); Voya Variable Funds rule 485(b) Registration Statement (May 1, 2016), *available at https://www.sec.gov/Archives/edgar/data/2664/000119312516562669/d124096d485bpos.htm* (''Liquidity: If a security is illiquid, the [fund] might be unable to sell the security at a time when the [fund's] manager might wish to sell, or at all. Further, the lack of an established secondary market may make it more difficult to value illiquid securities, exposing the [fund] to the risk that the price at which it sells illiquid securities will be less than the price at which they were valued when held by the [fund]. The prices of illiquid securities may be more volatile than more liquid investments. The risks associated with illiquid securities may be greater in times of financial stress. The [fund] could lose money if it cannot sell a security at the time and price that would be most beneficial to the Portfolio.'').

in certain portfolio investments when such sales would yield a price that the fund considered unacceptable.[171] This relationship is clear in the Commission guidelines limiting a fund's investment in illiquid investments. These guidelines specify that an illiquid investment is one that cannot be sold or disposed of within seven days *at approximately the value at which the fund has valued the investment*'' (emphasis added).[172] We continue to believe that the inclusion of a conceptual relationship between liquidity and sale price in the definition of ''liquidity risk'' is appropriate.[173] Such a relationship indicates that liquidity risk involves the risk that a fund will not be able to meet redemption requests under any circumstances, as well as the risk that a fund could meet redemption requests, but only in a manner that adversely affects the fund's non-redeeming shareholders through significant dilution.[174]

We believe a definition of ''liquidity risk'' that includes a reference to the value impact from trading portfolio investments should not imply that mutual fund shareholders are guaranteed a protected NAV or that the fund cannot sell investments at a loss due to market risk, credit deterioration, or liquidity risk. Indeed, funds' narrative risk disclosure in their registration statements and other shareholder communications generally should make clear those risks that could adversely affect the fund's NAV, yield, and total return, including liquidity-related risks.[175] However, we believe defining liquidity risk clarifies what funds must manage under rule 22e–4, and, for the reasons discussed above, we believe impacts on valuation may play a significant role in evaluating the ability to effectively meet shareholder redemptions while lessening the effects of dilution.

Nonetheless, we agree with commenters that using the proposed specific standard of ''materially affecting the fund's NAV'' may pose certain challenges. We recognize that it may be difficult to calculate the particular market impact that a fund's transactions in an investment will have on that investment's price, which some commenters suggested was inherent to the proposed standard. There could be other reasons for a fund's NAV fluctuating, separate from the fund's sales of portfolio investments to meet redemption requests as well.

Accordingly, in the final rule we have modified the NAV-impact standard in the definition of ''liquidity risk'' to substitute the phrase ''without significant dilution of remaining investors' interests in the fund'' for the phrase ''without materially affecting the fund's net asset value.'' This revised standard more directly corresponds to the concerns of the Act[176] and rule 22e–4 by focusing on meeting investor redemptions without dilution.

We also note that commenter interpretations of the term ''materially'' varied, with some commenters adopting very narrow interpretations[177] of the term and others taking a more broad view.[178] We note that, for purposes of this definition, the term ''significant'' is not meant to reference slight NAV movements, the causes of which may not be easily distinguishable, nor is it limited only to fire-sale situations. Instead, a fund's liquidity risk management program should focus on the fund's ability to meet redemptions in a manner that does not harm shareholders.[179] In particular, ''significant'' dilution of remaining investors' interests in the fund can occur at much lower levels of dilution than what would occur in a fire sale situation. We believe ''significant'' conveys more effectively than ''materially'' that the definition is not meant to reference slight NAV movements, while avoiding the confusion around the term ''materially'' evident in the comment letters and better focusing the rule on the level of dilution that would harm remaining investors' interests even in the absence of a fire sale.

Under rule 22e–4, a fund would be required to adopt a liquidity risk management program that is ''reasonably designed to assess and manage the fund's liquidity risk.'' A fund's liquidity risk management program should be appropriately tailored to reflect that fund's particular liquidity risks. Therefore, while a fund is required to consider certain liquidity risk factors specified in rule 22e–4 as applicable, a fund may also, as it determines appropriate, expand its liquidity risk management program beyond the required program elements, and must do so to the extent it would be necessary to effectively assess and manage its liquidity risk.[180] This

[171] That is, the price that a portfolio manager could realistically receive for certain portfolio investments could, in effect, render such investments de facto illiquid if these pricing considerations cause the portfolio manager to refrain from selling them. *See, e.g.,* Third Avenue Temporary Order, *supra* footnote 12 (''On December 9, 2015, after considering the environment the Fund was in and the likelihood that incremental sales of portfolio securities to satisfy additional redemptions would have to be made at prices that would unfairly disadvantage all remaining shareholders, the Board determined that the fairest action on behalf of all shareholders would be to adopt a plan of liquidation.'').

[172] *See supra* footnote 39 and accompanying text.

[173] We also note that several commenters favorably discussed foreign and international regulators' liquidity risk management regimes, including ones that define the concepts of liquid (or illiquid) portfolio assets, as well as funds' liquidity risk, with reference to value impact or a discount that the fund may incur upon sale. *See, e.g.,* Dechert Comment Letter (favorably discussing certain liquidity risk management requirements, including the definition of ''liquidity risk,'' under the UCITS Directive); ICI Comment Letter I (noting that the Commission could look to other jurisdictions, including the European Union, for support for a principles-based program rule); Invesco Comment Letter (also noting that the UCITS Directive provides a framework for a principles-based liquidity risk management program requirement); *see also* Commission Directive 2010/43/EU, OJ L 176 (2010), at Ch. 1, Art. 3(8) (defining ''liquidity risk'' as ''the risk that a position in the UCITS portfolio cannot be sold, liquidated or closed at limited cost in an adequately short time frame and that the ability of the UCITS to comply at any time with its redemption obligation is thereby compromised''); Ontario Securities Commission, Report on Staff's Continuous Disclosure Review of Mutual Fund Practices Relating to Portfolio Liquidity, OSC Staff Notice 81–727 (June 25, 2015) (definition of ''illiquid asset'' refers to the ''ability to readily dispose of a portfolio asset through a market facility on which public quotations are available at a price that approximates the amount at which the portfolio asset is valued'').

We note as well that U.S. banking regulators have defined ''liquidity'' as ''a financial institution's capacity to meet its cash and collateral obligations at a reasonable cost.'' Interagency Policy Statement on Funding and Liquidity Risk Management, 75 FR 13656 (Mar. 22, 2010), *available at http://www.occ.gov/news-issuances/federal-register/75fr13656.pdf.*

[174] *See supra* footnote 79 and accompanying text.

[175] *See, e.g.,* Item 4(b) of Form N–1A.

[176] *See supra* footnote 32and accompanying text for a discussion of the liquidity concerns of the Act.

[177] *See* Comment Letter of Interactive Data Pricing and Reference Data (Dec. 18, 2015) (''Interactive Data Comment Letter'') (noting that there are several possible interpretations of the term, including an NAV price impact based on a one penny movement, among others.).

[178] *See* SIFMA Comment Letter I (proposing the Commission substitute the phrase ''assuming no fire-sale discounting'' for the phrase ''without materially affecting the fund's net assets'' and arguing that a fire-sale standard is a more appropriate outer boundary for price movements.). We believe that adopting a fire-sale standard as the outer boundary for price movements would be inappropriate because such an extreme outer boundary would fail to capture a fund's liquidity risk exposure during normal and stressed conditions and would, thus, inadequately address the liquidity risk management concerns of rule 22e–4.

[179] The classification requirements under rule 22e–4 include a value impact standard as well, which is based on the number of days within which it is determined that an investment would be convertible to cash (or, in the case of the less-liquid and illiquid categories, sold or disposed of) without the conversion (or, in the case of the less-liquid and illiquid categories, sale or disposition) significantly changing the market value of the investment. *See infra* section III.C and accompanying text.

[180] Rule 22e–4(b) requires that a fund ''adopt and implement a written liquidity risk management program that is reasonably designed to assess and

Continued

requirement, however, requires a fund to assess and *manage* liquidity risk and does not require a fund to eliminate all adverse impacts of liquidity risk, which would be incompatible with an investment product such as a mutual fund or ETF, whose NAV may fluctuate for a variety of reasons, including changing liquidity conditions.

b. Expected and Reasonably Foreseeable Redemption Requests

As proposed, the definition of ''liquidity risk'' would have required funds to consider redemption requests that are expected under normal conditions, as well as those that are reasonably foreseeable under stressed conditions. Some commenters stated that the concept of redemption requests that are reasonably foreseeable under stressed conditions was vague and could subject funds to ex-post second guessing.[181] One commenter suggested that the Commission clarify: (i) Whether funds should address both normal and reasonably foreseeable stressed conditions (or select one set of conditions) in assessing liquidity risk; and (ii) the level of market stress that funds should assume in conducting a liquidity risk assessment.[182]

The final definition of liquidity risk eliminates references to redemption requests that are expected under normal conditions or reasonably foreseeable under stressed conditions. The final definition simply refers to ''requests to redeem.'' We believe our modifications to the liquidity risk factors used to assess a fund's liquidity risk, including the clarification that a fund must consider certain liquidity risk factors both during normal and reasonably foreseeable stressed conditions, makes any reference to market conditions within the definition of liquidity risk unnecessary, confusing and duplicative. We believe the revised definition also addresses commenters' concerns that the proposed definition was unclear. We have provided guidance below regarding each liquidity risk factor and the need to consider normal and reasonably foreseeable stressed market conditions.

2. Liquidity Risk Factors

Rule 22e–4 will require each fund to assess, manage, and periodically review (with such review occurring no less frequently than annually) its liquidity risk, considering the following factors as applicable:

- Investment strategy and liquidity of portfolio investments during both normal and reasonably foreseeable stressed conditions (including whether the investment strategy is appropriate for an open-end fund, the extent to which the strategy involves a relatively concentrated portfolio or large positions in particular issuers, and the use of borrowings for investment purposes and derivatives);
- Short-term and long-term cash flow projections during both normal and reasonably foreseeable stressed conditions; and
- Holdings of cash and cash equivalents, as well as borrowing arrangements and other funding sources.[183]

A fund may incorporate other considerations, in addition to these factors, in evaluating its liquidity risk.

Like the rule we are adopting today, rule 22e–4 as proposed would have required each fund to assess its liquidity risk, taking certain specified factors into account.[184] Specifically, the proposed rule would have required each fund to take the following factors into account in assessing the fund's liquidity risk: (i) Short-term and long-term cash flow projections, considering size, frequency, and volatility of historical purchases and redemptions of fund shares during normal and stressed periods; the fund's redemption policies; the fund's shareholder ownership concentration; the fund's distribution channels; and the degree of certainty associated with the fund's short-term and long-term cash flow projections; (ii) the fund's investment strategy and liquidity of portfolio investments; (iii) use of borrowings and derivatives for investment purposes; and (iv) holdings of cash and cash equivalents, as well as borrowing arrangements and other funding sources.[185] The person(s) designated to administer the liquidity risk management program must also conduct reviews of the adequacy and effectiveness of the implementation of the liquidity risk management program, and such reviews must occur no less frequently than annually.[186] Commenters generally supported the requirement for a fund to assess its liquidity risk.[187] Additionally, some commenters expressed support for the proposed liquidity risk factors, as well as the proposed requirement to consider these factors in assessing liquidity risk.[188] However, several commenters objected to the proposed requirement for a fund to consider certain specified factors and suggested instead that consideration of the factors be permissive instead of mandatory.[189]

We continue to believe that the factors are central to evaluating and managing a fund's liquidity risk and that requiring each fund to consider, as a baseline, a standard set of factors for assessing and managing liquidity risk would promote effective and thorough liquidity risk management across the fund industry. However, we recognize that some of the proposed factors may not be applicable in assessing and managing the liquidity risk of certain funds or types of funds.[190] One commenter requested that we clarify that a fund only needs to consider factors relevant to its operations, which may include some or all of the factors outlined in rule 22e–4, and others not enumerated.[191] We agree, and to the extent any liquidity risk factor specified in rule 22e–4 is not applicable to a particular fund, the fund will not be required to consider it in assessing and managing its liquidity risk. We have therefore added the words ''as applicable'' in the rule's instruction to consider the specified factors.[192] For example, a fund will not be required to consider the use of borrowings for investment purposes and derivatives, as specified under rule 22e–4(b)(1)(i)(A), if that fund does not engage in borrowing

manage its liquidity risk,'' and identifies certain specific elements that a fund must consider in doing so.

[181] *See* Federated Comment Letter; NYC Bar Comment Letter.

[182] *See* AFR Comment Letter.

[183] *See* rule 22e–4(b)(1)(i). We note that rule 22e–4 as adopted also includes two additional factors that an ETF will have to consider as applicable in assessing, managing, and periodically reviewing its liquidity risk, which reflect potential liquidity-related concerns that could arise from the structure and operation of ETFs (including In-Kind ETFs). These are: (i) The relationship between the ETF's portfolio liquidity and the way in which, and the prices and spreads at which, ETF shares trade, including, the efficiency of the arbitrage function and the level of active participation by market participants (including authorized participants); and (ii) the effect of the composition of baskets on the overall liquidity of the ETF's portfolio. These factors are discussed in more detail below. *See infra* section III.J.

[184] *See* Proposing Release, *supra* footnote 9, at section III.C.1.

[185] *See* proposed rule 22e–4(b)(2)(iii).

[186] *See id.*

[187] *See, e.g.,* AFR Comment Letter; Comment Letter of CFA Institute (Jan. 12, 2016) (''CFA Comment Letter''); FSR Comment Letter; ICI Comment Letter I.

[188] *See, e.g.,* AFR Comment Letter; CRMC Comment Letter; ICI Comment Letter I; Invesco Comment Letter.

[189] *See, e.g.,* CFA Comment Letter; MFS Comment Letter; Voya Comment Letter.

[190] *See* Proposing Release, *supra* footnote 9, at section III.C.1.

[191] *See* ICI Comment Letter I.

[192] *See* rule 22e–4(b)(1)(i) (requiring a fund to consider, ''as applicable,'' certain factors); *see also* FSR Comment Letter (supporting the proposed liquidity risk assessment requirement and agreeing with the Commission's position in the proposal that a fund would not be required to consider those factors that are not applicable to that particular fund).

or use derivatives. Similarly, a fund that maintains borrowing sources for investment purposes will be required to consider the use of borrowings for investment purposes as specified under the rule. We also believe that condensing and simplifying the proposed factors helps respond to commenters' concerns that the proposed factors were overly complex [193] and potentially inapplicable to certain funds.[194]

As noted above, this list of liquidity risk factors is not meant to be exhaustive. In assessing, managing, and periodically reviewing its liquidity risk, a fund may take into account considerations in addition to the factors set forth in rule 22e–4 and must do so to the extent necessary to adequately assess and manage the fund's liquidity risk.[195] For example, as discussed in the Proposing Release, if a fund elects to conduct stress testing to determine whether it has sufficient liquid investments to cover different levels of redemptions, a fund may wish to incorporate the results of this stress testing into its liquidity risk assessment and management.[196] We continue to believe that stress tests that analyze the proposed factors could be particularly useful to a fund in evaluating its liquidity risk.

Below we provide guidance on specific issues associated with each of the liquidity risk factors and also discuss the Commission's decision to adopt each of these factors (some with modifications).

a. Investment Strategy and Portfolio Liquidity

We are adopting the proposed requirement for a fund to consider its investment strategy and portfolio liquidity in assessing, managing, and periodically reviewing its liquidity risk, but with certain modifications in response to commenters.[197] The principal changes include a requirement to consider whether the investment strategy is appropriate for an open-end fund, as well as the extent the strategy involves a relatively concentrated portfolio or large positions in particular issuers, and a clarification that this factor should be assessed both during normal and reasonably foreseeable stressed conditions.

We continue to believe that various aspects of a fund's investment strategy—including whether the fund is actively or passively managed [198] and a fund's portfolio management decisions that are meant in part to decrease an undesirable tax impact on the fund [199]— could significantly affect the fund's liquidity risk. Also the extent to which the fund is diversified, including a fund's status as a regulated investment company under Subchapter M of the Internal Revenue Code, as well as its principal investment strategies as disclosed in its prospectus, could affect its liquidity risk in that the fund could be limited by its diversification obligations in its ability to sell certain portfolio securities.[200] We note, for example, that the Third Avenue Focused Credit Fund stated that its status as a regulated investment company under Subchapter M limited the fund's ability to return cash to its shareholders after it suspended redemptions because of its need to comply with certain asset diversification tests to maintain its regulated investment company status.[201] As discussed in the Proposing Release, we also continue to caution that while a fund's investment strategy is an important factor in evaluating a fund's liquidity risk, different types of funds within the same broad investment strategy may demonstrate different levels of liquidity, (and thus, presumably, different levels of liquidity risk).[202]

Consideration of Strategy Appropriateness for Open-End Fund Structure

We are adopting several modifications to the proposed requirement to consider a fund's investment strategy and portfolio liquidity in assessing, managing, and periodically reviewing its liquidity risk. First, we clarify in final rule 22e–4 that consideration of investment strategy must take into account whether the fund's strategy is appropriate for an open-end fund. This clarification reflects several commenters' suggestions that a fund's liquidity risk management program could (or should) involve a consideration of whether the fund's investment strategy and permissible holdings are suitable for the open-end structure.[203]

We agree with this suggestion raised by commenters. As discussed above, all open-end funds are subject to section 22(e) of the Investment Company Act, which requires a fund to pay redemption proceeds within seven days after receipt of a redemption request, and hold themselves out at all times as being able to meet redemptions (in many cases within an even shorter period of time).[204] To the extent that a fund's investment strategy involves investing in securities whose liquidity is limited, or otherwise entails a significant degree of liquidity risk, the fund may not be able to meet its redemption and other legal obligations, or may not meet redemptions without diluting its shareholders' interests in the fund. We understand that it is a common best practice for a fund and its management to consider the appropriateness of a fund's investment strategy in the context of launching an open-end fund, and then for an open-end fund to continue to manage its liquidity risk such that its strategy and holdings remain appropriate for the open-end structure. However, not all funds appear to consider this. Also, as we have observed funds beginning to pursue more complex investment

[193] *See, e.g.,* Comment Letter of Better Markets, Inc. (Jan. 13, 2016) (''Better Markets Comment Letter'').

[194] *See, e.g.,* ICI Comment Letter I; MFS Comment Letter.

[195] *See* note 180 and accompanying text.

[196] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying n.266.

[197] *See* rule 22e–4(b)(1)(i)(A).

[198] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.292–295 (discussing factors that could increase or decrease the liquidity risk associated with index-based strategies versus actively-managed strategies).

[199] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying n.299 (detailing the ways in which a fund's tax management strategy could make its portfolio managers unwilling to sell certain portfolio assets in order to meet redemptions, which could in turn increase the fund's liquidity risk compared to a similarly situated fund).

[200] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.296–298 (discussing the extent to which a fund's portfolio is diversified (or, relatedly, a fund's concentration in certain types of portfolio assets) could have ramifications on the fund's potential liquidity risk, including the ways that various diversification requirements could constrain its ability to sell certain portfolio securities in order to meet redemptions).

[201] *See* Third Avenue Focused Credit Fund Update (Mar. 8, 2016), *available at http://thirdave.com/wp-content/uploads/2016/04/03-09-16-FCF-Call-Transcript-1.pdf* (noting that, because one of the diversification tests under Subchapter M would require the fund to have less than 50% of its assets in concentrated positions, the fund needed to retain cash in order not to violate this test, in light of the manner in which it chose to manage the fund's liquidation of its other assets).

[202] *See* Proposing Release, *supra* footnote 9, at n.301 and accompanying text.

[203] *See* BlackRock Comment Letter (''[W]e recommend that the Commission consider whether funds should be required to explicitly address the level of position concentration that is appropriate for the fund's investment strategy and investor profile in [liquidity risk management] policies and procedures''); ICI Comment Letter I (''A risk-based liquidity management program could require a fund manager, when launching a new mutual fund, to assess whether the fund's investment strategy and permissible holdings are suitable for the open-end structure in light of [its] liquidity characteristics.''); *see also* CRMC Comment Letter (encouraging the Commission to consider whether certain funds may be inappropriate for the open-end fund structure).

[204] *See supra* footnotes 34–36, 42–47 and accompanying text.

strategies,[205] we believe it is appropriate to require that each open-end fund consider whether it has a liquidity risk management framework in place that corresponds with the liquidity risks inherent in its strategy and its structure as a fund that offers redeemable securities.

We believe that specifically requiring an open-end fund to consider whether its investment strategy is appropriate for the open-end structure would supplement existing practices and provide an important additional layer of shareholder protection. For example, this requirement will likely cause funds to evaluate the suitability of investment strategies that will be permitted under the 15% illiquid investment requirement, but still could entail significant liquidity risk—such as strategies involving highly concentrated portfolios, or strategies involving investment in portfolio investments that are so sensitive to stressed conditions that funds may not be able to find purchasers for those investments during stressed periods.[206] Furthermore, funds that have significant holdings of securities with extended settlement periods may face challenges operating as open-end funds and should take these holdings into account when determining whether the fund's portfolio is appropriate for an open-end fund.[207] For example, primarily holding securities with extended settlement periods beyond seven days may not be appropriate for an open-end fund, as primarily having such extended settlement holdings may raise concerns with the fund's ability to meet redemptions within seven days, particularly if the fund has not established adequate other sources of liquidity.

Because a fund will be required to consider the liquidity risk factors (as applicable) in periodically reviewing its liquidity risk, the final rule requires a fund's periodic liquidity risk review to include a consideration of whether the fund's investment strategy is appropriate for an open-end fund.[208] For example, if a fund's illiquid investments exceed 15% of net assets, this could indicate that the fund is encountering liquidity pressures that could significantly impair the fund's ability to meet its redemption and other legal obligations. In this case, we believe it would be appropriate for a fund to review and potentially update its liquidity risk management procedures for handling the fund's high levels of illiquid investment holdings. In circumstances in which it appears unlikely that the fund will be able to reduce its illiquid investment holdings to or below 15% within a period of time commensurate with its redemption obligations, a fund's periodic liquidity risk review could lead the fund to reconsider its continued operation as an open-end fund.[209]

Consideration of Portfolio Concentration, and Holdings of Large Portfolio Positions

We also are adopting a modification to the proposed liquidity risk factors to clarify that consideration of a fund's investment strategy must include an evaluation of whether the strategy involves a relatively concentrated portfolio or large positions in particular issuers. Some commenters suggested that funds with extraordinarily concentrated portfolios may have particular liquidity risks that could make redeemability from these funds especially challenging.[210] Our evaluation of these comments, together with recent events discussed below, have led us to revise the proposed ''investment strategy'' liquidity risk factor to focus on fund concentration issues.

We believe that this component of a fund's investment strategy is a particularly significant factor in evaluating the extent to which investment strategy contributes to liquidity risk. As we noted in the Proposing Release, while a fund with a relatively more diversified portfolio that needs to sell portfolio investments to build liquidity may be able to select investments for sale based on whether the markets for those investments are favorable, a relatively less diversified fund may have fewer options (*i.e.,* because it has less choice of investments to sell or because the markets for its portfolio investments are uniform or correlated) and could thus be compelled to transact in unfavorable markets.[211] In addition, as discussed below, holding a large portion of a particular issue could adversely affect a fund's ability to convert the position to cash without a value impact, and this can hamper a fund's portfolio management flexibility due to the higher liquidity risk in its positions.[212] Thus, we believe that investment strategies that involve holding large portions of a particular issue—particularly if the market for these securities is thinly traded[213] or if the fund's strategy involves investment in a relatively small number of holdings—could notably increase a fund's liquidity risk. As discussed above, the recent suspension of redemptions by Third Avenue Focused Credit Fund, which had a concentrated portfolio and large holdings of particular issues, illustrates how these methods of concentration directly affect liquidity risk, which in turn could adversely affect shareholders to the extent that they are not able to redeem their shares, or redeem their shares only at a significant discount.[214]

Use of Borrowings for Investment Purposes and Derivatives

We have incorporated the proposed requirement to consider a fund's use of borrowings for investment purposes and derivatives within the requirement to consider investment strategy in assessing, managing, and periodically reviewing a fund's liquidity risk.[215] As

[205] *See supra* footnote 11 and accompanying text.

[206] We note that, when a fund files its initial registration statement and post-effective amendments thereto with the Commission's Division of Investment Management for review, Commission staff could request information from the fund regarding the fund's basis for determining that its investment strategy is appropriate for the open-end structure, just as staff currently may request information from a fund to support its disclosure reflecting the fund's compliance with various provisions of the Investment Company Act and rules thereunder.

[207] *See infra* footnote 378 and accompanying text.

[208] *See infra* section III.B.3.

[209] Moreover, we note that actions that either directly or indirectly extinguish the rights of shareholders to redeem their shares could, depending on the facts and circumstances, involve violations of section 22(e) and other provisions of the Act, such as section 48(a) (prohibiting a person from doing indirectly, through another person, what that person is prohibited by the Act from doing directly).

[210] *See, e.g.,* BlackRock Comment Letter; CRMC Comment Letter; ICI Comment Letter I; Invesco Comment Letter.

[211] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.296–298.

However, as also discussed above, the extent to which a fund is required to be diversified, including a fund's status as a regulated investment company under Subchapter M of the Internal Revenue Code, could affect its liquidity risk in that the fund could be limited by its diversification obligations in its ability to sell certain portfolio securities. *See supra* footnotes 200–201 and accompanying text.

[212] *See infra* footnote 440 and accompanying text; *infra* paragraph accompanying footnote 450.

[213] *See infra* footnote 544 and accompanying text.

[214] *See, e.g.,* Jeffrey Ptak & Sarah Bush, *Third Avenue Focused Credit Abruptly Shuttered,* Morningstar (Dec. 11, 2015), *available at http://ibd.morningstar.com/article/article.asp?id=733021&CN=brf295,http://ibd.morningstar.com/archive/archive.asp?inputs=days=14;frmtId=12,%20brf295* (noting that ''Third Avenue Focused Credit stood out for its large, concentrated allocation to distressed and other low-quality fare''); *see also* Third Avenue Temporary Order, *supra* footnote 12 (noting that ''Applicants further state that relief permitting the Fund to suspend redemptions in connection with its liquidation would permit the Fund to liquidate its assets in an orderly manner and prevent the Fund from being forced to sell assets at unreasonably low prices to meet redemptions.'').

[215] *See* proposed rule 22e–4(b)(2)(iii)(C); rule 22e–4(b)(1)(i)(A).

proposed, this consideration was not included within the investment strategy factor, but instead was a stand-alone liquidity risk factor. However, we believe that including this consideration within the general investment strategy factor is clearer, because a fund's use of borrowings for investment purposes and derivatives may be viewed as a component of its investment strategy. We note that we have also revised the phrase ''use of borrowings and derivatives for investment purposes'' that was used in the Proposing Release, and instead are using the term, ''use of borrowings for investment purposes and derivatives'' in the final rule. We have made this revision in order to clarify that funds should consider all derivatives, including those used for hedging purposes. As proposed, this provision could potentially have been read to exclude the consideration of derivatives used for hedging, which was not the intent of the proposed requirement. We believe this clarification will make clear that the requirement is for a fund to consider both use of borrowings for investment purposes and use of derivatives in general. One commenter stated that it agreed that funds should consider the use of derivatives when assessing liquidity risk, including the extent and types of derivatives used, as well as the structure and terms of a fund's derivatives transactions.[216] No commenters suggested that a fund's use of borrowings for investment purposes and derivatives is inapplicable to a fund's liquidity risk (provided that the fund engages in borrowing or uses derivatives [217]).

We continue to believe that the potential effects of the use of borrowings for investment purposes and derivatives are relevant to assessing, managing, and periodically reviewing a fund's liquidity risk.[218] As we noted in the Proposing Release, borrowing for investment purposes, whether from a bank [219] or through financing transactions such as reverse repurchase agreements and short sales,[220] may affect a fund's liquidity risk.[221] Similarly, a fund's use of derivatives such as futures, forwards, swaps and written options may affect a fund's liquidity risk as well.[222] We note that in addition to the liquidity of the derivatives positions themselves, assessing, managing, and periodically reviewing liquidity risk generally may include an evaluation of the potential liquidity demands that may be imposed on the fund in connection with its use of derivatives, including any variation margin or collateral calls the fund may be required to meet.[223] To the extent the fund is required to make payments to a derivatives counterparty, those assets would not be available to meet shareholder redemptions.

Consideration of Investment Strategy and Portfolio Liquidity During Normal and Reasonably Foreseeable Stressed Conditions

Finally, we also are modifying the proposed liquidity risk assessment requirement to clarify that certain liquidity risk factors must be considered during both normal and reasonably foreseeable stressed conditions. As proposed, rule 22e–4 did not specify whether a consideration of these factors should consider normal conditions, stressed conditions, or both. One commenter stated that the proposed rule's treatment of stressed conditions was unclear,[224] and another said that the proposed rule was unclear about what needed to be considered in assessing ''stress.'' [225] For those liquidity risk factors that could vary depending on market conditions (*i.e.,* a fund's portfolio liquidity and cash flow projections), we believe that it is appropriate to require a fund to evaluate those factors in normal and reasonably foreseeable stressed conditions. Thus, if a fund's portfolio strategy involves investing in securities whose liquidity is likely to decline in stressed conditions, a fund should take this into account in determining how its portfolio liquidity could contribute to its overall liquidity risk. For example, a fund's portfolio liquidity could decrease in stressed conditions if such conditions led to market participants pulling back on transacting in the fund's portfolio securities, or if stressed conditions affecting other assets or asset classes were to have correlated effects on the fund's portfolio securities. In considering normal and reasonably foreseeable stressed conditions, funds should consider historical experience but should recognize that such

[216] *See* CFA Comment Letter.

[217] *See supra* footnotes 191–192 and accompanying text (clarifying that, to the extent one of the factors specified in rule 22e–4(b)(1)(i) is not applicable to a particular fund, the fund would not be required to consider that factor in assessing its liquidity risk).

[218] *See* Proposing Release, *supra* footnote 9, at section III.C.1.c.

[219] *See id.,* at n.303 and accompanying text (noting that, in addition to the asset coverage limitations imposed by section 18 of the Investment Company Act, any borrowing from a bank would be subject to the terms agreed between a fund and the bank, including terms relating to the maturity date of the borrowing and any circumstances under which the borrowing may be required to be repaid).

[220] *See id.,* at nn.304–305 and accompanying text (noting that funds that borrow for investment purposes, for example through financing transactions such as reverse repurchase agreements and short sales, generally do so in reliance on certain Commission guidance, under which funds cover their obligations under such transactions by segregating certain liquid assets, and discussing the effects of asset segregation on funds' liquidity risk).

Segregated assets are considered to be unavailable for sale or disposition, including for redemptions, unless replaced by other appropriate non-segregated assets of equal value. *See* Securities Trading Practices of Registered Investment Companies, Investment Company Act Release No. 10666 (Apr. 18, 1979) [44 FR 25128 (Apr. 27, 1979)] (''Release 10666''). This means that a fund that receives significant redemption requests may need to exit a portion of its financing transactions in order make more liquid investments available for sale to fulfill such requests. Furthermore, if a fund seeks to exit its financing transactions in a declining market, it may need to dispose of a greater amount of its more liquid holdings in order to repay its borrowings, thereby reducing the amount of liquid investments it has available to meet redemptions. Consequently, a fund's assessment and management of its liquidity risk must include an evaluation of the nature and extent of its borrowings and the potential impact of borrowings on the fund's overall liquidity profile.

[221] We note that borrowings for investment purposes pose a variety of liquidity risks, including the risk that redemptions may require the sale of securities in amounts exceeding the amount of the redemption, resulting in a reduction of the fund's borrowings. Additionally, even without redemptions, the fund may need to sell securities and reduce borrowings if its investment values decline, which may have negative effects on the fund's liquidity.

[222] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.306–307 (discussing how the use of derivatives may affect a fund's liquidity risk). Funds that use derivatives under which they have an obligation to pay typically do so in reliance on the guidance we provided in Release 10666 and in related no-action letters issued by our staff, and therefore segregate liquid assets in respect of their obligations under derivatives transactions. *See generally* Use of Derivatives by Investment Companies under the Investment Company Act of 1940, Investment Company Act Release No. 29776 (Aug. 31, 2011) [76 FR 55237 (Sept. 7, 2011)], at 13–17; *see also* Use of Derivatives by Registered Investment Companies and Business Development Companies, Investment Company Act Release No. 31933 (Dec. 1, 2015) [80 FR 80884 (Dec. 28, 2015)] (''2015 Derivatives Proposing Release''), at n.47 and accompanying text; *see also supra* footnote 220. Derivatives may therefore raise concerns that are similar to those discussed at footnote 220 in the context of borrowings. Funds also may be required to dispose of assets in order to post required margin with respect to their short sale transactions. In addition, some derivatives transactions— particularly those that are complex or entered into OTC—may be less liquid, have longer settlement periods, or be more difficult to price than other types of investments, which potentially increases the amount of time required to exit such transactions.

[223] *See* In re OppenheimerFunds, Inc., *et al.,* Investment Company Act Release No. 30099 (June 6, 2012) (settled action) (''OppenheimerFunds Release'') (alleging the adviser made misleading statements regarding two fixed income mutual funds that suffered significant losses during the 2008 financial crisis primarily due to their use of total return swaps to obtain exposure to commercial mortgage-backed securities and noting that the funds ''had to raise cash for anticipated [total return swap] contract payments by selling depressed bonds into an increasingly illiquid market.'').

[224] *See* BlackRock Comment Letter.

[225] *See* AFR Comment Letter.

experience may not necessarily be indicative of future outcomes, depending on changes in market conditions and the fund's particular circumstances.

We note that ''stressed'' conditions will likely entail different scenarios for different types of funds. For example, differing levels of changes in interest rates and/or interest rates' implied volatility could affect two bond funds very differently, depending on factors such as the maturity, coupon rates and other characteristics of the funds' portfolio holdings. Assessment of stressed conditions also should take into account stresses originating outside of market stress. For example, certain funds could be significantly affected by geopolitical stresses, such as an emerging markets debt fund whose holdings' liquidity is affected by factors such as economic uncertainty in the holdings' countries of issuance. The extent to which stressed conditions are reasonably foreseeable will vary depending on the fund's facts and circumstances.

b. Cash Flow Projections

We are adopting the requirement for a fund to consider its short-term and long-term cash flow projections, during both normal and reasonably foreseeable stressed conditions, in assessing and managing its liquidity risk.[226] The proposed rule also included the requirement for a fund to consider its cash flow projections in assessing its liquidity risk. However, we are adopting some modifications to this proposed requirement. Most significantly, although the proposed rule specified five separate considerations a fund would have to take into account in evaluating the extent to which its cash flow projections contribute to its liquidity risk, rule 22e–4 as adopted today does not enumerate these five considerations. Instead, we are discussing these five considerations as guidance that funds should generally take into account in evaluating their cash flow projections, as discussed in more detail below.

We continue to believe, as discussed in the Proposing Release, that understanding a fund's cash flows is important in determining whether the fund will have sufficient cash to satisfy redemption requests.[227] We also continue to believe that the better a fund's portfolio and risk managers are able to predict the fund's net flows, the better they will be able to measure and manage the fund's liquidity risk.[228] Predictability about whether periods of market stress or declines in fund performance generally lead to increased redemptions of fund shares is particularly significant, as careful liquidity risk management during these periods could prevent the need to sell less-liquid portfolio assets under unfavorable circumstances. This type of selling, in turn, could create significant negative price pressure on the assets and, to the extent the fund continues to hold a portion of those assets, decrease the value of the assets still held by the fund at least temporarily.[229] To the extent a fund understands the composition of its shareholder base (for example, among retirement investors, other individual investors, or discretionary accounts), it may be able to better predict fund flows in response to market events or fund performance.

Consideration of Cash Flow Projections During Normal and Reasonably Foreseeable Stressed Periods

We also are revising the rule to require a fund to consider its short-term and long-term cash flow projections during both normal and reasonably foreseeable stressed conditions.[230] As discussed above, proposed rule 22e–4 would have required a fund, in evaluating short-term and long-term cash flow projections, to consider the size, frequency, and volatility of historical purchases and redemptions of fund shares during normal and stressed periods.[231] Although we are not including a specific requirement for a fund to consider historical purchases and redemptions in considering its cash flow projections, we believe continuing to incorporate the concept of normal and reasonably foreseeable stressed conditions within the requirement to consider cash flow projections is critical for a fund to obtain a complete picture of how its cash flows may affect its liquidity risk, particularly because greater, more frequent, or more volatile outflows during stressed conditions could exacerbate a fund's liquidity risk.[232] A fund and its portfolio and/or risk managers should review the guidance we provide below regarding funds' evaluation of the size, frequency, and volatility of historical purchases and redemptions of fund shares during normal and reasonably foreseeable stressed circumstances, as well as similar funds' purchases and redemptions, in determining how normal and reasonably foreseeable stressed market conditions could affect a fund's cash flows and contribute to the fund's liquidity risk.[233]

Guidance on Evaluating a Fund's Cash Flow Projections

As discussed above, rule 22e–4 as adopted today requires a fund to consider its short-term and long-term cash flow projections during both normal and reasonably foreseeable stressed conditions in assessing, managing, and periodically reviewing liquidity risk. This liquidity risk factor simplifies the rule as proposed, which would have codified five separate considerations that would comprise a fund's consideration of its cash flow projections—namely, (i) the size, frequency, and volatility of historical purchases and redemptions of fund shares during normal and reasonably foreseeable stressed periods, (ii) the fund's redemption policies, (iii) the fund's shareholder ownership concentration, (iv) the fund's distribution channels, and (v) the degree of certainty associated with the fund's short-term and long-term cash flow projections. Instead of enumerating these five considerations in the text of rule 22e–4, we are discussing each of them as guidance in this Release (together, the ''cash flow guidance considerations'').

We are not codifying the cash flow guidance considerations to simplify the rule 22e–4 liquidity risk factors and to alleviate certain commenter concerns about the complexity of the proposed factors. Commenters argued that the requirement to consider a specified list of multiple liquidity risk factors is overly complex—making compliance more difficult for funds, and oversight more difficult for the Commission.[234] Commenters discussed the dangers of an analysis that mandates consideration of multiple factors becoming a generic ''checklist'' approach to liquidity risk management that does not fully capture

[226] *See* rule 22e–4(b)(1)(i)(B).

[227] *See* Proposing Release, *supra* footnote 9, at nn.267–268 and accompanying text.

[228] *See id.,* at n.269 and accompanying text. *See also* Fidelity Comment Letter (noting that the predictability of fund cash flows varies depending on the predictability of the redemption behavior of the fund's shareholder base. ''[F]unds whose shareholders include investors who purchased shares distributed through a retirement program or other planned savings program may exhibit redemption patterns that are relatively more predictable.''); BlackRock Comment Letter (noting that funds may need additional data from their distributors and transfer agents regarding shareholder redemption activity to allow funds to make short-term and long-term cash projections).

[229] *See* Proposing Release, *supra* footnote 9, at n.270 and accompanying text.

[230] *See* rule 22e–4(b)(1)(i)(B).

[231] *See* proposed rule 22e–4(b)(2)(iii)(A)*(1).*

[232] *See* Proposing Release, *supra* footnote 9, at text accompanying and following n.273.

[233] *See infra* footnotes 236–239 and accompanying text.

[234] *See, e.g.,* Better Markets Comment Letter.

the business practices, strategies, and risks that are germane to certain funds.[235] We agree that requiring an overly complex liquidity risk assessment analysis could lead to this result, to the detriment of investors. Such procedures could appear to be robust, but in actuality may not reflect (or may underweight) a fund's most significant risk factors because of the perceived requirement to focus on enumerated factors that may not be particularly important to a fund's operations and risks. Thus, we believe that simplifying the cash flow liquidity risk factor in rule 22e–4 will benefit funds and their shareholders and continue to advance the Commission's goal of promoting meaningful liquidity risk analysis.

With respect to the size, frequency, and volatility of historical purchases and redemptions of fund shares, we continue to believe, as discussed in the Proposing Release, that funds whose historical net flows are relatively less volatile in terms of size and frequency will likely entail less liquidity risk than similar funds with more volatile net flows.[236] A fund should generally review historical purchases and redemptions of fund shares across a variety of market conditions in order to determine how the fund's flows may differ during normal and reasonably foreseeable stressed periods (keeping in mind that historical experience may not necessarily be indicative of future outcomes).[237] In addition to considering its own historical flow data, a fund, particularly a fund without substantial operating history, should consider purchase and redemption activity in funds with similar investment strategies.[238] A fund may wish to evaluate whether the size, frequency, and volatility of its shareholder flows follow any discernible patterns (for example, patterns relating to seasonality, shareholder tax considerations, fund advertising, changes in fund performance ratings provided by third-party rating agencies, and the fund's investment strategy and size).[239]

We also continue to believe that a fund generally should consider its normal redemption policies and practices in evaluating the extent to which its cash flow projections may contribute to its liquidity risk. Specifically, as discussed in the Proposing Release, a fund should generally consider its disclosed or advertised time period for paying (or endeavoring to pay) redemption proceeds and whether this time period varies based on the payment method the fund employs.[240] For example, a fund whose policies require it to typically pay redeeming shareholders on a next-day basis may have fewer options for managing high levels of redemptions than a fund whose policies require it to typically pay redeeming shareholders on a T + 3 basis.[241]

A fund's shareholder ownership concentration also could affect its cash flow projections, as a fund that has a concentrated set of beneficial owners could experience considerable cash outflows from redemptions by a single or small number of shareholders, or by the decisions of an intermediary that has discretionary power over a significant number of shareholder accounts.[242] This in turn could hamper a fund's management of liquidity risk if the fund does not have procedures in place to manage large redemptions. For these reasons, we believe a fund should consider the extent to which its shareholder concentration affects its liquidity risk, particularly taking into account other factors that could magnify shareholder concentration-related liquidity risk (*e.g.,* if a fund has an investment strategy that attracts shareholders who trade based on short-term price movements).

We also continue to believe that a fund should consider how its distribution channels could affect its cash flows, including the predictability of its cash flows. For example, a fund may wish to consider the extent to which its redemption practices could depend on its distribution channels,[243] as well as whether its distribution channels (particularly, whether the fund's shares are held through omnibus accounts) could make it difficult for a fund to be fully aware of the composition of its underlying investor base,[244] including investor characteristics that could affect the fund's short-term and long-term flows.[245] A fund's distribution channels could affect its cash flow predictions because certain distribution channels are generally correlated with particular purchase and redemption patterns.[246] Additionally, we note that investors in mutual funds distributed through certain channels also may have similar purchase and redemption characteristics relating to their financial and tax-related needs.[247]

---

[235] *See, e.g.,* MFS Comment Letter.

[236] *See* Proposing Release, *supra* footnote 9, at nn.272 and accompanying text.

[237] *See supra* footnotes 230–233 and accompanying text. A fund may find it instructive to understand when its highest, lowest, most frequent, and most volatile purchases and redemptions occurred within various time horizons, such as the past one, five, ten, and twenty years (as applicable, considering the fund's operating history).

[238] *See* Proposing Release, *supra* footnote 9, at text following n.273. We note that consideration of similar funds' purchases and redemptions could show whether the fund's historical flows are typical or aberrant compared to those seen in similar funds and assist new funds in predicting flow patterns.

[239] *See* Proposing Release, *supra* footnote 9, at nn.274–279 and accompanying text (discussing how a fund's investment strategy could contribute to its shareholder flows and noting that smaller funds may experience greater flow volatility). For instance, we understand that certain investors tend to trade in and out of ETFs with index-based strategies frequently because they invest in these ETFs for hedging and/or short-term trading purposes.

[240] *See* Item 6(b) of Form N–1A (requiring a fund to briefly identify the procedures for redeeming shares); *infra* section III.M.1 (discussing amendments to Item 11 of Form N–1A).

[241] To illustrate, when a fund that pays redemption proceeds within one day receives a large redemption request and a fund that pays redemption proceeds within three business days receives a redemption request of the same size, the first fund must satisfy the full request within one day, whereas the second fund has more time to satisfy the redemption request. Even though the shareholder flows of the first and second fund are identical, the redemption policies of the first fund magnify its liquidity risks by requiring that the fund pay redemptions quickly. *See, e.g.,* Proposing Release, *supra* footnote 9, at n.270.

[242] We note that a relatively concentrated fund shareholder base may make it easier for funds to communicate with those shareholders or intermediaries about anticipated future redemptions, and thus plan liquidity demands. However, those shareholders are under no legal obligation to forewarn the fund of their redemptions and, particularly in times of stress, may not do so.

[243] For example, mutual funds that are sold through broker-dealers will generally have to meet redemption requests within three business days, because rule 15c6–1 under the Exchange Act effectively establishes a T+3 settlement period for purchases and sales of securities (other than certain types of securities exempted by the rule) effected by a broker or dealer, unless a different settlement period is expressly agreed to by the parties at the time of the transaction.

[244] *See, e.g.,* Comment Letter of Coalition of Mutual Fund Investors (Jan. 18, 2016) (''CMFI Comment Letter'') (raising concerns regarding omnibus account transparency).

[245] These investor characteristics could include whether ownership in the mutual fund is relatively concentrated, as well as whether the types of underlying investors in the fund typically share common investment goals affecting redemption frequency and timing.

[246] For instance, investors in mutual funds distributed through a retirement plan channel or other planned savings channel (such as a qualified tuition plan authorized by section 529 of the Internal Revenue Code) may be more likely to be long-term investors who do not trade based on short-term price movements, and their purchase and redemption patterns thus may be relatively predictable compared to those of other investors.

[247] For example, taxable investors who are considering purchasing mutual fund shares around capital gains distribution dates have an incentive to delay their purchases until after the distribution, but non-taxable shareholders (such as those who invest through IRAs and other tax-deferred accounts) face no such incentive for delaying purchases. *See* Woodrow T. Johnson & James M. Poterba, *Taxes and Mutual Fund Inflows around*

Continued

Finally, we continue to believe that a fund should consider the degree of certainty surrounding its short-term and long-term cash flow projections. A fund could consider the length of its operating history (including the fund's experience during points of market instability, illiquidity, or volatility) and any purchase and redemption patterns. A fund may use ranges in considering cash flow projections and their relationship to liquidity risk. If a fund has implemented policies to encourage certain shareholders (*e.g.,* large shareholders or institutional shareholders) to provide advance notification of their intent to redeem a significant number of shares of the fund, this could increase the degree of probability surrounding its cash flow projections.[248]

c. Holdings of Cash and Cash Equivalents, Borrowing Arrangements, and Other Funding Sources

We are adopting the requirement for a fund to consider its holdings of cash and cash equivalents, as well as its borrowing arrangements and other funding sources, in assessing, managing, and periodically reviewing its liquidity risk, as proposed.[249] As discussed in the Proposing Release, current U.S. Generally Accepted Accounting Principles (''GAAP'') define cash equivalents as short-term, highly liquid investments that are readily convertible to known amounts of cash and that are so near their maturity that they present insignificant risk of changes in value because of changes in interest rates.[250] While we understand based on staff outreach and the comments we received on the proposal that many asset managers establish minimum cash and cash equivalent targets as part of their liquidity risk management practices,[251] commenters stated that significant cash and cash equivalent holdings are not necessarily appropriate for all funds and as a stand-alone tool do not necessarily entirely mitigate liquidity risk.[252] We agree with commenters that the amount of cash and cash equivalent holdings appropriate for liquidity risk management depends on a particular fund's facts and circumstances. Similarly, we agree with commenters that significant holdings of cash and cash equivalents could still be insufficient to protect a fund with large holdings of illiquid investments (or investments whose liquidity decreases significantly during stressed periods) if the fund were faced with heavy redemptions.[253] But we continue to believe that holdings of cash and cash equivalents can be a valuable liquidity risk management tool because these holdings tend to remain very liquid under nearly all market conditions.[254] Thus, a fund could use its cash and cash equivalent holdings in normal and stressed conditions to meet some redemption requests without significant dilution of remaining investors' interests. Holdings of cash and cash equivalents also could provide a fund's portfolio manager with flexibility to readjust its portfolio as it deems advantageous (either in terms of performance or risk management) under changing market circumstances. We therefore believe it is appropriate for a fund to consider its holdings of cash and cash equivalents as part of its liquidity risk assessment.

Several commenters discussed the extent to which a fund's borrowing arrangements and other funding sources could shape the fund's liquidity risk. Some commenters strongly supported the use of borrowing arrangements to help mitigate liquidity risk, asserting that funds historically have generally succeeded in managing liquidity risk, partly due to lines of credit and interfund lending.[255] Commenters also asserted that obtaining access to backup sources of liquidity like lines of credit, interfund lending arrangements, and repurchase agreements should be considered beneficial as the flexibility to use these liquidity sources has value to a fund's shareholders.[256] However, another commenter argued that asset managers should not meet redemptions through the use of borrowing facilities other than to meet short-term settlement mismatches, as this could potentially disadvantage non-redeeming investors.[257]

We continue to believe that entering into borrowing or other funding arrangements could assist a fund in meeting redemption requests in certain cases (for example, by bridging any timing mismatches between when a fund is required to pay redeeming shareholders and when any asset sales that the fund has executed in order to pay redemptions will settle).[258] However, we have concerns that, in some situations, borrowing arrangements may not be beneficial to a fund's liquidity risk management to the extent that the fund's use of borrowings to meet redemptions leverages the fund at the expense of non-redeeming investors. In such a case, non-redeeming shareholders would effectively bear the costs of borrowing and the increased risk to the fund created by leverage.[259] Thus, we believe that funds should consider the likely overall benefits and risks in including such borrowing or other funding arrangements within a liquidity risk management program.

In evaluating the extent to which a fund's borrowing arrangements could help the fund manage its liquidity risk, a fund may wish to consider any aspects of those arrangements that could limit the fund's ability to borrow. For instance, a fund generally may wish to consider the terms of the credit facility (*e.g.* whether the credit facility is committed or uncommitted), as well as the financial health of the institution(s) providing the facility. A fund also generally should consider whether a credit facility would be shared among multiple funds within a fund family.

Distribution Dates, NBER Working Paper 13884 (Mar. 2006, rev'd Mar. 2008), *available at http://economics.mit.edu/files/2512*; *see also supra* footnote 239 and accompanying text (discussing seasonality in mutual fund flows).

[248] We understand, based on staff outreach, that advance notification procedures are a relatively common liquidity risk management tool that funds currently employ. *See* Comment Letter of Invesco on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 11 (''Invesco FSOC Notice Comment Letter'') (noting that Invesco has advance notification arrangements regarding anticipated redemptions above certain levels in place with certain distribution partners).

[249] *See* rule 22e–4(b)(1)(i)(C).

[250] *See* Proposing Release, *supra* footnote 9, at n.311 and accompanying text.

[251] *See, e.g.,* Comment Letter of Pacific Investment Management Company LLC (Jan. 13, 2016) (''PIMCO Comment Letter'').

[252] *See, e.g.,* ICI Comment Letter I (noting that fund complexes that specialize in U.S. equity funds, especially those focusing on large-cap stocks, are likely to be able to meet redemptions with only modest holdings of cash or cash equivalents because the U.S. equity market is so liquid); *see also infra* footnote 662 and accompanying text (discussing commenters' concerns that the proposed three-day liquid asset minimum requirement would be construed to require a fund specifically to hold cash and cash equivalents, which commenters argued could prevent funds from meeting their principal investment strategies and could give investors a false sense of security that cash buffers will eliminate liquidity risk).

[253] We also note that a substantial investment in cash and cash equivalents could decrease a fund's total return and/or cause the fund to diverge from its investment strategy, and thus a fund may wish to calibrate its holdings of these instruments to manage its liquidity risk while taking these concerns into consideration.

[254] We note that cash and cash equivalent holdings and borrowing arrangements are just two of several liquidity management tools that are at a fund's disposal. Though we are requiring funds to consider these tools, the rule neither creates a substantive obligation on funds to maintain specific levels of cash and cash equivalents nor requires funds to procure any specific borrowing arrangements.

[255] *See, e.g.,* Comment Letter of Independent Directors Council (Jan. 13, 2016) (''IDC Comment Letter'').

[256] *See, e.g.,* BlackRock Comment Letter; Oppenheimer Comment Letter.

[257] *See* HSBC Comment Letter.

[258] *See* Proposing Release, *supra* footnote 9, at n.314 and accompanying text.

[259] *See* Heartland Release, *supra* footnote 80.

When a credit facility is shared, a fund should assess the extent the facility mitigates its liquidity risk given the liquidity risk associated with the other funds sharing the facility.[260] Similarly, with respect to interfund lending within a family of funds, the terms of an interfund lending arrangement and any conditions required under exemptive relief permitting the arrangement[261] (including limitations on the circumstances in which interfund lending may be used) will shape the role that interfund lending has in a fund's overall liquidity risk management.[262]

3. Periodic Review of a Fund's Liquidity Risk

Rule 22e–4 as adopted includes the requirement for a fund to periodically review the fund's liquidity risk, taking into account the same liquidity risk factors a fund would have to consider in initially assessing and managing its liquidity risk.[263] The proposed rule also included the requirement for a fund to periodically review its liquidity risk, considering those factors it would evaluate in initially assessing its liquidity risk.[264] Commenters generally supported the proposed liquidity risk review requirement.[265] Specifically, some commenters agreed that this requirement will help further the Commission's goals,[266] expressed support for the proposed liquidity risk review factors,[267] and agreed with the Commission's general approach of permitting funds to develop their own policies and procedures for conducting periodic liquidity risk reviews.[268] Other commenters objected to the requirement for a fund to consider certain specified liquidity risk review factors and suggested instead that consideration of the factors be made permissive instead of mandatory.[269] Still another commenter argued that the proposed liquidity risk review approach gives funds too much discretion and recommended that the Commission adopt a baseline standard for the frequency of funds' liquidity risk reviews (*i.e.,* adopt an annual or quarterly review requirement).[270]

We are adopting a periodic review requirement substantially as proposed. As discussed above, we have revised the liquidity risk factors that a fund must consider in assessing, managing, and periodically reviewing its liquidity risk. A fund will not have to consider any factor that is not applicable to a particular fund.[271] This requirement is principles-based, and thus each fund may develop and adopt procedures to review the fund's liquidity risk tailored as appropriate to reflect the fund's particular facts and circumstances.

After evaluating commenters' concerns about the liquidity risk assessment factors, we continue to believe that these factors, modified as discussed above, are central to reviewing a fund's liquidity risk. We also continue to believe that requiring each fund to consider a baseline set of factors, as applicable, in reviewing liquidity risk would promote effective liquidity risk management across the fund industry. As discussed above,[272] we believe that our changes to the proposed liquidity risk factors—which highlight particular risks but also condense and simplify some proposed factors—strike an appropriate balance between promoting consistency in funds' consideration of a standard set of liquidity risk factors and easing burdens associated with this analysis.

We considered a commenter's suggestion that the Commission adopt a minimum frequency for funds' liquidity risk review, and we have modified the proposed rule to clarify that a fund's periodic review of its liquidity risk must occur no less frequently than annually.[273] As discussed below, we are adopting a requirement that a fund periodically review, no less frequently than annually its highly liquid investment minimum (as determined considering the same factors that a fund would reference in periodically reviewing its liquidity risk).[274] Because this review of a fund's highly liquid investment minimum would, de facto, necessitate a fund's review of its liquidity risk, we believe it is appropriate to align the minimum periods for these reviews. Similarly, as discussed further below, we also are adopting a requirement that a fund's board must review, no less frequently than annually, a written report that describes a review of the adequacy of the fund's liquidity risk management program.[275] Accordingly, the minimum period for the liquidity risk review will be aligned with the period in which this report will be presented to the fund's board, creating further synergies. We note, however, that a fund may determine that it is appropriate for its liquidity risk to be reviewed more frequently than annually, depending on the extent to which the required review factors could vary based on market- or sector-wide developments, as well as changes to the fund's operations or other fund-specific circumstances.

C. Classifying the Liquidity of a Fund's Portfolio Investments, and Disclosure and Reporting Requirements Regarding Portfolio Investments' Liquidity Classifications

Today we are adopting requirements for each fund, with the exception of In-Kind ETFs, to classify the liquidity of its portfolio investments. Rule 22e–4 as adopted today requires a fund to classify the liquidity of each portfolio investment based on the number of days within which it determined that it reasonably expects an investment would be convertible to cash (or, in the case of the less-liquid and illiquid categories, sold or disposed of) without the conversion (or, in the case of the less-

[260] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.314–317.

[261] *See, e.g.,* Nationwide Mutual Fund, *et al.,* Investment Company Act Release No. 32115 (May 16, 2016) [81 FR 31988 (May 20, 2016)] (notice of application) (''Nationwide Exemptive Relief''); TCW Alternative Funds, *et al.,* Investment Company Act Release No. 32113 (May 11, 2016) [81 FR 30585 (May 17, 2016)] (notice of application) (''TCW Exemptive Relief''); *see also* Proposing Release, *supra* footnote 9, at paragraph accompanying nn.318–319.

[262] For example, it is common for such exemptive orders to permit interfund lending in circumstances in which there is a timing mismatch between when a fund is required to pay redeeming shareholders and when any asset sales that the fund has executed in order to pay redemptions will settle (*e.g.,* a fund may be required to pay redeeming shareholders within three business days, but the portfolio transactions the fund has executed in order to pay these shareholders may not settle for seven days). A fund can reasonably predict that it will repay borrowed money relatively quickly and reliably under these circumstances. Under these conditions, this type of borrowing would tend to be low risk, and thus entail less liquidity risk than borrowing money to pay redemptions without already having secured a price at which the assets used to cover the borrowing will be sold.

Funds may only engage in interfund lending when it is in the best interests of both the lending and the borrowing fund. The exemptive relief anticipates a fund family's interfund lending arrangements include an assessment of: (i) If the fund participates as a lender, any effect its participation may have on the fund's liquidity risk; and (ii) if the fund participates as a borrower, whether the fund's portfolio liquidity is sufficient to satisfy its obligation to repay the loan along with its other liquidity needs. *See* Nationwide Exemptive Relief, *supra* footnote 261; TCW Exemptive Relief, *supra* footnote 261. For example, the relief is not intended to permit a fund to act as lender of last resort to a borrowing fund.

[263] *See* rule 22e–4(b)(1)(i).

[264] *See* proposed rule 22e–4(b)(2)(iii).

[265] *See, e.g.,* CRMC Comment Letter; CFA Comment Letter; Fidelity Comment Letter; ICI Comment Letter I.

[266] *See* CRMC Comment Letter.

[267] *See, e.g.,* CRMC Comment Letter; ICI Comment Letter I.

[268] *See, e.g.,* CFA Comment Letter; Fidelity Comment Letter.

[269] *See, e.g.,* MFS Comment Letter; Voya Comment Letter.

[270] *See* Better Markets Comment Letter.

[271] *See supra* footnote 192 and accompanying text.

[272] *See supra* footnotes 193–194 and accompanying text.

[273] *See* rule 22e–4(b)(1)(i).

[274] *See infra* section III.D.4.

[275] *See infra* section III.H.2.

liquid and illiquid categories, sale or disposition) significantly changing the market value of the investment. Specifically, rule 22e–4 will require a fund to classify each of its portfolio investments, including its derivatives transactions,[276] into one of four liquidity categories:

- *Highly liquid investments,* defined as cash and any investment reasonably expected to be convertible to cash in current market conditions in *three business days* or less without the conversion to cash significantly changing the market value of the investment.
- *Moderately liquid investments,* defined as any investment reasonably expected to be convertible to cash in current market conditions in more than *three calendar days but in seven calendar days or less* without the conversion to cash significantly changing the market value of the investment.
- *Less liquid investments,* defined as any investment reasonably expected to be sold or disposed of in current market conditions in *seven calendar days or less* without the sale or disposition significantly changing the market value of the investment, but where the sale or disposition is reasonably expected to settle in more than seven calendar days.
- *Illiquid investments,* defined as any investment that may not reasonably be expected to be sold or disposed of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment.

This determination must be based on information obtained after reasonable inquiry; the term ''convertible to cash'' in the category definitions refers to the ability to be sold, with the sale settled. The final rule requires a fund to take into account relevant ''market, trading, and investment-specific considerations'' in classifying its portfolio investments' liquidity, but the rule does not detail a list of factors comprising these considerations.[277] This Release does include, however, guidance on certain considerations that a fund may wish to evaluate in taking into account relevant market, trading, and investment-specific considerations when classifying the liquidity of its portfolio investments.[278] The fund may classify portfolio investments based on asset class, so long as the fund or its adviser,[279] after reasonable inquiry, does not have information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of an investment that would suggest a different classification for that investment.[280] As discussed in more detail below, the fund also must consider the investment's market depth in classifying the investment.[281] The fund also must review its portfolio investments' classifications at least monthly and more frequently if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of its investments' classifications.[282] Finally, the fund must take into account certain considerations for highly liquid investments that it has segregated to cover certain derivatives transactions.[283]

Rule 22e–4 as proposed would have required each fund to classify the liquidity of its portfolio positions (or portions of a position in a particular asset) and review the liquidity classification of each position on an ongoing basis.[284] In classifying and reviewing the liquidity of portfolio assets, proposed rule 22e–4 would have required a fund to consider the number of days within which a fund's position in a portfolio asset (or portions of a position in a particular asset) would be convertible to cash at a price that does not materially affect the value of that asset immediately prior to sale.[285] Based on this determination, made using information obtained after reasonable inquiry, the proposed rule would have required a fund to classify each of its positions in a portfolio asset (or portions thereof) into one of six liquidity categories: (i) Convertible to cash within 1 business day; (ii) convertible to cash within 2–3 business days; (iii) convertible to cash within 4–7 calendar days; (iv) convertible to cash within 8–15 calendar days; (v) convertible to cash within 16–30 calendar days; and (vi) convertible to cash in more than 30 calendar days.[286] The proposed rule would have required a fund to consider certain specified factors, to the extent applicable, in determining the time period in which a portfolio position (or portion thereof) would be convertible to cash.[287]

Although some commenters acknowledged potential benefits to the proposed classification requirement, most commenters were generally opposed to the proposed six-category liquidity classification framework. As discussed further below, commenters' primary objections were concerns that the proposed classification framework would: (i) Not reflect current liquidity risk management practices or industry ''best practices''; (ii) require funds to make overly subjective projections about asset liquidity, particularly to the extent that they would have to project a fund's ability to sell and settle a position well into the future; (iii) place undue reliance on third-party data vendors and analysts; (iv) incorporate a materiality standard that is unclear and impractical to apply; and (v) inappropriately require funds to take position size and settlement timing into account when classifying the liquidity of a portfolio position.

Commenters suggested many alternatives to the proposed classification requirement—both changes to the structure of the proposed classification requirement, as well as suggestions about more granular aspects of the proposed requirement. Although the details vary, commenters raised three primary structural alternatives to the proposed classification requirement: (i) A ''principles-based'' liquidity classification approach, where each fund would have to classify the liquidity of its portfolio assets, but the Commission would not require any

[276] *See* rule 22e–4(b)(1)(ii). The final rule requires a fund to classify all portfolio investments, including investments that are liabilities of the fund. *See infra* section III.C.3.c.

[277] *See* rule 22e–4(b)(1)(ii).

[278] *See infra* section III.C.4.

[279] The term ''adviser'' as used in this Release and rule 22e–4 generally refers to any person, including a sub-adviser, that is an ''investment adviser'' of an investment company as that term is defined in section 2(a)(20) of the Investment Company Act. *See infra* paragraph accompanying footnote 818 (discussing the coordination of liquidity risk management efforts undertaken by various service providers, including a fund's sub-adviser(s)).

[280] *See* rule 22e–4(b)(1)(ii)(A).

[281] More specifically, the fund must determine whether trading varying portions of a position in a particular investment, in sizes that the fund would reasonably anticipate trading, is reasonably expected to significantly affect the liquidity of that investment, and if so, the fund must take this determination into account when classifying the liquidity of that investment. *See* rule 22e–4(b)(1)(ii)(B).

[282] *See* rule 22e–4(b)(1)(ii); *see also* rule 22e–4(b)(1)(i) (imposing an ongoing responsibility on the fund to assess and manage its liquidity risk).

[283] More specifically, with respect to the fund's derivatives transactions that it has classified as moderately liquid investments, less liquid investments, and illiquid investments, it must identify the percentage of the fund's highly liquid investments that it has segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions in each of these classification categories. *See* rule 22e–4(b)(1)(ii)(C); *see also* rule 22e–4(b)(1)(iii)(B) (addressing such percentage of highly liquid investments in connection with determining whether a fund primarily holds highly liquid investments).

[284] *See* Proposing Release, *supra* footnote 9, at section III.B.

[285] Proposed rule 22e–4(b)(2)(i).

[286] Proposed rule 22e–4(b)(2)(i).

[287] Proposed rule 22e–4(b)(2)(ii); *see also infra* section III.C.4.

specific classification scheme;[288] (ii) a simplified version of the proposed classification system, with fewer classification categories based on shorter time projections than the proposal;[289] and (iii) an approach with new classification categories based on qualitative distinctions in the market- and trading-related characteristics of different asset classes under different market conditions, which generally would rely on the Commission mapping different asset classes to each of these new classification categories.[290]

Our adopted liquidity classification requirement most closely resembles the second alternative described above and is designed to respond to commenters' concerns while also continuing to advance the Commission's goals. As discussed in the Proposing Release, we understand that funds today employ different practices for assessing the liquidity of their portfolios.[291] After considering comments, however, we continue to believe that a liquidity classification framework based on a days-to-cash determination, with certain modifications from the proposal, is an effective approach to further our goals of creating a meaningful, uniform framework for reporting to the Commission and providing public disclosure about funds' liquidity profiles. To achieve this goal, we believe the rule must provide a consistent methodology for assessing portfolio liquidity. This methodology also will form the basis for the highly liquid investment minimum and illiquid investment limit, each of which we believe will play an important role in fund liquidity risk management, as discussed in detail below. We also believe this classification system maintains the benefits of a spectrum-based liquidity analysis while responding to concerns about the burden and level of precision implied by the proposed approach.

While we agree that the suggested ''principles-based'' alternative approach would have benefits in terms of flexibility and funds' ability to leverage their existing procedures for assessing portfolio liquidity,[292] this approach would not provide a uniform methodology for funds' liquidity assessment procedures. It thus would not meaningfully advance our goal of establishing a foundation for reasonably comparable reporting to the Commission and disclosure to the public about funds' portfolio liquidity.[293] In particular, this approach would not permit detailed reporting about funds' portfolio investments' liquidity in a structured data format, as with reports on Form N–PORT, and thus would not provide an efficient basis for the Commission and its staff to monitor funds' portfolio liquidity and liquidity risk.

We likewise believe the third alternative classification system, based on liquidity characteristics of different asset classes—as opposed to a days-to-cash framework—may not provide clear distinctions between each liquidity category without the Commission assigning specific asset classes to each classification category. Given the size of the fund industry and the wide variety and types of asset classes held by funds, we believe that it would be impractical for the Commission or its staff to attempt to prescriptively categorize every asset class by liquidity. Further, the classification requirement is designed to provide information regarding the liquidity of portfolio investments under *current market conditions.* We are concerned that a classification system by which the Commission assigns specific asset classes to specific liquidity categories would not be sufficiently flexible to account for the impact changing market conditions may have on the liquidity of fund investments.

Relatedly, some commenters suggested an alternative classification system could be based on notions of liquidity other than ''days-to-cash,'' including, in whole or in part, on the fraction of average daily trading volume that each position size corresponds to, the expected behavior of bid-ask spreads in a given asset, or more qualitative liquidity buckets (*e.g.* ''converted to cash quickly under most circumstances'').[294] Other commenters suggested that all of the classification categories be defined based on a days-to-cash or days-to-trade determination,[295] while some recommended that only certain of the categories (generally, the relatively more liquid categories) be defined based on a days-to-cash or days-to-trade determination.[296] After considering comments, we have chosen to adopt a classification system that most closely resembles the second alternative raised by commenters and includes days-to-cash determinations for the more liquid categories. As noted below, some of the more specific criteria suggested by commenters in place of days-to-cash may not be appropriate for all asset classes, while more qualitative criteria make it more difficult to compare classifications across funds relative to the days-to-cash approach in the rule.[297]

1. Primary Elements of Classification Framework

a. Consolidation of Proposed Classification Categories

Similar to the proposed classification requirement, the final classification requirement is generally based on a framework that would require a fund to determine the number of days in which each portfolio investment is convertible to cash. However, the final classification framework reduces the number of classification categories from six (as proposed) to four. In addition, a fund may classify portfolio investments based on asset class under the final classification requirement, so long as the fund or its adviser does not have information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of an investment and that would require a different classification for that investment. When we proposed the rule 22e–4 classification requirement, we noted that the framework was meant to promote a more nuanced approach than a classification requirement under which a fund would simply designate assets as liquid or illiquid.[298] The proposed approach also was meant to provide the basis for detailed reporting and disclosure about the liquidity of funds' portfolio positions in a structured data format, as the six liquidity categories described above would be incorporated

[288] *See, e.g.,* AIMA Comment Letter; Comment Letter of the Loan Syndications and Trading Association (Jan. 13, 2016) (''LSTA Comment Letter''); Comment Letter of State Street Global Advisors (Jan. 13, 2016) (''State Street Comment Letter''); Comment Letter of Wellington Management Company LLP (Jan. 13, 2016) (''Wellington Comment Letter'').

[289] *See, e.g.,* Eaton Vance Comment Letter I; Interactive Data Comment Letter; Comment Letter of Markit (Jan. 13, 2016) (''Markit Comment Letter''); Comment Letter of Wells Fargo Funds Management, LLC (Jan. 13, 2016) (''Wells Fargo Comment Letter''). Commenters generally suggested three, four, or five classification categories.

[290] *See, e.g.,* BlackRock Comment Letter; MFS Comment Letter; Nuveen Comment Letter; Comment Letter of Systemic Risk Council (Jan. 13, 2016) (''SRC Comment Letter'').

[291] *See* Proposing Release, *supra* footnote 9, at section III.B.

[292] *See, e.g., supra* footnote 288; *see also* section IV.C.

[293] *See infra* section III.C.6.

[294] *See, e.g.,* AFR Comment Letter; BlackRock Comment Letter; SRC Comment Letter.

[295] AFR Comment Letter; Cohen & Steers Comment Letter; PIMCO Comment Letter; Charles Schwab Comment Letter.

[296] Oppenheimer Comment Letter; SIFMA Comment Letter I; T. Rowe Comment Letter.

[297] *See infra* section IV.C.1.

[298] *See* Proposing Release, *supra* footnote 9, at n.174 and accompanying and following text.

into the fund's portfolio holdings reported on proposed Form N–PORT.[299]

Multiple commenters expressed concerns about the proposed six-category classification framework. Many argued that the proposed classification method would require funds to make overly subjective projections about asset liquidity because predicting the time to liquidate a position for cash at a given price—particularly well into the future—is limited by required assumptions and market data availability, even for sophisticated asset managers.[300] They stated that making relatively subjective liquidity determinations would render liquidity assessments inconsistent across funds, and any appearance of objectivity and comparability among funds' liquidity assessments thus would be false.[301] Relatedly, commenters also maintained that the proposed liquidity classification categories were overly granular and therefore could present a false appearance of precision about portfolio assets' liquidity.[302] For example, commenters argued that determining whether an asset can be converted to cash in 15 calendar days versus 16 calendar days (that is, distinguishing between the fourth and fifth proposed classification categories) cannot realistically be known or predicted with accuracy.[303] Some commenters advocated reducing the number of classification categories[304] and expressed concern that the proposal would entail overly subjective classification analysis, which would give funds too much discretion to determine which assets are relatively liquid and thus make enforcement difficult and hinder meaningful risk mitigation.[305] Finally, commenters also predicted that the complexity of analyses inherent in the proposed six-category classification framework, and related operational burdens, could cause many funds to either shift their classification obligations to third-party analysts entirely, or to rely heavily on data provided by third-party vendors to help simplify funds' own classification analyses.[306]

After considering these comments, we agree that the level of precision implied by the proposed six-category classification system could have unintended negative consequences. We also agree that the six liquidity classification categories that we proposed could lead to varying liquidity assessments and could give rise to an appearance of a level of precision about liquidity determinations that may not be achievable for some funds or asset classes. However, we continue to believe that a classification approach that involves funds evaluating investments' liquidity across a liquidity spectrum (as opposed to making a binary determination of whether an investment is liquid or illiquid) provides a basis for more meaningful reporting and disclosure about funds' portfolio liquidity. Our opinion corresponds with many commenters' views that there are significant benefits associated with evaluating portfolio assets' liquidity across a spectrum.[307]

We believe that condensing the six proposed categories into four categories should decrease the variability in funds' liquidity assessments, since funds will not be required to make liquidity distinctions that are as detailed as would have been required under the proposal. The adopted categories also should reduce inconsistency in funds' liquidity assessments because the new categories do not include time periods in the least-liquid categories that are as granular or projected as far in the future as under the proposal. Furthermore, we believe that the adopted categories could decrease variability in some funds' liquidity assessments because we understand that the four adopted categories may correspond more closely than the proposed categories with classification methods and categories that some funds currently use in evaluating their portfolio liquidity.[308] For example, the time frames referenced in the moderately liquid, less liquid, and illiquid classification categories are tied to the seven-calendar-day period in which funds are required to pay redeeming shareholders under section 22(e) of the Investment Company Act. We understand through staff outreach conducted prior to the proposal that certain funds already classify their portfolios across a number of liquidity categories, taking into account days-to-cash determinations and focusing on assets that can be used to meet redemptions in the short- and medium-term.[309] Certain commenters likewise acknowledged that some asset managers may currently classify portfolio positions with categories that take days-to-cash or days-to-trade determinations into account, although not at the level of detail suggested by the proposal or for all classes of portfolio assets.[310]

We recognize that, although we are providing a uniform classification framework, different funds may still classify the liquidity of similar investments differently, based on the facts and circumstances informing their analyses. This simply reflects the fact that different funds likely have different views on liquidity based on considerations such as their assessment of various market, trading, and investment-specific factors, and the size of their position in a particular investment. We acknowledge that liquidity can be difficult to estimate and that there is no agreed-upon measure of liquidity for all asset classes.[311] Nevertheless, we believe the reporting of the liquidity classification information to us, and aggregated information to the public, will provide important information about fund liquidity.

b. Market, Trading, and Investment-Specific Considerations

Rule 22e–4 as adopted today requires a fund to take into account ''relevant market, trading, and investment-specific considerations'' in classifying and reviewing its portfolio investments' liquidity.[312] Rule 22e–4 as proposed did not include this requirement but instead included an enumerated list of nine separate factors that a fund would be specifically required to consider, as applicable, in classifying and reviewing the liquidity of its portfolio assets.[313]

---

[299] See id.

[300] *See, e.g.,* Comment Letter of Michael Aguilar, *et al.* (Jan. 12, 2016) (''Aguilar Comment Letter''); Credit Suisse Comment Letter; Comment Letter of J.P. Morgan Asset Management (Jan. 13, 2016) (''J.P. Morgan Comment Letter''); Voya Comment Letter.

[301] *See, e.g.,* AIMA Comment Letter; CRMC Comment Letter; T. Rowe Comment Letter; Vanguard Comment Letter.

[302] *See, e.g.,* Cohen & Steers Comment Letter; MFS Comment Letter; Nuveen Comment Letter; SIFMA Comment Letter I.

[303] *See, e.g.,* Credit Suisse Comment Letter.

[304] *See* AFR Comment Letter; *see also* Better Markets Comment Letter (expressing concern about the complexity of the proposed classification requirement).

[305] *See* Better Markets Comment Letter; SRC Comment Letter.

[306] *See, e.g.,* FSR Comment Letter; Comment Letter of Brian Reid, Chief Economist, Investment Company Institute (Jan. 13, 2016) (''ICI Comment Letter II''); Charles Schwab Comment Letter; Wells Fargo Comment Letter.

[307] *See, e.g.,* CRMC Comment Letter; HSBC Comment Letter; J.P. Morgan Comment Letter; Comment Letter of MSCI (Jan. 13, 2016) (''MSCI Comment Letter'').

[308] *See infra* text accompanying footnotes 366, 375, 383.

[309] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying n. 183.

[310] *See, e.g.,* HSBC Comment Letter; MFS Comment Letter; Nuveen Comment Letter; Wellington Comment Letter.

[311] Indeed our recognition of these facts is part of what has lead us to adopt requirements that the more detailed liquidity classification of each individual portfolio investment be reported to us confidentially, with only the aggregated fund liquidity profile reported publicly, as discussed in section III.C.6 below.

[312] *See* rule 22e–4(b)(1)(ii).

[313] Rule 22e–4 as proposed would have required a fund to take into account the following nine factors, to the extent applicable, when classifying

The Proposing Release requested comment generally on whether the Commission should codify the proposed list of nine liquidity classification factors. While one commenter agreed that the factors should be codified,[314] most opposed codification and stated that funds should be permitted, but not required, to consider the factors.[315] Commenters stated that codifying the proposed factors would mandate a classification process that would be overly burdensome on funds' resources [316] and could limit portfolio managers' ability to rely on industry expertise in evaluating portfolio assets' liquidity.[317] One commenter specifically expressed concern that ''the scope and complexity of the required analysis may excessively burden fund boards of directors and may actually act to distract fund managers and directors from the assessment of liquidity and redemption risk, which we view as the more important analysis.'' [318] Commenters also argued that a codified list of liquidity assessment factors could create a presumption that a fund must consider each factor in evaluating each portfolio holding, even if certain factors would not be useful or relevant to evaluating certain portfolio assets' liquidity.[319] Some commenters also stated that a codified list of factors could lead funds to place undue reliance on third-party data vendors,[320] and such reliance could result in these vendors being viewed as ''rating agencies'' for liquidity, which could lead to potential systemic risk issues.[321] In addition, they expressed more granular concerns about certain of the proposed factors, which are discussed in detail in section III.C.4 below.

After considering commenters' suggestions and concerns, we are not including the classification factors in the rule as proposed because we are concerned that including this list in rule 22e–4 could lead funds to focus too heavily on evaluating certain factors that may not be particularly relevant to the liquidity of a specific fund's portfolio investments, the evaluation of which may not help produce meaningful outcomes in terms of effective classification. This could operate to the detriment of efficient and appropriate liquidity assessments that focus on the liquidity characteristics most directly affecting a particular asset class or investment.

We are instead adopting a principles-based requirement that a fund take into account relevant market, trading, and investment-specific considerations in classifying its portfolio investments. We understand based on staff outreach that it is common for some funds, in assessing the liquidity of their portfolio investments, to look only at basic structural characteristics of an investment (such as asset class or restrictions on transfer) and not to supplement this analysis with market information or other potentially relevant factors.[322] This could lead to circumstances in which a fund's liquidity classifications do not reflect a fund's actual ability to sell its portfolio investments without significant dilution to meet redemptions within a given time period, or do not otherwise result in an accurate picture of a fund's liquidity profile. Thus, we believe that the classification requirement must require funds to evaluate relevant considerations in making liquidity determinations. We believe the requirement to take into account relevant market, trading, and investment-specific considerations achieves this goal and is broad and flexible enough to be relevant for all investment strategies and fund risk profiles. In addition, we continue to believe that the proposed classification factors could help funds in evaluating relevant market, trading, and investment-specific considerations, and thus we have included guidance on many of these areas in section III.C.4 of this Release that may be relevant to a fund's assessment of portfolio investments' liquidity characteristics.

We understand that some third-party service providers currently provide data and analyses assessing the relative liquidity of a fund's portfolio investments, and that many of these service providers assess certain market, trading, and investment-specific considerations in doing so. We believe that a fund could appropriately use this type of data to inform or supplement its own consideration of the liquidity of an asset class or investment. However, a fund would not be required to do so.[323] Also, we generally believe that a fund should consider having the person(s) at the fund or investment adviser designated to administer the fund's liquidity risk management program review the quality of any data received from third parties, as well as the particular methodologies used and metrics analyzed by third parties, to determine whether this data would effectively inform or supplement the fund's consideration of its portfolio holdings' liquidity characteristics. This review could include an assessment of whether modifications to an ''off-the-shelf'' product are necessary to accurately reflect the liquidity characteristics of the fund's portfolio holdings. As discussed above, certain commenters expressed concern that the proposed six-category classification framework, including the proposed codification of certain factors that a fund would be required to consider (as applicable) in classifying its portfolio holdings, would place undue reliance on data vendors and analysts, and that such reliance could produce potential systemic risk issues.[324] We believe that our decisions to simplify the proposed classification framework and not to include the proposed classification

the liquidity of each portfolio position in a particular asset: (1) Existence of an active market for the asset, including whether the asset is listed on an exchange, as well as the number, diversity, and quality of market participants; (2) frequency of trades or quotes for the asset and average daily trading volume of the asset (regardless of whether the asset is a security traded on an exchange); (3) volatility of trading prices for the asset; (4) bid-ask spreads for the asset; (5) whether the asset has a relatively standardized and simple structure; (6) for fixed income securities, maturity and date of issue; (7) restrictions on trading of the asset and limitations on transfer of the asset; (8) the size of the fund's position in the asset relative to the asset's average daily trading volume and, as applicable, the number of units of the asset outstanding; and (9) relationship of the asset to another portfolio asset. *See* proposed rule 22e–4(b)(2)(ii). These proposed factors are discussed in more detail in *infra* section III.C.4.

[314] *See, e.g.,* CRMC Comment Letter.

[315] *See, e.g.,* AFR Comment Letter; Invesco Comment Letter; J.P. Morgan Comment Letter; Vanguard Comment Letter.

[316] *See, e.g.,* CFA Comment Letter; LSTA Comment Letter; Oppenheimer Comment Letter.

[317] *See, e.g.,* Federated Comment Letter; Charles Schwab Comment Letter.

[318] *See* AFR Comment Letter.

[319] *See, e.g.,* ICI Comment Letter I (''We are concerned that [the proposed factors'] inclusion in the rule could create a presumption that funds consider each factor in evaluating each portfolio holding . . .''); Oppenheimer Comment Letter (''As an example, a fund that invests solely in equity securities of large capitalization issuers that are traded on U.S. exchanges might reasonably determine that the frequency of trades in those equity securities and their average daily trading volumes are sufficient factors to determine their liquidity, and that consideration of factors such as bid-ask spread and volatility of trading prices are not useful or informative in a liquidity assessment. However, because these securities have observable bid-ask spreads and volatility, the fund would nonetheless be required to obtain and consider such data.'').

[320] *See, e.g.,* Dechert Comment Letter; Dodge & Cox Comment Letter; Comment Letter of the Mutual Fund Directors Fund (''MFDF Comment Letter''); T. Rowe Comment Letter.

[321] *See, e.g.,* Federated Comment Letter; ICI Comment Letter II; MFDF Comment Letter; SIFMA Comment Letter I.

[322] *See, e.g., infra* section III.E.

[323] *See* Nuveen Comment Letter (requesting that the Commission confirm that data from third-party vendors may be used in a fund's assessment of liquidity, but that funds are not required to use data provided by third-party vendors in classifying the liquidity of their portfolio assets).

[324] *See supra* footnotes 320–321 and accompanying text.

factors as part of rule 22e–4, together with the guidance on the appropriate use of data vendors discussed in this paragraph, should largely mitigate these concerns.

c. Value Impact Standard

As discussed further below, in a modification to the proposed standard, each of the liquidity categories included in the classification requirement we are adopting requires a fund to determine the time period in which an investment would be reasonably expected to be converted to cash (or in some cases, sold or disposed of) in current market conditions without the conversion to cash (or in some cases, sale or disposition) significantly changing the market value of the investment.[325] This modification highlights that the standard does not require a fund to actually re-value or re-price the investment for classification purposes, nor does the standard require the fund to incorporate general market movements in liquidity determinations or estimate market impact to a precise degree.

Many commenters opposed the value impact standard incorporated in the proposed liquidity classification requirement—that the asset was convertible to cash ''at a price that does not materially affect the value of that asset immediately prior to sale.'' [326] Many suggested that the value impact component of the proposed standard was inappropriate for liquidity analyses [327] and should be eliminated from the classification requirement.[328] Commenters particularly were concerned that a ''materiality'' standard could be difficult and impractical to apply because they argued any sale of an asset could impact its market value to some degree.[329] They stated that it is difficult to separate and quantify the market impact of a fund's trades in a particular asset from other reasons that an asset's price could move (such as market events), particularly in dynamic markets, and that projections of future market impact are difficult to make.[330] Furthermore, they stated that without further guidance from the Commission funds may not know what ''material'' should mean in the context of the proposed classification requirement.[331] Some commenters specifically noted that the proposed value impact standard differed from the value impact standard incorporated in the Commission's guidelines limiting funds' illiquid asset holdings, which is based on whether a fund could sell an asset at approximately the value at which the fund has valued it, and that conflicting standards could raise confusion and operational difficulties.[332] Finally, several commenters argued that the inclusion of the value impact standard in the proposed classification categories could give fund shareholders the false impression that the fund guarantees a protected NAV.[333]

As we noted when discussing the definition of ''liquidity risk,'' we continue to believe that incorporating a value impact analysis into liquidity considerations is appropriate because it indicates that liquidity risk for a fund captures not just the risk of being unable to meet redemption requests, but also the risk that a fund could only meet redemption requests in a manner that significantly dilutes the funds' non-redeeming shareholders. Separately, as we noted above, the inclusion of some consideration of value impact is common in regulators' characterization of portfolio liquidity and fund liquidity risk.[334] Because we believe that the liquidity of portfolio investments is a significant component of a fund's overall liquidity risk,[335] we continue to believe that the inclusion of a value impact standard in the rule 22e–4 classification categories is appropriate. We also understand that many current trade order management systems estimate value impacts that may result from trades, which may assist funds in making these estimates.

Nevertheless, we have determined that certain modifications to the proposed value impact standard are warranted to address certain concerns raised by commenters. First, we recognize that in complying with the value impact standard, funds will be making assessments about the trading behavior of certain asset classes (and individual investments, for investments that need to be treated on an exception basis in the final classification framework we are adopting today). Accordingly, funds should be able to rely on their reasonable expectations at the time they make these assessments, and we do not expect them to estimate to a precise degree the market impact of trading that investment or the value of that investment as the trades occur.[336] As a result, we have modified the final rule to provide that an investment's classification be based a fund's *reasonable expectations* in *current* market conditions (emphasis added).[337] We also expect that the consolidation of the liquidity classification categories into ones that only require days-to-cash projections out to seven days should also mitigate commenters' concerns about the uncertainty involved in these value impact projections because the consolidated categories do not involve projections as far into the future as the proposed categories.

We also changed the standard to capture only value impacts that *significantly change* the investment's market value, rather than the proposed standard that focused on *materially affecting* the value of the asset immediately prior to sale (emphasis added). We believe that funds will be less likely to interpret *significant changes* in market value as capturing very small movements in price, and

[325] *See* rule 22e–4(a)(6); 22e–4(a)(8); 22e–4(a)(10); and 22e–4(a)(12). We note the term ''market value'' as used in the value impact standard includes the value of investments that are fair valued.

[326] *See, e.g.,* BlackRock Comment Letter; MFS Comment Letter; Comment Letter of Milliman Financial Risk Management LLC (Jan. 7, 2016) (''Milliman Comment Letter''); Vanguard Comment Letter.

[327] *See, e.g.,* Eaton Vance Comment Letter I; Fidelity Comment Letter; PIMCO Comment Letter; Vanguard Comment Letter.

[328] *See, e.g.,* CRMC Comment Letter; J.P. Morgan Comment Letter (recognizing, however, the concern underlying the proposed standard—''namely that if funds sell assets at 'fire sale' prices there can be negative price pressure on those assets as well as correlated assets, which could transmit stress to other funds or portions of the market''); PIMCO Comment Letter; Vanguard Comment Letter.

[329] *See, e.g.,* CRMC Comment Letter; IDC Comment Letter; PIMCO Comment Letter; T. Rowe Comment Letter.

[330] *See, e.g.,* BlackRock Comment Letter; CRMC Comment Letter; MFS Comment Letter; Voya Comment Letter.

[331] *See, e.g.,* Aguilar Comment Letter; Markit Comment Letter; Milliman Comment Letter; SIFMA Comment Letter I.

[332] *See, e.g.,* Interactive Data Comment Letter; NYC Bar Comment Letter; *see also infra* text accompanying footnotes 341–342 (discussing the harmonization of the value impact standard incorporated in the definition of ''illiquid asset'' that we are adopting with the standard incorporated in the rule 22e–4 classification requirement generally).

[333] *See, e.g.,* BlackRock Comment Letter; ICI Comment Letter III; PIMCO Comment Letter; SIFMA Comment Letter I.

[334] *See supra* footnote 173.

[335] *See* rule 22e–4(b)(1)(i)(A) (requiring a fund to consider its portfolio investments' liquidity in assessing its liquidity risk).

[336] In the proposal, we noted that the proposed term ''immediately prior to sale'' was not meant to require a fund to anticipate and determine in advance the precise current value of an asset at the moment before the fund would sell the asset. We believe that the alterations to the final value impact standard reinforce this intent. *See* Proposing Release, *supra* footnote 9, at text following n.170

[337] A fund's reasonable expectations pertain to each aspect of the definition of highly liquid investments, moderately liquid investments, less liquid investments, and illiquid investments—*i.e.,* a fund may rely on its reasonable expectations as to the fund's ability to convert the investment to cash (or, in some cases, sell or dispose of the investment) in current market conditions in a certain number of days and a fund may rely on its reasonable expectations as to whether the conversion to cash (or, in some cases, sale or disposition) of the investment can be done without significantly changing the market value of the investment.

thus this change should address commenters' concern that the proposal would create a value impact standard that is impractical to apply because any sale of an investment could affect its market value to some degree. We also believe that a fund's classification policies and procedures should address what it would consider to be a significant change in market value. Common alternatives that commenters suggested in place of the proposed value impact standard included an ''assuming no fire sale discounting'' (or similar) standard [338] or various quantitative materiality standards.[339] We believe a standard based on fire sale discounting would be too high of a value impact threshold, whereas suggested quantitative standards would be too precise and require burdensome calculations. However, we believe that the final value impact standard of ''without the conversion to cash (or in some cases, sale or disposition) *significantly changing* the market value'' appropriately balances our desire to capture the risk of dilution in cases of inadequate liquidity, while not also requiring funds to account for every possible value movement.

Finally, we note that the final value impact standard does not require the fund to incorporate general market movements in liquidity determinations. We recognize that there can be many reasons for the market value of a particular investment to fluctuate, separate from the fund's transactions in those investments. We do not intend for the value impact standard to capture movements in an investment's value due to market events. For this reason, we are not adopting a value impact standard based on the fund's most recent valuation of that investment as suggested by some commenters.[340] This type of standard may have required a fund to compare the investment's traded price with the fund's prior day valuation of the investment—such a comparison likely would reflect the effects of general market movements. The value impact standard we are adopting today only requires a fund to consider the market value impact of a hypothetical sale of an investment.

We recognize that the value impact standard incorporated in the ''illiquid investment'' definition is slightly different from the standard used in the definition of ''illiquid asset'' under the Commission's current guidelines, as the latter is based on whether a fund could sell an asset at ''approximately the value at which the fund has valued the investment.'' [341] We believe the revised value impact standard in the illiquid investment definition is preferable both because it prevents confusion by harmonizing the value impact standards within the classification framework and because, as just discussed, it removes any confusion that the value impact standard incorporates general market movements that would occur between when a fund strikes its NAV and when it trades the investment.[342]

With respect to commenters' concerns that the inclusion of a value impact standard in the rule 22e–4 classification categories could give fund shareholders the false impression that the fund guarantees a protected NAV, we do not believe that the final rule's classification categories imply a protected NAV. As noted in our discussion of the rule 22e–4 definition of ''liquidity risk,'' we believe that funds' narrative risk disclosure in their registration statements and other shareholder communications generally should make clear those risks that could adversely affect the fund's NAV, yield, and total return, including liquidity-related risks. All open-end funds are required to disclose that loss of money is a risk of investing in the fund.[343]

d. Consideration of Current Market Conditions

The definition of each liquidity category in the classification requirement we are adopting today specifically requires a fund to consider the time period in which an investment can be converted to cash (or, in some cases, sold or disposed of) in current market conditions.[344] The ''current market conditions'' specification is a change from the proposed classification requirement, which did not explicitly require that a fund consider current market conditions in making liquidity classification determinations.[345] The proposal, however, did require a fund to ''engage in an ongoing review'' of the liquidity of each of its portfolio positions.[346] The Commission suggested in the Proposing Release that a fund's policies and procedures for reviewing the liquidity of its portfolio positions generally should include procedures for assessing market-wide developments, as well as security- and asset-class-specific developments that could demonstrate a need to change the liquidity classification of a portfolio position.[347] The proposal's ongoing review standard (as opposed to the at-least-monthly review standard we are adopting today [348]) thus would have implicitly required that a fund's liquidity determinations reflect current market conditions.

Multiple commenters requested guidance and provided suggestions regarding the market conditions a fund should consider in classifying its portfolio assets' liquidity. Some commenters requested clarity on whether a fund would be required to classify the liquidity of its portfolio assets based on an assessment of normal market conditions or stressed market conditions.[349] One commenter suggested that the Commission provide additional guidance on how to assess the value impact that a fund's sale of portfolio assets could have under future stressed market conditions.[350] Additionally, one commenter suggested that any final liquidity classification framework should incorporate an assessment of reasonably foreseeable stressed conditions instead of current market conditions.[351]

In addition to the commenters who requested clarification or made suggestions about the market conditions referenced in the proposed liquidity classification framework, multiple commenters suggested alternative classification schemes that would more explicitly define liquidity categories based on distinctions in how a particular asset would trade under normal versus stressed market

[338] *See, e.g.,* SIFMA Comment Letter I; T. Rowe Comment Letter; *see also* AFR Comment Letter (suggesting standard should be that an asset could be sold at a price that does not create harm to fund shareholders due to the fund being forced to accept disadvantageous terms of sale in order to find a buyer).

[339] *See, e.g.,* Interactive Data Comment Letter (asset could be sold at a price that has a less than 5% impact on the value of that asset; asset could be sold at a price that does not create a 1 penny or more impact on the fund's NAV; fund could use volatility measures to determine security-specific materiality thresholds).

[340] IDC Comment Letter; NYC Bar Comment Letter.

[341] *See supra* section II.B.2

[342] *See also infra* section III.C.2.d.

[343] *See* Item 4(b)(1)(i) of Form N–1A.

[344] *See* rule 22e–4(a)(6); 22e–4(a)(8); 22e–4(a)(10); and 22e–4(a)(12). *See also infra* section III.C.5. (discussing the requirement to review liquidity classifications at least monthly and more frequently if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of a fund's classifications of investments) and section III.E. (discussing the prohibition on acquiring illiquid investments if, immediately after acquisition, the fund would have invested more than 15% of its net assets in illiquid investments that are assets).

[345] *See* proposed rule 22e–4(b)(2)(i).

[346] *Id.*

[347] *See* Proposing Release, *supra* footnote 9, at text following n.253.

[348] *See* section III.C.5.

[349] *See, e.g.,* AFR Comment Letter; HSBC Comment Letter.

[350] *See* ICI Comment Letter II.

[351] *See* AFR Comment Letter.

conditions.[352] One commenter suggested that this alternative method of defining liquidity classification categories would reflect directly the extent to which assets' liquidity can dynamically change as market conditions evolve.[353]

After considering commenters' suggestions and concerns, we are adopting liquidity classification categories that reflect current market conditions. We appreciate commenters' concerns that liquidity classifications based on current market conditions capture only a moment-in-time picture of a fund's portfolio liquidity, which may not accurately reflect liquidity in changing market conditions. We also appreciate commenters' concerns that investments that are relatively liquid under normal conditions may exhibit significantly reduced liquidity during times of stress.[354] However, we are concerned that requiring a fund to predict how an investment *may* trade in stressed market conditions would introduce an additional layer of subjectivity into the classification process. Specifically, we are concerned that funds would likely assume varying levels of stress when classifying the liquidity of their portfolio investments. We believe that liquidity categories requiring consideration of stressed conditions thus could impede our goals of promoting consistency in funds' processes for assessing portfolio investments' liquidity and enhancing the data quality of funds' liquidity-related reporting and disclosure. Conversely, we believe the requirement to assess current market conditions would increase consistency among funds' liquidity determinations by limiting the number of variables informing funds' classification determinations. Although we understand that the adopted classification scheme may not produce absolute consistency in how funds classify the liquidity of their portfolio investments as funds' assumptions and individual facts and circumstances may differ,[355] classifying based on current market conditions will result in all funds' classifications at a given time reflecting the same market conditions.

We believe that it would be informative to Commission staff to understand how the same set of market conditions could disparately affect different funds' assessments of their liquidity and that of different asset classes. Also, we note that, to the extent that the markets in which funds' portfolio investments trade are currently stressed, consideration of current market conditions would de facto reflect consideration of stressed market conditions. Therefore, the requirement to consider current market conditions, along with the requirement for funds to review the liquidity of their portfolio investments at least monthly[356] and the Form N–PORT reporting requirements concerning funds' liquidity classifications,[357] will provide data that will help the staff evaluate the role of changing market conditions on funds' liquidity by comparing liquidity data across different sets of current market conditions over time. We believe this liquidity data would be more useful than data based on projected stressed market conditions, because it would reflect funds' assessments in light of actual, not anticipated, market stresses.

Finally, we note that while we are not incorporating a requirement to evaluate potential future stressed market conditions in the portfolio investment liquidity *classification* requirement, we continue to believe that it is appropriate to require funds to consider reasonably foreseeable stressed conditions as part of the liquidity risk *assessment* and *management* requirements.[358] We believe that funds' liquidity risk assessment should inform the extent to which funds are prepared to manage their liquidity under both normal and reasonably foreseeable stressed conditions—particularly because, for many asset classes, liquidity is adversely affected by market stress and funds need to have a liquidity risk management program that is resilient under all market conditions. Thus, as discussed throughout this Release, a fund must establish liquidity risk management policies and procedures appropriate in light of both normal and reasonably foreseeable stressed market conditions.

2. Discussion of Specific Classification Categories

a. Highly Liquid Investments

The classification requirement we are adopting today requires a fund to identify its ''highly liquid investments,'' that is, cash held by a fund and investments that the fund reasonably expects to be convertible to cash in current market conditions in three business days or less without the conversion to cash significantly changing the market value of the investment. This category condenses the first two liquidity classification categories in the proposed classification requirement (assets convertible to cash within one business day, as well as two-to-three business days) to simplify the proposed classification framework. Multiple commenters who suggested simplified alternatives to the proposed approach suggested including a classification category based on portfolio assets' convertibility to cash within three days.[359] One such commenter suggested that ''highly liquid assets'' should include cash and any asset that can be converted to cash in the ordinary course of business within three business days.[360] Additionally, another commenter agreed that, given current redemption practices, funds should assess how much liquidity they may need over a three-day period.[361]

We continue to believe, as discussed in the Proposing Release, that it is important for funds to determine what percentage of their portfolio is convertible to cash—that is, available to meet redemptions—within the relatively short term. We understand that most funds typically pay redemption proceeds within a fairly short period (typically, one to three days) after receiving a shareholder's redemption request, even though a fund may disclose that it reserves the right to delay payment for up to seven calendar days, as permitted by section 22(e) of the Act.[362] Likewise, funds may find it useful to identify portfolio investments

[352] *See, e.g.,* BlackRock Comment Letter; J.P. Morgan Comment Letter; SIFMA Comment Letter III; T. Rowe Comment Letter.

[353] *See* BlackRock Comment Letter. This commenter also noted that ''the time needed to liquidate a position at a given price in a normal market environment will not be reflective of the market impact incurred when liquidating positions during stressed markets.''

[354] *See generally* MFS Comment Letter; NYC Bar Comment Letter.

[355] As discussed above, we recognize that funds are likely to make different assumptions in classifying the liquidity of their portfolio investments depending on the facts and circumstances relating to funds and their trading practices. *See supra* paragraph accompanying footnote 311.

[356] *See infra* section III.C.5.

[357] *See infra* section III.C.6.b.

[358] *See supra* section III.B. In discussing funds' liquidity risk assessment obligations under rule 22e–4, we note above that if a fund conducts stress testing to determine whether it has sufficient liquid investments to cover different levels of redemptions, a fund should incorporate the results of this stress testing into its liquidity risk assessment. *See supra* footnote 196.

[359] *See, e.g.,* Federated Comment Letter; Fidelity Comment Letter; SIFMA Comment Letter I; Vanguard Comment Letter.

[360] *See* Vanguard Comment Letter.

[361] *See* MFDF Comment Letter (stating in the context of the proposed three-day liquid asset minimum, that ''[g]iven current redemption practices in the industry, we agree with the Commission that funds should assess how much liquidity they may need, both in normal and stressed market conditions, over a three-day period to effectively meet anticipated redemption requests.'').

[362] *See supra* footnote 9 and accompanying text.

that may be converted to cash quickly in order to meet unexpected or unusually high redemption requests, or to rebalance or otherwise adjust a portfolio's composition in all market conditions.

We also understand that funds often consider which portfolio investments can be sold and settled on a T + 1 to T + 3 basis when determining their very liquid investments.[363] While such an analysis may be useful, our decision to define highly liquid investments to include any investment that the fund reasonably expects to be convertible into cash in current market conditions in three business days or less is founded in our belief that funds should understand what portion of their investments are convertible to cash in a short period of time taking into account current market conditions, not solely on which asset transactions can be settled in three days or less from the trade date. An investment that takes two days to sell but one day to settle, for example, would be convertible to cash in a short period of time. Conversely, an asset that may settle two days after trade date, but which is reasonably expected to take at least three days to trade, would not be available in a short period of time. Accordingly, we believe we have appropriately defined ''highly liquid investments'' under rule 22e–4 notwithstanding initiatives to shorten the standard settlement cycle for most broker-dealer transactions from T + 3 to T + 2.[364]

In addition, we emphasize that the highly liquid investment category (and the related highly liquid investment minimum) should not be interpreted as the Commission suggesting that a fund should, as a matter of routine practice, meet redemptions first by selling its highly liquid investments. Rather, we believe part of a thorough understanding of a fund's liquidity profile includes an understanding of the nature and level of the fund's highly liquid holdings.[365] As noted above, we understand that funds currently place significance on understanding the portion of their portfolio representing very liquid investments, as it is not unusual for funds to determine the percentage of their portfolio that can be liquidated in the short-to-medium term.[366] We anticipate that a fund could determine that a broad variety of investments within different asset classes could be classified as highly liquid investments, depending on facts and circumstances.[367]

We note that, as with the proposal, the highly liquid investment category measures the time period in which an investment could be converted to cash in business days, as opposed to the other liquidity categories, which use calendar days. Some commenters suggested that, instead of the references to both business days and calendar days, the categories that the Commission adopts should only reference business days.[368] One commenter stated that basing all classification categories on business days instead of calendar days would be ''preferable from a consistency standpoint, and reasonable given the lack of expectations around receiving cash flows on non-business days.''[369] Other commenters suggested alternative liquidity classification categories that, like the proposed categories, would reference both business days and calendar days.[370]

After considering these comments, we are continuing to reference business days in the highly liquid investment definition we are adopting, while referencing calendar days in the other liquidity classification categories. We appreciate commenters' concerns that classification categories that reference both business days and calendar days could add some complexity in the assumptions and models that funds may use in classifying the liquidity of their portfolio investments. However, as discussed below, we believe it is important to tie the time frames referenced in the moderately liquid, less liquid, and illiquid classification categories to the seven-calendar-day period in which funds are required to pay redeeming shareholders under section 22(e) of the Investment Company Act.[371] Although we could have referenced calendar days instead of business days in the highly liquid investment definition to help standardize the time periods referenced in all of the classification categories, we continue to reference business days in this classification category for several reasons. First, for short time periods, a calendar day standard could be unworkable and create absurd results if the time period were to encompass weekends or holidays, during which trading cannot be expected to occur. Second, many of the alternate classification categories that commenters suggested incorporated categories that referenced a three-business-day period,[372] and we understand from these comments and staff outreach that this is a workable (and, for some fund complexes, currently-used) period for a fund to consider in assessing the liquidity of its portfolio investments.[373]

b. Moderately Liquid Investments

A fund also will be required to identify its ''moderately liquid investments,'' that is, those investments the fund reasonably expects to be convertible into cash in current market conditions in more than three calendar days, but in seven calendar days or less, without the conversion to cash significantly changing the market value of the investment. These investments are those that are not immediately or very quickly convertible to cash, but that nevertheless may be converted to cash in a time frame that would permit funds to pay redeeming shareholders within the seven-day period established by section 22(e) of the Investment Company Act. We expect that this classification category will be an important component of the Form N–PORT reporting obligations because it will provide the Commission with information regarding the portion of a fund's portfolio that is not on the most liquid end of the spectrum, but still is sufficiently liquid to meet redemption requests within the statutory seven-day period without causing significant dilution. We also anticipate that the public will have an interest in gaining transparency into this information on an aggregate basis.[374] Several commenters who suggested simplified alternatives to the proposed classification approach

[363] *See supra* footnote 309.

[364] *See supra* footnote 9.

[365] *See infra* footnote 374 and accompanying text (discussing the use of moderately liquid assets to meet redemption requests).

[366] *See supra* footnote 363 and accompanying text.

[367] *See infra* section III.D.

[368] *See, e.g.,* Interactive Data Comment Letter; Nuveen Comment Letter.

[369] *See* Interactive Data Comment Letter; *see also* ICI Comment Letter I; T. Rowe Comment Letter (noting that the proposed classification categories could require a fund to make difficult distinctions in determining which assets can be converted to cash in three business days versus four calendar days). The note to rule 22e–4(b)(1)(ii) addresses situations where the period to convert an investment to cash depends on the calendar or business day convention. *See infra* footnotes 376 and accompanying text.

[370] *See, e.g.,* Markit Comment Letter; PIMCO Comment Letter.

[371] *See infra* sections III.C.2.b–d.

[372] *See, e.g.,* Fidelity Comment Letter; Invesco Comment Letter; T. Rowe Comment Letter; Vanguard Comment Letter.

[373] We also note that rule 15c6–1 under the Exchange Act, which was adopted in 1993 and became effective in 1995, established three business days as the standard settlement period for securities trades effected by a broker-dealer. Thus, we understand that many funds pay redemption proceeds within three business days after receiving a redemption request, because a broker or dealer will be involved in the redemption process. *See supra* footnote 32 and accompanying text. *See also supra* footnote 366.

[374] *See infra* section III.C.6.c.

recommended including a classification category based on portfolio investments' convertibility to cash within seven days.[375]

We understand that circumstances could arise in which the sale and settlement period for a particular portfolio position could be viewed as within three business days or four-to-seven calendar days. For example, if a sale were to occur on a Thursday and be settled on a Monday, the sale and settlement period could be viewed either as within three business days or four calendar days. This situation could cause ambiguity for reporting purposes. Thus, rule 22e–4, similar to the proposed rule, includes a note stating that a fund should classify the portfolio position based on the shorter period (*i.e.,* as a highly liquid investment).[376]

c. Less Liquid Investments

Additionally, a fund will be required to identify its ''less liquid investments,'' that is, those investments that the fund reasonably expects to be able to sell or dispose of in current market conditions in seven calendar days or less a without the sale or disposition significantly changing the market value of the investment, but where the sale or disposition is reasonably expected to settle in more than seven calendar days. Thus, the less liquid investments category focuses on investments whose sale cannot be settled quickly. For example, transactions in certain types of securities—such as certain foreign securities [377] and U.S. bank loan participations [378]—have historically entailed settlement periods that are longer than standard settlement periods in the broader securities markets. If a fund were to determine that securities within these asset classes, or other asset classes with longer-than-standard settlement periods, were able to be sold within seven calendar days, but could not be settled within this period, the fund should classify these securities as less liquid investments. As an example, certain foreign securities may be able to be sold in seven calendar days or less, but may be subject to capital controls that would limit the extent to which the foreign currency could be repatriated or converted to dollars within this time frame. Thus, these securities would be considered to be less liquid investments because they would be reasonably expected to settle in more than seven calendar days. We note that trades in certain investments, however, may take an extended period of time to settle.[379] In the event of an extended settlement period, at some point, a fund may need to consider re-classifying such an investment as illiquid.[380] We also note that if a fund holds a forward contract on a security, such as a forward in a transaction in the ''To-Be-Announced'' (''TBA'') market,[381] the convert to cash determination for that instrument may be based on the forward contract and not on the underlying securities to be received.[382]

The ''less liquid investments'' category, like the ''moderately liquid investments'' category and the ''illiquid investments'' category, directly reflects the statutorily required seven-day period for meeting redemption requests. The ''less liquid investments'' category is meant to identify for the Commission and its staff, as well as investors and other potential users, the portion of a fund's portfolio investments that may be available to meet redemption requests within seven days, but only to the extent that the fund addresses the lengthier settlement period associated with these investments. Because less liquid investments are those that may be sold, but not settled, within seven days, a fund generally could use less liquid investments to meet redemptions within seven days only if the fund obtained an additional source of financing (for example, a line of credit) to bridge the period until the sales would settle, or if the fund used its cash holdings to meet the redemptions while simultaneously selling the less liquid investment and then replenishing its cash holdings upon settlement.

Transparency regarding the portion of a fund's portfolio held in less liquid investments also could demonstrate those investments that could be liquidated in order to meet redemptions that would occur more than a week in the future, if a fund were to enter into a period of extended redemptions that it anticipates would last for multiple days. Because an open-end fund has an obligation to meet redemption requests within seven days, we believe it is important for funds to identify those investments that could pose certain challenges in being used to meet redemption requests within that time period, for purposes of the fund's own liquidity risk assessment and management,[383] as well as to provide transparency into certain funds or strategies that could have relatively limited liquidity compared to peer funds.

d. Illiquid Investments

A fund also will be required to identify those investments that it

[375] *See, e.g.,* Federated Comment Letter; Fidelity Comment Letter; PIMCO Comment Letter; Vanguard Comment Letter.

[376] *See* note to rule 22e–4(b)(1)(ii); *see also* note to proposed rule 22e–4(b)(2)(i); *see also supra* footnote 369 (discussing comments that noted situations where the period to convert an asset to cash depends on the calendar or business day convention).

[377] *See, e.g.,* Comment Letter of the Global Foreign Exchange Division to the European Commission and the European Securities and Markets Authority re: Consistent Regulatory Treatment for Incidental Foreign Exchange (FX) Transactions Related to Foreign Securities Settlement—''FX Security Conversions'' (Mar. 25, 2014), *available at www.gfma.org/Initiatives/Foreign-Exchange-(FX)/GFMA-FX-Division-Submits-Comments-to-the-HKMA-on-the—Treatment-of-Securities-Conversion-Transactions-under-the-Margin-and-Other-Risk-Mitigation-Standards* (''Typically, the settlement cycle for most non-EUR denominated securities is trade date plus three days ('T + 3'). Accordingly, the bank custodian or broker-dealer would enter into a FX transaction on a T + 3 basis as well. In some securities markets, for example in South Africa, the settlement cycle can take up to seven days (T + 7).'').

[378] *See, e.g.,* BlackRock, *Who Owns the Assets? A Closer Look at Bank Loans, High Yield Bonds and Emerging Market Debt,* Viewpoint (Sept. 2014) (''Who Owns the Assets?''), *available at https://www.blackrock.com/corporate/en-fi/literature/whitepaper/viewpoint-closer-look-selected-asset-classes-sept2014.pdf*; Michael Mackenzie & Tracy Alloway, *Lengthy US loan settlements prompt liquidity fears,* Fin. Times (May 1, 2014) *available at http://www.ft.com/intl/cms/s/0/32181cb6-d096-11e3-9a81-00144feabdc0.html*; Comment Letter of OppenheimerFunds on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015) (stating that ''loans still take longer to settle than other securities. Median settlement times for buy-side loan sales are 12 days'' and noting that an ''important tool in managing settlement times is the establishment of a credit line dedicated to bank loan funds.''). *See also* LSTA Comment Letter.

[379] *See infra* footnote 416 and accompanying text.

[380] *See* rule 22e–4(b)(1)(ii) (requiring review of portfolio classifications at least monthly, and more frequently, if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of its investments' classifications).

[381] In the TBA market, lenders enter into forward contracts to sell agency mortgage-backed securities and agree to deliver such securities on a settlement date in the future. The specific agency mortgage-backed securities that will be delivered in the future may not yet be created at the time the forward contract is entered into. The purchaser will contract to acquire a specified dollar amount of mortgage-backed securities, which may be satisfied when the seller delivers one or more mortgage-backed securities pools at settlement. For a discussion of the TBA market, *see* Task Force on Mortgage-Backed Securities Disclosure, Staff Report: Enhancing Disclosure in the Mortgage-Backed Securities Markets (Jan. 2003), at section II.E.2, *available at http://www.sec.gov/news/studies/mortgagebacked.htm.*

[382] *See* ICI Comment Letter I (noting that the ''TBA market is similar to the futures market, in which physically-settled futures contracts may trade continuously (*e.g.,* daily) but the underlying reference assets are delivered at a later date (*e.g.,* once every 3 months).'').

[383] For example, a fund's holdings of less liquid investments typically would be a relevant consideration when assessing whether its strategy is appropriate for an open-end fund and determining its highly liquid investment minimum. *See supra* section III.B; *see also infra* section III.D.2.

considers to be ''illiquid investments.'' Rule 22e–4 as adopted today defines an illiquid investment as any investment that a fund reasonably expects cannot be sold or disposed of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment. Like the ''less liquid investments'' and ''moderately liquid investments'' category, the ''illiquid investments'' category references the statutorily required seven-day period for meeting redemption requests. However, while the ''less liquid investments'' and ''moderately liquid investments'' categories are based on the time period in which investments are convertible to cash—that is, sold with the sale settled—the ''illiquid investments'' category only reflects the period for selling (or otherwise disposing of) an investment and does not also consider settlement timing.

Rule 22e–4 as proposed would have included a limit on funds' ability to acquire ''15% standard assets,'' or any asset that may not be sold or disposed of in the ordinary course of business within seven calendar days at approximately the value ascribed to it by the fund.[384] Under the proposal, 15% standard assets were not a category in the classification framework. In determining whether an asset was a 15% standard asset, a fund would not have been required to take into account any specific market or other factors, or assess position size as it could reflect market depth, in determining whether it could sell the asset within seven days without the specified value impact.[385] The proposed limit was intended to be consistent with the Commission's guidelines limiting funds' holdings of illiquid assets to 15% of net assets[386] and most commenters supported the proposed 15% limit.[387]

We understand, however, that funds have engaged in a variety of practices in determining the illiquidity of investments. It has been our staff's experience that some of these practices are less robust than others. We believe that the definition of illiquid investments we are adopting today will provide a clear standard for determining the illiquidity of investments and will better ensure that all funds are determining the illiquidity of investments more consistently. We recognize, however, that as a result of this new definition, some funds may take into account relevant market, trading, and investment-specific considerations, as well as market depth, for the first time and therefore, as discussed below, some funds may determine that a greater percentage of holdings are illiquid.[388]

We note that some commenters suggested strengthening the current illiquid asset guidelines.[389] Many commenters also suggested that these assets continue to be referred to as ''illiquid assets'' (not 15% standard assets) and be harmonized with any classification system that the Commission ultimately adopts.[390] Additionally, commenters requesting such a harmonization also stated that value impact standards should be consistent between the 15% standard asset definition and the categories used in the classification.[391]

We have determined to incorporate an illiquid investment category into rule 22e–4's broader classification requirement for several reasons. Specifically, harmonizing funds' illiquid investment determinations with the general liquidity classification framework will create consistency in the value impact standards across liquidity categories.[392] As noted above, the illiquid investment value impact standard in final rule 22e–4 has been changed from whether a fund could sell an investment at ''approximately the value at which the fund has valued the investment,'' to whether a fund could sell the investment ''without the sale or disposition significantly changing the market value of the investment.''[393] We are adopting this new value impact standard for illiquid investment determinations in part as a response to commenters' concerns about confusion that could arise from conflicting standards. Accordingly, the value impact standard for illiquid investments is substantially identical to the value impact standard for all other classification categories.[394] As discussed in more detail above, the final classification value impact standard highlights that: (i) The standard does not require a fund to actually re-value or re-price an investment for classification purposes; and (ii) the standard does not require the fund to incorporate general market movements in liquidity determinations or estimate market impact to a precise degree.[395]

Significantly, in harmonizing features of the illiquid investment category with other categories in the liquidity classification framework, we also are replacing existing Commission guidance on identifying illiquid assets with new regulatory requirements regarding the process for determining that certain investments are illiquid.[396] In the Proposing Release, we noted that we were proposing to withdraw Commission guidance because we believed the proposal would provide ''a more comprehensive framework for funds to evaluate the liquidity of their assets.''[397] We also requested comment on whether additional guidance is needed in connection with the proposed codification of the Commission's illiquid asset guidelines. Although many commenters supported the proposed codification of the Commission's guidelines on illiquid assets,[398] most did not specifically comment on the Commission's proposal to withdraw the guidance associated with its illiquid asset guidelines. However, certain commenters suggested that stronger requirements and guidance regarding assets subject to the 15% limit could be appropriate.[399] One commenter expressed concern that the Commission's guidelines today are having only a ''limited impact on fund behavior'' and that the current 15% limit ''applies to an inappropriately narrow range of assets and is therefore ineffective as an investor protection mechanism.''[400] This commenter suggested that the limit should encompass not only those assets that are not able to be sold within seven days at approximately the value ascribed by the fund, but also those assets that cannot be converted to cash (that is, sold with the sale settled) within this same period, taking into account this same value impact standard.[401]

We agree with those commenters that suggested the Commission's current guidelines, together with many funds' interpretation of these guidelines today,

[384] *See* proposed rule 22e–4(b)(2)(iv)(D).

[385] *See* Proposing Release, *supra* footnote 9, at text following n.355.

[386] *See id.*, at section III.C.4.

[387] *See, e.g.*, Federated Comment Letter; Fidelity I Comment Letter; SIFMA Comment Letter I; State Street Comment Letter.

[388] *See infra* paragraph accompanying footnote 419.

[389] *See infra* footnotes 399–401 and accompanying text.

[390] *See, e.g.*, AFR Comment Letter; BlackRock Comment Letter; Interactive Data Comment Letter; Markit Comment Letter.

[391] *See, e.g.*, AFR Comment Letter; Markit Comment Letter.

[392] *See supra* section III.C.1.c.

[393] *See* rule 22e–4(a)(8).

[394] *Compare* rule 22e–4(a)(8) *with* rule 22e–4(a)(6), (10) and (12).

[395] *See supra* section III.C.1.c.

[396] *See infra* footnote 561 and accompanying text.

[397] *See* Proposing Release, *supra* footnote 9, at text following n.356.

[398] *See supra* footnote 387.

[399] *See, e.g.*, AFR Comment Letter; *see also* Keefer Comment Letter; Wahh Comment Letter (both suggesting that the 15% standard not just be limited to the time of purchase, but instead should be an ongoing requirement).

[400] *See* AFR Comment Letter.

[401] *Id.*

may result in funds only focusing on certain largely structural features that can lessen the liquidity of an investment (such as transfer restrictions and trading halts) rather than more market- and trading-based features. This can result in funds considering only an artificially narrow set of portfolio investments to be illiquid. As we discussed in the Proposing Release, we understand that today it is common—even for complexes with generally robust liquidity risk management procedures—to treat the process for determining whether an investment is illiquid under the current Commission guidelines as a compliance or ''back-office'' function, with little indication that information generated from the risk or portfolio management functions informs the compliance determinations. Thus, we understand that some funds currently may determine that an investment is liquid, rather than illiquid, primarily based on certain structural characteristics of the investment without assessing market or trading information or other potentially relevant factors. Such investments include private equity securities and certain other privately placed or restricted securities,[402] as well as certain instruments or transactions that by their structure do not mature and are not readily transferable in seven days or less, including term repurchase agreements.[403] While a focus on structural features alone may be appropriate in some circumstances (for example, an across-the-board assumption that all securities with a trading halt are illiquid, without an additional assessment of market or trading factors), in other circumstances the failure to consider market, trading, and other relevant information could result in a fund considering an investment to be liquid even if the fund cannot reasonably expect to sell amounts it reasonably anticipates trading without the sale or disposition significantly changing the market value of the investment within seven calendar days.

For these reasons, rule 22e–4 as adopted today, requires a fund to incorporate certain additional considerations in determining whether an investment is illiquid. We are withdrawing existing guidance and replacing it with new regulatory requirements and guidance regarding the process for determining whether a portfolio investment is illiquid.[404] A fund would have to take into account ''relevant market, trading, and investment-specific considerations'' when determining whether an investment is an illiquid investment.[405]

The guidance the Commission provides below on matters funds might consider in assessing market, trading, and investment-specific considerations reflects factors that the Commission has previously said are reasonable examples of factors to evaluate in determining whether a rule 144A security is liquid and makes them more generally applicable to assessing liquidity of other investments.[406] Thus, this guidance draws on past Commission guidance for evaluating whether a certain type of investment is liquid or illiquid, and extends this process to a fund's liquidity determinations regarding all types of investments. We recognize that the guidance in the Rule 144A Release anticipates that fund boards will determine whether certain securities are liquid or illiquid.[407] While we have considered the specific guidance factors discussed in the Rule 144A Release in the context of the guidance we provide herein with respect to classifying the liquidity of portfolio investments, neither our guidance nor the final rule places the responsibility for determining whether a specific security is liquid or illiquid on the fund's board. The board would, however, be responsible for approving the fund's liquidity risk management program, which provides the framework for evaluating the liquidity of the fund's investments, and for reviewing (at least annually) a written report that describes a review of the program's adequacy and the effectiveness of its implementation. Overall, a fund must classify its investments by focusing on those market, trading, and investment-specific considerations that are relevant to its portfolio. We believe that this principles-based approach should result in funds making realistic and well-informed determinations about investments' liquidity (or illiquidity) based on analysis beyond simple decisions solely about structural features of an asset class.

As with other liquidity classification categories and as discussed in more detail in section III.C.3.a below, funds can determine illiquid investments on an asset-class basis, with exceptions for investments whose liquidity characteristics significantly differ from the class. For example, a fund could employ procedures whereby certain asset classes are initially considered liquid, and then further evaluated to decide whether relevant market, trading, and investment-specific considerations should result in a particular investment being treated as an exception and a change to the initial liquidity determination.[408] A fund could use the specific guidance factors we discuss in section III.C.4 below as part of its process for taking into account relevant market, trading, and investment-specific considerations in determining whether an investment is illiquid. For example, a fund that generally considers certain high-yield bonds *not* to be illiquid (for instance, a fund that typically considers high-yield domestic corporate bonds to be moderately liquid investments) could determine that certain securities within this class are actually illiquid investments, based on restrictions on trading that could occur if one of these bonds' issuers were to enter bankruptcy and the debt were to become distressed. Conversely, a fund that generally considers certain investments to be illiquid (such as rule 144A securities) could determine that some of these investments should be included in another liquidity category based on relevant market, trading, and investment-specific considerations.[409]

We also understand, based on staff outreach, that some fund complexes make determinations of whether a portfolio investment is liquid (or illiquid) under the current Commission guidelines based on whether a single trading lot for the investment can be sold within seven days under normal market circumstances. Certain funds interpret this to allow them to declare an entire holding to be liquid even if they could only sell a very small portion of it without a significant value impact. Staff has observed that these fund practices and interpretations of current

[402] *See* Restricted Securities Release, *supra* footnote 37; *see also* Rule 144A Release, *supra* footnote 37.

[403] *See* Interval Fund Proposing Release, *supra* footnote 41.

[404] *See* rule 22e–4(b)(1)(ii), (iv).

[405] *See* rule 22e–4(b)(1)(ii).

[406] *See infra* footnotes 560 and 561 and accompanying text.

[407] *See* Rule 144A Release, *supra* footnote 37 (stating that ''determination of the liquidity of Rule 144A securities in the portfolio of an investment company issuing redeemable securities is a question of fact for the board of directors to determine, based upon the trading markets for the specific security.'').

[408] *See infra* section III.C.3.a (discussing that, under rule 22e–4, a fund would generally be permitted to classify its portfolio investments according to their asset class, but if it has information that a particular investment has different liquidity characteristics than other investments within the same asset class, it would need to treat that investment as an exception to the way that the fund classifies its other holdings within the same asset class).

[409] *See* rule 22e–4(b)(ii). *See also* section III.C (discussing the various considerations required when classifying the liquidity of fund securities).

Commission guidelines may result in a fund determining that very few, if any, portfolio investments are illiquid under the current guidelines, even in situations in which the liquidity of a large portion of a fund's portfolio is fairly limited.

Given the practices described above when funds did not consider market depth in making liquidity determinations and considering the comments discussed above regarding the proposed illiquid asset limit, under the final rule, a fund will be required to consider market depth in determining whether to classify portfolio investments as illiquid investments. To the extent that the fund determines that trading varying portions of a position is reasonably expected to significantly affect the liquidity characteristics of that investment—that is, the market depth for the investment is reasonably expected to significantly affect its liquidity—the fund would need to take this into account in classifying the investment as illiquid.[410] These are the same market depth considerations a fund would have to take into account in classifying the liquidity of its portfolio investments generally, as discussed in detail below.[411]

Members of the fund industry have argued that because a fund will not likely need to sell its entire position in a particular investment under normal market circumstances, liquidity determinations should be based on the sale of a single trading lot for that investment, except in unusual circumstances.[412] However, a fund could encounter situations in which it needs to liquidate larger portions than one trading lot of its positions in order to meet redemption requests, but cannot do so within the seven-day time period required under section 22(e). As discussed below, we believe that the market depth considerations required by the final classification requirement will appropriately require a fund to consider situations in which the size of a fund's holdings could significantly affect those holdings' liquidity and impact the fund's ability to manage its liquidity risk—that is, when portfolio liquidity may be significantly constrained by the fund's ability to trade meaningful sizes of its portfolio holdings. We believe this assessment of market depth will assist in illiquidity determinations incorporating a realistic analysis of a fund's ability to meet redemption requests without significant dilution, and thus in funds better managing liquidity risk.

As discussed above, one commenter suggested extending the definition of illiquid assets to encompass not only those assets that are not able to be sold within seven days at approximately the value ascribed by the fund, but also those assets where the sale cannot be settled within this same period, taking into account the same value impact standard.[413] After considering this suggestion, we have ultimately decided that the ''illiquid investments'' category under rule 22e–4 should reflect only the period for selling or disposing of an investment and not also consider settlement timing. Instead, the ''less liquid'' category reflects those investments that could be sold, but not settled, within seven days without a significant value impact. Investments that *cannot be sold* within seven days without a significant value impact (illiquid investments, under rule 22e–4) have different liquidity characteristics and are essentially less liquid than investments that *can be sold* within seven days without a significant value impact, but whose sale cannot be settled within this period (less liquid investments, under rule 22e–4).[414] As discussed above, less liquid investments could still be considered a limited source of liquidity for meeting redemptions within the seven-day period specified under section 22(e) of the Act, with the caveat that a fund may have to address certain challenges associated with their settlement, whereas a fund's illiquid investments are structurally or as a matter of market dynamics less liquid and a fund may be unable to use them to meet redemptions within seven days.[415]

However, we note that trades in certain investments may take an extended period of time to settle. Trades in some low quality loans, for example, may not settle for a number of months.[416] A fund that holds less liquid investments with extended settlement periods must develop a liquidity risk management program that takes into account the liquidity risks associated with extended settlement periods.[417] These policies and procedures could include limits on the amount of less liquid investments with extended settlement periods a fund will hold or more frequent liquidity classification reviews for this type of holding. Such a fund may also wish to consider the circumstances in which it would seek to obtain expedited settlement (where possible) and establish tailored policies and procedures regarding how and when it would seek expedited settlement. Funds may also wish to consider whether to obtain an additional source of financing (for example, a committed line of credit dedicated to that fund) to bridge the period until the sales would settle.

We believe that the new requirement to take into account market, trading, and investment-specific considerations, as well as to consider market depth, in identifying illiquid investments responds to the concern that the way illiquid investments are currently defined has only limited effects on funds' liquidity risk management and the liquidity of their portfolios.[418] We understand that, to the extent a fund is not currently taking into account market, trading, and investment-specific considerations or market depth when assessing the illiquidity of its investments, the new regulatory requirements regarding the process for determining that certain investments are illiquid under the rule are likely to result in the fund determining that a greater percentage of its holdings are illiquid than under the guidelines. In extreme circumstances, this—in combination with the limitation on funds' illiquid investment holdings to 15% of its net assets discussed at section III.E below—could cause certain funds to have to modify their investment strategies or reconsider their structure as open-end funds. We also understand that these requirements will entail additional operational costs, to

[410] Rule 22e–4(b)(1)(ii).

[411] *See infra* III.C.3.b.

[412] *See* Investment Company Institute, *Valuation and Liquidity Issues for Mutual Funds* (Feb. 1997), at 42.

[413] *See supra* footnote 401 and accompanying text.

[414] When a fund sells an asset (even if the transaction has not yet settled), the fund has a receivable on its books, and any potential loss from the sale of that asset will be reflected in the fund's NAV. If the fund has an asset it cannot sell, however, the fund continues to be exposed to the risk of unknown potential loss until the asset can be sold.

[415] *See supra* paragraph accompanying footnote 383 (discussing less liquid investments and the extent to which less liquid investments may be available to meet redemption requests within seven days if a fund addresses certain challenges associated with their sale and settlement).

[416] *See e.g.,* Michael Mackenzie and Tracy Alloway, *Lengthy US loan settlements prompt liquidity fears,* Financial Times (May 1, 2014), *available at http://www.ft.com/cms/s/0/32181cb6-d096-11e3-9a81-00144feabdc0.html#axzz4HQiQv5wj* (noting that a quarter of new loans being issued were taking more than 30 days to settle).

[417] Such extended settlement period securities have the potential to pose heightened liquidity risks for funds, and thus policies and procedures that are reasonably designed to assess and manage the liquidity risk of a fund that holds such securities would take into account the particular liquidity risks raised by such holdings. *See* rule 22e–4(b)(1)(i).

[418] *See supra* footnote 400 and accompanying text.

the extent that funds today do not generally take into account relevant market, trading, and investment-specific considerations, or market depth, in determining whether their portfolio investments are illiquid. However, as discussed in detail in the Economic Analysis section below, we believe that these costs are justified by the investor protection benefits that we believe will result from better portfolio liquidity assessments.[419]

3. Required Classification Procedures

a. Classification Based on Asset Class

Rule 22e–4, as adopted today, generally permits a fund to, as a starting point, classify the liquidity of its portfolio investments according to their asset class.[420] Notwithstanding this general approach, a fund will be required to separately classify any investment if the fund or its adviser, after reasonable inquiry, has information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of that investment as compared to the fund's other portfolio holdings within that asset class.[421] For example, if the fund or its adviser were to know that particular large-capitalization equity was affected by adverse events at the issuer that caused it to have different liquidity characteristics than the asset class as a whole, it would be required to treat that investment as an exception and classify it separately. As another example, a fund could decide that high credit quality corporate bonds generally fall into a particular liquidity category, but if the fund or its adviser had information that certain bonds' bid-ask spreads are significantly wider or more volatile than those of their peers, it would be required under rule 22e–4 to separately assess these bonds and potentially classify them into a less-liquid category than the fund's other holdings within the same asset class. We expect that, based on a fund's responsibility under the rule to classify each of its investments after reasonable inquiry and taking into account relevant market, trading, and investment-specific considerations, there are some asset classes, such as those encompassing some bespoke complex derivatives or complex structured securities,[422] that have such a range of liquidity characteristics that each position would need to be classified individually.

Rule 22e–4 as proposed would not have allowed a fund to, as a starting point, classify its portfolio investments according to asset class. The proposed rule instead would have required a fund to classify each of its positions in a portfolio asset (or portions of a position) according to the liquidity categories included in the rule.[423] In the Proposing Release, we requested comment on whether the proposed classification requirement and associated liquidity categories reflected the manner in which funds currently assess and categorize the liquidity of their portfolio holdings as part of their portfolio and risk management.

Many commenters objected to the proposed position-level classification requirement, arguing that it does not reflect recognized liquidity risk management practices and does not reflect industry best practices.[424] Commenters likewise maintained that, instead of assessing portfolio liquidity on a position-by-position basis, asset managers tend to focus on the liquidity of certain asset classes and/or generally view liquidity at the portfolio level based on a ''top-down'' analysis.[425] On the other hand, some commenters acknowledged that certain asset managers may classify the liquidity of individual portfolio positions within a range of categories, albeit not at the level of detail suggested by the proposal, or for all classes of portfolio assets.[426]

Commenters stated that considering portfolio liquidity on the basis of asset class, at least as a starting point, has practical, operational, and conceptual benefits compared to considering the liquidity of each portfolio position individually.[427] Commenters stated that assets with certain similar characteristics are often ''highly comparable and substitutable from a liquidity perspective,'' [428] and liquidity assessments based on asset class would permit a fund manager to account for differences in market structure and portfolio management objectives among asset classes.[429] Commenters also argued that evaluating and classifying each portfolio asset individually would be ''overly burdensome and near-impossible to manage,'' as a fund complex may collectively hold hundreds of thousands of individual portfolio assets,[430] and the data required to classify each asset individually may not be readily available for all asset types (particularly for fixed income or other OTC assets).

Relatedly, multiple commenters suggested alternative liquidity classification schemes that would be based on an ''asset-type mapping with exceptions'' analysis.[431] These alternatives used an approach where a fund's portfolio assets' liquidity generally would be classified by asset class—with exceptions to the extent a particular portfolio asset demonstrates liquidity characteristics that differ from the liquidity of its asset class generally and that are deemed to make the position substantially more or less liquid.[432] Assets treated on an exception basis could be placed in a different liquidity category than the rest of their asset class, which could be either higher or lower.[433] The asset class analysis provisions of final rule 22e–4 generally take this approach. The primary difference between commenters' ''asset-type mapping with exceptions'' suggested approaches and the approach incorporated in final rule 22e–4 is that commenters' suggested approaches would rely on the Commission (or an industry group) assigning default liquidity categories to each asset class, whereas the approach we are adopting would depend on each fund performing this exercise based on its adviser's individual experience in the markets.

We believe that this approach strikes an appropriate balance between lessening operational burdens associated with classification and recognizing that many investments within an asset class may be considered interchangeable from a liquidity perspective, on one hand, and providing reasonably precise liquidity classifications that appropriately reflect investments' liquidity characteristics, on the other hand. This approach also should leverage fund managers' current practices to a greater degree than under the proposal. A fund's asset-class-based classification procedures should incorporate sufficient detail to meaningfully distinguish between asset

[419] *See infra* section 0.C.

[420] *See* rule 22e–4(b)(1)(ii)(A).

[421] *Id.*

[422] *See* 2015 Derivatives Proposing Release, *infra* footnote 222 (discussing bespoke complex derivatives).

[423] Proposed rule 22e–4(b)(2)(i).

[424] *See, e.g.,* Credit Suisse Comment Letter; Dodge & Cox Comment Letter; PIMCO Comment Letter; Vanguard Comment Letter.

[425] *See, e.g.,* Dodge & Cox Comment Letter; ICI Comment Letter III; IDC Comment Letter; Charles Schwab Comment Letter.

[426] *See* CFA Comment Letter; MFS Comment Letter; Nuveen Comment Letter; Wellington Comment Letter.

[427] *See, e.g.,* Dechert Comment Letter; HSBC Comment Letter; ICI Comment Letter I; Wellington Comment Letter.

[428] *See* ICI Comment Letter I.

[429] *See* Vanguard Comment Letter.

[430] *See* Fidelity Comment Letter.

[431] *See* SIFMA Comment Letter III; *see also* BlackRock Comment Letter; T. Rowe Comment Letter.

[432] *See, e.g.,* SIFMA Comment Letter III.

[433] *Id.*

classes and sub-classes. For example, a fund may wish to distinguish how it classifies its equity securities based on factors such as the market(s) in which the security's issuer is based, market capitalization, and whether the security is common or preferred stock. As another example, a fund may wish to distinguish its fixed income securities based on factors such as issuer type, the market(s) in which the issuer is based, seniority, age, and credit quality, and to distinguish its holdings of structured products based on tranche seniority and credit quality. We do not consider it appropriate for a fund to use very general asset class categories (*e.g.,* ''equities,'' ''fixed income,'' and ''other'') in classifying the liquidity of its portfolio investments, as these broad categories would likely not permit a fund to identify investments with fungible liquidity characteristics. A fund's asset-class-based classification procedures also should include procedures for updating default asset-class liquidity classifications as relevant market, trading, and investment-specific considerations warrant.[434]

A fund would be required to separately classify any investment within an asset class if the fund or its adviser were to have information about any market, trading, or investment specific considerations that are reasonably expected to significantly affect the liquidity characteristics of that investment as compared to the fund's other portfolio holdings within that asset class (its ''exception processes'').[435] Rule 22e–4 does not specify precisely how a fund must identify investments that should be classified separately as part of its exception processes. However, reasonably designed policies and procedures would likely include specifying the sources of inputs that inform its exception processes (for example, inputs from the fund's portfolio management, risk management, and/or trading functions), as well as particular variables that could affect the fund's classification of certain investments. For example, a fund could determine that a particular investment should be classified differently than other investments within its asset class if the market for that particular investment were exceptional in terms of size, breadth, or depth, or if the investment's typical bid-ask spreads were generally wider, narrower, or more volatile than the bid-ask spreads of other assets within the asset class. A fund could incorporate an assessment of the liquidity classification guidance factors discussed below, as the fund determines appropriate, in its exception processes.[436]

b. Required Procedures for Considering Market Depth

Under rule 22e–4 as adopted today, a fund would be required to determine whether trading varying portions of a position in a particular portfolio investment, in sizes that the fund would reasonably anticipate trading, is reasonably expected to significantly affect the liquidity characteristics of that investment.[437] To the extent that the fund determines that trading varying portions of a position *is* reasonably expected to significantly affect the liquidity characteristics of that investment—that is, the market depth for the investment is reasonably expected to significantly affect its liquidity—the fund would need to take this into account in classifying the liquidity of that investment.[438] As discussed in more detail below, this requirement would have a fund consider portions of a portfolio position that are larger than a single trading lot, but not necessarily the position's full size, in assessing its portfolio investments' liquidity.

These market depth-related requirements are meant to substitute for, and modify, the language of proposed rule 22e–4 that would have effectively required a fund to consider position size in classifying the liquidity of its portfolio investments. As discussed above, proposed rule 22e–4 would have had a fund consider, for each portfolio position, the amount of time it would take to convert the entire position, or portions thereof, to cash.[439] Under this proposed requirement, if a fund were to conclude that it would take the fund longer to convert its entire position in an asset to cash, it could determine, for example, that 50% of the position should be classified in one liquidity category, and the remaining 50% should be classified in another category.

This aspect of the proposed requirement arose from our belief that a fund should consider its ability to trade larger portions of a portfolio asset than a single trading lot in assessing its portfolio investments' liquidity. The ability to quickly trade larger portions of a particular position is a reflection of market depth for a particular asset, which is a well-recognized aspect of assessing liquidity.[440] In the Proposing Release, we responded to arguments that because a fund will not likely need to sell its entire position in a particular asset under normal market conditions, liquidity determinations should be based on the sale of a single trading lot for that asset, except in unusual circumstances.[441] We noted that, although we agreed that a fund not being able to convert its entire position in an asset to cash at a price that does not materially affect the value of that asset should not, by itself, be dispositive of a portfolio asset's liquidity, assessing liquidity only on the basis of the ability to sell and receive cash for a single trading lot of an asset ignores the fact that a fund may need to sell all (or a significant portion) of its position.[442]

Multiple commenters expressed concern about the proposed requirement to consider full position size in classifying the liquidity of a fund's portfolio assets.[443] Commenters argued that many industry participants currently assess asset liquidity by trading lot (as opposed to evaluating whether a fund can exit an entire position within a certain time period), reflecting that a fund generally would not need to liquidate an entire large position unexpectedly.[444] Commenters also contended that this aspect of the proposal could result in large funds' portfolio liquidity appearing artificially low compared to smaller funds because large funds are more likely to hold larger positions and determine that they could not quickly liquidate these positions entirely without a value impact.[445] Commenters argued that it could be misleading for large funds to

[434] *See* rule 22e–4(b)(1)(ii) (requiring funds to classify their investments taking into account relevant market, trading, and investment-specific considerations and to review their portfolio investments' classifications if changes in these considerations are reasonably expected to materially affect one or more of their investments' classifications).

[435] *See* rule 22e–4(b)(1)(ii)(A).

[436] *See infra* section III.C.4.

[437] *See* rule 22e–4(b)(1)(ii)(B).

[438] *Id.*

[439] *See* proposed rule 22e–4(b)(2)(i); *see also supra* section III.C.2.d.

[440] *See infra* footnote 526 and accompanying text.

[441] *See* Proposing Release, *supra* footnote 9, at n.177 and accompanying text.

[442] *See id.,* at paragraph accompanying n.177. For example, a fund needing to sell certain assets in order to meet redemptions may need to sell more than one trading lot of a particular asset. In addition, a fund may determine to dispose of an entire position because of deteriorating credit quality or other portfolio management factors. Similarly, an index fund may need to sell an entire position in an asset if that asset falls out of the tracked index.

[443] *See, e.g.,* BlackRock Comment Letter; IDC Comment Letter; SIFMA Comment Letter I; Wellington Comment Letter.

[444] *See, e.g.,* ICI Comment Letter I; Charles Schwab Comment Letter; Vanguard Comment Letter.

[445] *See, e.g.,* BlackRock Comment Letter; ICI Comment Letter I; Oppenheimer Comment Letter; SIFMA Comment Letter I.

appear to be less liquid than smaller funds, because large funds' portfolios might actually entail less liquidity risk compared to smaller funds (because each position, while large in absolute size, is a smaller portion of the overall portfolio than may be the case in smaller funds), and large funds may have greater resources than smaller funds to manage liquidity effectively.[446] For example, one commenter stated that large funds often have more diversified holdings than smaller funds and may wield more negotiating power with broker-dealers.[447]

The market depth approach we are adopting takes commenters' concerns into account, although as discussed above we continue to believe that an investment strategy involving large positions in particular issuers—particularly if the fund's portfolio is relatively concentrated—is relevant to assessing liquidity risk.[448] We appreciate that, in many cases, a fund may not have to trade large portions of its portfolio holdings in relatively short time periods in order to meet redemptions, or to otherwise manage its liquidity risk. For example, a fund may not need to often quickly convert large portions of its portfolio investments to cash, based on its cash flow projections (*e.g.,* if the fund's investors are known to be primarily long-term investors) and other liquidity risk assessment factors.[449] We also recognize that there could be situations in which the requirement to consider entire position size in classifying a fund's portfolio investments, regardless of the size of trades a fund typically engages in, could make a fund appear to be less liquid than the fund's actual trading experiences in light of its portfolio investments' market depth. This could be misleading if the fund were actually able to trade a large percentage of its holdings fairly quickly without the fund's trades significantly moving the investments' prices. We believe that the required market depth considerations incorporated into the final classification requirement will permit a fund to more realistically assess the liquidity of its portfolio investments because they allow a fund to classify and review its portfolio investments taking into account position sizes that the fund would reasonably anticipate trading.

We believe that if a fund reasonably anticipates trading sizeable portions of its portfolio positions, the fund's portfolio liquidity could be adversely affected by a lack of market depth for its portfolio investments. A fund could reasonably anticipate trading sizeable portions of its portfolio positions if it often trades relatively large portions of its portfolio positions. Likewise, a fund may not trade larger portions of its portfolio positions on a regular basis, but could reasonably anticipate, based on past flow patterns or current market conditions that it could encounter larger-than-typical redemptions that would necessitate larger portfolio trades. In both of these examples, such a fund could conclude that it may be difficult to find trading partners for a particular portfolio investment, or may be difficult to sell the investment within a particular time frame without this sale causing a significant value impact. For this reason, rule 22e–4 requires a fund to consider the sizes of a particular investment that the fund would reasonably anticipate trading and whether trading in such sizes could significantly affect the investment's liquidity. If so, the fund would be required to take this into account in classifying the liquidity of that portfolio investment.[450] If the fund determined, after conducting the required market depth analysis, that a downward adjustment in the liquidity classification of a particular investment is appropriate, the new liquidity classification that the fund assigns to this investment would apply to the entirety of the fund's position in that investment (not, as proposed, to portions of that position). This approach is meant to lessen burdens on funds, as well as respond to commenters' concerns, by focusing a fund's market depth considerations on circumstances in which a fund's practices in trading varying portions of its portfolio positions could have a disproportionate effect on its portfolio investments' liquidity.

Rule 22e–4 directs a fund to consider sizes that the fund would reasonably anticipate trading in assessing the impact of market depth on an investment's liquidity.[451] Depending on the liquidity risk factors that a fund must consider under rule 22e–4(b)(1)(i), as well as other factors including the fund's size, a fund could reasonably anticipate selling various portions of its position in a particular portfolio investment, or various dollar amounts or block sizes of a particular portfolio investment.[452] For example, it may be appropriate for a fund with a highly liquid portfolio, with very stable and minimal cash flow projections and significant cash holdings and operating in very stable market conditions, to adopt policies and procedures that consider whether trading relatively small fractions of each of the fund's portfolio holdings would result in significant liquidity impacts. On the other hand, we would generally consider it appropriate for a fund whose holdings are relatively illiquid and/or fairly concentrated, with unpredictable cash flow projections or deteriorating market conditions in the markets in which it invests, to consider whether trading larger portions of its portfolio holdings would result in significant liquidity impacts.

c. Classification Issues Arising With Respect to Derivatives Transactions

Rule 22e–4 requires that the liquidity classification and review requirements cover each of the fund's investments, including derivatives transactions, and that a fund take into account relevant market, trading, and investment-specific considerations in classifying the liquidity of its investments.[453] The rule also states that for derivatives transactions that a fund has classified as moderately liquid investments, less liquid investments, and illiquid investments, the fund must identify the percentage of its highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions in each of these classification categories.[454] A fund also will be required to disclose these percentages on its Form N–PORT filings.[455] We believe a fund's disclosure of this percentage will permit

[446] *See, e.g.,* SIFMA Comment Letter I; *see also* BlackRock Comment Letter; Oppenheimer Comment Letter; Vanguard Comment Letter; Wellington Comment Letter.

[447] *See* BlackRock Comment Letter.

[448] *See supra* footnotes 210–212 and accompanying text.

[449] *See* rule 22e–4(b)(1)(i).

[450] *See* rule 22e–4(b)(1)(ii)(B).

[451] *Id.*

[452] *See, e.g.,* Kapil Phadnis, *Block Trading in Today's Electronic Markets,* Bloomberg Tradebook (May 20, 2015), *available at http://www.bloombergtradebook.com/blog/block-trading-in-todays-electronic-markets/* (discussing block trading in the equity markets and noting that New York Stock Exchange Rule 72 defines a ''Block'' as at least 10,000 shares or $200,000, whichever is less); *Got Liquidity?,* BlackRock Investment Institute (Sept. 2012) (''Got Liquidity?''), at 6, *available at https://www.blackrock.com/investing/literature/whitepaper/got-liquidity-us-version.pdf* (indicating that, from 2010–2012, block trades of over $5 million represented between approximately 30%–45% of the U.S. investment grade corporate bond market's trading volume).

[453] Rule 22e–4(b)(1)(ii).

[454] Rule 22e–4(b)(1)(ii)(C). Because, as discussed below, a fund generally will segregate certain liquid assets in order to cover the fund's obligations under its derivatives transactions, rule 22e–4 assumes that a fund would not segregate any of its assets identified as illiquid investments to cover its derivatives transactions. *See infra* footnote 462 and accompanying text.

[455] *See infra* section III.C.6.b.

the Commission and its staff to understand what percentage of a fund's highly liquid investment minimum is composed of encumbered assets, and will allow the public to better understand that a certain percentage of a fund's highly liquid investments may not be immediately available for liquidity risk management purposes. The final rule does not require the fund to determine or disclose the percentage of the fund's moderately liquid investments or less liquid investments that the fund has segregated to cover, or pledged in connection with, its derivatives transactions, because we understand that funds are less likely to post moderately or less liquid investments as margin or collateral. We also expect that investors and others will find most valuable information regarding the extent to which the fund's highly liquid investments are segregated or pledged in connection with derivatives transactions because understanding that percentage may give investors a better understanding of whether such assets are truly available to make redemptions.

These requirements replace the proposed requirement for a fund to consider the ''relationship of [an] asset to another portfolio asset'' in classifying and reviewing the liquidity of its portfolio assets,[456] as well as the derivatives-focused guidance that the Commission provided in the Proposing Release regarding this proposed classification factor.[457] The Commission's guidance was meant to give direction to funds' liquidity classification of derivatives transactions and the assets that a fund may segregate to cover its obligations under these transactions.[458] As discussed below, we are not adopting the proposed factors that a fund would have had to consider in classifying the liquidity of its portfolio holdings, including the ''relationship of [an] asset to another portfolio asset'' factor.[459] However, we are adopting new classification provisions in rule 22e–4 that will apply to derivatives transactions[460] as well as a provision that will address assets segregated to cover derivatives transactions[461] so that funds consistently consider certain unique aspects of these transactions, and also to respond to commenters' concerns stemming from the treatment of derivatives under the proposal.

In the Proposing Release, we noted that when funds enter into certain transactions that implicate section 18 of the Investment Company Act, they generally will maintain, in a segregated account, certain liquid assets in order to ''cover'' the fund's obligation under the transactions.[462] We applied this framework to certain financing transactions in Release 10666, issued in 1979,[463] and also understand that funds today apply this framework to certain derivatives, based on the guidance we provided in Release 10666 and on no-action letters issued by our staff.[464] We explained in Release 10666 that ''[a] segregated account freezes certain assets of the investment company and renders such assets unavailable for sale or other disposition.''[465] We also stated in Release 10666 that only certain types of liquid assets should be placed in a segregated account.

Thus, we noted in the Proposing Release that, although assets used by a fund to cover derivatives and other transactions should be liquid when considered in isolation, when evaluating their liquidity for purposes of proposed rule 22e–4, the fund would have to consider that they are being used to cover other transactions and, consistent with our position in Release 10666, are ''frozen'' and ''unavailable for sale or other disposition.''[466] We stated that because these assets are only available for sale to meet redemptions once the related derivatives position is disposed of or unwound, a fund should classify the liquidity of these segregated assets using the liquidity of the derivative instruments they are covering. We also provided guidance that, when a formerly segregated asset is no longer segregated, a fund generally should assess, as part of the proposed ongoing liquidity classification review requirement, whether the liquidity classification given to the portfolio asset when it was segregated continues to be appropriate. Finally, we noted in the Proposing Release that in addition to the liquidity of a fund's derivatives positions themselves, assessing a fund's liquidity risk generally may include an evaluation of the potential liquidity demands that may be imposed on the fund in connection with its use of derivatives, including any variation margin or collateral calls the fund may be required to meet.[467]

The Proposing Release included a request for comment on the proposed ''relationship of [an] asset to another portfolio asset'' liquidity classification factor, which included asking whether rule 22e–4 should explicitly require a fund to classify the liquidity of a position (or portions of a position in a particular asset) used to cover a derivative position using the same liquidity classification category as it assigned to the derivative, and whether the Commission should provide additional guidance regarding the circumstances in which a fund should consider the liquidity of a particular portfolio asset in relation to the liquidity of another asset.[468] Multiple commenters raised concerns about the proposed ''relationship of [an] asset to another portfolio asset'' liquidity classification factor and accompanying guidance in the Proposing Release.[469] Many stated that the Commission's guidance as to classifying segregated assets using the liquidity of the derivative instrument they are covering would be unworkable and would raise costly operational burdens, because funds currently do not identify individual liquid assets to cover specific derivatives transactions.[470] Instead,

[456] *See* proposed rule 22e–4(b)(2)(ii)(I).

[457] *See* Proposing Release, *supra* footnote 9, at section III.B.2.i.

[458] *Id.*

[459] Instead, we are requiring that a fund must take into account market, trading, and investment-specific considerations in classifying the liquidity of its portfolio investments. *See* rule 22e–4(b)(1)(ii); *see also supra* section III.C.1.b. We provide guidance below on specific factors that a fund may find appropriate to consider in furtherance of this requirement. *See infra* section III.C.4.

[460] *See* rule 22e–4(b)(1)(ii).

[461] *See* rule 22e–4(b)(1)(ii)(C). This provision also applies to assets pledged to satisfy margin requirements in connection with derivatives transactions.

[462] *See* Proposing Release, *supra* footnote 9, at section III.B.2.i.

[463] Release 10666, *supra* footnote 220. In December 2015, the Commission proposed a new exemptive rule, rule 18f–4, which would permit funds to enter into derivatives transactions and financial commitment transactions notwithstanding section 18 of the Investment Company Act, provided that the funds comply with the conditions of the proposed rule. In proposing rule 18f–4, the Commission noted that, should the rule be adopted, it would rescind Release 10666 and relevant staff no-action letters. *See* 2015 Derivatives Proposing Release, *supra* footnote 222, at section III.I.

[464] *See generally* 2015 Derivatives Proposing Release, *supra* footnote 222, at section II.B (providing background information on the application of section 18 and Release 10666 to derivatives and certain other transactions).

[465] *See also* Dear Chief Financial Officer Letter from Lawrence A. Friend, Chief Accountant, Division of Investment Management (Nov. 7, 1997) (staff letter taking the position that a fund could segregate assets by designating such assets on its books, rather than establishing a segregated account at its custodian).

[466] *See* Proposing Release, *supra* footnote 9, at section III.B.2.i.

[467] *See id.,* at n.309 and accompanying text.

[468] *See id.,* at section III.B.2.j.

[469] *See, e.g.,* Dechert Comment Letter; Milliman Comment Letter; T. Rowe Comment Letter; Vanguard Comment Letter.

[470] *See, e.g.,* Dechert Comment Letter; ICI Comment Letter I; Invesco Comment Letter; Vanguard Comment Letter. *But see* Nuveen Comment Letter (suggesting that, for purposes of the alternative liquidity classification approach that it recommends, a security used specifically to cover a derivatives transaction that cannot be unwound

Continued

commenters noted that it is common in the fund industry for a fund to review its outstanding obligations under its derivatives positions on a portfolio basis and determine an aggregate amount of liquid assets that must be segregated in connection with the transactions requiring coverage.[471] One commenter suggested that, instead of the proposed ''relationship of [an] asset to another portfolio asset'' liquidity classification factor, the Commission alternatively could require funds to assign liquidity classifications to cover assets on an aggregate portfolio basis in amounts corresponding to the aggregate amount of derivatives exposure in each liquidity category.[472]

Some commenters also argued that the guidance provided in the proposal could make an otherwise liquid but segregated asset appear to be less liquid than it actually is when considered in isolation.[473] For example, if a cash equivalent security were used to cover a derivative that the fund determined to be convertible to cash within 8–15 days, under the Commission's guidance, the cash equivalent also would be classified as an asset that could be converted to cash within 8–15 days. However, the fund would be able to replace the cash equivalent as a coverage asset with another liquid asset at any time, which would immediately unencumber the cash equivalent (but would encumber other liquid assets with the same value).

Finally, commenters generally discussed features of derivatives transactions informing the way that their liquidity would be classified under proposed rule 22e–4. One commenter noted that the proposal seemed to suggest that derivatives are inherently more risky and present greater liquidity risk than other, more traditional assets.[474] This commenter maintained that, in some situations, derivatives may be more liquid than more traditional assets. Another commenter stated that, while the liquidity of a derivatives transaction depends on the derivative's underlying reference asset to some degree, its liquidity also largely stems from the needs of other market participants for that kind of derivative.[475]

The requirements in rule 22e–4 regarding the classification of a fund's derivatives transactions are meant to clarify and simplify the application of the classification requirements to derivatives transactions and respond to commenters' concerns. First, rule 22e–4 specifies that the liquidity classification and review requirements apply to each of the fund's investment transactions (including derivatives) and requires a fund to take into account relevant market, trading, and investment-specific considerations in classifying derivatives' liquidity.[476] In addition, we have modified rule 22e–4 from the proposal to require a fund to classify each of the fund's portfolio *investments*.[477] We have made this change to clarify that the classification requirement (and the other requirements of rule 22e–4) applies to all of a fund's investment positions, regardless of whether they are assets or liabilities, as the proposal intended.[478] The proposed classification requirement, which would have required each fund to classify the liquidity of its portfolio positions (or portions of a position in a particular asset), could potentially have been read to exclude certain derivatives and other transactions that are classified as liabilities on the fund's balance sheet.[479] Final rule 22e–4 thus requires the liquidity of all derivatives transactions to be classified, regardless of if they are classified as assets or liabilities on a fund's balance sheet, for the sake of operational simplicity, completeness (*e.g.,* to help reduce confusion regarding a fund's liquidity profile as disclosed on Form N–PORT), and because all derivatives transactions could implicate portfolio liquidity insofar as other assets are segregated to cover these derivatives and derivatives in a liability position involve transactions for which a fund would be required to pay fund assets to exit the transaction.[480]

Besides specifying that the liquidity of a derivatives transaction must be classified taking into account relevant market, trading, and investment-specific considerations, rule 22e–4 provides no derivatives-specific factors that a fund would have to evaluate in classifying a derivatives transactions' liquidity. We generally agree with commenters' suggestions that the liquidity of a derivatives transaction may depend on market demand for that kind of derivative, as well as the liquidity of the derivative's underlying reference asset.[481] Whether a derivatives transaction is centrally cleared also could indicate that the transaction is more liquid than an equivalent transaction that is not cleared.[482] In classifying and reviewing the liquidity of a derivatives transaction, like classifying the liquidity of any portfolio investment, a fund should consider the guidance factors discussed in this Release, to the extent the factors are applicable and the fund deems their

---

within seven days (and thus the derivative would be classified as ''illiquid'' under the commenter's recommended approach) also would be considered to be ''illiquid'' under that approach).

[471] *See* Dechert Comment Letter.

[472] *See id.; see also* ICI Comment Letter I (suggesting that the Commission add an item to Form N–PORT's Schedule of Portfolio Investments that permits a fund to note whether an asset (or portion thereof) is encumbered or linked to other assets as of the reporting date, without separately tying to or identifying a ''linked'' asset).

[473] *See* ICI Comment Letter I; T. Rowe Comment Letter.

[474] *See* T. Rowe Comment Letter.

[475] *See* Milliman Comment Letter.

[476] Rule 22e–4(b)(1)(ii). As with other portfolio investments, funds may classify derivatives transactions by asset class, so long as the fund or its adviser does not have information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of a particular derivative that would require a different classification for that derivative. Rule 22e–4(b)(1)(ii)(A).

[477] We note that in the Proposing Release, we requested comment on whether the rule should ''focus not just on the liquidity of the fund's assets but also more specifically and prominently on its liabilities, such as derivatives obligations, that may affect the liquidity of the fund.'' *See* Proposing Release, *supra* footnote 9, at text following n.155.

[478] We note that use of the term ''investments'' is consistent with other reporting requirements on Form N–PORT, and reflects the proposal's discussions of the classification requirement applying to all of a fund's portfolio positions, not just those that are assets. *See, e.g., id.,* at section III.B. (''[W]e are proposing new requirements for classifying and monitoring the liquidity of funds' *portfolio positions*.''; ''The proposed liquidity categorization process would be in addition to the existing 15% guideline (which would be retained, as discussed below) and would require a fund to assess the liquidity of its *portfolio positions* individually, as well as the liquidity profile of the fund as a whole.'' [emphasis added]). *See also* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[479] We note, however, that no commenters suggested that the proposal's use of the terms ''assets'' and ''positions'' interchangeably would lead to derivatives or other investments that are liabilities not being subject to the rule, and that many commenters discussed the impact of the classification requirement on a variety of derivatives and other transactions that could be liabilities. *See, e.g.,* ICI Comment Letter (discussing classifications of derivatives and TBA transactions); HSBC Comment Letter (noting that ''[T]o the extent that this is possible, Asset Managers should attempt to take all liabilities into account when trying to calculate liquidity for a given fund.''). Nonetheless, to eliminate any potential confusion, we are changing the term ''assets'' to ''investments'' throughout rule 22e–4, related reporting items and definitions on Form N–PORT and Form N–LIQUID.

[480] *See* rule 22e–4(b)(1)(ii) (requiring funds to classify each of the portfolio investments, including each of the fund's derivatives transactions). We have made corresponding changes to each of the liquidity categories to account for the classification of all portfolio investments (*i.e.,* the liquidity categories under rule 22e–4 as adopted are highly liquid investments, moderately liquid investments, less liquid investments, and illiquid investments).

[481] *See supra* footnotes 474–475 and accompanying text.

[482] *See, e.g.,* Deutsche Bank Research, *Liquidity Is Key for the Central Clearing of Derivatives* (Mar. 12, 2015), *available at https://www.dbresearch.com/PROD/DBR_INTERNET_EN-PROD/PROD0000000000352403/Liquidity_is_key_for_the_central_clearing_of_deriv.pdf*; *see also infra* footnote 552.

consideration to be appropriate.[483] The provision in rule 22e–4 stating that a fund may generally classify its portfolio investments according to their asset class applies to the fund's derivatives transactions,[484] as do the rule's market depth provisions.[485] The definitions of ''highly liquid investment,'' ''moderately liquid investment,'' and ''less liquid investment'' that refer to the ability to convert an investment to cash or dispose of an investment within a specified period, with respect to derivatives transactions that the fund classifies as liabilities on its balance sheet,[486] should be read to refer to the time period in which the fund reasonably expects to be able to exit a transaction.

Along with classifying the liquidity of each of its derivative transactions, final rule 22e–4 requires a fund to identify, for derivatives transactions that a fund has classified as moderately liquid investments, less liquid investments, and illiquid investments, the percentage of the fund's highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, the transactions in each of these classification categories.[487] When a fund's assets are segregated or pledged in connection with derivatives transactions, they are only available for sale to meet redemptions once the related derivatives position is disposed of or unwound (or if other assets are segregated or pledged in their place). Thus, even if the segregated or pledged assets would, on their own, be considered extremely liquid, they would effectively not be able to be used to meet redemption requests or to rebalance or otherwise adjust a portfolio's composition in order to manage liquidity risk. As discussed below, we believe that it is important, for purposes of transparency regarding a fund's portfolio liquidity, to provide clarity that certain percentages of a fund's investments may not be functionally available to meet redemptions or for other liquidity risk management purposes.[488]

We believe that requiring a fund to determine the percentage of highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, its derivatives transactions classified in each of the ''moderately liquid,'' ''less liquid,'' and ''illiquid'' classification categories strikes an appropriate balance between providing this transparency and reducing burdens on funds. Under this approach, a fund generally would not need to specifically identify particular assets that are segregated or pledged to cover specific derivatives transactions, but instead a fund will calculate the percentage of highly liquid investments segregated or pledged to cover derivatives transactions that include derivatives transactions classified in each of the other three classification categories. For purposes of calculating these percentages, a fund that has segregated or pledged non-highly liquid investments as well as highly liquid investments to cover derivatives transactions, should first use segregated or pledged assets that are highly liquid investments to cover derivatives transactions classified in the three lower liquidity classification categories.[489] This approach should promote consistency and comparability across funds. In the absence of such an instruction, some funds might instead take the opposite approach, and assume that segregated non-highly liquid investments first cover these less liquid derivatives transactions, creating inconsistencies between funds.

The approach in the final rule responds to commenters' concerns that funds rarely identify and segregate a specific liquid asset against an individual derivative on a one-for-one relationship,[490] and would reduce burdens that could result if the Commission's liquidity classification rules were to require a fund to do so. It also responds to commenters' concerns that linking the liquidity of specific segregated assets to the liquidity of a fund's derivatives transactions could understate the liquidity of those segregated assets, since a fund may be able to readily substitute another liquid asset for the segregated asset.[491] However, the Commission's approach also would provide the basis for needed transparency for the Commission, its staff, and the public into the way that a fund's segregated or pledged assets may affect the fund's overall portfolio liquidity. Rule 22e–4, which requires a fund only to determine percentages of segregated or pledged assets comprising the fund's highly liquid investments, reflects our belief that this transparency is especially important with respect to funds' highly liquid investments. As noted above, a fund's disclosure of percentages of its highly liquid investments that are segregated or pledged assets would permit the Commission and its staff to understand what percentage of a fund's highly liquid investment minimum is composed of encumbered assets, and would allow the public to better understand that a certain percentage of a fund's highly liquid investments may not be immediately available for liquidity risk management purposes.

While a fund will not need to identify which of its particular assets are segregated in connection with particular derivatives transactions, it will need to identify the percentage of its highly liquid investments that are segregated or pledged with respect to derivatives transactions classified in each of the moderately liquid, less liquid, and illiquid classification categories. We recognize that these requirements will likely entail additional evaluation of the liquidity character of a fund's segregated assets compared to what a fund might do today as part of its current asset segregation procedures.[492] We believe these burdens are justified, however, by the important transparency benefits of identifying the percentages of highly liquid investments that are segregated or pledged assets.

We also note that these burdens are further reduced because under the rule a fund need not identify the percentage of segregated or pledged assets covering derivatives that are highly liquid investments, or the percentage of segregated or pledged assets that are moderately liquid investments or less liquid investments.[493] A fund would be permitted to exclude its derivatives transactions that are classified as highly liquid investments in determining the percentages of highly liquid investments that are segregated or pledged assets since the fund could dispose of or exit these derivatives transactions within three business days and the segregated or pledged assets also would be available to the fund for liquidity risk management purposes within three business days. Furthermore, as described in the preceding paragraph, the rule's requirement to identify the percentages of a fund's highly liquid investments that are also segregated or

[483] *See infra* section III.C.4.

[484] Rule 22e–4(b)(1)(ii)(A).

[485] Rule 22e–4(b)(1)(ii)(B).

[486] *See supra* footnote 480 and accompanying text.

[487] Rule 22e–4(b)(1)(ii)(C).

[488] *See infra* section III.C.6.

[489] *See* note to rule 22e–4(b)(1)(ii)(C). However, if a fund has specifically identified individual assets that are not highly liquid investments as being segregated to cover such derivatives transactions, the fund may match those specific segregated assets to specific derivatives transactions and need not assume that segregated highly liquid assets cover those derivatives.

[490] *See supra* footnote 470 and accompanying text.

[491] *See supra* footnote 473 and accompanying paragraph. We note, however, that the ability to substitute may not improve the overall liquidity of the portfolio.

[492] *See infra* section IV.C.1.

[493] *See* rule 22e–4(b)(1)(ii)(C).

pledged assets reflects our belief that asset segregation or margin transparency is most important with respect to a fund's highly liquid investments.

4. Guidance on Liquidity Classification Factors

Unlike rule 22e–4 as proposed, final rule 22e–4 does not include an enumerated list of factors that a fund would be specifically required to consider in classifying and reviewing the liquidity of its portfolio investments. The rule instead generally requires a fund to take into account ''relevant market, trading, and investment-specific considerations'' in classifying and reviewing its portfolio investments' liquidity.[494] In contrast, under the proposed rule a fund would have been required to take the following nine factors into account, to the extent applicable, when classifying the liquidity of each portfolio position in a particular asset:

- Existence of an active market for the asset, including whether the asset is listed on an exchange, as well as the number, diversity, and quality of market participants;
- Frequency of trades or quotes for the asset and average daily trading volume of the asset (regardless of whether the asset is a security traded on an exchange);
- Volatility of trading prices for the asset;
- Bid-ask spreads for the asset;
- Whether the asset has a relatively standardized and simple structure;
- For fixed income securities, maturity and date of issue;
- Restrictions on trading of the asset and limitations on transfer of the asset;
- The size of the fund's position in the asset relative to the asset's average daily trading volume and, as applicable, the number of units of the asset outstanding; and
- Relationship of the asset to another portfolio asset.[495]

The Proposing Release requested comment generally on whether the Commission should codify a list of liquidity classification factors (as discussed above)[496] and also requested comments relating to the usefulness of the proposed factors generally, as well as specific comments on the proposed factors.[497] With respect to the general usefulness of the proposed factors, multiple commenters suggested that the proposed factors would be largely informative in assessing assets' relative liquidity,[498] but others advised that the proposed factors would not be useful in assisting fund management in making liquidity determinations.[499] Some who objected to the proposed factors argued that their usefulness would be limited by the fact that they would be based on backward-looking data and thus may not reflect future conditions.[500] Some commenters also argued that some of the proposed factors (*e.g.,* frequency of trades or quotes for an asset and average daily trading volume of an asset) are generally more appropriate for assessing the liquidity of exchange-traded securities than securities that are traded over-the-counter (''OTC'') and that evaluating certain OTC securities using the proposed factors may make these securities appear to be less liquid than they actually are.[501] For example, multiple commenters contended that certain fixed income securities tend to trade infrequently on any given day, but these securities' liquidity is nevertheless quite high because a fund would generally be able to sell them fairly quickly.[502] As discussed specifically below, commenters also expressed more granular concerns about certain of the proposed factors (specifically, frequency of trades or quotes for an asset, trading price volatility, position size, and relationship of an asset to another portfolio asset[503]).

As discussed above, we are not codifying the proposed factors in part because we understand that certain factors would be more informative to some funds than others, depending on the fund's investment strategy and liquidity risk profile. We also are concerned that codifying the factors, particularly if applied in a ''check-the-box'' fashion, could lead funds to adopt classification processes that do not reflect the extent of a fund's ability to sell its portfolio investments to meet redemptions within a given time period without a market impact, or do not otherwise result in an accurate picture of a fund's liquidity profile.[504] However, we continue to believe that the proposed classification factors could be useful and relevant as aspects of the general market, trading, and investment-specific considerations that a fund must take into account under the final rule. Thus, in this section III.C.4, we discuss each of the factors that funds could consider in evaluating portfolio investments' liquidity characteristics and managing liquidity risk.[505] Based on staff outreach across the fund industry, we understand that certain of these factors reflect certain common considerations that funds often take into account in evaluating their portfolio investments' liquidity.[506] Moreover, as discussed above, multiple commenters stated that the proposed rule included factors that, largely, are useful for assessing a fund's assets' relative liquidity.[507] For example, some

[494] *See supra* section III.C.1.b.

[495] Proposed rule 22e–4(b)(2)(ii).

[496] *See supra* section III.C.1.b.

[497] *See* Proposing Release, *supra* footnote 9, at section III.B.2.j.

[498] *See, e.g.,* CRMC Comment Letter; ICI Comment Letter I; J.P. Morgan Comment Letter; Nuveen Comment Letter.

[499] *See, e.g.,* Cove Street Comment; GFOA Comment Letter; MFS Comment Letter; Vanguard Comment Letter.

[500] *See, e.g.,* Cove Street Comment; Dodge & Cox Comment Letter; Vanguard Comment Letter.

[501] *See, e.g.,* Banks Comment Letter; LSTA Comment Letter; Milliman Comment Letter; Wells Fargo Comment Letter.

[502] *See, e.g.,* GFOA Comment Letter; MFS Comment Letter; T. Rowe Comment Letter; Vanguard Comment Letter.

[503] For a discussion of commenters' concerns about this proposed factor in the context of derivatives transactions, *see supra* section III.C.3.c.

Commenters also expressed concerns about this proposed factor in the context of assets used for hedging or risk mitigation purposes. In the Proposing Release, we stated that, when a fund purchases an asset (a ''hedging asset'') in order to hedge or mitigate the risks associated with another asset (a ''hedged asset''), the fund should consider the liquidity of the hedged asset when evaluating the liquidity of the hedging asset. Commenters stated that current industry practice often involves hedging aggregate portfolio exposures, not specific securities. *See, e.g.,* ICI Comment Letter I; Milliman Comment Letter; Oppenheimer Comment Letter; T. Rowe Comment Letter. These commenters argued that the Commission's guidance instructing a fund to classify the liquidity of hedging assets in consideration of the hedged asset's liquidity classification would therefore be unworkable and would raise costly operational burdens, because funds do not currently link hedging assets and hedged assets on a one-for-one basis.

Unlike in the context of derivatives transactions, in which we have stated that a fund must segregate assets to cover derivatives transactions, and this renders the segregated assets ''frozen'' and ''unavailable for sale or other disposition'' (*see supra* footnote 465 and accompanying text), we have not previously stated that purchasing assets with the intent to hedge or mitigate the risks associated with another asset makes those hedging assets unavailable for sale. We thus do not view the linkages between hedging and hedged assets to be directly analogous with the linkages between derivatives transactions and assets segregated to cover those derivatives transactions, and we are not stating in this Release the guidance we included in the Proposing Release regarding the proposed ''relationship of an asset to another portfolio asset'' in the context of assets used for hedging or risk mitigation purposes.

[504] *Cf. supra* paragraph accompanying footnote 322.

[505] Our discussion of factors that could be considered by funds does not include the proposed ''relationship of [an] asset to another portfolio asset'' factor because guidance on this factor, as discussed above, has been replaced by requirements in rule 22e–4 regarding classification issues that arise with respect to derivatives transactions. *See supra* footnotes 456–461 and accompanying text; *see also supra* footnote 503 (discussing this proposed factor in the context of assets used for hedging or risk mitigation purposes).

[506] *See* Proposing Release, *supra* footnote 9, at text preceding n.200.

[507] *See supra* footnote 498 and accompanying text.

commenters agreed that factors such as those incorporated in the proposal are generally relevant considerations to use when evaluating asset liquidity and would help promote effective liquidity risk assessments,[508] and that portfolio assets' liquidity should be evaluated using a variety of inputs such as those that the proposed factors represent.[509] Some suggested that the Commission discuss the factors as guidance accompanying its adoption of rule 22e–4.[510] Overall, we believe this approach provides flexibility that should facilitate meaningful liquidity analyses, and encourages funds to consider relevant information.

We acknowledge, as stated by some commenters, that certain of these factors may involve consideration of backward-looking data and thus may not account for ways in which changing market conditions could affect the liquidity of certain asset classes or investments.[511] But we believe analyzing past data, while considering how that data may change in the future, is an inherent aspect of all risk management and does not render such analysis fruitless. In addition, the review requirements embedded in the classification framework, when combined with the liquidity risk assessment requirement to consider portfolio liquidity during normal and reasonably foreseeable stressed periods, further responds to this critique. We also are cognizant that, for certain fixed income or other OTC assets or asset classes, certain of the proposed liquidity classification factors, if considered standing alone, may appear to make these assets or classes to appear less liquid than they actually are. In the guidance below, we discuss special concerns that may be relevant to funds' consideration of the liquidity characteristics of fixed income or other OTC assets.[512]

As discussed above, a fund generally is permitted to classify the liquidity of its portfolio investments according to their asset class. Thus, a fund may wish to consider the guidance discussed below in assessing the general liquidity characteristics of the asset classes in which it invests. For investments that the fund determines must be treated as an ''exception'' and classified separate from their asset class,[513] the guidance provided below could assist funds in identifying and classifying those investments that may demonstrate liquidity characteristics that are distinct from the fund's other portfolio holdings within that same asset class.

The guidance we provide below is not meant to cover an exhaustive list of considerations that a fund may take into account in evaluating its portfolio investments' liquidity. Also, we recognize that specific liquidity concerns appropriate for consideration could vary depending on the issuer and the particular investment.[514] Even if a fund's liquidity classification policies and procedures were to incorporate all of the guidance factors discussed below, a fund may decide that it is appropriate to focus more heavily on certain factors and less on others in evaluating its portfolio investments' liquidity.

In the following sections, we discuss certain factors that a fund could consider in assessing the liquidity of its portfolio investments and provide guidance on specific issues associated with each of these factors. We also discuss comments we received on the proposed classification factors.

a. Existence of Active Market for an Asset Class or Investment; Exchange-Traded Nature of an Asset Class or Investment

We continue to believe that the manner in which a fund may sell an asset class (or particular portfolio investment), including whether an asset class or investment is generally listed on an exchange, may affect the liquidity of that asset class or investment.[515] While in general, being listed on a developed and recognized exchange may increase an investment's liquidity,[516] we note, as certain commenters mentioned,[517] the fact that an investment is exchange-traded does not necessarily mean that a fund would be able to sell or convert that investment to cash within a relatively short period.[518] For example, a small-cap equity stock might be listed on an exchange but trade quite infrequently, which would tend to decrease its relative liquidity. Conversely, as commenters discuss, we agree that certain securities that are traditionally traded in OTC markets, such as corporate bonds, may not typically be designed to be traded frequently and instead are more often ''bought and held,'' but certain of these securities nevertheless may be readily saleable without the conversion to cash (or in some cases, sale or disposition) significantly changing their market value.[519] Additionally, securities issued (or guaranteed as to principal and interest) by the U.S. government do not trade on exchanges, but are typically considered to be quite liquid.[520]

In assessing the effect that being traded on an exchange could have on an asset class's or investment's liquidity, a fund generally should evaluate how this consideration informs the liquidity characteristics of any ETF shares in which it invests. We understand that certain funds, particularly funds with

[508] *See, e.g.,* CRMC Comment Letter; Fidelity Comment Letter; J.P. Morgan Comment Letter; Nuveen Comment Letter.

[509] *See, e.g.,* HSBC Comment Letter; MSCI Comment Letter.

[510] *See, e.g.,* IDC Comment Letter; Invesco Comment Letter; J.P. Morgan Comment Letter; SIFMA Comment Letter I.

[511] *See supra* footnote 500 and accompanying text.

[512] *See, e.g.,* text accompanying *infra* footnotes 536–538 and 545–558.

[513] *See* rule 22e–4(b)(1)(ii)(A).

[514] *See, e.g.,* Fidelity Comment Letter; LSTA Comment Letter; Nuveen Comment Letter; T. Rowe Comment Letter (each suggesting that the Commission clarify that not every factor is required to be considered to evaluate the liquidity of each of a fund's portfolio assets).

[515] *See* Proposing Release, *supra* footnote 9, at section III.B.2.a (discussing the proposed requirement for a fund to consider, to the extent applicable, the existence of an active market for an asset, including whether the asset is listed on an exchange, as well as the number, diversity, and quality of market participants, in classifying the liquidity of each portfolio position in a particular asset).

[516] *See, e.g.,* Basel Committee on Banking Supervision, *Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools* (Jan. 2013), at part 1, section II.A.1, *available at http://www.bis.org/publ/bcbs238.pdf*; *see also* Nuveen FSOC Notice Comment Letter, *supra* footnote 85 (''While securities that trade on exchanges . . . or in deep principal/over-the–counter (''OTC'') markets (*e.g.,* U.S. Treasuries) are generally liquid even in stressed markets, other securities that trade on an OTC basis . . . have faced increasing liquidity challenges in normal markets and can be subject to insufficient quality bids in times of stress as market makers pull back their capital. This can make it not only more difficult to sell these securities, but also to accurately value those assets that are retained.'').

[517] *See, e.g.,* ICI Comment Letter I.

[518] We note that in certain cases the exchange on which an investment is listed may not be the primary market for that security. For example, we understand that certain bonds that are exchange listed trade predominantly in the OTC markets. *See, e.g.,* Types of Bonds, How Big Is the Market, and Who Buys?, *available at http://www.investinginbonds.com/learnmore.asp?catid=5&subcatid=18&id=174* (''[T]he vast majority of bond transactions, even those involving exchange-listed issues, take place in [OTC] market.'').

[519] See id.

[520] *See* rule 15c3–1(c)(2)(vi)(A)(1) under the Exchange Act (describing securities haircuts for securities issued or guaranteed as to principal or interest by the United States or any agency thereof); *see also* Liquidity Coverage Ratio: Liquidity Risk Measurement Standards (Sept. 9, 2014) [79 FR 61440 (Oct. 10, 2014)] (''Liquidity Coverage Ratio Release'') (in liquidity coverage ratio rule adopted by the Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation, ''Level 1 Liquid Assets'' are described as securities issued or unconditionally guaranteed as to timely payment of principal and interest by the U.S. Department of the Treasury, and liquid and readily-marketable securities issued or unconditionally guaranteed as to the timely payment of principal and interest by any other U.S. government agency (provided that its obligations are fully and explicitly guaranteed by the full faith and credit of the U.S. government)).

investment strategies involving relatively less liquid portfolio securities (such as micro-cap equity funds, high-yield bond funds, and bank loan funds), may invest a portion of their assets in ETFs with strategies similar to the fund's investment strategy because they view ETF shares as having characteristics that enhance the liquidity of the fund's portfolio.[521] Specifically, in discussions with Commission staff, funds that invest in ETF shares have suggested that they find that these shares are more readily tradable, are less expensive to trade, and have shorter settlement periods than other types of portfolio investments.[522] In addition, unlike investments in cash, cash equivalents, and other highly liquid instruments, funds also have suggested to Commission staff that investing in ETFs with the same (or a similar) strategy as the fund's investment strategy permits the fund to remain fully invested in assets that reflect the fund's investment concentrations, risks, and performance potential.[523]

While we appreciate that ETFs' exchange-traded nature could make these instruments useful to funds in managing purchases and redemptions under certain conditions (for example, ETFs' settlement times could more closely reflect the time in which a fund has disclosed that it will typically redeem fund shares), funds should consider the extent to which relying substantially on ETFs to manage liquidity risk is appropriate. The liquidity of an ETF, particularly in times of declining market liquidity, is limited by the liquidity of the market for the ETF's underlying securities and, in fact, may be impaired based on factors not directly related to the liquidity of the underlying securities.[524] Thus, shares of an ETF whose underlying securities are relatively less liquid may not be able to be counted on to provide liquidity to a fund investing in these shares during times of stress. In the case of a significant decline in market liquidity, if authorized participants were unwilling or unable to trade ETF shares in the primary market, and the majority of trading took place among investors in the secondary market, the ETF's shares could trade continuously at a premium or a discount to the value of the ETF's underlying portfolio securities. This could frustrate the expectations of secondary market participants who count on the creation and redemption process to align the prices of ETF shares and their underlying portfolio securities. We therefore encourage funds to assess the liquidity characteristics of an ETF's underlying securities, as well as the characteristics of the ETF shares themselves, in classifying the liquidity of ETF shares under rule 22e–4(b)(1)(ii).

Other Trading Mechanism Considerations

The means of trading a particular asset class or investment can affect its liquidity regardless of whether the investment is a security traded on an exchange. For example, whether an asset class or investment is generally traded in a bilateral transaction with a single dealer, or through an electronic auction mechanism where a trader can simultaneously contact multiple counterparties, can have different effects on its liquidity.[525] The liquidity effects associated with choice of trading mechanism may differ depending on the asset class or investment being traded and other market conditions, and therefore it is difficult to make general statements regarding the correlation between a particular trading mechanism and the liquidity of the asset class or investment being traded. For this reason, a fund may wish to consider past experience in using different trading mechanisms to sell a certain asset class or investment.

Diversity and Quality of Market Participants

In addition, the diversity and quality of market participants for a particular asset class or investment also could contribute to the liquidity of that asset class or investment. A fund may wish to consider the number of market makers on both the buying and selling sides of transactions. A fund also may wish to consider the quality of market participants purchasing and selling a particular asset class or investment, and may wish to assess, in particular: The market participant's capitalization; the reliability of the market participant's trading platform(s); and the market participant's experience and reputation transacting in various types of assets. We believe that the diversity and quality of market participants may be meaningful in assessing a portfolio investment's liquidity because it is common for relatively liquid asset classes and investments to have active sale or repurchase markets at all times with diverse market participants.[526] The presence of multiple active market makers may be a sign that a market is liquid.[527] Diversity of market participants, on both the buying and selling sides of transactions, may also be a significant point for a fund to consider because it tends to reduce market concentration and may facilitate a

---

[521] *See, e.g.,* Katy Burne, *Institutions Pour Cash Into Bond ETFs,* Wall Street Journal (Mar. 1, 2015), *available at http://www.wsj.com/articles/institutions-pour-cash-into-bond-etfs-1425250969.* Funds' investments in ETFs are subject to the Investment Company Act's limitations on investments in shares issued by other registered investment companies. *See* section 12(d)(1)(A) of the Act. Currently, these practices do not concern ETMFs.

The Commission's 2015 Request for Comment on Exchange-Traded Products requested comment on whether investors' expectations of the nature of the liquidity of an exchange-traded product (including an ETF) holding relatively less liquid portfolio securities differ from their expectations of the liquidity of the underlying portfolio securities. *See* 2015 ETP Request for Comment, *supra* footnote 29, at Question 49. Commenters expressed a range of views on the question. *See, e.g.,* Comment Letter of Vanguard on the 2015 ETP Request for Comment (Aug. 17, 2015) (stating that the disclosures made by ETFs in prospectuses, shareholder reports, and Web sites ''ensures that investors and market participants have the necessary information to make informed investment decisions''); Comment Letter of ETF Radar on the 2015 ETP Request for Comment (Aug. 8, 2015) (stating that investor expectations of liquidity depend on the skill of the investor); Comment Letter of Danny Reich on the 2015 ETP Request for Comment (July 2, 2015) (stating that there is a ''false assumption'' that underlying assets have the same liquidity as the ETP, particularly with respect to bond ETPs).

[522] *See* Proposing Release, *supra* footnote 9, at section III.C.6.b.

[523] *See id.*

[524] *See* ETF Proposing Release, *supra* footnote 27, at section III.A.1; *see also* Tyler Durden, *What Would Happen if ETF Holders Sold All at Once? Howard Marks Explains,* Zero Hedge (Mar. 26, 2015), *available at http://www.zerohedge.com/news/2015-03-26/what-would-happen-if-etf-holders-sold-all-once-howard-marks-explains* (''Thus we can't get away from depending on the liquidity of the underlying high yield bonds. The ETF can't be more liquid than the underlying, and we know the underlying can become highly illiquid.''). *But see, e.g.,* Shelly Antoniewicz, *Plenty of Players Provide Liquidity for ETFs,* ICI Viewpoints (Dec. 2, 2014), *available at http://www.ici.org/viewpoints/view_14_ft_etf_liquidity* (stating that most of the trading activity in bond ETF shares is done in the secondary market and not through creations and redemptions with authorized participants).

[525] *See, e.g.,* Terrence Hendershott & Ananth Madhavan, *Click or Call? Auction versus Search in the Over-the-Counter Market.,* 70 J. of Fin. 419 (Feb. 2015), *available at http://faculty.haas.berkeley.edu/hender/Click_Call_OTC.pdf.*

[526] *See, e.g.,* Abdourahmane Sarr & Tonny Lybek, *Measuring Liquidity in Financial Markets,* IMF Working Paper (Dec. 2002), *available at http://www.imf.org/external/pubs/ft/wp/2002/wp02232.pdf* (''Liquid markets tend to exhibit five characteristics: (i) Tightness (ii) immediacy, (iii) depth, (iv) breadth, and (v) resiliency.'').

[527] *See, e.g.,* Sunil Wahal, *Entry, Exit, Market Makers, and the Bid-Ask Spread,* 10 Rev. of Fin. Stud. 871 (1997), *available at https://www.acsu.buffalo.edu/~keechung/MGF743/Readings/H1.pdf* (''Large-scale entry (exit) is associated with substantial declines (increases) in quoted end-of-day inside spreads, even after controlling for the effects of changes in volume and volatility. The spread changes are larger in magnitude for issues with few market makers; however, even for issues with a large number of market makers, substantial changes in quoted spreads take place.'').

market remaining liquid during periods of stress.[528]

b. Frequency of Trades or Quotes; Average Daily Trading Volume

In general, we continue to believe that a high frequency of trades or quotes for a particular asset class or investment tends to indicate that a particular asset class or investment has relatively high liquidity.[529] However, as many commenters raised and as discussed below, low trading frequency and trading volume does not necessarily indicate low liquidity, particularly for asset classes and investments that are not exchange-traded.[530] Also, we note that the frequency of trades or quotes for a particular asset class or investment is not a perfect or complete measure of liquidity, and a fund may wish to also consider trade size in assessing the relationship between trade frequency and liquidity.[531] In evaluating the frequency of trades (and bid and ask quotes) for an asset class or investment, a fund may wish to generally consider, among other relevant factors, the number of dealers quoting prices for that asset class or investment, the number of other potential purchasers and sellers, and dealer undertakings to make a market in the asset class or investment.

High average trading volume also tends to be correlated with greater liquidity, particularly for exchange-traded asset classes and investment. In general, high average daily trading volume for a particular asset class or investment indicates a deep market for that asset class or investment, which in turn indicates that a fund may be able to convert its holdings in that asset class or investment to cash without the conversion (or in some cases, sale or disposition) significantly changing the market value.[532] Especially for exchange-traded asset classes or investments, a fund may wish to consider the number of days of zero or very low trading volume during the prior month, year, or other relevant period, as this could indicate particularly limited liquidity. As one commenter suggested, and we agree, a fund may wish to consider not only the historical average trading volume of the asset class or assets in which its invests, but also whether trading volume is likely to change under different or stressed market conditions.[533] High trading volume is not always indicative of available liquidity for a particular asset class or investment, however. For example, high trading volumes might be associated with high selling pressure on the asset class or investment, and trades at that time may have a high value impact.[534] Also, as one commenter suggested, even if a particular asset class or investment were to exhibit high trading volume, the ability to convert the asset class or investment to cash without the conversion (or in some cases, sale or disposition) significantly changing the market value may also depend on other factors such as investors' appetite for risk and the perceived ''safety'' of specific securities in ''risk-off'' flight-to-quality market conditions.[535]

Multiple commenters stressed that, particularly for fixed income and other typically OTC asset classes and assets, relatively low trading volume does not necessarily correlate with low liquidity. For example, many commenters discussed the low turnover of the corporate bond market, which is driven by factors such as the buy-and-hold nature of bond investing, the distribution of an issuer's borrowing across many different bond issues, and the fact that portfolio managers may deem many bonds to be substitutes for one another based on common characteristics such as issuer, sector, credit quality, and maturity.[536] Commenters argued that, despite the relatively low turnover that is typical in the corporate bond market, these assets are commonly considered to be readily tradable at market-clearing prices.[537] Commenters made similar arguments about the dynamics of the municipal bond market, noting that municipal securities' trading volume is not normally high, particularly during stable financial periods, but municipal securities (especially those that are investment grade) are commonly considered to be easily saleable.[538] We generally agree with commenters' concerns that the consideration of trading volume as a liquidity indicator should not by itself imply that low trading volume necessarily indicates low liquidity. Rather, it may indicate that other information needs to be assessed to make a liquidity determination. For asset classes and investments that typically demonstrate low trading volume, funds may wish to consider how the other liquidity characteristics of those asset classes and investments, including but not limited to other guidance factors discussed in this Release, may affect the time period and value impact associated with the class's or investment's ability to be converted to cash. Analysis of capital structure and credit quality of a particular asset class or investment, as well as bid-ask spreads and maturity/date of issue, may be particularly useful in considering the liquidity of investments whose trading volume is normally low.

[528] *See, e.g.,* Amir Rubin, *Ownership Level, Ownership Concentration, and Liquidity,* 10 J. Fin. Markets 219 (Aug. 2007), *available at http://www.sciencedirect.com/science/article/pii/S1386418107000134* (''We examine the link between the liquidity of a firm's stock and its ownership structure, specifically, how much of the firm's stock is owned by insiders and institutions, and how concentrated is their ownership. We find that the liquidity-ownership relation is mostly driven by institutional ownership rather than insider ownership. Importantly, liquidity is positively related to total institutional holdings but negatively related to institutional block holdings.'').

[529] *See* Proposing Release, *supra* footnote 9, at section III.B.2.b (discussing the proposed requirement for a fund to consider, to the extent applicable, the frequency of trades or quotes for a particular asset, as well as the asset's average daily trading volume (regardless of whether the asset is a security traded on an exchange), in classifying the liquidity of each portfolio position in a particular asset).

[530] *See infra* footnotes 536–538 and accompanying text.

[531] For example, 100 trades at $100 might or might not signify greater liquidity than 50 trades at $200, although they are likely to suggest better liquidity than one trade at $10,000. *See* Erik Banks, *Liquidity Risk: Managing Funding and Asset Risk* (2nd ed. 2013), at 169.

[532] *See id.; see also* Fidelity FSOC Notice Comment Letter, *supra* footnote 69 (''Liquidity management is linked to portfolio managers' attention to market risks indicated by . . . shrinking transaction volumes which exacerbate the impact cost for additional trading'').

We note that double-counting of trades is a potential issue to consider when assessing average trading volume. Double-counting occurs because of differences between dealer and auction markets. In a dealer market, trades are ''double-counted'' because the dealer buys from person A and then sells to person B. In an auction market, person A and B trade directly. *See, e.g.,* Anne M. Anderson & Edward A. Dyl, *Trading Volume: NASDAQ and the NYSE,* 63 Fin. Analysts J. 79 (May/June 2007), *available at http://www.cfapubs.org/doi/abs/10.2469/faj.v63.n3.4693.*

[533] *See* Interactive Data Comment Letter (suggesting that the Commission consider requiring a fund to consider the *potential* daily trading volume of its portfolio assets instead of, as proposed, the *average* daily trading volume of its assets).

[534] *See, e.g.,* HSBC Comment Letter; *see also e.g.,* Jennifer Huang & Jiang Wang, *Liquidity and Market Crashes,* 22 Rev. of Fin. Stud. 2607 (2009), *available at http://rfs.oxfordjournals.org/content/22/7/2607.full* (discussing how there can be high selling pressure (and high volume) along with low liquidity and how this can create market crashes); Mark Carlson, *A Brief History of the 1987 Stock Market Crash with a Discussion of the Federal Reserve Response,* Federal Reserve Board Working Paper 2007–13 (Nov. 2006), *available at http://www.federalreserve.gov/pubs/feds/2007/200713/200713pap.pdf* (discussing how the 1987 stock market crash had both high volume and low liquidity).

[535] *See* HSBC Comment Letter.

[536] *See, e.g.,* Nuveen Comment Letter; Vanguard Comment Letter.

[537] *See, e.g.,* Nuveen Comment Letter; Vanguard Comment Letter.

[538] *See, e.g.,* GFOA Comment Letter; Nuveen Comment Letter.

c. Volatility of Trading Prices

We continue to believe that trading price volatility is potentially a valuable metric to consider in evaluating an asset class's or investment's liquidity.[539] In general, there is an inverse relationship between liquidity and volatility,[540] as lack of liquidity in a particular investment tends to amplify price volatility for that asset.[541] Additionally, the Commission understands that certain funds and fund groups have historically experienced liquidity disruptions during periods of extreme market volatility, such as the June 2013 ''taper tantrum'' [542] and the October 2014 ''flash crash.'' [543] As one commenter suggested, and we agree, if a fund holds asset classes or investments that are thinly traded, the fund may wish to consider volatility of evaluated pricing information in assessing the liquidity of those asset classes or investments.[544]

d. Bid-Ask Spreads

Bid-ask spreads—the difference between bid and offer prices for a particular investment—have historically been viewed as a useful measure for assessing the liquidity of assets,[545] and we continue to believe that a fund may consider this factor useful in classifying the liquidity of a particular asset class or investment.[546] The bid-ask spread of a particular investment is related to the riskiness of that investment, as well as the length of time that a broker-dealer believes it will have to hold the investment before selling it.[547] In general, high bid-ask spreads for a particular asset class or investment correlate with a lack of liquidity in that asset class or investment. For example, when liquidity was significantly constricted during the 2007–2009 financial crisis, bid-ask spreads on U.S. investment grade bonds were notably elevated.[548] However, bid-ask spreads alone do not necessarily provide a comprehensive understanding of an investment's liquidity. For instance, bid-ask spreads are often constrained by the increments in which prices are quoted.[549] Additionally, as one commenter noted, bid-ask spreads do not take into account the volume and scale of a portfolio manager's intended buy and sell transactions.[550]

e. Standardization and Simplicity of Asset Class's or Investment's Structure

We continue to believe that whether an asset class or investment has a relatively standardized and simple structure is generally relevant to a fund's evaluation of an asset class's or investment's liquidity.[551] Investments that trade OTC with terms set at issuance such as sizes, maturities, coupons, and payment dates may be relatively more liquid compared to similarly situated investments without standardized terms. Standardization can increase liquidity by simplifying the ability to quote and trade securities, enhancing operational efficiency to execute and settle trades, and improving secondary market transparency. Some types of OTC-traded securities exhibit a relatively high level of standardization, such as government and agency bonds, futures contracts, and certain swap contracts. Central clearing of certain OTC-traded securities, which generally requires the terms of these securities to be highly standardized, has been associated with an increase in these investments' liquidity, as measured by factors such as the bid-ask spreads for these investments and the number of dealers providing quotes for these

[539] *See* Proposing Release, *supra* footnote 9, at section III.B.2.c (discussing the proposed requirement for a fund to consider, to the extent applicable, the volatility of trading prices for its portfolio assets, in classifying the liquidity of each portfolio asset).

[540] *See, e.g.,* Tarun Chordia, Asani Sarkar & Avanidhar Subrahmanyam, *An Empirical Analysis of Stock and Bond Market Liquidity,* Federal Reserve Bank of New York Staff Reports, No. 164 (Mar. 2003), *available at http://www.newyorkfed.org/research/staff_reports/sr164.pdf* (finding that unexpected liquidity and volatility shocks are positively and significantly correlated across stock and bond markets).

[541] *See, e.g.,* Prachi Deuskar, *Extrapolative Expectation: Implications for Volatility and Liquidity* (Aug. 2007), *available at https://business.illinois.edu/pdeuskar/Deuskar_Extrapolative_Liquidity_Volatility.pdf* (''Illiquidity amplifies supply shocks, increasing realized volatility of prices, which feeds into subsequent volatility forecasts.''); *see also* Fidelity FSOC Notice Comment Letter, *supra* footnote 69, at 21 (''Liquidity management is linked to portfolio managers' attention to market risks indicated by . . . increasing market- and security-specific volatility.'').

[542] In May 2013, Ben Bernanke, then Chairman of the Federal Reserve Board, announced that the Federal Reserve may start scaling back its asset purchase program—in which the Federal Reserve purchased approximately $85 billion worth of bonds and mortgage-backed securities each month—sooner than investors expected. This caused interests rates on fixed income products to spike, and bond prices to fall dramatically. This market dislocation came to be known as the ''taper tantrum. *See* Christopher Condon & Jeff Kearns, *Fed Worried About Triggering Another 'Taper Tantrum',* Bloomberg (Oct. 8, 2014), *available at http://www.bloomberg.com/news/articles/2014-10-08/fed-worried-about-triggering-another-taper-tantrum-.*

[543] *See* Joint Staff Report: The U.S. Treasury Market on October 15, 2014 (July, 13, 2015), *available at https://www.treasury.gov/press-center/press-releases/Documents/Joint_Staff_Report_Treasury_10-15-2015.pdf* (''On October 15, 2014, the market for U.S. Treasury securities, futures, and other closely related financial markets experienced an unusually high level of volatility and a very rapid round-trip in prices. Although trading volumes were high and the market continued to function, liquidity conditions became significantly strained.'').

[544] *See* Interactive Data Comment Letter (suggesting that the Commission consider replacing the proposed ''volatility of trading prices for the asset'' classification factor with ''volatility of traded or evaluated pricing information,'' to make this proposed factor more applicable to fixed income assets and other asset classes that may be thinly traded).

[545] *See, e.g.,* Michael J. Fleming, *Measuring Treasury Market Liquidity,* Federal Reserve Bank of New York Economic Policy Review (Sept. 2003), *available at https://www.newyorkfed.org/medialibrary/media/research/epr/03v09n3/0309flempdf.pdf* (providing a literature review of studies analyzing bid-ask spreads in relation to Treasury market liquidity); *see also* Fidelity FSOC Notice Comment Letter, *supra* footnote 69, at 21 (''Liquidity management is linked to portfolio managers' attention to market risks indicated by . . . heightened market impact costs (as indicated by widening bid/ask spreads)'').

[546] *See* Proposing Release, *supra* footnote 9, at section III.B.2.d (discussing the proposed requirement for a fund to consider, to the extent applicable, its portfolio assets' bid-ask spreads when assessing its portfolio assets' liquidity).

[547] *See* MarketAxess, The MarketAxess Bid-Ask Spread Index (BASI): A More Informed Picture of Market Liquidity in the U.S. Corporate Bond Market (2013), *available at http://www.marketaxess.com/pdfs/research/marketaxess-bid-ask-spread-index-BASI.pdf* (discussing methodology for developing an index that tracks bid-ask spreads of U.S. corporate bonds).

[548] *See, e.g.,* Got Liquidity?, *supra* footnote 452, at 7; *see also* Rich Estabrook, *Diminished Liquidity in the Corporate Bond Market: Implications for Fixed Income Investors,* Oppenheimer (Mar. 16, 2015), at 1, *available at http://www.opco.com/trend-analysis/final_liquidity_report-031615.pdf.*

[549] *See, e.g.,* Michael A. Goldstein & Kenneth A. Kavajecz, *Eighths, Sixteenths, and Market Depth: Changes in Tick Size and Liquidity Provision on the NYSE,* 56 J. Fin. Econ. 125 (2000), *available at https://www.researchgate.net/publication/4978467_Eighths_Sixteenths_and_Market_Depth_Changes_in_Tick_Size_and_Liquidity_Provision_on_the_Nyse* (''Using limit order data provided by the NYSE, we investigate the impact of reducing the minimum tick size on the liquidity of the market. While both spreads and depths (quoted and on the limit order book) declined after the NYSE's change from eighths to sixteenths, depth declined throughout the entire limit order book as well. The combined effect of smaller spreads and reduced cumulative limit order book depth has made liquidity demanders trading small orders better off; however, traders who submitted larger orders in lower volume stocks did not benefit, especially if those stocks were low priced.''); Hendrik Bessembinder, *Tick Size, Spreads, and Liquidity: An Analysis of Nasdaq Securities Trading Near Ten Dollars,* 9 J. of Fin. Intermediation 213 (July 2000), *available at http://www.acsu.buffalo.edu/~keechung/MGF743/Readings/G4.pdf* (''There is no evidence of a reduction in liquidity with the smaller tick size. The largest spread reductions occur for stocks whose market makers avoid odd-eighth quotes. This finding provides support for models implying that changes in the tick size can affect equilibrium spreads on a dealer market and indicates that the relation between tick size and market quality is more complex than the imposition of a constraint on minimum spread widths.'').

[550] *See* HSBC Comment Letter.

[551] *See* Proposing Release, *supra* footnote 9, at section III.B.2.e (discussing the proposed requirement for a fund to consider, to the extent applicable, the standardization and simplicity of structure of its portfolio assets when assessing its portfolio assets' liquidity).

investments.[552] However, standardization alone may not be indicative of an investment's liquidity. For example, corporate bond issuers commonly have large numbers of bonds outstanding, and trading can be fragmented among that universe of bonds.[553] However, as discussed above, we understand that market participants may consider many corporate bonds to be highly comparable and substitutable from a liquidity perspective, to the extent that they share common characteristics such as issuer, sector, credit quality, and maturity.[554]

f. Maturity and Date of Issue of Fixed Income Securities

We continue to believe that, with respect to the fixed income investments a fund holds in its portfolio, those investments' maturity, as well as their date of issue, are significant indicators of their liquidity.[555] In general, a fixed income asset trades most frequently in the time directly following issuance, and its trading volume decreases in the asset's remaining time to maturity.[556] Thus ''on-the-run'' securities (that is, bonds or notes of a particular maturity that were most recently issued) tend to trade significantly more frequently than their ''off-the-run'' counterparts (that is, bonds or notes issued before the most recently issued bond or note of a particular maturity).[557] Because high trading volume generally suggests relatively high liquidity,[558] a fixed income asset's date of issuance and maturity, which in turn are generally correlated with the trading volume of a fixed income asset, together are important liquidity indicators. We understand, based on staff outreach and industry knowledge, that remaining time to maturity is a key factor that fixed income funds commonly consider in assessing the liquidity of their portfolio positions.

g. Restrictions on Trading; Limitations on Transfer

We continue to believe that restrictions on trading certain investments, as well as limitations on an investment's transfer, may adversely affect those investments' liquidity.[559] For example, although we are replacing existing Commission guidance on identifying illiquid assets (including the specific factors listed in the Rule 144A Release regarding the liquidity of a rule 144A security)[560] with new regulatory requirements regarding the process for determining that certain investments are illiquid, we believe that the restricted nature of a rule 144A security is one factor that generally should be considered by a fund in evaluating the liquidity of a rule 144A security.[561] Regardless of whether a portfolio investment is a restricted security, it may nevertheless be subject to other limitations on transfer. For example, for securities that are traded in certain foreign markets, government approval may be required for the repatriation of investment income, capital, or the proceeds of sales of securities by foreign investors.[562] Portfolio investments furthermore may be subject to certain contractual limitations on transfer.[563] Securities subject to transfer limitations in general are less liquid than securities without such limitations.

[552] See, *e.g.,* Yee Cheng Loon & Zhaodong (Ken) Zhong, The Impact of Central Clearing on Counterparty Risk, Liquidity, and Trading: Evidence from the Credit Default Swap Market, 112 J. of Fin. Econ. 91 (Apr. 2014), *available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2176561* (analyzing the impact of central clearing on credit default swaps and finding that cleared reference entities experience an improvement in both liquidity and trading activity relative to non-cleared entities); Joshua Slive, Jonathan Witmer & Elizabeth Woodman, Liquidity and Central Clearing: Evidence from the CDS Market, Bank of Canada Working Paper 2012–38 (Dec. 2012), *available at http://www.bankofcanada.ca/wp-content/uploads/2012/12/wp2012-38.pdf* (analyzing ''the relationship between liquidity and central clearing using information on credit default swap clearing at ICE Trust and ICE Clear Europe,'' and finding that ''the introduction of central clearing is associated with a slight increase in the liquidity of a contract'' (but noting that the effects of central clearing on liquidity must be viewed in light of the fact that the central counterparty chooses the most liquid contracts for central clearing, consistent with liquidity characteristics being important in determining the safety and efficiency of clearing)). *But see* Manmohan Singh, Collateral, Netting and Systemic Risk in the OTC Derivatives Market, IMF Working Paper 10/99 (Apr. 1, 2010), *available at https://www.imf.org/external/pubs/cat/longres.cfm?sk=23741.0* (arguing that large increases in collateral posted for the centrally cleared trades negatively affect market liquidity given that most large banks will be reluctant to offload their positions to central counterparties).

[553] For example, while each of the top ten largest issuers in the United States had one common equity security outstanding as of April 2014, these issuers collectively had more than 9,000 bonds outstanding. *See* BlackRock, *Corporate Bond Market Structure: The Time for Reform Is Now,* Viewpoint (Sept. 2014), at 7, *available at https://www.blackrock.com/corporate/en-mx/literature/whitepaper/viewpoint-corporate-bond-market-structure-september-2014.pdf.*

[554] *See supra* footnote 536 and accompanying text.

[555] *See* Proposing Release, *supra* footnote 9, at section III.B.2.f (discussing the proposed requirement for a fund to consider, with respect to fixed income assets, these assets' maturity and date of issue when assessing their liquidity).

[556] *See, e.g.,* Sugato Chakravarty & Asani Sarkar, Liquidity in U.S. Fixed Income Markets: A Comparison of the Bid-Ask Spread in Corporate, Government and Municipal Bond Markets, Federal Reserve Board of New York Staff Report No. 73 (Mar. 1999), *available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=163139.*

[557] The on-the-run phenomenon refers to the fact that, in fixed income markets, securities with nearly identical cash flows trade at different yields and with different liquidity. In particular, most recently issued (*i.e.,* on-the-run) government bonds of a certain maturity are generally more liquid than previously issued (*i.e.,* off-the-run or old) bonds maturing on similar dates. *See, e.g.,* Paolo Pasquariello & Clara Vega, *The on-the-run liquidity phenomenon,* 92 J. of Fin. Econ. 1–24 (Apr. 2009), *available at http://webuser.bus.umich.edu/ppasquar/onofftherun.pdf* (analyzing the liquidity differentials of on-the-run and off-the-run U.S. Treasury bonds and finding, among other things, that on-the-run and off-the-run liquidity differentials are economically and statistically significant—showing that on-the-run bonds tend to be more liquid than their off-the-run counterparts—even after controlling for certain intrinsic characteristics of the bonds); Michael Barclay, Terrence Hendershott & Kenneth Kotz, *Automation versus Intermediation: Evidence from Treasuries Going Off the Run,* 61 J. of FIN. 2395 (Oct. 2006), *available at http://faculty.haas.berkeley.edu/hender/on-off.pdf* (discussing how ''when Treasury securities go 'off the run' their trading volume drops by more than 90%'').

[558] *See supra* section III.C.4.b.

[559] *See* Proposing Release, *supra* footnote 9, at section III.B.2.g (discussing the proposed requirement for a fund to consider restrictions on trading and limitations on transfer in classifying the liquidity of each portfolio asset).

[560] *See* Rule 144A Release, *supra* footnote 37, at text following n.62.

[561] *See id.* While we are withdrawing the guidance in the Rule 144A Release, including the guidance that boards are responsible for determining if a security is liquid or illiquid, we note that the guidance factors discussed in the Rule 144A Release are consistent with certain of the guidance factors discussed in this Release.

[562] *See, e.g.,* HSBC Comment Letter; HSBC Global Research, Emerging Markets Currency Guide 2012 (Dec. 2011), *available at https://www.hsbcnet.com/gbm/attachments/rise-of-the-rmb/currency-guide-2012.pdf?WT.ac=CIBM_gbm_pro_rmbrise_pbx01_On; see also* Liquidity Coverage Ratio Release, *supra* footnote 520, at section II.B.3.iv (discouraging banking entities from holding a disproportionate amount of their eligible highly qualified liquid assets in locations outside the United States where unforeseen impediments may prevent timely repatriation of such assets during a liquidity crisis).

[563] *See, e.g.,* Stephen H. Bier, Julien Bourgeois & Joseph McClain, *Mutual Funds and Loan Investments,* The Investment Lawyer: Covering Legal and Regulatory Issues of Asset Management, Vol. 22, No. 3 (Mar. 2015), at 2, *available at http://www.dechert.com/files/Uploads/Documents/FSG/Mutual%20Funds%20and%20Loan%20Investments%20-%20The%20Investment%20Lawyer.pdf* (''[M]any loans and assignment trades remain bespoke transactions that require consents from borrowers or key syndicate members, and loan documents are still negotiated written documents that require human review. As a result . . . the mechanics of loan trades and certain trade settlement times cause funds to carefully monitor liquidity considerations surrounding loan investments. . . . [In making such determinations, funds] typically consider factors common to general liquidity determinations, as well as factors specific to the loan markets, which can include: (i) The legal limitations on the transferability or sale of a loan including the requirement to obtain consents from borrowers or syndicate agents and members prior to assignment; (ii) the existence of a trading market for the loans and the estimated depth of the market; (iii) the frequency of trades or quotes for the loan; (iv) the estimated length of the settlement period; and (v) the borrower's health.'').

5. Liquidity Classification Review Requirement

Under rule 22e–4 as adopted today, a fund would be required to review its portfolio investments' classifications at least monthly in connection with reporting the liquidity classification for each portfolio investment on Form N–PORT, as well as more frequently if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of its investments' classifications.[564] A fund generally could classify and review the liquidity classifications of its portfolio investments according to their asset class; however, the fund must separately classify and review any investment within an asset class if the fund or its adviser, after reasonable inquiry, has information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of that investment as compared to other securities within that asset class.[565]

As discussed in the Proposing Release, the Commission has previously stated that it ''expects funds to monitor portfolio liquidity on an ongoing basis to determine whether, in light of current circumstances, an adequate level of liquidity is being maintained.'' [566] Some have interpreted this statement to mean that the Commission does not intend for a fund to reassess the liquidity status of *individual* securities on an ongoing basis, but instead to monitor whether a fund *portfolio's* overall liquidity profile is appropriate in light of its redemption obligations.[567] While we agree that a fund should monitor the liquidity of its portfolio holistically, we note that the decreased liquidity of individual portfolio components can directly affect the ability of a fund to meet its redemption obligations without significant dilution of remaining investors' interests in the fund.[568] We thus believe that specifically requiring a fund to review the classifications of its portfolio investments made under rule 22e–4 would reduce the risk that a fund would be unable to meet its redemption obligations without significant investor dilution.

As proposed, rule 22e–4 would have required a fund to review its liquidity classifications on an ongoing basis.[569] Also, like the proposed classification requirement, the proposed review requirement would have required a fund to take into account a list of specified factors, as the fund determines applicable, in reviewing its portfolio assets' liquidity.[570] In the Proposing Release, we stated that a fund may wish to determine the frequency of ongoing review of portfolio positions' liquidity classifications based in part on the liquidity of its portfolio holdings, as well as the timing of its portfolio acquisitions and turnover.[571] In addition, we noted in the Proposing Release that, at a minimum, a fund would review its liquidity classifications at least monthly in order to accurately report this information on proposed Form N–PORT.[572] Proposed rule 22e–4 did not include provisions that would permit a fund to review its portfolio assets' liquidity on an asset-class basis.

We sought comment in the Proposing Release about the proposed ongoing review requirement. Several commenters suggested that the Commission adopt a general liquidity classification review requirement, without incorporating specific factors that a fund would be required to consider during the course of its review.[573] One commenter argued that the frequency of the proposed review requirement was unclear and recommended that the Commission adopt more specific standards associated with review frequency.[574] Multiple commenters expressed concerns about the potential burden associated with an ''ongoing'' review requirement [575] and suggested that these concerns could be mitigated by replacing the proposed requirement to classify the liquidity of each portfolio position with a ''top-down'' requirement permitting funds to classify their portfolio assets' liquidity on an asset-class basis.[576]

We believe that the review requirement we are adopting, together with the rule provision specifying that a fund would generally be permitted to review its liquidity classifications with reference to its holdings' asset classes, advances our goal of requiring funds to appropriately re-evaluate the liquidity of their portfolio holdings, while responding to commenters' concerns. As discussed in the Proposing Release, we understand that some funds currently may not review the liquidity of their portfolio investments on a continuing basis after they are acquired.[577] In particular, we understand that certain funds may initially determine that certain investments are liquid or illiquid but will not regularly re-evaluate these initial classifications, even in light of changing market conditions. We understand that some funds, on the other hand, currently reassess the liquidity of their portfolio investment regularly based on market-wide developments, as well as events affecting particular securities or asset classes.[578]

Rule 22e–4 as adopted requires a fund to review its liquidity classifications at least monthly, in connection with reporting its liquidity classifications monthly on Form N–PORT.[579] This requirement responds to the recommendation that the Commission adopt more specific standards associated with review frequency. Moreover, in order to determine whether its holdings are consistent with the fund's highly liquid investment minimum, as well as the rule 22e–4 limitation on illiquid investments, a fund would have to determine whether its initial classification determinations have changed based on market conditions or other developments. Therefore, rule 22e–4 also includes the requirement for a fund to review its liquidity classifications more frequently than monthly if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of its investment classifications.[580] For example, relevant market-wide developments could include changes in interest rates or other macroeconomic events, market-wide volatility, market-wide flow changes, dealer inventory or capacity changes, and extraordinary

[564] *See* rule 22e–4(b)(1)(ii).

[565] *See* rule 22e–4(b)(1)(ii)(A).

[566] *See* Proposing Release, *supra* footnote 9, at nn.246–248 and accompanying text (citing Guidelines Release, *supra* footnote 38, at section II).

[567] *See id.,* at n.247 (citing Investment Company Institute, *Valuation and Liquidity Issues for Mutual Funds* (Feb. 1997), at 45).

[568] *See, e.g.,* Third Avenue Temporary Order, *supra* footnote 12 (''On December 9, 2015, after considering the environment the Fund was in and the likelihood that incremental sales of portfolio securities to satisfy additional redemptions would have to be made at prices that would unfairly disadvantage all remaining shareholders, the Board determined that the fairest action on behalf of all shareholders would be to adopt a plan of liquidation.''); *see also* Heartland Release, *supra* footnote 80.

[569] Proposed rule 22e–4(b)(2)(i).

[570] Proposed rule 22e–4(b)(2)(ii).

[571] *See* Proposing Release, *supra* footnote 9, at text accompanying n.252.

[572] *See id.,* at n.253.

[573] *See, e.g.,* CFA Comment Letter; Vanguard Comment Letter.

[574] *See* Better Markets Comment Letter.

[575] *See, e.g.,* Dechert Comment Letter; ICI Comment Letter I; LSTA Comment Letter; T. Rowe Comment Letter.

[576] *See, e.g.,* LSTA Comment Letter.

[577] *See* Proposing Release, *supra* footnote 9, at paragraph accompanying n.250.

[578] *See id.,* at n.250 and accompanying text; *see also* ICI Comment Letter I.

[579] *See* rule 22e–4(b)(1)(ii).

[580] *See id.*

events such as natural disasters or political upheaval.[581] Asset-class and investment-specific developments that a fund may wish to consider include, among others, regulatory changes affecting certain asset classes and corporate events (such as bankruptcy, default, pending restructuring, or delisting, as well as reputational events). We believe that the rule's requirement that a fund review its liquidity classifications at least monthly, as well as more frequently in light of market-related and other changes that could materially affect a fund's investment classifications, will provide funds with more direction as to the frequency of their classification reviews, as well as circumstances that could lead to a classification review, than the proposed ongoing review requirement.

We believe that the review requirement we are adopting, as opposed to the proposed ongoing review requirement, permits funds to tailor their review of liquidity classifications in light of the liquidity character of a fund's portfolio investments. The modifications to rule 22e–4 clarify that we do not expect a fund to constantly reassess all of its portfolio investments' liquidity. Also, the review requirement that we are adopting would not require a fund to consider a detailed list of specific factors in the course of conducting its liquidity classification reviews. Instead, as discussed above, it would require a fund to take into account ''relevant market, trading, and investment-specific considerations'' in reviewing its investments' liquidity.[582]

Finally, the review requirement that we are adopting, like the rule 22e–4 classification requirement, would permit a fund to generally review its portfolio investments' liquidity according to their asset class (provided that the fund must identify, and separately review, any investment within an asset class that the fund determines should be reviewed separately based on its liquidity characteristics).[583] We believe that this approach will permit funds to increase their efficiency in classifying and reviewing portfolio investments' liquidity.

6. Liquidity Classification Reporting and Disclosure Requirements

In connection with the liquidity classification requirement of rule 22e–4, we are requiring, largely as proposed and with certain modifications in response to comments, a fund to report the liquidity classification assigned to each of the fund's portfolio investments on Form N–PORT.[584] Position-level liquidity classification information will be reported to the Commission in a structured data format on a confidential basis rather than released every three months to the public.[585] Under the final rules, a fund will also be required to publicly report on Form N–PORT the aggregated percentage of its portfolio investments that falls into each of the four liquidity classification categories outlined above.[586] This aggregate information will be disclosed to the public only for the third month of each fiscal quarter with a 60-day delay. While we acknowledge that liquidity classification determinations may be to some extent subjective and that such information reported on Form N–PORT may be non-standardized, we believe that, on balance, our staff, investors, and other potential users would benefit from the information that will be reported on Form N–PORT that currently may not be reported or disclosed by funds. We believe that this greater transparency about liquidity at the fund-level will provide our staff, investors, and other potential users with a helpful picture of the general liquidity characteristics of funds and help them better understand the liquidity risks associated with a particular fund. We also believe that this information will help investors make more informed investment decisions.

As part of this public disclosure, a fund would publicly disclose the percentages of its highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, the fund's derivatives transactions that the fund has classified in the moderately liquid, less liquid, and illiquid investments classification categories in light of the requirement in rule 22e–4 that the liquidity classification cover each of the fund's derivatives transactions, discussed above.[587] This derivatives transactions information will also be made public for the third month of each fiscal quarter with a 60-day delay.

Most commenters opposed the proposed Form N–PORT reporting requirement, and particularly objected to having position-level liquidity information reported on Form N–PORT made public.[588] We believe that the additions to Form N–PORT adopted today in this Release address many of these concerns. We discuss these additions, the comments we received on the proposal, as well as modifications we made to the proposal in response to comments, in more detail below.

a. Reporting Liquidity Classification of Portfolio Investments

We proposed to require a fund to report on Form N–PORT the liquidity classification of each of the fund's positions (or portions of a position) in a portfolio asset using the proposed classification system of rule 22e–4.[589] As discussed above, most commenters opposed the proposed classification regime, and many offered varied classification alternatives for fund liquidity risk management and reporting purposes. As discussed previously, we are today adopting a liquidity classification requirement under rule 22e–4 based on a ''days-to-cash'' framework as proposed, but with a number of modifications informed by commenter recommendations that we believe address many commenters' concerns about the classification process itself.

A number of commenters supported reporting liquidity classifications to the Commission on Form N–PORT, provided that it was not publicly disclosed.[590] For example, one

[581] *See, e.g.,* 2014 Fixed Income Guidance Update, *supra* footnote 94.

[582] *See* rule 22e–4(b)(1)(ii).

[583] *See* rule 22e–4(b)(1)(ii)(A).

[584] Rather than report the liquidity classification among six categories as under the proposal, funds will be required to report liquidity classifications among four liquidity categories, which may be based on asset type to the extent discussed above. *See* Item C.7. of Form N–PORT. We have modified the numbering convention for items within Form N–PORT from the proposal to be consistent with Form N–PORT as adopted in the Investment Company Reporting Modernization Adopting Release.

[585] *See* General Instruction F of Form N–PORT.

[586] Item B.8.a. of Form N–PORT. We note that such reporting is designed to serve as a snapshot of a fund's liquidity on the last business or calendar day of the month. *See* rule 30b1–9 under the Investment Company Act (requiring reporting on Form N–PORT to be current as of the last business day, or last calendar day, of the month). Accordingly, the aggregate percentage of portfolio investments in each of the four liquidity classification categories need not reflect pending transactions, but instead should reflect the balance of investments in each category on the last business or calendar day of the month.

[587] Item B.8.b. of Form N–PORT. This derivatives transactions reporting requirement corresponds to the modification in rule 22e–4(b)(1)(ii)(C), discussed above.

[588] *See, e.g.,* Cohen & Steers Comment Letter; NYC Bar Comment Letter; SIFMA Comment Letter I; Wellington Comment Letter.

[589] *See* Proposing Release, *supra* footnote 9, at section III.G.2.a.

[590] *See, e.g.,* Dechert Comment Letter; Interactive Data Comment Letter; J.P. Morgan Comment Letter; Nuveen Comment Letter. Some commenters suggested that the Commission evaluate reported classification data for a period of time to determine whether the information is appropriate for public disclosure. *See* BlackRock Comment Letter; Fidelity Comment Letter; SIFMA Comment Letter III.

commenter expressed support for reporting position-level liquidity classifications to the Commission, noting that the Commission should have the data it needs to monitor fund holdings and liquidity determinations, examine potential outliers, and, if an unexpected market event occurs (*e.g.,* the default of a significant institution), quickly assess the potential impact on mutual funds it supervises.[591] Another commenter expressed the belief that the proposed liquidity classifications data could be appropriate for Commission oversight purposes.[592]

On the other hand, a few commenters objected to reporting liquidity classifications, as proposed, even if such information is disclosed only to the Commission.[593] Some commenters stated that there is limited utility in the proposed classification information for the Commission since the information would be subjective and methodology-specific, which would lead to results that would preclude comparisons across funds, limiting the utility of this information for the Commission's monitoring of industry-wide data.[594] In addition, one commenter expressed concerns about the security of sensitive information filed with the Commission due to recent high-profile cybersecurity breaches both in the governmental and private sectors.[595]

We continue to believe that requiring funds to report the liquidity classification of their portfolio investments is vital to our ongoing monitoring and oversight efforts. A key goal of the rulemaking is to allow us to monitor funds' liquidity profiles (both on a fund-by-fund basis and across funds) over time, and respond as appropriate. Absent the required reporting on Form N–PORT, our ability to engage in such efforts would be limited and less efficient. We believe that the changes made to the classification system discussed above should serve to mitigate commenters' concerns about the difficulties of making comparisons across the industry, in light of the reduced number of categories for classification. We recognize that there is still likely to be variation between funds in how they classify certain asset classes and investments, and believe that despite any variations, this liquidity information will be useful and valuable to us. We will be able to identify different fund liquidity classification practices, and use that information to gain insight into how different funds view liquidity in the market, and whether there are any identifiable liquidity concerns. We also note that despite any concerns about variation of practices across funds limiting comparability, we expect that the reported information will allow us to generally monitor specific funds' liquidity on a consistent basis across time, and identify how their views of the liquidity of their investments change.

We believe that such information will assist us in better assessing liquidity risk in the open-end fund industry, which can inform our policy and guidance. We also believe that this information will assist us in monitoring for compliance with rule 22e–4 and identifying potential outliers in fund liquidity classifications for further inquiry, as appropriate. We recognize that liquidity classifications, similar to valuation- and pricing-related matters, inherently involve judgment and estimations by funds. We also understand that the liquidity classification of an asset class or investments may vary across funds depending on the facts and circumstances relating to the funds and their trading practices.[596] We do not believe that data based on estimations of market conditions on a fund-by-fund basis is uninformative or of limited utility because of the information's sometimes fund-specific, subjective nature.[597] Rather, we believe that even with potential variances in determinations, the liquidity information reported will be informative to the Commission. Furthermore, we believe that members of the fund industry are generally in the best position to provide current information on the conditions of fund liquidity since they are in the markets every day trading securities and observe how markets are evolving and related liquidity characteristics are changing.

In sum, we believe that the modified reporting requirements on Form N–PORT will provide the Commission with meaningful data concerning the liquidity of portfolio investments across the fund industry and at the same time lessen burdens on funds classifying and reporting liquidity information (compared to the proposal). Accordingly, we are adopting the requirement for funds to report the liquidity classification of their portfolio investments to the Commission.

b. Non-Public Disclosure of Liquidity Classification Information Reported on Form N–PORT

We proposed that liquidity classification information reported on Form N–PORT at the portfolio position level be disclosed to the public for the third month of each fiscal quarter with a 60-day delay. One commenter expressed general support for regulatory initiatives aimed at improving transparency.[598] Several commenters expressed support for public disclosure of liquidity information if the framework for classification was modified from the proposed six-category liquidity classification framework to alternative frameworks proposed by commenters that generally measured the liquidity of portfolio positions based on asset type and included less classification categories.[599]

On the other hand, most commenters opposed the proposed public disclosure of the liquidity classification. Some commenters expressed concerns that the value to the public of the position-level liquidity classification information on Form N–PORT, as proposed, would be limited.[600] Many other commenters expressed concerns that the public disclosure of the position-level liquidity classification information could be potentially misleading to investors for various reasons. For example, many commenters contended that, while the position-by-position information reported would be subjective, the numeric days-to-settlement presentation proposed on Form N–PORT could imply a false sense of precision of the data to

[591] *See* J.P. Morgan Comment Letter.

[592] *See* State Street Comment Letter.

[593] *See* Federated Comment Letter; Fidelity Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I.

[594] *See, e.g.,* BlackRock Comment Letter; Fidelity Comment Letter; Wellington Comment Letter.

[595] *See* Invesco Comment Letter.

[596] *See, e.g.,* Comment Letter of the Investment Company Institute on Investment Company Reporting Modernization Release (Aug. 11, 2015) (''These [liquidity] judgments may differ among personnel and certainly among fund complexes.''); Comment Letter of Invesco Advisers, Inc. on Investment Company Reporting Modernization Release (Aug. 11, 2015) (''Invesco and other fund complexes could reasonably differ in their assessments of the liquidity of a particular security, even though both complexes have a sound method for determining liquidity and follow their own reasonable procedures.'').

[597] *See supra* footnote 594 and accompanying text.

[598] *See* Interactive Data Comment Letter.

[599] *See, e.g.,* Charles Schwab Comment Letter; FSR Comment Letter; Nuveen Comment Letter; Vanguard Comment Letter.

[600] *See, e.g.,* Better Markets Comment Letter (expressing concerns that the proposal's three-day liquid asset minimum and 15% standard assets are determined by the fund and that the liquidity classifications reported on Form N–PORT would be stale information for the public); Morningstar Comment Letter (also stating concerns that the information available to the public under the proposal would be stale and expressing the belief that investors could find it difficult to compare the liquidity characteristics of portfolios from different funds).

fund investors.[601] Many of these commenters also argued that providing subjective, position-level liquidity classification information to the public could potentially result in misleading comparisons across funds,[602] with some commenters noting that such comparisons could disadvantage certain funds over others.[603] While reports on Form N–PORT would be submitted to the Commission within 30 days after month end, some commenters voiced concerns that the liquidity data presented on Form N–PORT would be stale for the public given that the reports, as proposed, would be available every third month of a fund's fiscal quarter with a 60-day delay, adding to the risk of misleading investors about the real-time state of a portfolio's liquidity.[604]

Many commenters also expressed concerns that public disclosure of the proposed position-level liquidity classification information would ultimately harm fund shareholders and the fund market for a variety of reasons. Some commenters argued that public reporting would facilitate predatory trading practices, particularly during periods of liquidity stress, ultimately harming fund investors.[605] Commenters expressed the belief that public reporting of liquidity classifications at the position-level exacerbates these concerns, noting, for example, that in the event a fund experiences a liquidity issue, public information about its portfolio-level liquidity classifications may expose the fund to predatory trading.[606] In addition, several commenters expressed concern that public reporting of position-level liquidity classifications could be harmful to the fund market, arguing that such reporting would incentivize homogenized liquidity determinations and comparative liquidity ''ratings'' from third-party service providers,[607] as well as ''window dressing'' at period ends prior to disclosure, increasing the potential for systemic risks in the fund industry. [608] Other commenters suggested that the Commission evaluate reported classification data for a period of time to determine whether the information is appropriate for public disclosure.[609]

While many of these commenters objected to the proposed position-level public disclosure of liquidity classifications, several commenters did not object to making more aggregated portfolio-level disclosure of liquidity data available to the public.[610] These commenters suggested that, while position-level liquidity data may pose concerns as discussed above, providing the public a portfolio-level ''roll up'' of the liquidity levels of the fund may provide useful data and would be unlikely to raise the same kind of issues.[611]

We recognize that the level of position-level detail necessary for the Commission and our staff to effectively monitor fund liquidity may not be necessary for other users. We understand that some data collectors would prefer to use information reported on Form N–PORT proposed under the Investment Company Reporting Modernization proposal (which we are adopting concurrently), such as monthly portfolio holdings data, rather than the classification information proposed in the liquidity proposal.[612] Furthermore, we understand that for many investors, the proposed specific position-level liquidity data would be likely unnecessarily detailed, and that aggregated or ''rolled up'' portfolio-level information about fund liquidity may be more easily understandable and usable. As discussed below, such aggregated information will likely result in more user friendly and digestible portrayals of fund liquidity, and at the same time we expect will avoid many of the potential harms suggested by commenters that might result from position-level disclosure to the public. Such a layered reporting and disclosure regime should allow the Commission and investors each to access the liquidity information likely most useful for their purposes.

We also appreciate the limitations and subjectivity of the liquidity classification process, and thus understand the risks of investors potentially giving too much weight to a fund manager's individual liquidity classification choices. The classification of portfolio investments at the position-level under the days-to-cash framework involves a number of assumptions and methodologies that could result in classifications that vary from fund to fund. As a result, the liquidity classification information reported for the same or similar asset classes and investments could vary because of complex differences in methodologies and assumptions that may not be reported on Form N–PORT nor easily explained to investors but would be available to the Commission in inspections.[613]

We appreciate the concerns raised by commenters that reporting publicly position-level data could imply a false sense of precision about the liquidity profile of a fund and that, given the delay in the public reporting of portfolio-level classification information (60 days after quarter-end), the position-level information will likely be out of date when reviewed by investors. While we can take these potential variances in liquidity classifications of assets into account in evaluating and using the data for the Commission's purposes in observing potential trends in liquidity profiles across the fund industry, it may be more difficult to explain them to investors. Furthermore, the Commission would receive portfolio-level classification information within 30 days of month-end, thereby increasing the utility of the classification information for Commission purposes. We expect that providing only aggregated liquidity classification information on the funds' portfolio assets publicly may mitigate some of these concerns. This level of detail should appropriately focus investors on the fund's general liquidity profile and general trends in fund liquidity rather than individual security-level liquidity decisions, in light of the concerns discussed above.

Some commenters also raised concerns that public reporting of

[601] *See, e.g.,* Dechert Comment Letter; Eaton Vance Comment Letter I; Federated Comment Letter; LSTA Comment Letter; Morningstar Comment Letter.

[602] *See, e.g.,* BlackRock Comment Letter; IDC Comment Letter; J.P. Morgan Comment Letter; Voya Comment Letter.

[603] *See, e.g.,* BlackRock Comment Letter; IDC Comment Letter; ICI Comment Letter I; Wellington Comment Letter.

[604] *See, e.g.,* FSR Comment Letter; LSTA Comment Letter; Morningstar Comment Letter (noting that given public disclosure on N–PORT would be provided infrequently, the information might well be very out of date when an investor reviews it, thereby providing little benefit to investors); NYC Bar Comment Letter.

[605] *See* BlackRock Comment Letter (stating that publicly available position-level data exacerbated Third Avenue's troubles as other market participants knew of the holdings of the Focused Credit Fund and used that information to the detriment of the fund). *See also e.g.,* Federated Comment Letter; ICI Comment Letter I; SIFMA Comment Letter I; Voya Comment Letter.

[606] *See, e.g.,* SIFMA Comment Letter I.

[607] *See, e.g.,* Charles Schwab Comment Letter; Wellington Comment Letter; Comment Letter of Wellington Management Company LLP (June 10, 2016) (''Wellington Comment Letter II''); Wells Fargo Comment Letter.

[608] *See, e.g.,* Dechert Comment Letter; LSTA Comment Letter; NYC Bar Comment Letter; Oppenheimer Comment Letter.

[609] *See, e.g.,* BlackRock Comment Letter; Fidelity Comment Letter; SIFMA Comment Letter I.

[610] *See, e.g.,* Nuveen Comment Letter; T. Rowe Comment Letter.

[611] *See, e.g.,* Nuveen Comment Letter; T. Rowe Comment Letter.

[612] *See* Morningstar Comment Letter.

[613] A fund has the option of providing explanatory notes related to its filing to explain any of its methodologies, including related assumptions, in Part E of Form N–PORT. *See* Instruction G to Form N–PORT.

liquidity classifications at the position level could potentially expose investors to harm, including, for example, potentially exposing a fund to predatory trading, particularly during periods of liquidity stress.[614] We believe, however, that the aggregated public disclosure on Form N–PORT once each quarter with a 60-day lag would alleviate these predatory trading concerns given that those engaged in predatory trading would not have information about a fund's own assessment of its liquidity characteristics in real-time and would not have the detailed position-level information in real time necessary to pursue such strategies.

For these reasons, we find that it is neither necessary nor appropriate in the public interest or for the protection of investors to make liquidity classification information for each portfolio investment publicly available.[615] We also are adopting amendments to Form N–PORT to require a fund to publicly disclose the aggregated percentage of its portfolio assets representing each of the four classification categories outlined in Form N–PORT and related rule 22e–4,[616] as discussed in more detail below. We believe that providing liquidity classification data attributable to each portfolio investment to the Commission and fund-level data to investors is an efficient approach to present liquidity information in a manner that both satisfies the Commission's need for position-level liquidity data for its regulatory oversight purposes and provides useful fund liquidity information to investors.

In addition, the Commission recognizes the importance of sound data security practices and protocols for non-public information, including information that may be competitively sensitive. The Commission has substantial experience with storage and use of non-public information reported on Form PF and delayed public disclosure of information on Form N–MFP (although the Commission no longer delays public disclosure of reports on Form N–MFP), as well as other non-public information that the Commission handles in its ordinary course of business. Commission staff is carefully evaluating the data security protocols that will apply to non-public data reported on Form N–PORT in light of the specific recommendations and concerns raised by commenters. Drawing on its experience, the staff is working to design controls and systems for the use and handling of Form N–PORT data in a manner that reflects the sensitivity of the data and is consistent with the maintenance of its confidentiality.[617] In advance of the compliance date, we expect that the staff will have reviewed the controls and systems in place for the use and handling of non-public information reported on Form N–PORT.

c. Public Fund-Level Aggregate Liquidity Profile Reporting

As previously discussed, we are adopting, with modifications, the proposed requirement that funds report to the Commission on a non-public basis the liquidity classification assigned to each portfolio position on Form N–PORT. Some commenters expressed concerns that the value to the public of the position-level liquidity classification information on Form N–PORT, as proposed, would be limited.[618] Other commenters recommended that, as an alternative to the proposal, the Commission make available to the public a general assessment of the liquidity of the portfolio at the fund level, rather than the individual security level,[619] with more detailed information, including the fund's assessment of the liquidity of each asset at the individual security level, provided to the Commission but kept confidential.[620]

We appreciate these comments and recognize that position-level liquidity classification data, while valuable for Commission purposes, may be of limited use for everyday investors. We find persuasive commenters' recommendations to provide the public with a general assessment of the liquidity of a portfolio at the fund level as an approach to provide everyday investors useful information on fund liquidity. As a result, we are adopting amendments to Form N–PORT to require a fund to publicly report for the third month of each fiscal quarter with a 60-day delay the aggregate percentage of its portfolio representing each of the four classification categories outlined in Form N–PORT and related rule 22e–4.[621] For purposes of this reporting item, a fund would report the aggregate percentage of investments that are assets in each liquidity category compared to total portfolio investments that are assets (not including liabilities) of the fund.[622]

In order to avoid misleading investors about the actual availability of highly liquid investments to meet redemptions, a fund also will be required to publicly report on Form N–PORT the percentage of its highly liquid investments that it has segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions that are classified as moderately liquid, less liquid, or illiquid investments.[623] As discussed above, we proposed to require a fund to consider the relationship of an asset to another portfolio asset in classifying the liquidity of its portfolio assets reported on Form N–PORT and to consider guidance that a fund should classify the liquidity of assets segregated to cover derivatives obligations using the liquidity of the derivative instruments such assets are covering.[624] One commenter suggested that the Commission add an item to the Schedule of Portfolio Investments on Form N–PORT that permits a fund to note whether an asset (or portion thereof) is encumbered or linked to other assets as of the reporting date.[625] Another commenter suggested that the Commission require funds to assign liquidity classifications to cover assets on an aggregate portfolio basis in amounts corresponding to the aggregate amount of derivatives exposure in each liquidity category.[626]

In consideration of the commenters' recommendations, we believe that our modification to the proposal to require a fund to report publicly the percentage of the fund's highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, the fund's derivatives

[614] *See, e.g.,* ICI Comment Letter; Cohen and Steers Comment Letter; Dechert Comment Letter; Nuveen Comment Letter.

[615] *See* section 45(a) of the Investment Company Act, which requires information in investment company forms to be made available to the public, unless we find that public disclosure is neither necessary nor appropriate in the public interest or for the protection of investors. *See also* General Instruction F of Form N–PORT.

[616] *See* Item B.8. of Form N–PORT.

[617] *See* Reporting by Investment Advisers to Private Funds and Certain Commodity Pool Operators and Commodity Trading Advisors on Form PF, Investment Advisers Act Release No. 3308 (Oct. 31, 2011) [76 FR 71228 (Nov. 16, 2011)]. We recognize that there are differences between the N–PORT reporting requirements and the Form PF reporting requirements, such as frequency, granularity, and registration status, and our recognition of these differences guides our evaluation of appropriate measures for preservation of data security for reported information.

[618] *See, e.g.,* Better Markets Comment Letter; Morningstar Comment Letter.

[619] *See, e.g.,* Dechert Comment Letter; Federated Comment Letter; LSTA Comment Letter; NYC Bar Comment Letter.

[620] *See, e.g.,* SIFMA Comment Letter I; Charles Schwab Comment Letter.

[621] *See* Item B.8.a. of Form N–PORT.

[622] *See id.*

[623] *See* Item B.8.b. of Form N–PORT; *see also supra* section III.C.3.c.

[624] *See* Proposing Release, *supra* footnote 9, at section III.B.2; *see also supra* section III.C.3.c.

[625] *See* ICI Comment Letter I; *see also supra* section III.C.3.c.

[626] *See* Dechert Comment Letter; *see also supra* section III.C.3.c.

transactions that are classified in each liquidity category strikes an appropriate balance between providing investors with useful information about the impact of derivatives coverage obligations on the percentage of a fund's highly liquid investments and lessening operational burdens associated with classifying investments. Since the public will only receive asset liquidity classification information on an aggregate level and only the Commission will receive liquidity classifications on an investment-by-investment basis, we believe that the suggested alternative to add an item to the Schedule of Portfolio Investments on Form N–PORT linking an asset encumbered to other assets in connection with derivatives transactions would not be a helpful means to inform investors about the connection between derivatives obligations and the availability of highly liquid investments to meet redemptions. We believe that without public reporting of the percentage of a fund's highly liquid investments that are segregated to cover, or pledged to satisfy margin requirements in connection with, a fund's derivatives transactions that are not themselves highly liquid investments, the reported percentage of a fund's highly liquid investments could be potentially misleading to investors if a portion of highly liquid investments are not available to meet redemptions due to derivatives transactions obligations.

Overall, we continue to believe that investors currently have limited information about the liquidity of fund investments and would benefit from enhanced information to evaluate funds and assess the potential for returns and risks of a particular fund. We expect that many investors will use liquidity reporting information to better understand the liquidity risks associated with a particular fund for purposes of making more informed investment decisions and will benefit from aggregate information about a fund's overall liquidity. Moreover, we believe that requiring a fund to publicly disclose only the aggregate percentage of its portfolio assets representing each of the four classification categories balances commenters' concerns about certain adverse effects that could arise from public reporting of detailed portfolio liquidity information with investors' need for improved information about funds' liquidity risk profiles.

d. Illiquid Investments

As discussed above, rule 22e–4, as adopted, combines a fund's illiquid investment determinations with the general liquidity classification framework reported on Form N–PORT.[627] In the Proposing Release, in connection with the codification of the 15% guideline that an open-end fund may not invest in the aggregate more than 15% of its net assets in ''illiquid securities,'' we proposed to require funds to report on Form N–PORT whether each portfolio asset is a ''15% standard asset,'' as defined under the proposal,[628] in addition to reporting the liquidity of each of the fund's positions (or portions of a position) in a portfolio asset using six proposed categories.[629] One commenter opposed requiring reporting of the 15% standard asset at the individual portfolio asset level, raising concerns that public disclosure could have adverse effects on funds.[630] Another commenter opposed reporting of the 15% standard asset at the individual portfolio asset level if publicly disclosed in addition to the proposed six liquidity classification categories, stating that the distinction between the two pieces of data would make sense to industry experts but would be confusing and potentially misleading to typical investors.[631]

After considering these comments, we agree that presenting to the public liquidity classification information and the 15% standard asset designation separately could potentially confuse investors. As discussed in more detail in section III.C previously, we believe that it is more appropriate to harmonize the rule 22e–4 limit on illiquid investments, referred to as 15% standard assets under the proposal, with the rule's broader liquidity classification requirement by incorporating an illiquid investment category into the classification requirement. Likewise, we believe that this harmonization should be reflected in reports on Form N–PORT. Thus, we are adopting, modified from the proposal, an illiquid investment category into Form N–PORT that corresponds with rule 22e–4's broader classification requirement.[632] By doing this, a fund's exposure to illiquid investments may be viewed as part of the fund's overall liquidity profile in a more clear and concise manner. Furthermore, we are persuaded by some of the concerns raised by commenters regarding the unintended adverse effects that public disclosure of illiquid investment information on the portfolio position level could have on funds and fund investors. As adopted, liquidity classification information reported on the portfolio position level will be non-public on Form N–PORT, as discussed in more detail above.

We expect to use this information to monitor fund compliance with the prohibition of acquiring illiquid investments if the fund would have invested more than 15% of its net assets in illiquid investments that are assets and analyze liquidity trends in the fund industry. Overall, we believe that maintaining this information on illiquid investments as part of the liquidity classification information reported on Form N–PORT will provide the Commission with meaningful data, including information regarding exposure to illiquid investments across the fund industry.

D. Highly Liquid Investment Minimum

Today we are adopting a requirement that each fund determine its ''highly liquid investment minimum,'' or the minimum amount of the fund's net assets that the fund invests in highly liquid investments that are assets.[633] In determining its highly liquid investment minimum, a fund will be required to consider the factors the fund also has to consider, as applicable, in assessing its liquidity risk under rule 22e–4.[634] Additionally, in determining whether a fund is meeting its highly liquid investment minimum, the fund will look only to its investments that are assets of the fund.[635] Rule 22e–4 as adopted today also requires a fund to adopt and implement policies and procedures for responding to a shortfall in a fund's highly liquid investments below its highly liquid investment minimum.[636] These policies and procedures must include reporting to the fund's board of directors, no later than the board's next regularly scheduled meeting, regarding any shortfall of the fund's highly liquid investments compared to its minimum. A fund is required to report to its board

[627] *See supra* section III.C.2.d.

[628] *See* Proposing Release, *supra* footnote 9, at section III.G.2.b.

[629] *See* Proposing Release, *supra* footnote 9, at section III.G.2.a.

[630] *See* Cohen & Steers Comment Letter.

[631] *See* Federated Comment Letter.

[632] *See* Item C.7. of Form N–PORT.

[633] Rule 22e–4(a)(7). Rule 22e–4(a)(7) refers to highly liquid investments that are ''assets'' to make clear that when evaluating whether a fund is meeting its highly liquid investment minimum, the fund should look to its investments with positive values. Highly liquid investments that have negative values should not be netted against highly liquid investments that have positive values when calculating whether the fund is meeting its highly liquid investment minimum. Thus, only highly liquid investments that have positive values (*i.e.*, ''assets'') should be used in the numerator. *Cf. infra* footnote 744 (discussing the use of the term ''assets'' in the 15% limit on illiquid investments).

[634] Rule 22e–4(b)(1)(iii)(A)(1).

[635] Rule 22e–4(a)(7).

[636] Rule 22e–4(b)(1)(iii)(A)(3).

within one business day, and submit a non-public report to the Commission, if its highly liquid investment minimum shortfall lasts more than seven consecutive calendar days.[637] A fund's board of directors is not normally required to specifically approve the fund's highly liquid investment minimum, although during a time that a fund's highly liquid investments are below the fund's determined minimum level, a fund's highly liquid investment minimum can be changed only with board approval.[638] Additionally, a discussion of the fund's minimum must be included in the written annual report to the board on the adequacy and effectiveness of the fund's liquidity risk management program. Funds whose portfolio assets consist primarily of highly liquid investments, as well as In-Kind ETFs, are not subject to the highly liquid investment minimum requirement.[639]

As described in more detail below, this requirement is a modification of the proposed ''three-day liquid asset minimum,'' which also would have required a fund to determine the percentage of the fund's net assets to be invested in relatively liquid assets (under the proposal, ''three-day liquid assets,'' or cash and any asset convertible to cash within three business days at a price that does not materially affect the value of that asset immediately prior to sale).[640] In determining its three-day liquid asset minimum, the proposed rule would have required a fund to consider the factors the fund would have to consider, as applicable, in assessing its liquidity risk under rule 22e–4.[641] Under the proposal, a fund would have been prohibited from acquiring any asset other than a three-day liquid asset if, after acquisition, the fund would hold fewer three-day liquid assets than the percentage specified under its three-day liquid asset minimum.[642] Also under the proposal, a fund's board would have had to approve the fund's three-day liquid asset minimum and any changes thereto.[643]

The goal of the proposed three-day liquid asset minimum requirement was to increase the likelihood that a fund would hold adequate liquid assets to meet redemption requests without materially affecting the fund's NAV.[644] The proposed three-day liquid asset minimum also was intended to be structured in a way that would foster consistency in funds' consideration of relevant liquidity risk factors, while permitting flexibility in implementing this liquidity risk management tool as appropriate given the diverse range of funds it would cover.[645] It was intended to work together with other aspects of the proposed liquidity risk management program designed to help ensure that while funds would consider the spectrum of liquidity in their portfolios (in part through the proposed classification requirement), they would pay particular attention to the most liquid and least liquid ends of this spectrum.[646]

Many commenters agreed that a requirement for a fund to determine a minimum—or, per some commenters' suggestions, a target—amount of relatively liquid assets would assist funds in effectively meeting redemption requests under a variety of market conditions.[647] Some, on the other hand, suggested that a minimum or target requirement would not necessarily enhance a fund's ability to meet shareholder redemptions because the amount of liquid assets a fund may need is dynamic and unpredictable, and in extraordinary stressed market conditions no particular amount of liquid assets may end up being sufficient to meet redemptions.[648] Commenters also objected to the structure of the proposed minimum requirement, particularly the fact that the requirement would not permit a fund to acquire relatively less liquid assets if the fund were to fall below its minimum, arguing that the requirement could actually increase shareholder redemptions during times of stress.[649] In addition, commenters expressed concerns that the proposed requirement could prevent funds from meeting their principal investment strategies[650] and that it could effectively prevent funds from holding or acquiring favorable, but relatively less liquid, assets under certain circumstances, which could intensify market stress as well as adversely affect a fund's NAV.[651] Finally, some commenters expressed concerns about the potential operational burdens associated with the proposed three-day liquid asset minimum requirement.[652]

Some commenters also suggested alternatives to the proposed three-day liquid asset minimum. As discussed further below, a number of commenters suggested requiring funds to maintain a ''target'' or threshold amount of certain liquid assets.[653] Other commenters suggested requiring funds to consider whether to maintain a target amount of liquid assets[654] or to adopt policies and procedures to address shareholder redemptions, which could include targets or ranges.[655] As discussed below, we believe the highly liquid investment minimum requirement we are adopting strikes an appropriate balance in promoting the benefits intended by the proposed three-day liquid asset minimum requirement, including consistency in funds' consideration of certain factors relevant to their liquidity risk management procedures, while at the same time lessening the likelihood of certain adverse consequences identified by commenters.

1. Anticipated Benefits of Highly Liquid Investment Minimum

Like the proposed three-day liquid asset requirement, we believe that the highly liquid investment minimum requirement will increase the likelihood that a fund would be prepared to meet redemption requests without significant dilution of remaining investors' interests in the fund. Some commenters noted that it is common for funds to assess how much liquidity they may need under various market conditions in order to meet redemptions over a relatively short time horizon and suggested that targeting a certain level of relatively liquid assets is an appropriate way for a fund to manage its liquidity

[637] *Id. See also* Item D.1 of new Form N–LIQUID.

[638] Rule 22e–4(b)(1)(iii)(A)(1).

[639] Rule 22e–4(b)(1)(iii)(A); *see also* rule 22e–4(a)(5) (excluding money market funds and In-Kind ETFs from the definition of ''fund'').

[640] Proposed rule 22e–4(a)(8); proposed rule 22e–4(b)(2)(iv)(A)–(C).

[641] Proposed rule 22e–4(b)(2)(iv)(A).

[642] Proposed rule 22e–4(b)(2)(iv)(C).

[643] Proposed rule 22e–4(b)(3)(i).

[644] *See* Proposing Release, *supra* footnote 9, at section III.C.3.

[645] *Id.*

[646] *See id.,* at sections III.B.1, III.C and III.C.3.

[647] *See, e.g.,* AFR Comment Letter; Charles Schwab Comment Letter; CRMC Comment Letter; Wells Fargo Comment Letter.

[648] *See, e.g.,* Dechert Comment Letter; HSBC Comment Letter; Invesco Comment Letter; MFS Comment Letter.

[649] *See, e.g.,* BlackRock Comment Letter; SIFMA Comment Letter I.

[650] *See, e.g.,* Invesco Comment Letter; Oppenheimer Comment Letter; Cohen & Steers Comment Letter; ICI Comment Letter I.

[651] *See, e.g.,* BlackRock Comment Letter; Credit Suisse Comment Letter; ICI Comment Letter I; NYC Bar Comment Letter.

[652] *See, e.g.,* Federated Comment Letter; ICI Comment Letter I.

[653] *See, e.g.,* Invesco Comment Letter (suggesting that funds be required to maintain a ''target'' range of three-day and/or seven-day liquid assets); PIMCO Comment Letter (suggesting that a minimum cash target could be established by the investment manager); BlackRock Comment Letter (suggesting that funds could be required to take several steps to ensure an appropriate level of Tier 1 and Tier 2 assets, which could be articulated as a range or target); Credit Suisse Comment Letter.

[654] *See, e.g.,* SIFMA Comment Letter I; Oppenheimer Comment Letter.

[655] *See, e.g.,* Dechert Comment Letter; IDC Comment Letter.

risk.[656] To the extent that a fund already aims to invest a specified portion of its portfolio in relatively liquid assets, we anticipate that such funds may already be substantially in compliance with the highly liquid investment minimum requirement we are adopting today. More importantly, it would require those funds that do not currently consider what an appropriate baseline level of liquidity might be to do so.

As with the proposal, we believe that the final highly liquid investment minimum requirement will help encourage consistency in funds' consideration of certain factors relevant to their liquidity risk management procedures. This is an important benefit compared to some commenters' suggestions that funds simply be required to have policies and procedures to address shareholder redemptions (which could include liquid asset minimums or targets), but not to specify any particular procedures within this general requirement.[657] As with the proposal, we believe that the approach we are adopting appropriately encourages regularity and thoroughness in funds' consideration of certain risk factors, while at the same time promoting flexibility in funds' management of this risk. Under rule 22e–4 as adopted, a fund will be able to determine its own highly liquid investment minimum, as well as (within a fairly broad range) the assets it will hold to satisfy its minimum.[658] We believe that the requirement we are adopting provides important additional flexibility to funds' liquidity risk management practices in that a fund will be required to adopt policies and procedures, but would be permitted to design them as appropriate to respond to shortfalls in highly liquid investments relative to the fund's minimum.

As noted above, some commenters suggested that a minimum requirement would not necessarily enhance funds' ability to meet shareholder redemptions. We agree that the highly liquid investment minimum requirement we are adopting, standing alone, may not be a sufficient safeguard for funds to manage liquidity risk under all market conditions. However, we believe that, together with the rest of the liquidity risk management program requirements we are adopting, it is a central tool to help put a fund in a solid position to meet redemption requests without significant dilution of remaining investors' interests. The highly liquid investment minimum requirement, together with the classification requirement and the 15% limitation on a fund's investments in illiquid investments that are assets, is meant to be a primary component of a fund's overall approach to liquidity risk management. While the classification requirement would illustrate the spectrum of a fund's portfolio liquidity, the highly liquid investment minimum requirement and the 15% limitation on illiquid investments would focus the fund's attention on each end of that liquidity spectrum—the fund's most liquid and least liquid investments, respectively.

Based on a fund's liquidity risk assessment, the fund could determine what additional liquidity risk management tools, if any, together with the highly liquid investment minimum requirement and the 15% limitation on illiquid investments, would best permit the fund to meet redemptions and help prevent significant investor dilution. We also believe that the highly liquid investment minimum requirement will be a useful liquidity risk management tool because we understand, based on staff outreach and comments that we received on the proposal, that the requirement we are adopting is similar to liquidity risk management strategies that many funds currently use.[659]

While certain commenters expressed concern that the proposed three-day liquid asset minimum requirement could unduly encourage funds to use only their most liquid assets in meeting redemptions (which commenters argued could lead to additional redemptions from funds in stressed periods),[660] we note that the minimum requirement—both as proposed and as adopted—was never meant to suggest that a fund should only, or primarily, use its most liquid investments to meet shareholder redemptions.[661] Nor is it meant, as commenters argued, to suggest that funds should hold cash-like buffers that investors may inappropriately assume will eliminate funds' liquidity risk.[662] Indeed, we noted in the Proposing Release that assets eligible for inclusion in a fund's three-day liquid asset minimum holdings could include a broad variety of securities, as well as cash and cash equivalents.[663] Moreover, because the final highly liquid investment minimum requirement would not prohibit a fund from acquiring investments other than highly liquid investments if a fund were to fall below its minimum, we believe that the final requirement may convey more effectively than the proposal that a fund is not guaranteed to hold a certain level of cash or highly liquid investments at all times.

As with the proposed three-day liquid asset minimum requirement, we believe an important feature of the highly liquid investment minimum requirement we are adopting is the flexibility it provides for a fund to determine an appropriate highly liquid investment minimum considering its particular risk factors, as well as (within a fairly broad range) the assets it will hold to satisfy its minimum. We acknowledge that, for certain funds that currently have relatively less liquid portfolios, the highly liquid investment minimum requirement could cause a fund to modify its investment strategy if, after consideration of the required factors, the fund were to determine it is appropriate to invest in higher amounts of highly liquid investments. In these circumstances, we believe such a modification would be appropriate. We discuss the costs associated with any modifications to funds' investment strategies that could result from the final highly liquid investment minimum requirement in the Economic Analysis section below.

2. Consideration of Liquidity Risk Factors

Rule 22e–4 requires a fund to consider the liquidity risk factors set forth in the rule, as applicable, in determining its highly liquid investment minimum.[664] Under the proposed rule, a fund likewise would have been required to consider the proposed rule's liquidity risk assessment factors in determining its three-day liquid asset minimum.[665] Several commenters suggested that these factors should be guidance that funds *may* consider in setting a minimum or target for relatively liquid assets, but should not be mandatory considerations a fund would be required to assess.[666] Commenters also objected to the requirement that funds determine their three-day liquid asset minimum based

[656] *See, e.g., supra* footnote 653.

[657] *See supra* footnote 655; *see also infra* section IV (discussing other reasonable alternatives to the highly liquid investment minimum requirement).

[658] *See* rule 22e–4(b)(1)(iii)(A)(1).

[659] *See supra* footnote 656 and accompanying text.

[660] *See, e.g.,* BlackRock Comment Letter.

[661] *See, e.g.,* Proposing Release, *supra* footnote 9, at section II.B.2 (discussing how funds may choose to sell assets in ''strips'' or in a range of liquidity).

[662] *See, e.g.,* CFA Comment Letter.

[663] *See* Proposing Release, *supra* footnote 9, at paragraph following n.343.

[664] Rule 22e–4(b)(1)(iii)(A)(1).

[665] Proposed rule 22e–4(b)(2)(iv)(A)–(B).

[666] *See, e.g.,* Oppenheimer Comment Letter; Charles Schwab Comment Letter; SIFMA Comment Letter I.

on liquidity risk under both normal and reasonably foreseeable stressed conditions, arguing that this requirement would result in funds being forced to maintain artificially high levels of three-day liquid assets.[667] Some commenters also discussed more granular objections to certain of the proposed factors to be used in determining a fund's three-day liquid asset minimum, such as certain aspects of the proposed requirements to consider a fund's shareholder concentration[668] and borrowing arrangements.[669]

We continue to believe it is appropriate for a fund to be required—not only permitted—to consider a specified set of liquidity risk factors in determining its highly liquid investment minimum. We believe requiring every fund to consider multiple aspects of its history, policies, strategy, and operations in determining its highly liquid investment minimum will lead to a general industry-wide baseline for the minimum requirement. However, we are making certain modifications to the proposed liquidity risk factors, including only requiring funds to consider applicable factors, to respond to commenters' concerns about this aspect of the requirement.

a. Modifications to Proposed Requirement To Consider Liquidity Risk Factors

As discussed above, the liquidity risk factors we are adopting today incorporate certain modifications to the proposed factors,[670] and thus these modifications flow through with respect to a fund's consideration of these factors in determining its highly liquid investment minimum. We believe that the guidance that we provide in section III.B.2 regarding a fund's consideration of these factors in assessing its liquidity risk also is appropriate for a fund to take into account when determining its highly liquid investment minimum. With the exception of the recommendations about specific factors or guidance discussed below, we did not receive comments on the proposed factors or the guidance provided in the Proposing Release regarding these factors.

Some commenters recommended that the Commission confirm that funds may consider and weigh the factors as they deem appropriate and relevant for purposes of the proposed minimum requirement,[671] and we agree that a fund should give the most weight to the factors that it deems most relevant for determining its highly liquid investment minimum. Moreover, to the extent any liquidity risk assessment factor is not applicable to a particular fund, the fund would not be required to consider that factor in determining its highly liquid investment minimum. We have therefore added the words ''as applicable'' in the rule,[672] and we note that, in this context, the phrase ''as applicable'' is meant to refer to those factors that are relevant to a fund's particular facts and circumstances. For example, a fund would not be required to consider the use of borrowings for investment purposes, as specified under rule 22e–4(b)(1)(i)(A), if that fund does not engage in borrowing.[673] Conversely, however, a fund that maintains borrowing sources for investment purposes would be required to consider the use of borrowings for investment purposes as specified under the rule. The addition of ''as applicable'' should help respond to commenters' concerns that codifying a list of required factors as a provision of the proposed minimum requirement would ''create an overly rigid structure and a one-size-fits-all approach that may result in unnecessary focus on factors that are irrelevant to certain funds.''[674]

We continue to believe that a fund should consider both normal and reasonably foreseeable stressed conditions in determining the amount of highly liquid investments it will hold, based on the liquidity risk assessment factors. However, in a change from the proposal, the rule specifies that only those stressed conditions that are reasonably foreseeable *during the period until the next review of the highly liquid investment minimum* (emphasis added) should be considered when a fund determines its highly liquid investment minimum.[675] As discussed above, some commenters expressed concern that the requirement for funds to consider normal and reasonably foreseeable stressed conditions in determining their three-day liquid asset minimum could suggest that all funds should hold a high level of cash or other highly liquid assets at all times, which could in turn encourage funds to maintain portfolio liquidity levels that are disproportionate relative to their liquidity risk.[676] We believe that requiring consideration of only those stressed conditions that are reasonably foreseeable during the period until the next review of the highly liquid investment minimum should address commenters' concerns and should help ensure that the highly liquid investment minimum requirement leads funds to hold levels of portfolio liquidity that are appropriate in light of their reasonably anticipated liquidity risk.

This change also responds to commenters' concerns about perceived ambiguity in the length of time over which the proposed rule would have required funds to forecast the effect of stressed conditions on the liquidity risk factors.[677] Under the final rule, funds are required to periodically review, no less frequently than annually, their highly liquid investment minimum. Thus, the requirement to consider stressed conditions only to the extent they are reasonably foreseeable *during the period until the next review of the highly liquid investment minimum,* limits consideration of stressed conditions to whatever time frame the fund has determined for review of its highly liquid investment minimum, but no longer than one year. We note that if a fund encounters extremely stressed market conditions, beyond those that were reasonably foreseeable during the period until the next review of the highly liquid investment minimum, that could increase its liquidity risk to unusual levels, the fund should consider adjusting its highly liquid investment minimum at that time, and indeed a fund should generally review its highly liquid investment minimum more frequently than annually if circumstances warrant.

[667] *See, e.g.,* NYC Bar Comment Letter; SIFMA Comment Letter I.

[668] *See* SIFMA Comment Letter I.

[669] *See* Cohen & Steers Comment Letter.

[670] *See supra* section III.B.2.

[671] *See, e.g.,* Oppenheimer Comment Letter; SIFMA Comment Letter I.

[672] *See* rule 22e–4(b)(1)(iii)(A)(1); *see also supra* footnote 192 and accompanying text.

[673] *See supra* section III.B.2.

[674] *See* SIFMA Comment Letter I; *see also e.g.,* Charles Schwab Comment Letter; Oppenheimer Comment Letter (suggesting that it is critically important that funds be afforded a certain amount of flexibility in setting the fund's three-day liquid asset minimum).

[675] *See* rule 22e–4(b)(1)(iii)(A)(1); *see also* rule 22e–4(b)(1)(iii)(A)(2) (requiring funds to periodically review, no less frequently than annually, the highly liquid investment minimum).

[676] *See supra* footnote 667 and accompanying text. Commenters argued that this, in turn, could lead to declines in fund performance, which shareholders would experience in the form of lower returns. *See, e.g.,* Fidelity Comment Letter; Invesco Comment Letter; J.P. Morgan Comment Letter; Wells Fargo Comment Letter.

[677] *See, e.g.,* MFS Comment Letter (noting that the proposal fails to indicate the period of time over which the estimate of foreseeable redemptions is to be calculated); *see also* SIFMA Comment Letter I (''We do not agree, however, that in making their Highly Liquid Asset Target determinations, funds should be required to forecast the timing, severity or potential impact of stressed market conditions or other events affecting the fund that have occurred in the past but for which there is no reasonable way to accurately predict their recurrence.'').

b. Role of Liquidity Risk Factors in Determining the Highly Liquid Investment Minimum

As noted above, rule 22e–4 requires a fund to consider the liquidity risk factors set forth in the rule, as applicable, in determining its highly liquid investment minimum. In summary, a fund must consider, as applicable, its: (i) Investment strategy and portfolio liquidity during normal conditions, and during stressed conditions to the extent such conditions are reasonably foreseeable during the period until the next review of the highly liquid investment minimum; (ii) short-term and long-term cash flow projections during normal conditions, and during stressed conditions to the extent such conditions are reasonably foreseeable during the period until the next review of the highly liquid investment minimum; and (iii) holdings of cash and cash equivalents, as well as borrowing arrangements and other funding sources.[678] In addition to these factors, an ETF also must consider, as applicable: (i) The relationship between the ETF's portfolio liquidity and the way in which, and the prices and spreads at which, ETF shares trade, including the efficiency of the arbitrage function and the level of active participation by market participants (including authorized participants); and (ii) the effect of the composition of baskets on the overall liquidity of the ETF's portfolio.[679]

With respect to a fund's consideration of its investment strategy and portfolio liquidity in determining its highly liquid investment minimum, we continue to believe that the less liquid a fund's overall portfolio investments are, the higher a fund may want to establish its highly liquid investment minimum. Similarly, funds with certain investment strategies that typically have had greater volatility of flows than other investment strategies—such as alternative funds and emerging market debt funds—would generally need highly liquid investment minimums that are higher than funds whose strategies tend to entail less flow volatility. For funds that use borrowings for investment purposes and derivatives, we continue to believe that, all else equal, a fund with a leveraged strategy (*e.g.,* a fund with leverage through bank borrowings or that has significant fixed obligations to derivatives counterparties) generally would need a highly liquid investment minimum that is higher than a fund that does not.[680] Similarly, when setting the fund's highly liquid investment minimum, we believe a fund that has or expects to have a significant amount of highly liquid investments segregated to cover derivatives transactions or pledged to satisfy margin requirements in connection with derivatives transactions should take into account the fact that such segregated or pledged highly liquid investments may not be available to meet redemptions. However, this guidance is not meant to suggest that a fund should only, or primarily, use highly liquid investments to meet shareholder redemptions. Rather, in the examples provided in this paragraph, we believe that holding a relatively high level of assets that are highly liquid investments would *both* support a fund in meeting redemption requests in a manner that does not dilute non-redeeming shareholders, and assist the fund in readjusting its portfolio as necessary to handle stressed conditions, weathering periods of heightened volatility, and managing its obligations to derivatives counterparties.

Regarding a fund's cash flow projections, we continue to believe that the Commission's cash flow guidance considerations could be useful to a fund in setting its highly liquid investment minimum.[681] We generally expect that a fund would evaluate the Commission's guidance on these considerations and determine whether each would be useful and relevant in setting the fund's highly liquid investment minimum. In addition, a fund may wish to consider employing some form of stress testing[682] or consider specific historical redemption scenarios in determining its highly liquid investment minimum.

Each of the cash flow guidance considerations—either standing alone, but especially viewed in combination with one another—are potentially significant features that could materially affect the risk of significant redemptions and thus could influence a fund's determination of its highly liquid investment minimum. For example, a fund with a concentrated shareholder base has a high risk that only one or two shareholders deciding to redeem can cause the fund to sell a significant amount of assets, which depending on the liquidity of the fund's portfolio and how it meets those redemptions, can dilute remaining shareholders. Similarly, a fund whose redemption policy is to satisfy all redemptions on a next business day basis (T + 1) or that is sold through distribution channels that historically attract investors with more volatile and/or unpredictable flows also should consider setting a higher minimum level for its assets that are highly liquid investments than a fund that, all else equal, does not face these risks.

In setting a highly liquid investment minimum, a fund should consider the degree of certainty associated with the fund's short-term and long-term cash flow projections. Projections may only be as good as the extent and quality of information that informs them. For example, if a fund does not have substantial visibility into its shareholder base (*e.g.,* because the fund's shares are principally sold through intermediaries that do not provide shareholder transparency) or if a fund is uncertain about changing market conditions which are likely to materially affect the fund's level of net redemptions, it may make projections but be quite uncertain about the reliability of those projections. In these circumstances, a fund should consider setting its highly liquid investment minimum to reflect this uncertainty, for example, by providing a cushion or multiple of its cash flow projections in the event realized net redemptions are significantly higher.

One commenter objected that shareholder ownership concentration, which is discussed in this Release as a guidance factor that could be used in evaluating cash flows (but in the proposal would have been *required* to be considered in analyzing a fund's cash flow projections), should not be a

[678] Rule 22e–4(b)(1)(i)(A)–(C); rule 22e–4(b)(1)(iii)(A)(1).

[679] Rule 22e–4(b)(1)(i)(D); rule 22e–4(b)(1)(iii)(A)(1); *see also infra* section III.J. (discussing liquidity risk management program elements tailored to ETFs).

[680] *See* Proposing Release, *supra* footnote 9, at paragraphs accompanying n.339. As discussed in the Proposing Release, we believe that a leveraged fund has an increased risk that it will be unable to meet redemptions and an increased risk of investor dilution compared to an equivalent fund with no leverage. For example, a fund with leverage through bank borrowings may have to meet margin calls if a security the fund provided to the bank to secure the loan declines in value. Such margin calls can render highly liquid portfolio assets unavailable to meet investor redemptions, which can increase dilution and the risk the fund will be unable to meet redemptions.

Similarly, a fund that has significant fixed obligations to derivatives counterparties (for example, from a total return swap or writing credit default swaps) must pay out on these obligations when due, even if it means selling the fund's more liquid, high quality assets to raise cash. *See, e.g.,* OppenheimerFunds Release, *supra* footnote 223.

[681] *See supra* section III.B.2.b. These five guidance considerations include: (i) The size, frequency, and volatility of historical purchases and redemptions of fund shares during normal and reasonably foreseeable stressed periods; (ii) the fund's redemption policies; (iii) the fund's shareholder ownership concentration; (iv) the fund's distribution channels; and (v) the degree of certainty associated with the fund's short-term and long-term cash flow projections.

[682] *See supra* footnote 196 and accompanying text.

determinative consideration for a fund in establishing its appropriate level of relatively liquid assets.[683] This commenter expressed concern that ''accentuating the significance of this sub-factor in the context of new or recently launched funds, which may have a small number of shareholders relative to more established funds, could have a severe anti-competitive effect and create an unwarranted barrier to the introduction of new funds.'' We agree that emphasizing shareholder concentration could lead new funds to increase their holdings of relatively liquid investments. However, we note that substantial shareholder concentration, even for new or recently launched funds, could give rise to significant liquidity risk, and thus this consideration should not be discounted when a fund whose investor base is significantly concentrated determines its highly liquid investment minimum.[684] New or recently launched funds that have a concentrated shareholder base should consider disclosing the risk of redemption by one or more such shareholders in the fund's prospectus.[685] To the extent that a new fund's shareholder base becomes significantly less concentrated as the fund matures, the fund may wish to take this into consideration in reviewing its highly liquid investment minimum and adjusting it as it determines appropriate.

With respect to a fund's consideration of its holdings of cash and cash equivalents in determining its highly liquid investment minimum, we continue to believe that these holdings may provide funds with important flexibility to manage their liquidity risks. Our staff has observed that it is relatively common for fund complexes to target a minimum amount of cash or cash equivalent holdings in the fund, with the assumption that cash and cash equivalent holdings would allow the fund to meet redemptions in a stressed period without realizing significant discounts to its holdings' carrying values when they are sold. Holding cash or cash equivalents also could readily permit funds to rebalance or otherwise adjust a portfolio's composition in order to manage liquidity risk. Similarly, the availability of a line of credit or other funding sources to meet redemptions could assist a fund in managing liquidity risk, although as discussed below, depending on the nature of use, the use of a line of credit could raise other issues.[686] To the extent that a fund determines that any of these considerations could indicate decreased liquidity risk, these considerations could provide important inputs regarding the level that the fund deems appropriate for its highly liquid investment minimum.

Certain commenters indicated that the Commission should permit a fund to reduce its required holdings of relatively liquid assets by the amount of other sources of liquidity available to the fund, such as a committed line of credit.[687] Under these commenters' views, if a fund were to determine that its highly liquid investment minimum would typically be x% of the fund's net assets, a fund with a committed line of credit representing y% of the fund's net assets should be able to reduce its highly liquid investment minimum to x% minus y% of the fund's net assets. We disagree with this approach for several reasons. First, we believe that a mechanical subtraction of the amount of a credit line available to a fund from the fund's highly liquid investment minimum is inappropriate under circumstances in which all or part of the line of credit is not guaranteed to be available to a fund—for example, because it is a committed line of credit that may be shared among other members of the fund family. Even if the credit facility was committed just to the fund, the amount ultimately available could depend on the financial health of the institution providing the facility, as well as the terms and conditions of the facility. Finally, as discussed in the Proposing Release, while a line of credit can facilitate a fund's ability to meet unexpected redemptions and can be taken into consideration when determining its highly liquid investment minimum, we continue to believe that liquidity risk management is better conducted primarily through construction of a fund's portfolio.[688]

As with the proposed three-day liquid asset minimum requirement, a fund would be required to maintain a written record of how its highly liquid investment minimum was determined, including an assessment of each of the factors.[689] This would permit our examination staff to ascertain that funds are indeed considering the required factors, as applicable. As discussed in the Proposing Release, we continue to generally believe that it would be extremely difficult to conclude, based on the factors that a fund would be required to consider, that a highly liquid investment minimum of zero would be appropriate.[690]

3. Highly Liquid Investment Minimum Shortfall Policies and Procedures

Under rule 22e–4, a fund will be required to adopt specific policies and procedures for responding to a shortfall in the fund's assets that are highly liquid investments below its highly liquid investment minimum (for purposes of this section, a fund's ''shortfall policies and procedures''). A fund's shortfall policies and procedures, as described in more detail below, must include reporting to the fund's board of directors no later than the board's next regularly scheduled meeting with a brief explanation of the causes of the shortfall, the extent of the shortfall, and any actions taken in response.[691] Also, a fund's shortfall policies and procedures must include reporting within one business day to the fund's board if a shortfall lasts more than seven consecutive calendar days, including an explanation of how the fund plans to restore its minimum within a reasonable period of time.[692]

a. Shortfall Policies and Procedures Requirement

Rule 22e–4 as proposed did not include the requirement for a fund to adopt shortfall policies and procedures. This requirement replaces the proposed prohibition against acquiring any asset

[683] *See* SIFMA Comment Letter I.

[684] As discussed above, a fund may also take into account the types of shareholders in the fund and whether those shareholders share common investment goals affecting redemption frequency and timing. Additionally, a fund may take into account other liquidity risk management tools available to it, such as redemption fees, when determining its highly liquid investment minimum.

[685] *See* SIFMA Comment Letter I (suggesting that the Commission encourage such prospectus disclosure). We recognize that other factors, such as the size of a fund's positions and the liquidity of those positions, could impact the extent to which this risk could affect the fund.

[686] *See infra* footnote 688 and accompanying text.

[687] *See, e.g.,* Cohen & Steers Comment Letter; Oppenheimer Comment Letter.

[688] *See* Proposing Release, *supra* footnote 9, at section III.C.3; *see also, e.g.,* HSBC Comment Letter (''The degree to which a fund employs leverage can have a material impact on its liquidity demands, particularly during periods of market stress. As such, attempts to model liquidity risk should incorporate an assessment of leverage and the extent to which this might intensify liquidity demands for a given fund during different scenarios compared to unleveraged funds.''); Nuveen FSOC Notice Comment Letter, *supra* footnote 85 (''Funds without credit lines face the possibility of not being able to sell sufficient assets to raise cash to fund redemption requests, or having to sell assets at significantly discounted values. To the extent that a fund draws on a credit line to meet net redemptions (and thus temporarily leverages itself), it increases its market risk at a time when markets are stressed. While this can be potentially beneficial to long-term performance if the asset class recovers, it increases the risk of loss to remaining shareholders if markets continue to weaken.'').

[689] *See* rule 22e–4(b)(3)(iii); *see also infra* section III.I.

[690] *See* Proposing Release, *supra* footnote 9, at paragraphs accompanying and following n.341.

[691] *See* rule 22e–4(b)(1)(iii)(A)(3).

[692] See id.

other than a three-day liquid asset if a fund's holdings of three-day liquid assets were to drop below its three-day liquid asset minimum (for purposes of this section, the ''proposed acquisition limit'').[693] As discussed above, commenters expressed concerns that the proposed acquisition limit could have adverse effects on funds, their shareholders, and the markets in which funds operate. Specifically, commenters cautioned that shareholder redemptions could increase if shareholders observe that a large redemption has taken place and assume that the fund will not be able to effectively employ its investment strategy due to the proposed prohibition on acquiring any assets that are not three-day liquid assets.[694] Commenters suggested that this, in turn, could incentivize shareholders to redeem quickly in times of stress, which could spark additional redemptions from funds in stressed periods. Some commenters also argued that the proposed acquisition limit could lead index funds to hold a level of relatively liquid assets that causes them to deviate from the construction of their indices[695] and could cause funds that are managed relative to a benchmark to experience higher tracking error.[696] Commenters also maintained that the proposed acquisition limit could impair actively managed funds to the extent that it could limit portfolio managers' discretion to purchase assets that they believe would maximize funds' returns.[697]

In addition, commenters argued that the proposed acquisition limit could effectively prevent funds from holding or acquiring favorable, but relatively less liquid, assets under certain circumstances, which could intensify market stress as well as adversely affect a fund's NAV.[698] For example, some commenters suggested that a fund whose three-day liquid asset holdings were to fall below its minimum could feel pressure to sell less liquid assets in order to replenish its three-day liquid assets, which could lead to excessive sales of less liquid assets during times of market stress that could adversely affect the fund's NAV.[699] Relatedly, commenters suggested that the proposed acquisition limit could produce harmful market effects if it were to significantly increase the demand for relatively liquid assets, which could conversely decrease demand for other asset types (making them less liquid) and exacerbate market volatility.[700] Commenters expressed concern that any ''herding'' behavior that could result from the proposed acquisition limit could become especially pronounced during stressed periods.[701] Commenters also argued that the proposed acquisition limit could prevent a fund manager from purchasing certain investments that it views as undervalued in a downturn, when the fund's holdings of three-day liquid assets are at or below the fund's minimum.[702] They contended that this in turn could reduce the fund's universe of potential investments and ability to invest in contrarian and countercyclical ways,[703] which could eliminate a potential pool of buyers and thus could exacerbate an already stressed environment.[704]

A significant number of commenters suggested that the Commission adopt a liquid asset target in lieu of the proposed three-day liquid asset minimum requirement—indeed, this was the most common alternative suggestion to the proposed three-day liquid asset minimum requirement.[705] One primary distinction between the target requirements that commenters recommended and the proposed three-day liquid asset minimum requirement is that a target requirement would not prohibit a fund from acquiring certain assets if a fund's holdings of relatively liquid assets were to fall below the target. Instead, some commenters stated that a fund should have a reasonable period to respond to a shortfall of relatively liquid assets below the fund's target, and/or that any such shortfalls must be reported to the fund's board.[706]

We continue to believe that fund shareholders' interests are generally best served when the percentage of a fund's assets invested in relatively liquid investments is at (or above) the level deemed appropriate by the fund.[707] The highly liquid investment minimum requirement we are adopting would not prohibit a fund from acquiring assets other than highly liquid investments when a fund's highly liquid investments fall below its minimum. However, we believe that the shortfall policies and procedures requirement we are adopting—which replaces the proposed acquisition limit—provides flexibility while also promoting effective liquidity management practices. We believe this requirement also responds to concerns about a flat prohibition against purchasing certain assets when the fund's assets that are highly liquid investments drop below a certain level.

Additionally, we believe that the shortfall policies and procedures requirement responds appropriately to commenters' concerns that there could be appropriate reasons for a fund to acquire an investment other than a highly liquid investment if a fund were to fall below its minimum. The final highly liquid investment minimum requirement will require that funds determine a level of assets that are highly liquid investments designed to help them manage the fund through stressed conditions or opportunistically readjust their portfolios, while permitting a fund's portfolio liquidity to fall below this level when determined appropriate from a risk management perspective or on account of extenuating circumstances. The shortfall policies and procedures requirement, including the reporting requirement, is meant to foster discussion among the fund's management (and board) if its assets that are highly liquid investments fall below the level the fund determined to be an appropriate minimum. We further believe that the final highly liquid investment minimum requirement appropriately responds to commenters' concerns that the proposed acquisition limit could restrict funds' ability to meet their principal investment strategies, to the detriment of fund investors. The final requirement provides fund managers more leeway than the proposed requirement to structure and modify their portfolios because—as would be the case in the target requirement commenters suggested—fund managers would not be prevented from purchasing certain assets when a fund's holdings of assets that are highly liquid investments drop below its highly liquid investment minimum.

The highly liquid investment minimum requirement we are adopting, together with the shortfall policies and

[693] *See* proposed rule 22e–4(b)(2)(iv)(C).

[694] *See, e.g.,* BlackRock Comment Letter.

[695] *See, e.g.,* Invesco Comment Letter; Dechert Comment Letter; Oppenheimer Comment Letter.

[696] *See, e.g.,* HSBC Comment Letter; ICI I Comment Letter.

[697] *See, e.g.,* PIMCO Comment Letter; ICI I Comment Letter; Federated Comment Letter.

[698] *See, e.g.,* BlackRock Comment Letter; SIFMA I Comment Letter; Wells Fargo Comment Letter.

[699] *See, e.g.,* Oppenheimer Comment Letter.

[700] *See, e.g.,* Invesco Comment Letter; Cohen & Steers Comment Letter; ICI Comment Letter I; Wells Fargo Comment Letter.

[701] *See, e.g.,* ICI Comment Letter I; Wellington Comment Letter II.

[702] *See, e.g.,* ICI Comment Letter I.

[703] *See, e.g.,* BlackRock Comment Letter; ICI Comment Letter I; Wells Fargo Comment Letter.

[704] *See, e.g.,* SIFMA Comment Letter I; Invesco Comment Letter

[705] *See, e.g., supra* footnote 653 and accompanying text; *see also infra* section IV.C (discussing other reasonable alternatives to the highly liquid investment minimum requirement).

[706] *See, e.g.,* Invesco Comment Letter; PIMCO Comment Letter; Federated Comment Letter; J.P. Morgan Comment Letter.

[707] *See* Proposing Release, *supra* footnote 9, at n.346 and accompanying text.

procedures requirement, also responds to commenters' concerns that the proposed acquisition limit could exacerbate potential market stresses and lead to other harmful market effects. Under the final rule, a fund that falls below its highly liquid investment minimum would not be restricted to acquiring only highly liquid investments, if acquiring other investments were consistent with the fund's shortfall policies and procedures. Also, as discussed above, the requirement that a fund determine its highly liquid investment minimum taking into account only those stressed conditions that are reasonably foreseeable during the period until the next review of the highly liquid investment minimum should decrease the probability that a fund could overweight its assets that are highly liquid investments relative to its liquidity risk. This also, in turn, should lessen demand for highly liquid investments compared to the possible market effects of the proposed requirement.

Finally, we believe that the final highly liquid investment minimum requirement, in conjunction with the shortfall policies and procedures requirement, will help to mitigate some of the operational burdens that commenters argued would accompany the proposal,[708] while continuing to advance the Commission's goals. We note that the highly liquid investment minimum requirement will involve monitoring a fund's portfolio investments' liquidity for compliance. We recognize that this monitoring may result in operational costs, which could be greater for funds with multiple sub-advisers to the extent that these funds would need to build or otherwise implement systems to coordinate portfolio liquidity information provided by each sub-adviser.[709] However, we expect that the operational costs associated with the final highly liquid investment minimum requirement would be significantly less compared to the proposal, which would have entailed the additional costs of building systems that would bar the purchase of less liquid investments if the fund were to fall below its minimum. We understand that some fund complexes today already track a liquid asset minimum or target, and for these funds, operational costs associated with the final minimum requirement would only entail adjustments to their current processes and not the costs of an entirely new systems build-out.

b. Operation of Shortfall Policies and Procedures Requirement

Rule 22e–4 provides flexibility as to the particular shortfall policies and procedures a fund may adopt because we believe that different facts and circumstances could result in different funds taking different approaches to address a decline in assets that are highly liquid investments.[710] We also recognize that it may be difficult to contemplate or specify all appropriate factors to consider (or their weighting) in advance of a shortfall, and that part of the decision process requires an evaluation of the current stress event and a determination of whether it is likely to persist (and for how long). Nonetheless, a fund's shortfall policies and procedures could specify some of the actions that a fund could consider taking to respond to a highly liquid investment minimum shortfall under different conditions, as well as market- and fund-specific circumstances that could shape a fund's response to a particular shortfall occasion. For example, the policies and procedures could outline some of the circumstances under which it could be appropriate for a fund to purchase assets that are *not* highly liquid investments, despite being below its minimum. If, for example, the fund reasonably expected inflows in the near future (*e.g.,* from a retirement plan platform), it may determine it is acceptable to pursue an attractive buying opportunity despite a decline below the fund's highly liquid investment minimum that it expects to be short-term. It also could be appropriate, for example, for a fund to consider selling certain relatively less liquid holdings over a period of time and investing some of the proceeds in highly liquid investments.

Similarly, as part of its shortfall policies and procedures, a fund could set forth how it would set out a time frame by which it plans to bring its assets that are highly liquid investments back up to the level of its highly liquid investment minimum.[711] If a fund encounters highly liquid investment minimum shortfalls regularly, a fund's liquidity risk management program administrator, potentially together with the fund's broader risk management function, should consider whether the fund's risk management policies and procedures should be modified. We note that a fund's shortfall policies and procedures could, but will not be required to, specify the persons who will typically determine how, if at all, to respond to a shortfall (for example, the person designated by the board to administer the fund's liquidity risk management program, in conjunction with the fund's risk managers and portfolio managers).

As discussed below, although we are not requiring a fund's board to specifically approve its highly liquid investment minimum, we continue to believe that the board should play an oversight role with respect to the minimum.[712] A requirement to inform the board when a fund drops below its highly liquid investment minimum, as well as the circumstances leading to the fund's highly liquid investment minimum shortfall and actions taken in response, will permit the board better to understand circumstances that may give rise to heightened liquidity risk. It also will provide important context for the board in evaluating the effectiveness of the fund's highly liquid investment minimum and the fund's liquidity risk management program generally. Many commenters suggested that the Commission should adopt a board reporting requirement when a fund's holdings of relatively liquid assets drop below the level that the fund has generally targeted as appropriate.[713] Rule 22e–4 as adopted generally reflects these suggestions.

As fund boards are charged with oversight and not day-to-day management of funds' liquidity risk, we

[708] *See, e.g.,* Federated Comment Letter (suggesting that the proposed requirement could present significant operational and technological challenges because a fund's trade order management system would need to maintain the liquidity classification for each security in order to accurately monitor compliance with the fund's three-day liquid asset minimum); ICI Comment Letter I (noting that the proposed requirement would raise operational difficulties for funds with multiple sub-advisers because compliance would necessitate consideration of portfolio assets' liquidity at the fund level, and thus the proposal would require a significant amount of coordination among sub-advisers).

[709] *See also infra* paragraph accompanying footnote 818 (discussing the coordination of liquidity risk management efforts undertaken by various service providers, including a fund's sub-adviser(s)).

[710] For example, a fund may handle a shortfall due to changes in market conditions differently than a shortfall due to increased redemptions.

[711] If a fund's highly liquid investment minimum shortfall lasts more than seven consecutive calendar days, reporting to the fund's board within one business day is required, including an explanation of how the fund plans to restore its minimum within a reasonable period of time. *See* rule 22e–4(b)(1)(iii)(A)(3).

[712] *See infra* section III.H.3.

[713] *See, e.g.,* J.P. Morgan Comment Letter (suggesting a breach would necessitate a report to the board); SIFMA I Comment Letter (suggesting a ''highly liquid asset target'' and noting that ''[i]nstances where a fund dipped below its target percentage [could] be reported to the fund board with an explanation from management as to why the fund dipped below its target and any resulting impact on the fund's liquidity risk profile''); Invesco Comment Letter; Dechert Comment Letter.

believe that it is appropriate not to require that the fund's board be informed that the fund has dropped below its highly liquid investment minimum immediately when this occurs. Thus, rule 22e–4 requires that a fund's board be informed of a highly liquid investment minimum shortfall at the board's next regularly scheduled meeting.[714] If a fund were to drop below its highly liquid investment minimum multiple times prior to the next regularly scheduled board meeting, fund management could provide a single report to the board at that meeting discussing each of these occurrences.

However, we believe that when a fund's assets that are highly liquid investments are below its minimum for an extended period of time, this could indicate especially heightened liquidity risk, and thus under these circumstances it is appropriate to report a highly liquid investment minimum shortfall to the board within a shorter time frame. We are therefore adopting the requirement for a fund to report to its board of directors within one business day if its shortfall lasts longer than seven consecutive calendar days. Rule 22e–4 requires that this accelerated reporting include an explanation of how the fund plans to restore the fund's highly liquid investment minimum within a ''reasonable'' period of time. Fund management generally should take into account the fund's level of liquidity risk, as well as the facts and circumstances leading to the highly liquid investment minimum shortfall, in determining a reasonable time for returning the fund's assets that are highly liquid investments to the fund's minimum level.

4. Periodic Review of Highly Liquid Investment Minimum

Rule 22e–4 requires a fund to periodically review, no less frequently than annually, the fund's highly liquid investment minimum.[715] The proposed rule also included a periodic review requirement with respect to the proposed three-day liquid asset minimum, but instead of an annual minimum review requirement, the proposed rule would have required that the periodic review be conducted at least semi-annually.[716] We requested comment on this proposed review requirement generally, including the proposed minimum frequency of a fund's review. We received few comments on the proposed review requirement separate from general comments on the proposed three-day liquid asset minimum, although we received general support for a review requirement concerning a fund's target level of liquid assets.[717]

We continue to believe, as discussed in the Proposing Release, that a periodic review is a central component of the highly liquid investment minimum requirement we are adopting.[718] Although we proposed a minimum semi-annual review requirement, we are adopting a minimum annual review requirement primarily in order to correlate the minimum period for a fund's highly liquid investment minimum review with the minimum period in which a fund's board would be required to review a written report describing the adequacy of the fund's liquidity risk management program, as described in more detail below.[719] The minimum annual review period also would correlate with the requirement for a fund to review its liquidity risk periodically, but no less frequently than annually.[720] We believe that correlating the time periods for each review requirement in rule 22e–4 will reduce compliance burdens and mitigate potential confusion that could arise from disparate review periods.

We also do not believe that extending the highly liquid investment minimum review period from a minimum of semi-annually to annually will adversely affect funds or investors as a fund generally should review its highly liquid investment minimum more frequently if circumstances warrant. Additionally, as discussed above, a fund's board will be regularly informed of any highly liquid investment minimum shortfalls. Thus, the board will be aware of any liquidity risk management issues that might warrant reconsideration of the fund's risk management procedures or its highly liquid investment minimum.

Like the requirement for a fund to periodically review its liquidity risk, the highly liquid investment minimum review requirement will permit each fund to develop and adopt its own procedures for conducting this review, taking into account the fund's particular facts and circumstances. Additionally, we believe that in developing comprehensive review procedures, a fund should generally consider including procedures for evaluating regulatory, market-wide, and fund-specific developments affecting the fund's liquidity risk. A fund also may wish to adopt procedures specifying any circumstances that would prompt more frequent review of the fund's highly liquid investment minimum in addition to the annual minimum review required by the rule (as well as the process for conducting more frequent reviews).[721]

5. Exclusion for Funds Primarily Holding Assets That Are Highly Liquid Investments

Rule 22e–4, as adopted, excludes a fund that primarily holds assets that are highly liquid investments (a ''primarily highly liquid fund'') from the requirements to determine and review a highly liquid investment minimum, and to adopt shortfall policies and procedures.[722] We sought comment in the Proposing Release about whether we should exclude certain funds from the proposed three-day liquid asset minimum, such as funds that only invest in three-day liquid assets. Commenters argued that a requirement for a fund to determine a minimum portion of assets that it will invest in relatively liquid assets is not suitable for funds that primarily invest in highly liquid investment classes, given that a significant portion of the fund's portfolio would be composed of such assets, and thus the benefits associated with the three-day liquid asset minimum requirement would not justify the burdens.[723] After considering these comments and reevaluating the costs and benefits of the proposal, we agree that a primarily highly liquid fund should not be required to determine and review a highly liquid investment minimum, or adopt shortfall policies and procedures. We agree with commenters that the benefits associated with these requirements as applied to

[714] *See* rule 22e–4(b)(1)(iii)(A)(3).

[715] *See* rule 22e–4(b)(1)(iii)(A)(2).

[716] *See* proposed rule 22e–4(b)(2)(iv)(B).

[717] *See, e.g.,* Oppenheimer Comment Letter.

[718] *See* Proposing Release, *supra* footnote 9, at paragraph following n.352.

[719] *See infra* section III.H.2.

[720] *See supra* section III.B.3.

[721] *See, e.g., supra* footnote 273 and accompanying paragraph; *see also supra* section III.D.2.a.

[722] *See* rule 22e–4(b)(1)(iii)(A).

[723] *See, e.g.,* FSR Comment Letter (''[T]he Commission should consider alternative regulatory approaches for index funds that seek to track the performance of indices that are comprised of highly liquid assets . . . .''); Dechert Comment Letter (citing Statement on Open-End Fund Liquidity Risk Management Programs and Swing Pricing, Commissioner Daniel M. Gallagher, Securities and Exchange Commission (Sept. 22, 2015) (''Furthermore, for funds that invest solely in assets that can be settled in three days or less—for example, a fund that limits its investments to equity securities of S&P 500 companies—the 'three-day bucket' has no functional value. Requiring such a fund to set its three-day bucket—whether it be at 1%, or 20% or even 90%—would be a meaningless exercise given that the entire portfolio would be comprised of assets settled in three days or less.'')).

primarily highly liquid funds would not justify the associated burdens.[724]

Under rule 22e–4, a fund whose portfolio consists primarily of assets that are highly liquid investments would be excluded from the highly liquid investment minimum requirement.[725] Thus, we anticipate that a primarily highly liquid fund would address in its liquidity risk management program how it determines that it primarily holds assets that are highly liquid investments, including, for example, how it defines ''primarily.''[726] If a fund were to modify its investment strategy or encounter strategy ''drift'' such that it no longer primarily held assets that were highly liquid investments, it would be required to adopt and review a highly liquid investment minimum, as well as adopt and implement policies and procedures for responding to a shortfall of the fund's assets that are highly liquid investments below its minimum. We therefore believe that if a fund's investment strategy is such that it cannot generally be predicted whether the fund would primarily hold assets that are highly liquid investments (for example, if the strategy were to entail a significant amount of volatility in terms of the fund's portfolio liquidity), it would be difficult for the fund's management to conclude that the fund should appropriately be excluded from the highly liquid investment minimum requirement.

For purposes of determining whether a fund primarily holds assets that are highly liquid investments, a fund must exclude from its calculations the percentage of the fund's assets that are highly liquid investments that it has segregated to cover derivatives transactions that the fund has classified as moderately liquid investments, less liquid investments, and illiquid investments, or pledged to satisfy margin requirements in connection with those derivatives transactions, as determined pursuant to rule 22e–4(b)(1)(ii)(C).[727] As discussed above, when a fund's assets are segregated or pledged in connection with derivatives transactions, they may not be immediately available for liquidity risk management purposes.[728] Thus, a fund whose assets that are highly liquid investments that are segregated or pledged in connection with derivatives transactions may not have the same level of liquidity risk management flexibility as a fund whose assets are highly liquid investments that are not similarly segregated or pledged. While we believe that the benefits associated with the highly liquid investment minimum requirements as applied to primarily highly liquid funds would not justify associated burdens,[729] we believe that this consideration is appropriate only to the extent a fund primarily holds assets that are highly liquid investments that are not segregated or pledged in connection with derivatives transactions. As an extreme example, if a fund were to hold only assets that were highly liquid investments that were segregated or pledged in connection with derivatives transactions and that were not themselves classified as highly liquid investments, none of its assets that were highly liquid investments would be available to meet redemptions or otherwise manage liquidity risk. Thus, we believe that such fund's assets that were highly liquid investments would likely not be commensurate with its liquidity risk profile as determined with reference to the liquidity risk factors it would be required to consider under rule 22e–4.[730]

6. Highly Liquid Investment Minimum Reporting and Disclosure Requirements

We proposed to amend Form N–PORT to add a new item that would require each fund to disclose its three-day liquid asset minimum, as such term was proposed to be defined in proposed rule 22e–4. One commenter supported reporting the three-day liquid asset minimum in a structured data format to the public as proposed.[731] Certain other commenters supported reporting the three-day liquid asset minimum in a structured data format as proposed but to the Commission only.[732] One commenter did not support public disclosure of a fund's three-day liquid asset minimum, as proposed, but said it would support public disclosure of a fund's three-day liquid asset minimum if the Commission adopted a recommended alternative to such definition.[733]

Some commenters, however, opposed public disclosure of both the three-day liquid asset minimum as proposed and recommended alternatives to the three-day liquid asset minimum. Commenters expressed concerns that public disclosure could be misleading to investors, arguing that any minimum reported on Form N–PORT would be subjective, presented without context, and may not reflect a fund's actual portfolio management approach at the time the data is being relied upon by investors.[734] Other commenters contended that public disclosure could interfere with a fund's investment strategy and promote unwarranted, and potentially destabilizing, redemption activity by fund shareholders, especially during times of stress.[735] One commenter stated that public disclosure of a liquidity minimum would also give undue emphasis to a single element of a fund's liquidity risk management program and could potentially encourage third parties to use a single numerical figure as a basis for comparing funds, further encouraging undue reliance on the liquidity minimum figure by investors.[736] Certain other commenters expressed concern that public disclosure could potentially expose a fund to predatory trading activity if the fund is seen as vulnerable to liquidity risks or is under stress.[737] In addition, one commenter contended that comparisons of three-day liquid asset minimums could result in competitive pressures for relatively

[724] For more discussion about the costs and burdens associated with the highly liquid investment minimum requirement, *see infra* section IV.C.

[725] *See* rule 22e–4(b)(1)(iii)(A). Money market funds and In-Kind ETFs also would be excluded from the highly liquid investment minimum requirement. *See* rule 22e–4(a)(5) (defining ''fund,'' for purposes of the rule as excluding money market funds and In-Kind ETFs).

[726] As noted by commenters, a highly liquid index fund would be one example of a fund whose portfolio consists primarily (in the case of these index funds, almost entirely) of assets that are highly liquid investments. *See supra* footnote 723. In our view, if a fund held less than 50% of its assets in highly liquid investments it would be unlikely to qualify as ''primarily'' holding assets that are highly liquid investments.

[727] Rule 22e–4(b)(1)(iii)(B). As described above, a fund would be permitted to exclude its derivatives transactions that are classified as highly liquid investments in determining the percentage of highly liquid investments that are segregated or pledged assets because, since the fund could dispose of or exit these derivatives transactions within three business days, the associated segregated or pledged assets also would be available to the fund for liquidity risk management purposes within three business days. *See supra* text following footnote 493.

[728] *See supra* section III.C.3.c.

[729] *See supra* footnote 724 and accompanying text.

[730] *See supra* section III.D.2 (discussing the rule 22e–4 requirement for a fund to consider certain liquidity risk factors in determining its highly liquid investment minimum).

[731] *See* Charles Schwab Comment Letter (noting that information about the fund's liquidity risk management program will be particularly helpful to investors, as will disclosure of a fund's overall liquidity picture and a fund's three-day liquid asset minimum).

[732] *See, e.g.,* CFA Comment Letter; Voya Comment Letter.

[733] *See* Vanguard Comment Letter.

[734] *See, e.g.,* Eaton Vance Comment Letter I; J.P. Morgan Comment Letter; NYC Bar Comment Letter; Voya Comment Letter.

[735] *See, e.g.,* Eaton Vance Comment Letter I; J.P. Morgan Comment Letter; Wells Fargo Comment Letter.

[736] *See* SIFMA Comment Letter I.

[737] *See, e.g.,* Eaton Vance Comment Letter I; SIFMA Comment Letter.

uniform minimums among funds with similar investment strategies, ultimately harming fund investors.[738]

We are persuaded by some of the concerns expressed by commenters regarding the potential risks to funds and fund investors of public reporting of a fund's three-day liquid asset minimum, as proposed, or any alternative formulation, including a fund's highly liquid investment minimum, as adopted today. In response to comments, we are adopting amendments to require a fund to report its highly liquid investment minimum on Form N–PORT to the Commission on a non-public basis.[739] We believe that the requirement that a fund report to its board when the fund's assets that are highly liquid investments fall below the fund's highly liquid investment minimum, discussed above, is a more appropriate tool to assist fund boards in their oversight of fund liquidity risks, thereby ultimately protecting shareholder interests in the fund.[740]

In light of the changes we are making to the way the highly liquid investment minimum is established, the final modifications to Form N–PORT require that if a fund's minimum has changed during the reporting period, any prior minimums established by the fund during the reporting period also be reported.[741] Because, as discussed previously, we are not requiring the fund's board to approve changes to the highly liquid asset minimum, we believe it is important that any changes to the minimum during a reporting period be included in Form N–PORT to help mitigate the possibility of window dressing a fund's highly liquid asset minimum at the end of the reporting period, and allow us to monitor for changes to a fund's minimum. In addition, considering the changes we have made to the way the minimum works from the proposal, and consistent with the board and Commission reporting requirements we are adopting relating to shortfalls of a fund's minimum, the final amendments to Form N–PORT also require that if a fund is below its minimum during the reporting period, a fund needs to report the number of days it is below its minimum during the reporting period.[742] We believe that this reporting requirement will enhance our monitoring of fund's compliance with the minimum and the board and Commission reporting requirements contained elsewhere in rule 22e–4. These additional reporting requirements also would be non-public, for the same reasons discussed above.

Overall, we believe that such board oversight together with confidential reporting to the Commission is a regulatory approach that balances commenters' concerns about certain adverse effects that could arise from public reporting of liquid investment minimums with the need for enhanced investor protections and meaningful information for Commission regulatory oversight responsibilities. We believe that it is neither necessary nor appropriate in the public interest or for the protection of investors to make information regarding a fund's highly liquid investment minimum publicly available at this time.[743]

E. Limitation on Funds' Illiquid Investments

Rule 22e–4 includes a limit on a fund's ability to acquire illiquid investments. Specifically, the rule prohibits a fund from acquiring any illiquid investment if, immediately after the acquisition, the fund would have invested more than 15% of its net assets in illiquid investments that are assets.[744] The rule's 15% limit on funds' illiquid investments applies to all funds (including In-Kind ETFs).[745] Additionally, as discussed below, a fund will be required to notify its board, and confidentially the Commission, when its illiquid investments that are assets exceed 15% of its net assets. Moreover, the person(s) designated to administer the liquidity risk management program must explain in a report to the board the extent and causes of the occurrence, and how the fund plans to bring its illiquid investments that are assets to or below 15% of its net assets within a reasonable period of time.[746] If the amount of the fund's illiquid investments that are assets is still above 15% of its net assets 30 days from the occurrence (and at each consecutive 30 day period thereafter), the board of directors, including a majority of its independent directors,[747] must assess whether the plan presented to it continues to be in the best interest of the fund.

The limitation on funds' illiquid investments is similar to the limitation on ''15% standard assets'' in proposed rule 22e–4,[748] in that both requirements would limit the acquisition of assets that cannot be sold or disposed of within seven days. However, there are several key differences between the proposed and adopted requirements. Specifically, the proposed rule would have had a fund identify 15% standard assets in a process separate from the requirement to classify portfolio assets' liquidity, whereas rule 22e–4 as adopted today generally incorporates classification of portfolio investments as illiquid into the process for classifying the liquidity of a fund's portfolio investments generally. As discussed in sections III.C.1.b and III.C.3.b above, a fund is required to take into account ''relevant market, trading, and investment-specific considerations,'' and also is required to consider market depth, in classifying an investment as illiquid. Also as discussed above in section III.C.2.d, rule 22e–4 incorporates a modified value impact standard in the definition of ''illiquid investment'' from the value impact standard reflected in

738 *See* NYC Bar Comment Letter.

739 *See* General Instruction F of Form N–PORT.

740 *See supra* section III.D.3.

741 *See* Item B.7.c. of Form N–PORT.

742 *See* Item B.7.b. of Form N–PORT.

743 *See* section 45 of the Act, which provides, in summary, that the information contained in any report or other document filed with the Commission pursuant to the Act shall be made available to the public, unless by rules and regulations upon its own motion, or by order upon application, the Commission finds that public disclosure is ''neither necessary nor appropriate in the public interest or for the protection of investors.''

744 Rule 22e–4(b)(1)(iv). Rule 22e–4(b)(1)(iv) refers to investments that are ''assets'' to make clear that the 15% limit on illiquid investments applies to investments with positive values. Illiquid investments that have negative values should not be netted against illiquid investments that have positive values when calculating compliance with the 15% limit. Thus, only illiquid investments that have positive values (*i.e.,* ''assets'') should be used in the numerator.

745 *See id.; see also* rule 22e–4(a)(5) and (9) (defining the terms ''fund'' and ''In-Kind ETF'' for purposes of the rule).

746 Rule 22e–4(b)(1)(iv)(A).

747 ''Independent directors'' as used herein refers to directors who are not ''interested persons'' of a fund or In-Kind ETF, as applicable, as that term is defined in section 2(a)(19) of the Investment Company Act.

748 *See* Proposing Release, *supra* footnote 9, at section III.C.4. Under the proposed rule, ''15% standard asset'' was defined as ''an asset that may not be sold or disposed of in the ordinary course of business within seven calendar days at approximately the value ascribed to it by the fund.'' Proposed rule 22e–4(a)(4). For purposes of this definition, a fund would not have needed to consider the size of the fund's position in the asset or the number of days associated with receipt of proceeds of sale or disposition of the asset. *Id.*

We note that, as proposed, the text of rule 22e–4 would have limited the acquisition of 15% standard assets if, immediately after the acquisition, the fund would have invested more than 15% of its *total assets* (as opposed to *net assets*) in 15% standard assets. *See* proposed rule 22e–4(b)(2)(iv)(D). This reference to ''total assets'' in the proposed rule text was intended to read ''net assets,'' as was evident in the discussion of this rule provision in Proposing Release, section III.C.4 (and elsewhere in the Proposing Release), which consistently discussed the provision as limiting a fund's acquisition of 15% standard assets if, immediately after the acquisition, the fund would have invested more than 15% of its net assets in 15% standard assets. Rule 22e–4 as adopted refers to ''net assets'' instead of ''total assets.''

the proposed definition of ''15% standard asset.''

The majority of commenters supported the codification of the Commission's 15% guideline as proposed. Many commenters stated that the 15% guideline is an important investor protection measure and posited that the guideline has proven to be a highly effective safeguard against liquidity risk.[749] One commenter specifically noted that assets of open-end funds should be predominantly liquid and replacing the guideline with a formal regulatory mandate would promote investor protection.[750] Another commenter viewed the 15% guideline as a clear safeguard against liquidity risk that has the benefits of simplicity, clarity, and easy administration.[751] One commenter stated that setting reasonable controls on, and monitoring the use of, illiquid asset classes to ensure that they do not compromise the liquidity offered to investors within the fund is an important element of properly managing open-end funds.[752] Finally, one commenter suggested that the proposed codification of the 15% guideline would both increase the likelihood that funds hold adequate liquid assets to meet redemption requests without significant dilution and increase the likelihood that a fund's portfolio is not concentrated in assets whose liquidity is limited.[753]

In addition, several commenters supported a limit on the amount of illiquid assets that can be held by a fund generally, but suggested alternatives to how the 15% standard would operate or the proposed definition of 15% standard assets.[754] In fact, most commenters who expressed concerns regarding the proposed 15% limit did so in the context of suggesting alternatives to the proposal or the proposed definition of ''15% standard asset.'' Multiple commenters who discussed the proposed limit suggested that the Commission should harmonize its codification of the existing 15% guideline with the proposed requirement for a fund to classify the liquidity of its portfolio assets generally (*i.e.,* they suggested that illiquid assets be the least liquid classification category).[755] Some commenters suggested that any limit on illiquid assets should not just limit the acquisition of illiquid assets, but also should require the fund to adjust its portfolio if it exceeds the 15% limit.[756] Finally, some commenters suggested that a fund be required to notify its board and the Commission if it exceeds the 15% limit.[757] All other comments on the proposed limit were comments regarding the definition of ''15% standard asset'' and are discussed above in section III.C.2.d.

We agree with commenters who stated that codifying a limit on funds' illiquid investments should be a central element of managing open-end funds' liquidity risk, which in turn would further the protection of investors. While we believe that the highly liquid investment minimum requirement will increase the likelihood that each fund holds adequate liquid assets to meet redemption requests without significant dilution of remaining investors' interests in the fund, the limit on illiquid investments also should increase the likelihood that a fund's portfolio is not concentrated in investments whose liquidity is extremely limited, and thus will serve as an across-the-board limit on fund illiquidity. As discussed above, the Commission and staff have in the past provided guidance in connection with the 15% guideline. Today we are withdrawing this guidance along with the 15% guideline and replacing it with new requirements for determining that an investment is illiquid, as well as new guidance in this Release regarding these requirements. We believe that the limit on illiquid investments that are assets that we are adopting, together with the new definition of ''illiquid investments'' that encompasses additional elements for determining that an investment is illiquid,[758] provides a more comprehensive framework for funds to evaluate the liquidity of their investments.

We also agree, as discussed in more detail in section III.C.2.d above, that it is appropriate to harmonize the rule 22e–4 limit on illiquid investments with the rule's broader liquidity classification requirement by incorporating an illiquid investment category into the classification requirement. We believe that this harmonization will reduce confusion that could arise if we were to adopt requirements for identifying illiquid investments that differed from the requirements for classifying the liquidity of investments that are not illiquid.[759] Additionally, we believe the harmonization responds to commenter concerns that, in practice, many funds believe very few of their portfolio investments are subject to the 15% limit on illiquid securities, since funds will be required to take into account ''relevant market, trading, and investment-specific considerations'' in identifying illiquid investments and incorporate market depth considerations as part of the rule's liquidity classification requirement.[760] A fund also will be required to consider a modified value impact standard in determining if an investment is illiquid, which as discussed above, we believe will help funds make more accurate liquidity assessments, particularly for asset classes or investments that are subject to intra-day price volatility.

One commenter suggested that, if the Commission adopts requirements that would expand the set of assets that is subject to the 15% limit on illiquid assets, it could consider extending the limit beyond 15%, or extending the time-to-sale period associated with the definition of ''illiquid asset'' beyond seven days, in order to limit market disruptions.[761] We have considered this suggestion and have decided that it is not necessary.[762] We continue to believe that 15% is an appropriate limit on illiquid investments that are assets. The compliance period we are adopting for rule 22e–4 will permit funds to come into compliance with the revised 15% illiquid investment limit while minimizing market disruptions.[763]

In the proposal, we requested comment as to whether we should require a fund to divest its assets in excess of the 15% limit or whether we should limit the time period in which a fund can exceed the 15% limit. As noted above, some commenters suggested that the 15% limit should be a maintenance test, rather than an acquisition test, requiring the fund to adjust its portfolio if it exceeds the 15%

[749] *See, e.g.,* Cohen & Steers Comment Letter; Eaton Vance Comment Letter I; FSR Comment Letter; LSTA Comment Letter.

[750] *See* State Street Comment Letter.

[751] *See* Better Markets Comment Letter.

[752] *See* BlackRock Comment Letter.

[753] *See* CRMC Comment Letter.

[754] *See, e.g.,* AFR Comment Letter; Blackrock Comment Letter; Keefer Comment Letter; Wahh Comment Letter. In general, the comments we received on the 15% standard did not specifically address the amount of the limit; *cf.* footnote 761 and accompanying text.

[755] *See, e.g.,* Eaton Vance Comment Letter I; Federated Comment Letter; SIFMA Comment Letter I; Markit Comment Letter.

[756] *See, e.g.,* Fidelity Comment Letter; Keefer Comment Letter; Wahh Comment Letter. *But see* HSBC Comment Letter (arguing that imposing a fixed time period in which holdings above the 15% threshold must be divested would not be appropriate because it may force sales at depressed prices to the detriment of investors).

[757] *See* BlackRock Comment Letter; ICI Comment Letter I; SIFMA Comment Letter III.

[758] *See supra* section III.C.2.d.

[759] *See supra* footnotes 392–395 and accompanying text.

[760] *See supra* footnotes 399–401 and accompanying text.

[761] *See* AFR Comment Letter.

[762] As noted above, no other commenters specifically addressed the amount of the limit.

[763] *See infra* section III.M.1.

limit.[764] Another commenter argued that imposing a fixed time period in which holdings above the 15% threshold must be divested would not be appropriate because it may force sales at depressed prices to the detriment of investors.[765] In addition, one commenter noted the importance of ensuring oversight once a fund breaches the 15% limit and that efforts are made to reduce the fund's illiquid asset holdings (when possible).[766]

We believe that *requiring* a fund to divest illiquid investments if the fund's holdings of illiquid investments that are assets exceed 15% of net assets—which, as suggested by a commenter, could result in the fund needing to sell the illiquid investments at prices that incorporate a significant discount to the investments' stated value, or even at fire sale prices—could adversely affect shareholders and could potentially negate the liquidity risk management benefits of the illiquid investment limit. Therefore, under the final rule, a fund will be prohibited from *acquiring* any illiquid investment if, immediately after the acquisition, its illiquid investments that are assets would exceed 15% of its net assets.[767]

We further believe, however, that a fund should not be permitted to exceed the 15% limit on illiquid investments for an extended period of time without board oversight. Therefore, because we believe that if a fund's illiquid investments that are assets exceed the 15% limit it could indicate that the fund is encountering harmful liquidity pressures, the final rule requires, as suggested by commenters,[768] that a fund promptly report such occurrence to its board and the Commission.[769] Specifically, the final rule requires funds that hold more than 15% of their net assets in illiquid investments that are assets to report such an occurrence to their boards of directors within one business day, including an explanation of the extent and causes of the occurrence and how they plan to bring their illiquid investments that are assets to or below 15% of their net assets within a reasonable period of time.[770] We also anticipate that if a fund exceeds the 15% limit on illiquid investments that are assets at any point during the year, the written report to the board of directors regarding the adequacy and effectiveness of the liquidity risk management program would discuss the breach of the limit and, if the fund is still breaching the 15% limit at the time of the report, the plan to bring the fund's illiquid investments that are assets to or below 15% of its net assets within a reasonable period of time.[771] In addition, if the amount of the fund's illiquid investments that are assets is still above 15% of its net assets 30 days from the occurrence (and at each consecutive 30 day period thereafter), the fund's board of directors, including a majority of directors who are not interested persons of the fund, must assess whether the plan presented to it, as described above, continues to be in the best interest of the fund or in kind ETF.[772] We believe these requirements appropriately balance our concerns regarding the overall liquidity of the fund's portfolio with the potential adverse effects that the forced sale of illiquid investments could have on a fund and its shareholders. These requirements should not result in funds selling their illiquid investments at fire sale prices or at inopportune times because such a sale would likely not be in the best interests of a fund and its shareholders. However, we believe that board oversight is important when a fund's illiquid investments exceed 15% of its net assets for an extended period of time.

We acknowledge that requiring a board assessment of the appropriateness of the fund's plan to decrease its level of illiquid investments every 30 days a fund holds illiquid assets in excess of 15% of its net assets may impose burdens on boards and funds. Nonetheless, we believe that such a requirement is appropriate in light of the serious consequences that can result when a fund's liquidity becomes impaired or further deteriorates, particularly for extended periods of time.[773] We expect that this requirement will appropriately focus boards and funds on resolving liquidity impairments in a reasonable period of time and in the best interests of the fund and its shareholders. In light of the risks attendant in holding larger proportions of illiquid investments, we believe it is important that the board is provided sufficient information and regular updates so that it can make an informed judgment. Accordingly, we believe this periodic reassessment requirement in the rule is appropriate.

Additionally, as discussed in section III.M.2 below, a fund will be required to confidentially notify the Commission when its illiquid investments that are assets exceed 15% of its net assets. As discussed below, reporting of this information will assist Commission staff in its monitoring efforts of liquidity, including monitoring not only the reporting fund but also funds that may have comparable characteristics to the reporting fund and may be similarly affected by market events. The percentage of the fund's holdings invested in illiquid investments that are assets also will be disclosed on Form N–PORT to the public on a quarterly basis, with a 60-day delay, as discussed in section III.C.6 above, which will lead to increased transparency of the fund's profile regarding holdings of illiquid investments at particular points in time.

F. Policies and Procedures Regarding Redemptions in Kind

Many funds reserve the right to redeem their shares in-kind instead of with cash.[774] Mutual funds that reserve the right to redeem in kind may use such redemptions to manage liquidity risk under exceptional circumstances.[775] While many funds

[764] *See supra* footnote 756 and accompanying text.

[765] *See* HSBC Comment Letter.

[766] *See* BlackRock Comment Letter; *cf.* PIMCO Comment Letter (suggesting that, with respect to the proposed three day liquid asset minimum, if a fund breaches the minimum, its manager should be afforded a reasonable period of time to reposition the portfolio).

[767] We recognize that some index funds currently implement their strategies by using a full replication technique—*i.e.,* by investing in all of the component securities of an index. To the extent an index tracked by an index fund would require a fund using a full replication technique to invest more than 15% of its net assets in illiquid investments that are assets, such fund could not make those investments and would need to consider whether it should continue to seek to track the performance of such index or whether it should use a different investment technique, such as sampling, to track the index.

[768] *See supra* footnote 757.

[769] *See infra* section III.H.4 (discussing board oversight of the illiquid investment limit).

[770] Rule 22e–4(b)(1)(iv)(A); *see also infra* section III.H.4.

[771] *See infra* section III.H.2 (discussing the written report to the board on the adequacy and effectiveness of the liquidity risk management program); *see also* rule 22e–4(b)(2)(iii).

[772] *See* rule 22e–4(b)(1)(iv)(A) and (B).

[773] *See, e.g.,* Discussion of liquidity issues associated with the Third Avenue Focused Credit fund at n. 81.

[774] *See, e.g.,* Rule 18f–1 and Form N–18F–1 Adopting Release, *supra* footnote 24 (stating that the definition of ''redeemable security'' in section 2(a)(32) of the Investment Company Act ''has traditionally been interpreted as giving the issuer the option of redeeming its securities in cash or in kind.'').

[775] *See* Karen Damato, *'Redemptions in Kind' Become Effective for Tax Management,* Wall Street Journal (Mar. 10, 1999), *available at http://www.wsj.com/articles/SB921028092685519084* ('''Redemptions in kind' are typically viewed by fund managers as an emergency measure, a step they could take to meet massive redemptions in the midst of a market meltdown.''). Besides using in-kind redemptions as an emergency measure to manage liquidity risk, funds may also use in-kind redemptions for other reasons. For example, funds may wish to redeem certain investors (particularly, large, institutional investors) in kind, because in-kind redemptions could have a lower tax impact on the fund than selling portfolio securities in order to pay redemptions in cash. This, in turn, could

Continued

disclose that they have reserved the right to redeem in kind, most funds often consider redemptions in kind to be a last resort or emergency measure, and thus many do not have specific policies or procedures in place governing such in-kind redemptions.[776] Like the proposal, the final rule requires a fund that engages in or reserves the right to engage in in-kind redemptions to adopt and implement written policies and procedures regarding in-kind redemptions as part of the management of its liquidity risk.[777] These policies and procedures generally should address the process for redeeming in kind, as well as the circumstances under which the fund would consider redeeming in kind.

Multiple commenters welcomed efforts by the Commission to facilitate funds' ability to use redemptions in kind and stated that they considered redemptions in kind an important liquidity risk management tool for allocating the cost of selling securities to meet redemptions to redeeming investors.[778] These commenters also generally agreed that as part of a fund's management of its liquidity risk, a fund should adopt and implement written policies and procedures regarding in-kind redemptions.[779] Commenters noted that there are often logistical issues associated with paying in-kind redemptions, and that this limits the availability of in-kind redemptions under many circumstances.[780] Commenters also noted that some shareholders are generally unable or unwilling to receive in-kind redemptions, which may limit its utility.[781] These commenters agreed that requiring funds to implement policies and procedures on in-kind redemptions in advance would promote a focus on addressing any legal or operations issues before the fund's use of redemptions in kind, thus making such redemptions a more practical and effective liquidity management tool.[782]

Commenters also suggested that the Commission provide guidance on the appropriate use of in-kind redemptions for funds.[783] We expect that effective fund policies and procedures on in-kind redemptions would contemplate a variety of issues and circumstances. Well-designed policies and procedures would likely address the particular circumstances in which a fund might employ in-kind redemptions, for example, detailing whether a fund would use in-kind redemptions at all times, or only under stress, and what types of events may lead the fund to use them. Such policies and procedures would also likely address whether a fund would use in-kind redemptions for all redemption requests or only for requests over a certain size.[784]

Funds may also wish to consider having policies and procedures that address the ability of investors to receive in-kind redemptions, potentially including different procedures for different shareholder types. For example, the policies and procedures might provide that retail shareholders (who may not be operationally equipped to receive in-kind redemptions) may be provided cash redemptions, but that institutional investors who may be able to receive such securities, would be paid out in-kind under certain circumstances. These procedures may also consider whether holdings through omnibus accounts pose any unique issues that should be addressed. Well-designed policies and procedures would likely also address potential operational issues with providing in-kind redemptions to various kinds of investors, and plan out methods for addressing such operational issues. These might include notifying large shareholders that may be subject to redemptions in kind and setting up securities transfer processes for those shareholders in advance.

Effective policies and procedures would also likely address how the fund would determine which securities it would use in an in-kind redemption (for example would it use illiquid or restricted securities), or whether it plans to redeem securities in kind as a *pro rata* ratio of the fund's securities holdings, or whether it would redeem in a non-*pro rata* manner. For a fund that redeems *pro rata,* policies and procedures might address how the fund plans in-kind redemptions of odd lots or small lots of securities, and if a fund were to do such odd lot transactions, how to process such transactions. They may also consider how they would accomplish in-kind redemptions of illiquid securities or securities that have restrictions on their transferability, and the extent to which these securities would not be redeemed in kind.

If a fund chooses not to redeem in a *pro rata* manner, effective policies and procedures would likely address that securities redeemed are selected and distributed in a manner that is fair and does not disadvantage either the redeeming shareholder or the remaining investors in the fund. We caution that if a fund redeems an investor's interests in a fund by transferring an unrepresentative set of securities to the investor, this may raise questions of shareholder discrimination and unfairness (as well as potentially cherry picking and favoritism), which should be addressed in the fund's policies and procedures. For example, policies and procedures could address how to ensure that any securities that are redeemed in kind in a non-*pro rata* manner are valued properly, to ensure that the securities transferred represent the proportionate share of the fund NAV.[785] They might also address how the fund would determine that shareholders are treated fairly, and are not redeemed with securities the fund deems undesirable or securities that have significant tax consequences. Relatedly, the policies and procedures may also address how the fund evaluates the tax consequences to the fund and the redeeming shareholder of distributing certain securities, for example, whether distributing certain securities that have significant capital gains or losses built in would have inequitable results.

Because the management and personnel capacity of funds facing heavy redemptions and other liquidity stresses will likely be strained as funds attempt to manage these pressures, the Commission believes that requiring funds to have policies and procedures

---

benefit the remaining shareholders in the fund. *See, e.g., id.* (''If a fund has to sell appreciated stocks to pay a redeeming shareholder, it realizes capital gains. Unless the fund has offsetting capital losses, those gains are distributed as taxable income to all remaining fund holders. By contrast, when funds distribute stocks from their portfolios, there is no tax event for the continuing holders.'').

[776] *See* Proposing Release, *supra* footnote 9, at section III.C.5

[777] Rule 22e–4(b)(v). This requirement also applies to In-Kind ETFs that are subject to the tailored regime discussed below. *Id.*

[778] BlackRock Comment Letter (noting that redemptions in kind allow costs to be externalized from the fund without the use of mechanisms such as swing pricing).

[779] *See, e.g.,* BlackRock Comment Letter; Invesco Comment Letter.

[780] *See, e.g.,* Invesco FSOC Notice Comment Letter, *supra* footnote 248 (noting that while ''Invesco has on occasion exercised rights to redeem in kind, in practice such rights are exercised infrequently'').

[781] *See* Peter Fortune, *Mutual Funds, Part I: Reshaping the American Financial System,* New England Econ. Rev. (July/Aug. 1997) (''Fortune'') at 47 (''A fund redeeming in kind does so at the risk of its reputation and future business . . .''), *available at http://www.bostonfed.org/economic/neer/neer1997/neer497d.htm*; Invesco Comment Letter.

[782] ICI Comment Letter I; BlackRock Comment Letter.

[783] *See, e.g.,* BlackRock Comment Letter.

[784] One commenter suggested that fund sponsors should consider redemptions in kind if withdrawal requests exceed a certain percentage of a fund's total assets. *See* BlackRock Comment Letter.

[785] *See* section 2(a)(32) (definition of redeemable security). Such a transaction may have significant negative consequences to the redeeming recipient, particularly if the security provided was fair valued improperly, was restricted, or was in other ways impaired.

dictating how fund's will implement in-kind redemptions will increase the likelihood that in-kind redemptions will be a feasible risk management tool, and may address any potential fund or shareholder inequities. Accordingly, we are adopting this requirement largely as proposed.[786]

G. Cross-Trades

Today, under rule 17a–7, funds may make certain affiliated securities transactions between funds and certain affiliates (''cross trades''), provided they meet certain protective conditions.[787] Rule 17a–7 includes conditions that limit the portfolio assets that may be cross-traded, and, as discussed below, cross-trades involving certain less liquid assets may not be eligible to rely on the rule. As discussed in the Proposing Release, some funds may consider engaging in cross-trades to be a useful liquidity risk management tool. Cross-trading can benefit funds and their shareholders by allowing funds that are mutually interested in a securities transaction that is consistent with the investment strategies of each fund to conduct the transaction without incurring transaction costs and without generating a market impact.[788] However, cross-trades also have significant potential for abuse. For example, as the Commission has previously stated, ''an unscrupulous investment adviser might 'dump' undesirable securities on a registered investment company or transfer desirable securities from a registered investment company to another more favored advisory client in the complex. Moreover the transaction could be effected at a price which is disadvantageous to the registered investment company.'' [789] Cross-trade transactions also may be inconsistent with the investment objectives, investment strategies, or risk profiles of participating investment companies and other advisory clients.[790]

Accordingly, rule 17a–7 requires that any cross-trades satisfy certain conditions designed to prevent such abuses, including the requirement that market quotations be readily available for each traded security and that if the security is only traded over the counter, the cross-trade be conducted at the average of the highest current independent bid and lowest current independent offer determined on the basis of reasonable inquiry.[791] In requiring market quotations for cross-traded securities, the Commission has stated that ''[r]eliance upon such market quotations provides an independent basis for determining that the terms of the transaction are fair and reasonable to each participating investment company or other advisory client and do not involve overreaching.'' [792] Rule 17a–7 also requires that a cross-trade transaction be ''consistent with the policy of each registered investment company and separate series of a registered investment company participating in the transaction, as recited in its registration statement and reports filed under the Act.'' [793]

We noted in the Proposing Release that less liquid assets are less likely to satisfy rule 17a–7 than highly liquid investments.[794] Some commenters expressed concern that this assertion would prohibit funds from, or create a presumption against, cross-trading any assets deemed less liquid,[795] or directly incorporate liquidity classification decisions into rule 17a–7 eligibility determinations.[796] One commenter, disagreeing with the assertion that less liquid assets are less likely to satisfy rule 17a–7 than highly liquid assets, stated ''a less actively traded security may be less liquid, but nonetheless have readily available market quotations, and a fund may determine that independent bid and offer prices are available in the market. The relative illiquidity of the security itself will not alone be determinative of whether prices are available for Rule 17a–7 purposes.'' [797]

We note that less liquid assets, by definition, are less likely to trade in highly active markets that produce readily available market quotations, which may make it more difficult to ensure that the terms of a cross-trade transaction are fair and reasonable to each participating investment company or other advisory client and do not involve overreaching. As one commenter noted, ''rule 17a–7 broadly requires the availability of accurate valuation information with respect to any security proposed to be traded from one adviser-directed account to another. This effectively requires such securities to be relatively liquid.'' [798] Moreover, the absence of highly active markets for less liquid assets may exacerbate the concern discussed above relating to ''dumping'' undesirable securities, because limited markets for such assets indicates that there are fewer alternate options for disposing of the assets. Similarly, the absence of highly active markets for less liquid assets may exacerbate the concern relating to a transfer of assets that is inconsistent with the investment objective, investment strategies, or risk profile of each participating investment company or other advisory client.

We agree that an assessment of an asset's liquidity, without more, would not determine whether the asset is eligible for a cross-trade transaction under rule 17a–7. However, as noted above, we believe that any assets used in a cross-trade transaction should be scrutinized to ensure that they satisfy all of rule 17a–7's requirements. Due to the particular risks associated with cross-trading less liquid assets, it may be

[786] The rule text has been slightly modified to make clear that redemption in kind policies and procedures must address not just how the fund will engage in redemptions in kind, but also when it will do so. Rule 22e–4(b)(1)(v).

[787] Section 17 of the Act restricts transactions between an ''affiliated person of a registered investment company or an affiliated person of such affiliated person'' and that investment company—for example, transactions between a fund and another fund managed by the same adviser. A fund must therefore obtain exemptive relief from the Commission before entering into purchase or sale transactions with an affiliated fund, or execute such transactions subject to the provisions of rule 17a–7 under the Investment Company Act (permitting purchase and sale transactions among affiliated funds and other accounts, under certain circumstances).

[788] As noted above, rule 17a–7 requires that each cross-trade be consistent with the policy of each fund participating in the transaction and that no brokerage commissions, fees or other remuneration be paid in connection with the transaction. Because cross-trades are conducted privately between funds, they are not transparent to market trading reporting systems and thus are unlikely to generate a market impact.

[789] Exemption of Certain Purchase or Sale Transactions Between a Registered Investment Company and Certain Affiliated Persons Thereof, Investment Company Act Release No. 11136 (Apr. 21, 1980) [45 FR 29067 (May 1, 1980)]. *See also* Evergreen Order, *supra* footnote 46 (fund's adviser failed to seek best execution in trading fund securities and favored one client over another, thereby engaging in transactions that operated as a fraud or deceit upon its client in violation of section 206(2) of the Advisers Act).

[790] A fund that provided a non-*pro rata* distribution of cash, securities or other property to a shareholder that owns 5% or more of the fund and/or gives any election to the shareholder about which assets to receive may also raise affiliated transaction concerns under section 17(a) and rule 17a–5, as such a transaction would fall outside the exemption provided by rule 17a–5 and thus might be viewed as a sale to or purchase from the fund by an affiliated person.

[791] *See* rule 17a–7(b).

[792] Exemption of Certain Purchase or Sale Transactions Between a Registered Investment Company and Certain Affiliated Persons Thereof, Investment Company Act Release No. 11676 (Mar. 10, 1981) [45 FR 17011 (Mar. 17, 1981)]. The Commission has historically declined to expand rule 17a–7 to cross-trades for which market quotations were not readily available and where independent current market prices were not available because these conditions increase the potential for abuse through cross-trades. *See id.*

[793] *See* rule 17a–7(c).

[794] *See* Proposing Release, *supra* footnote 9, at n.396 and accompanying text.

[795] *See* ICI Comment Letter I.

[796] *See* Comment Letter of Simpson Thacher & Bartlett LLP (Jan. 14, 2016) (''Simpson Thacher Comment Letter'').

[797] *See* Fidelity Comment Letter.

[798] See id.

prudent for advisers to subject less liquid assets to careful review (and potentially even a heightened review compared to other more liquid assets) before engaging in such transactions.

We note that cross trading also implicates a fund's adviser's duty to seek best execution for each fund or other advisory client, as well as its duty of loyalty to each fund or other advisory client.[799] An adviser should not cause funds or other clients to enter into a cross-trade unless doing so would be in the best interests of each fund or other client participating in the transaction. Advisers should be particularly sensitive to the possibility of heightened conflicts when one or both of the clients is experiencing stress at the time of consideration of a cross trade.

Under rule 38a–1, a fund's compliance policies and procedures related to rule 17a–7 generally should contemplate how the fund meets the rule's requirements with regard to less liquid assets. For example, as part of these policies and procedures, a fund might consider conducting a review of less liquid assets before cross-trading them to ensure that ''market quotations are readily available,'' that a ''current market price'' is available, that the transaction is in line with each participating investment company's or other advisory client's investment objective, investment strategies and risk profile, and that the cross-trade satisfies all other requirements set forth in rule 17a–7. Reasonably designed policies and procedures thus would likely specifically address how a fund would determine that such less liquid securities are appropriately used when meeting the requirements of rule 17a–7. The specific review of a less liquid asset would likely vary depending on the characteristics of the market or markets in which the asset transacts, the characteristics of the asset itself, and the nature of the funds potentially involved in the cross trade.

In crafting policies and procedures reasonably designed to address the particular risks of cross-trading less liquid assets, a fund could consider specifying the sources of the readily available market quotations to be used to value the assets and establish specific criteria for determining whether market quotations are current and readily available, and include potential back-up sources if the primary sources are not available. Funds should consider including in their policies and procedures periodic reviews of the continuing appropriateness of those sources of readily available market quotations.

In addition, a fund's policies and procedures might also provide for assessing the quality of quotations provided by dealers. The quality of dealer quotations may vary depending upon, among other things, the extent to which a dealer makes a market in or retains an inventory in the particular security, or in similar securities, such that the dealer maintains an awareness of changes in market factors affecting the value of the security.[800] ''Indications of interest'' and ''accommodation quotes,'' may not necessarily reflect the current market values of the securities and thus are not ''market quotations'' or ''market values'' for the purposes of rule 17a–7.[801]

In addition, reasonably designed policies and procedures likely would also include compliance monitoring to help ensure that the investment objective, investment strategies and risk profile of each participating investment company or other advisory client are scrutinized in conjunction with the characteristics of any cross-traded asset to evaluate whether the asset transfer is not in line with any objective or strategy or inappropriately shifts risk from one investment company or other advisory client to another. Whether a cross-trade is in the best interest of an investment company or other client purchasing an asset may depend, in part, on the relative liquidity of the purchaser's existing portfolio assets and the level of redemptions that may be reasonably anticipated by the purchaser.

H. Board Approval and Designation of Program Administrative Responsibilities

Directors, and particularly independent directors, play a critical role in overseeing fund operations, although they generally may delegate day-to-day management to a fund's adviser.[802] As discussed below, we are adopting as proposed the requirement for a fund's board of directors to approve the investment adviser, officer, or officers who are responsible for administering the program and to approve the fund's written liquidity risk management program. However, in a change from the proposal, the board will not be required to specifically approve the fund's highly liquid investment minimum (except in the limited circumstances that a fund below its minimum seeks to change it) or to approve material changes to the program. Instead, similar to rule 38a–1, the board will be required to review, no less than annually, a written report prepared by the investment adviser, officer, or officers designated to administer the liquidity risk management program that describes a review of the program's adequacy and effectiveness, including, if applicable, the operation of the highly liquid investment minimum, and any material changes to the program.[803] As discussed in detail below, the final rule retains a role for the board in overseeing the fund's liquidity risk management program, but in response to commenters, eliminates certain of the more specific and detailed approval requirements.

We believe the role of the board under the rule is one of general oversight, and consistent with that obligation we expect that directors will exercise their reasonable business judgment in overseeing the program on behalf of the fund's investors. As discussed in the Proposing Release, directors may satisfy their obligations with respect to this initial approval by reviewing summaries of the liquidity risk management program prepared by the fund's investment adviser, officer, or officers administering the program, legal counsel, or other persons familiar with the liquidity risk management

[799] *See, e.g.,* In re Western Asset Management Co., Investment Company Act Release No. 30893 (Jan. 27, 2014) (settled action) (stating that the adviser to funds and other advisory clients engaging in cross-trading ''has a fiduciary duty of loyalty to its clients and also must seek to obtain best execution for both its buying and selling clients'' and finding that the adviser aided and abetted and caused violations of section 17(a) and violated Advisers Act section 206).

[800] Dealers do not necessarily purport to provide quotations for securities that reflect their current market values. Some dealers may provide only ''indications of interest,'' *i.e.,* non-firm expressions of interest to trade that do not constitute quotations or ''accommodation quotes''. *See, e.g.,* Regulation NMS, Securities Exchange Act Release No. 49325 (Feb. 26, 2004) [69 FR 11126 (Mar. 9, 2004)], at n.257. *Cf.* Rules 600(b)(8) and (62) under Regulation NMS [17 CFR 242.600(b)(8) and 242.600(b)(62)] (defining ''bid or offer'' as ''the bid price or the offer price communicated by a member of a national securities exchange or member of a national securities association to any broker or dealer, or to any customer, at which it is willing to buy or sell one or more round lots of an NMS security, as either principal or agent, but shall not include indications of interest,'' and defining ''quotation'' as ''a bid or an offer'').

[801] *Id.* We also note that evaluated prices provided by pricing services are not, by themselves, readily available market quotations. *See* 2014 Money Market Fund Reform Adopting Release, *supra* footnote 43, at n.895 and accompanying text.

[802] *See* Investment Trusts and Investment Companies: Hearings on H.R. 10065 Before a Subcomm. of the House Comm. on Interstate and Foreign Commerce, 76th Cong., 3d Sess. 112 (1940) at 109 (describing the board as an ''independent check'' on management); *Burks* v. *Lasker,* 441 U.S. 471, 484 (1979) (citing *Tannenbaum* v. *Zeller,* 552 F.2d 402, 406 (2d. Cir. 1979)) (describing independent directors as ''independent watchdogs'').

[803] *See* rule 22e–4(b)(2).

program.[804] The summaries should familiarize directors with the salient features of the program and provide them with an understanding of how the liquidity risk management program addresses the required assessment of the fund's liquidity risk.

Many commenters expressed general support for board oversight of the liquidity risk management program, although several objected to certain of the board's specific responsibilities required under the rule, in particular their approval of the three-day highly liquid asset minimum and of material changes to the program.[805] Given the board of directors' historical oversight role, the Commission continues to believe it is appropriate to require a fund's board to oversee the fund's liquidity risk management program. The rule's requirements are designed to facilitate the board's oversight of the adequacy and effectiveness of the fund's liquidity risk management program.

Several commenters asked that the final rule include an express standard of care (*i.e.,* the business judgment rule) to which the Commission would hold a fund's board accountable in this area.[806] One commenter requested that the final rule provide fund boards with a safe harbor in approving specific elements of the program and clarification that a board is not required to consider all of the enumerated factors (specifically, any non-applicable factors) when setting and adjusting the three-day liquid asset minimum.[807] We believe that the changes made to the board oversight role from the proposal should largely address the commenters' concerns. In addition, we believe that the board oversight role here is substantially similar to its role and responsibilities in other contexts under the Investment Company Act, and that providing a different standard of care for board action here would not be appropriate.[808]

1. Designation of Administrative Responsibilities to Fund Investment Adviser, Officer, or Officers

We are adopting substantially as proposed the requirements that the fund's board of directors approve the designation of the fund's investment adviser, officer, or officers (which could not be solely portfolio managers of the fund) responsible for administering the fund's liquidity risk management program.[809] We are also adopting, substantially as proposed, the requirement that the administrator of the program provide the board with a written report on the adequacy of the fund's liquidity risk management program, including the highly liquid investment minimum, and the effectiveness of its implementation, at least annually.[810] The Commission continues to believe this approach properly tasks the person(s) who are in a position to manage the fund's liquidity risks on a real-time basis with responsibility for administration of the liquidity risk management program. Designating the fund's investment adviser, officer, or officers responsible for the administration of the fund's liquidity risk management program, subject to board approval, is consistent with the way the Commission understands most funds manage liquidity.[811]

We received little comment on this aspect of the proposal. A few commenters agreed with the proposal that the board's responsibilities should include approval of the program's administrator.[812] We continue to believe that requiring that the board approve the designation of the administrator of the liquidity risk program is an important step in board oversight of the program. We believe that having the board approve the administrator should help enhance board oversight of the program and allow for boards to better understand who is responsible for administering it.

One commenter argued that portfolio managers should administer the program, contending that liquidity risk management requires investment skills and swiftness during stress to manage redemptions.[813] This commenter believed that if a program administrator were independent from portfolio management, then liquidity assessment might become divorced from the investment process, which the commenter argued would be disadvantageous to the fund and investors. We agree that portfolio management provides valuable input into the liquidity risk management process. However, we are concerned that if only portfolio managers run the program, the program might not be administered with sufficient independence to accomplish the goal of managing the risk of the fund's liquidity. We believe that a fund generally should consider the extent of influence portfolio managers may have on administration of the program, and seek to provide independent voices and administration of the program as a check on any potential conflicts of interest to the extent appropriate. However, as the proposal noted, although the fund's portfolio managers cannot be solely responsible for administering the program, the administrator of the program might wish to consult with the fund's portfolio manager, traders, risk managers, and others as necessary or appropriate in administering a fund's liquidity risk management program.[814] Portfolio managers may also be a part of any committee or group designated to administer the program, if more than one person is so designated. The Commission understands that some funds currently employ a dedicated risk management officer who consults with the fund's portfolio management team. One commenter noted, and we agree, that portfolio managers should provide day-to-day management of funds, with an additional layer of oversight provided by the risk and compliance framework.[815] After review of the comments received, we continue to believe that requiring the officer or officers responsible for administering the fund's liquidity risk management program not to be solely portfolio managers strikes the appropriate balance between independence and expertise.

The Commission recognizes that, in certain circumstances, a fund's service providers might assist a fund and its investment adviser by providing information relevant to a fund's assessing and managing liquidity

[804] *See* Proposing Release, *supra* footnote 9, at section III.D.

[805] *See, e.g.,* ICI Comment Letter I; IDC Comment Letter; SIFMA Comment Letter I.

[806] Fidelity Comment Letter; FSR Comment Letter; MFDF Comment Letter; T. Rowe Comment Letter. *See also* NYC Bar Comment Letter (suggesting codifying a good-faith, reasonable, business judgment standard). One commenter also suggested that the proposed requirement of keeping records of the board's determination related to the factors considered when approving the three-day liquid asset minimum is not appropriate in light of the board's historical role. T. Rowe Comment Letter. We note that as discussed below, the board will not specifically approve the highly liquid investment minimum, thereby addressing the commenters' concerns about keeping records of the factors used in the board's determination.

[807] T. Rowe Comment Letter.

[808] *See, e.g.,* 2014 Money Market Fund Reform Adopting Release, at text accompanying nn.266–267 (discussing the board's role under the Investment Company Act).

[809] *See* rule 22e–4(b)(2)(ii).

[810] *See* rule 22e–4(b)(2)(iii). We note that a fund's sub-adviser could be designated as the administrator of the program if appropriate.

[811] *See* American Bar Association, Fund Director's Guidebook, Federal Regulation Of Securities Committee, (4th ed. 2015), at 82 (''Determining the liquidity of a security is primarily an investment decision that is delegated to the investment adviser, but directors may establish guidelines and standards for determining liquidity.'').

[812] IDC Comment Letter; Voya Comment Letter.

[813] Invesco Comment Letter.

[814] *See* Proposing Release, *supra* footnote 9, at section III.D.3.

[815] BlackRock Comment Letter.

risk.[816] We note, however, that the primary parties responsible for a fund's liquidity risk management are the fund itself and any parties to whom the fund has delegated responsibility for administering the fund's liquidity risk management program.

One commenter requested further guidance on what responsibilities the administrator could delegate and to what extent the administrator could rely upon third parties.[817] The Proposing Release provided two examples of when a fund's service providers could assist a fund and its investment adviser in monitoring factors relevant to a fund's liquidity risk and managing the fund's liquidity risk: Third parties could provide data relevant to assessing fund flows, and a sub-adviser necessarily would be responsible for investing a fund's assets in accordance with the fund's three-day liquid asset minimum and any other liquidity-related portfolio requirements adopted by the fund.[818] As proposed, the final rules require a fund to oversee any liquidity risk monitoring or risk management activities undertaken by the fund's service providers. We encourage the fund to communicate regularly with its service providers as a part of its oversight and to coordinate the liquidity risk management efforts undertaken by various parties.

2. Oversight of the Liquidity Risk Management Program

Under the final rule, a fund will be required to obtain initial approval of its written liquidity risk management program from the fund's board of directors, including a majority of its independent directors.[819] Additionally, the fund's board will be required to review a written report from the administrator of the fund's liquidity risk management program, provided no less frequently than annually, that addresses the operation of the program and assesses its adequacy and effectiveness of implementation.[820] In a change from the proposal, a fund will not be required to obtain approval of any material changes to the fund's liquidity risk management program from the fund's board of directors, but instead such material changes will be described in the report.[821]

Commenters raised concerns that the proposed rule imposed management responsibilities on the fund's board of directors and suggested that the Commission clarify that the board's role is to provide oversight through approval of policies and procedures, whereas management's role is to devise the specific details of the program.[822] Commenters contended that the final rule should mirror rule 38a–1, requiring fund managers to explain material changes to the program (including changes to the three-day liquid asset minimum) in an annual report to the board, not to submit those changes for prior board approval.[823] These commenters felt that a requirement to discuss material changes to the liquidity risk management program in an annual update to the fund's board would strike an appropriate balance between allowing the fund manager the flexibility to make changes to liquidity risk management as market conditions might require, while also keeping the fund's board informed.[824]

We agree with commenters that requiring funds to obtain approval from fund boards before making material changes to a liquidity risk management program risks the program becoming stale and outdated as market changes occur, and is not consistent with the approach taken under rule 38a–1. Accordingly, the final rule does not require prior approval of material changes to the fund's liquidity risk management program from the fund's board of directors. However, under the final rule, the board is still required to approve the program initially and to provide oversight of it, as well as review a report on the adequacy and effectiveness of the program's implementation, which must include a description of any material changes made to the program during the period. We believe that this oversight role is consistent with the board's historical responsibilities with respect to overseeing fund operations.

3. Oversight of the Highly Liquid Investment Minimum

In a change from the proposal, under the final rule, boards will not be required to approve the highly liquid investment minimum, nor approve changes to it, except in the limited circumstances where a fund seeks to change the minimum while the fund is below the pre-established minimum. Commenters argued that because liquidity risk management, including management of three day-liquid assets, is both technical and fact-intensive and often requires day-to-day judgments, fund managers should develop and administer the program, subject to board review.[825] Commenters were concerned that the requirement for a fund to obtain board approval for setting and changing the three-day minimum may cause delay that might harm fund shareholders.[826] For example, one commenter argued that requiring board approval, which might be difficult to obtain on a timely basis, could cause a fund to stand idle as market conditions changed, missing opportunities as board approval was sought.[827]

We agree with commenters that requiring boards to approve the highly liquid investment minimum may reduce its utility, as the minimum may need to be revised on a more timely basis so that it can best reflect the liquidity management needs of the fund under current market conditions. In addition, we understand commenters' concerns that requiring mutual fund boards to make day-to-day determinations regarding the minimum amount of cash or liquid assets the fund should hold may lead to a more detailed managerial role for the board.

However, in the limited circumstances where the program administrator seeks to change the fund's highly liquid investment minimum while the fund is below the pre-established minimum, the final rules require the board to approve such a change. In the absence of such a requirement, the administrator could simply change the minimum if the fund dropped below it, avoiding the accountability of the board approval requirements as well as reducing the minimum's utility as a liquidity risk management tool. The final rule also requires the board to receive a report whenever the fund falls below its highly liquid investment minimum at its next regularly scheduled meeting and a report of such a shortfall if the fund is below its highly liquid investment minimum for more than 7 consecutive calendar days, within one business day thereafter. The Commission believes these requirements properly balance the ability of funds to move quickly in response to shifting environments with

[816] *See* Proposing Release, *supra* footnote 9, at section III.D.3.

[817] Voya Comment Letter.

[818] *See* Proposing Release, *supra* footnote 9, at section III.D.3.

[819] *See* rule 22e–4(b)(2)(i).

[820] As noted above, more frequent reports to the board may be appropriate in certain circumstances. *See supra* footnote 771.

[821] *See* rule 22e–4(b)(2).

[822] *See, e.g.,* Cohen & Steers Comment Letter; FSR Comment Letter; HSBC Comment Letter; NYC Bar Comment Letter.

[823] *See, e.g.,* BlackRock Comment Letter; FSR Comment Letter; ICI Comment Letter I; Invesco Comment Letter.

[824] *See, e.g.,* BlackRock Comment Letter; Dechert Comment Letter; Voya Comment Letter.

[825] *See, e.g.,* CRMC Comment Letter; FSR Comment Letter; State Street Comment Letter; Dodge & Cox Comment Letter.

[826] *Id.*

[827] Dechert Comment Letter.

the boards' oversight of the liquidity risk management program.

4. Oversight of Illiquid Investment Limit

In a change from the proposal, the final rule will also require that a fund board be informed within one business day if the fund's holdings of illiquid investments exceed 15% of its net assets. In the proposal, we requested comment as to whether additional aspects of a fund's liquidity management program should be reported to a fund's board. For the reasons discussed in the section on Form N–LIQUID, if a fund's holdings of illiquid investments exceed 15% for any reason (for example, if a fund experiences net redemptions leading to increased holdings of illiquid investments) it may raise significant concerns regarding the fund's management of its liquidity and ability to continue to meet its redemption obligations. Accordingly, we believe that such an event should be reported to the board immediately, as it may have significant impacts on the ability of the fund to meet its redemption obligations, and may compromise its liquidity risk management.

As discussed in the section on Form N–LIQUID below, a number of commenters also expressed support for the addition of an early warning notification provision, under which funds would be required to notify the Commission (or take other action) when illiquid investments held at the end of a business day exceed 15% of net assets and continue to exceed 15% of net assets three business days after the threshold was first exceeded.[828] As discussed in the section on Form N–LIQUID, we are adopting a requirement that a fund report to the Commission within one business day if the fund's holdings of illiquid investments exceed 15% percent of its net assets. One commenter suggested that such a requirement would impose greater discipline on the oversight of fund holdings of illiquid assets, and that a fund would likely consult with the fund board in developing how to proceed in response.[829] We agree, and believe that if a fund were to file Form N–LIQUID because the fund's holdings of illiquid investments exceeded 15% of its net assets, a fund board should be informed, and should be informed quickly, so that the board can provide oversight as the fund determines how to address the level of illiquidity in the fund's portfolio. Accordingly, as a complement to this new N–LIQUID requirement, the final rules require that if a fund's holdings of illiquid investments exceed 15% of its net assets, the fund board be informed of that fact within one business day after the occurrence, with an explanation of the extent and causes of the occurrence and how the fund plans to bring its illiquid investments that are assets to or below 15% of its net assets within a reasonable period of time.

I. Recordkeeping Requirements

Under the final rules, and as we proposed, each fund will be required to maintain a written copy of the policies and procedures adopted as part of its liquidity risk management program for five years, in an easily accessible place.[830] Additionally, each fund will be required to maintain copies of any materials provided to its board in connection with the board's initial approval of the fund's liquidity risk management program, and copies of written reports provided to the board on the adequacy of the fund's liquidity risk management program, including the fund's highly liquid investment minimum, and the effectiveness of its implementation for at least five years after the end of the fiscal year in which the documents were provided to the board, the first two years in an easily accessible place.[831] In a change from the proposal, funds would also need to keep records of any materials provided to the board related to the fund dropping below its highly liquid investment minimum. As with the proposal, the final rules also require each fund to keep a written record of how its highly liquid investment minimum, and any adjustments thereto, were determined, including the fund's assessment and periodic review of its liquidity risk for a period of not less than five years, the first two years in an easily accessible place, following the determination of, and each change to, the fund's highly liquid investment minimum.[832]

One commenter found the recordkeeping requirements consistent with similar recordkeeping requirements that funds are currently required to maintain.[833] The recordkeeping requirement is designed to provide our examination staff with a basis to evaluate a fund's compliance with the requirements of rule 22e–4. We also anticipate that these records would assist our staff in identifying weaknesses in a fund's liquidity risk management. The five-year retention period is also consistent with the period provided in rule 38a–1(d) under the Act. We believe consistency in these retention periods is appropriate because funds currently have compliance program-related recordkeeping procedures in place incorporating a five-year retention period, which we believe lessen the compliance burden to funds, compared to choosing a different retention period, such as the six-year recordkeeping retention period under rule 31a–2 of the Act.

The Commission continues to believe that the rule appropriately balances recordkeeping-related burdens on funds and our examination staff's ability to evaluate a fund's liquidity risk management program in light of the requirements of rule 22e–4. We are therefore adopting this aspect of the rule substantially as proposed.

J. ETFs

We are adopting certain tailored liquidity risk management program requirements for ETFs.[834] In assessing, managing, and periodically reviewing its liquidity risk, an ETF will be required to consider certain additional factors, as applicable, that take into account its unique operation, as discussed further below.[835] Like all funds, each ETF also will be required to limit its investments in illiquid investments to no more than 15% of its net assets and obtain certain board approvals regarding the program. Certain ETFs that qualify as ''In-Kind ETFs,'' [836] (generally ETFs that redeem shares in kind except to a *de minimis* extent and that publish their holdings daily) however, will not be required to classify their portfolio investments or comply with the highly liquid investment minimum requirement.[837]

[828] *See, e.g.,* ICI Comment Letter III; SIFMA Comment Letter III (noting that this early warning notification could respond to concerns raised by the Third Avenue Fund liquidation); *see also* Third Avenue Temporary Order, *supra* footnote 12.

[829] *See* ICI Comment Letter III.

[830] *See* rule 22e–4(b)(3)(i). These policies and procedures would include any shortfall policies and procedures adopted by a fund. *See id.*

[831] *See* rule 22e–4(b)(3)(ii).

[832] *See* rule 22e–4(b)(3)(iii).

[833] CFA Comment Letter.

[834] References to ETFs in this section are to both in-kind and other open-end ETFs, but not UIT ETFs (which are not subject to the liquidity risk management program requirements), except where specifically indicated otherwise. *See infra* section III.K for a discussion of limited liquidity review requirements for principal underwriters and depositors of UITs.

[835] *See* rule 22e–4(b)(1)(i).

[836] References to ''In-Kind ETFs'' include both ETFs and ETMFs that meet the requirements in rule 22e–4(a)(9)) (defining an ''In-Kind ETF''). *See infra* footnote 851 and accompanying text (discussing a requirement that ETFs report their status as an ''In-Kind ETF,'' when applicable, on Form N–CEN).

[837] ETFs that redeem in cash, or that do not qualify otherwise as ''In-Kind ETFs'' (as defined in rule 22e–4(a)(9)) will be subject to the full set of liquidity risk management program elements, including the classification and highly liquid investment minimum requirements. *See* rule 22e–

Continued

We believe these adjusted program requirements recognize and appropriately require management of the unique liquidity risks found in ETFs, and in particular In-Kind ETFs.

A number of commenters on the proposal highlighted how ETFs differ from mutual funds, and stated in particular that In-Kind ETFs do not present the same type of liquidity risks as other funds.[838] These commenters suggested that the Commission: (i) Exempt either ETFs or In-Kind ETFs entirely from proposed rule 22e–4;[839] (ii) exempt either ETFs or In-Kind ETFs from certain requirements of proposed rule 22e–4 (notably the portfolio liquidity classification and three-day liquid asset requirements);[840] or (iii) develop a more tailored liquidity risk management program applicable to ETFs.[841]

As noted above, we believe that ETFs, like mutual funds, face liquidity risks.[842] But we agree that In-Kind ETFs have different liquidity risks than funds (including ETFs) that redeem in cash. This is particularly the case because the redeeming shareholder (*i.e.,* authorized participant or its customer), rather than the ETF, typically will bear the direct costs associated with its liquidity needs, given that if that authorized participant (or its customer) wants cash, it must sell the in-kind assets and bear the costs of doing so. Therefore, after further analysis, including carefully considering the comments received, we are adopting tailored liquidity risk management program requirements for ETFs as discussed further below.

We decline to exempt all ETFs from the rule entirely, because we believe ETFs that redeem more than a *de minimis* amount in cash can have substantially similar liquidity risks as mutual funds, and we believe that all ETFs have certain unique additional risks discussed below. In addition, while we agree that the classification and highly liquid investment minimum components of the liquidity risk management program we are adopting for other funds are not necessary for In-Kind ETFs, we believe that In-Kind ETFs must maintain sufficient liquidity and assess liquidity-related risks that could affect their shareholders. In this regard, the liquidity of an ETF's portfolio positions is a factor that may contribute to the bid-ask spread, the effective functioning of the ETF's arbitrage mechanism and the ETF's shares trading at a price that is at or close to NAV.[843] For example, if an ETF holds illiquid or less liquid investments, this will be reflected in the redemption basket transferred to a redeeming authorized participant (or its customer), which might result in a liquidity cost to the authorized participant (or its customer or other market participants). This increased cost could alter the authorized participant's decisions regarding exactly when or whether to create or redeem the ETF's creation units, possibly resulting in the ETF trading at increased spreads and/or a price that deviates significantly from its NAV and ultimately adversely impacting the ETF's investors.

Over the years, the Commission and staff have explored the structural and operational differences between ETFs (including those that redeem in kind) and other open-end funds (that redeem in cash), solicited public comment, including on issues related to the potential effects of illiquidity on the operation of ETFs and evaluated the trading of ETFs in times of market stress.[844] In 2015, the Commission solicited public comment on topics related to the listing and trading of exchange-traded investment products (''ETPs'') on national securities exchanges and sales of these products by broker-dealers.[845] Of relevance here, the Commission sought comment on all aspects of the arbitrage mechanism for ETPs (including ETFs), including what characteristics of an ETP would facilitate or hinder the alignment of secondary market share prices with the value of the underlying portfolio reference assets and how arbitrage mechanisms work in the case of ETPs with less-liquid underlying or reference assets. The questions posed in this Release, as well as the comments received, demonstrate the importance of assessing liquidity risks and liquidity needs for all ETFs, including In-Kind ETFs. We considered the comments received on the 2015 ETP Request for Comment in formulating the proposed rule and the final rule we are adopting today.

1. Definitions

Under the final rule, all ETFs must consider certain additional liquidity risk assessment factors, if applicable, but only In-Kind ETFs will be excluded from the classification and highly liquid investment minimum requirements.[846] We are defining an exchange-traded

4(b)(1)(i)–(iii). Throughout the discussion of liquidity risk management programs in this Release, references to ''funds'' include ETFs that redeem in cash, except where specifically indicated otherwise.

[838] *See, e.g.,* ICI Comment Letter; BlackRock Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I.

[839] *See, e.g.,* Invesco Comment Letter (suggesting an exemption for all ETFs); FSR Comment Letter (suggesting an exemption for In-Kind ETFs); SIFMA Comment Letter I (suggesting an exemption for In-Kind ETFs).

[840] *See, e.g.,* State Street Comment Letter (suggesting an exemption for In-Kind ETFs from the portfolio liquidity classification and three-day liquid asset requirements); Dechert Comment Letter (suggesting an exemption for all ETFs from the three-day liquid asset requirements); ICI Comment Letter I (suggesting an exemption for In-Kind ETFs from the three-day liquid asset requirements); BlackRock Comment Letter (stating that the days-to-cash framework in the portfolio liquidity classification requirements is irrelevant for ETFs and suggesting an exemption for at least In-Kind ETFs from the three-day liquid asset requirements).

[841] *See* BlackRock Comment Letter; FSR Comment Letter.

[842] We note, as discussed previously, that ETFs will be subject to the requirement to implement an overall liquidity risk management program, including the requirement that the fund determine whether its investment strategy is appropriate for an open-end fund.

[843] By this we mean that, and we generally expect that, each day and over time an ETF's shares will trade at or close to the ETF's intraday value. *See* 2015 ETP Request for Comment, *supra* footnote 29 (''When providing exemptive or no-action relief under the Exchange Act, the Commission and its staff have analyzed and relied upon the representations from ETP issuers regarding the continuing existence of effective and efficient arbitrage to help ensure that the secondary market prices of ETP Securities do not vary substantially from the value of their underlying portfolio or reference assets.''); *infra* footnote 857. Because an ETF does not determine its NAV in real time throughout the trading day, in assessing whether this expectation is met, one looks to the difference between the ETF shares' closing market price and the ETF's end-of-day net asset value (*i.e.,* its ''premium'' or ''discount''). *See* 2015 ETP Request for Comment, *supra* footnote 29. With regard to ETMFs, as noted in the Proposing Release, ETMF market makers would not engage in the same kind of arbitrage as ETF market makers because all trading prices of ETMF shares are linked to NAV. *See* Proposing Release, *supra* footnote 9, at n.458.

[844] *See, e.g.,* ETF Proposing Release, *supra* footnote 27; Staff of the Office of Analytics and Research, Division of Trading and Markets, Research Note: Equity Market Volatility on August 24, 2015 (Dec. 2015) (''August 24 Staff Report''), *available at https://www.sec.gov/marketstructure/research/equity_market_volatility.pdf.*

[845] *See* 2015 ETP Request for Comment, *supra* footnote 29 at n.10. The 2015 ETP Request for Comment did not address ETMFs' listing and trading given that, at the time, no ETMFs were listed or traded on an exchange.

[846] We note that an in-kind ETF may not be able to avail itself of the tailored liquidity risk management program where the in-kind ETF operates as a class of a fund that also has mutual fund classes. In such a case, for example, the liquidity classification requirement would apply to the entire portfolio, thus applying to both in-kind ETFs and other funds (*e.g.,* mutual funds). UITs, including ETFs structured as UITs, will not be subject to the majority of the liquidity risk management program requirements. *See supra* section III.A.2.d and *infra* section III.K (discussing rule 22e–4(c), that requires, on or before the date of initial deposit of portfolio securities into a registered UIT (including ETF UITs), the principal underwriter or depositor to determine that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues and maintain a record of that determination for the life of the UIT and for five years thereafter).

fund or ''ETF'' as ''an open-end management investment company (or series or class thereof), the shares of which are listed and traded on a national securities exchange, and that has formed and operates under an exemptive order under the Act granted by the Commission or in reliance on an exemptive rule adopted by the Commission.'' [847] We are defining an ''In-Kind ETF'' to mean an ETF that meets redemptions through in-kind transfers of securities, positions, and assets other than a *de minimis* amount of cash and that publishes its portfolio holdings daily.[848] The definition of ''In-Kind ETF'' is intended to distinguish this type of ETF, which, as described throughout this Release, has a unique structure and raises different liquidity risks than other open-end funds (that in most cases redeem shares in cash). As discussed below, we believe that this definition of an In-Kind ETF facilitates this distinction by limiting an ETF's redemption basket to in-kind securities and other assets, and no more than a *de minimis* amount of cash. In addition, the definition requires that an In-Kind ETF publish the ETF's holdings daily.[849] This daily publishing of ETF holdings (or ''daily transparency'') is a condition of many of our ETF orders, and we understand that even for ETFs not subject to that condition, most provide this daily transparency as a matter of course.[850] We believe that requiring this daily transparency will permit the sophisticated authorized participants that directly interact with the ETF to effectively evaluate the liquidity of the ETF's holdings. We also note that we are requiring an ETF to report publicly to the Commission on Form N–CEN its designation as an In-Kind ETF as defined in the final rule so that there is clarity on which ETFs meet this definition and are thus subject to the tailored liquidity risk management program.[851]

Consistent with our exemptive orders, we recognize that there may be circumstances under which an In-Kind ETF may use cash to meet redemptions (in addition to securities and other non-cash assets). For example, today an ETF that typically redeems in-kind may use cash to: (i) Make up any difference between the NAV attributable to a creation unit and the aggregate market value of the creation basket exchanged for the creation unit (generally referred to as the ''balancing amount'' in an ETF's exemptive order); (ii) correspond to uninvested cash in the fund's portfolio (which, to the extent that this amount of cash equals the fund's cash position in the portfolio, would be an ''in-kind'' redemption); or (iii) substitute for a portfolio position or asset that is not eligible to be transferred in kind (*e.g.,* a derivative instrument that, pursuant to contract, is not transferrable).[852] By their nature, ''balancing amounts'' are small amounts and thus would be *de minimis.* Accordingly, there are a number of reasons, including those described above, why an In-Kind ETF may find it prudent or necessary to use a *de minimis* amount of cash to meet redemptions. However, if an In-Kind ETF were to use more than a *de minimis* amount of cash (as determined in accordance with its written policies and procedures) to meet redemptions (for any of the reasons discussed above or otherwise), it would not qualify as an In-Kind ETF and would need to comply with the liquidity risk management program requirements applicable to other ETFs.[853] By way of example, an ETF that normally redeems in-kind, but delivers all cash to a single authorized participant that elects to receive cash, would not be an ETF that uses a *de minimis* amount of cash. However, depending on the circumstances, an ETF that delivers cash only on one occasion may be able to conclude that it qualifies as an In-Kind ETF in later years if such circumstances are not repeated.

An In-Kind ETF generally should describe in its written policies and procedures for its liquidity risk management program,[854] to the extent applicable, how the fund analyzes the ability of the ETF to redeem in-kind in all market conditions such that it is unlikely to suddenly fail to continue to qualify for this exception to the classification and highly liquid investment minimum requirements, the circumstances in which the In-Kind ETF may use a *de minimis* amount of cash to meet a redemption, and what amount of cash would qualify as such. As part of its policies and procedures, an In-Kind ETF generally should also describe how the ETF will manage and/or approve any portion of a redemption that is paid in cash and document the ETF's determination that such a cash amount is *de minimis.* In making these determinations, an In-Kind ETF may consider, if applicable: (i) The amount (both in dollars and as a percentage of the entire redemption basket) and frequency with which cash is used to meet redemptions; and (ii) the circumstances and rationale for using cash to meet redemptions.

As discussed above, in-kind redemptions mitigate certain liquidity risks, but only to the extent that the fund can use in-kind redemptions. This factor is particularly important for an In-Kind ETF because such a fund may only include in its redemption basket a *de minimis* amount of cash if it wants to qualify for the exclusion from the classification and highly liquid investment minimum requirements. If, for example, market conditions change and the fund can no longer meet redemptions without more than a *de minimis* amount of cash, the fund would no longer qualify as an In-Kind ETF. As a result, the ETF would be required to comply with additional requirements under its liquidity risk management program (including liquidity portfolio classifications and highly liquid investment minimum).

[847] *See* rule 22e–4(a)(4). We note that this definition is substantially the same as the definition of ETF that we had proposed as amendments to rule 22c–1. We also note that this definition is substantially the same as the definition in Form N–1A.

[848] *See* rule 22e–4(a)(9). Cash means cash held in U.S. dollars, and would not include, for example, cash equivalents or foreign currency.

[849] Today, such daily publishing of ETF holdings involves posting on the ETF's Web site on each day that the national securities exchange on which the fund's shares are listed is open for business, before commencement of trading of fund shares on the exchange, the identities and quantities of the securities, assets or other positions held by the fund, or its respective master fund, that will form the basis for the fund's calculation of net asset value at the end of the business day.

[850] *See, e.g.,* Foreside ETF Trust, *et al.,* Investment Company Act Release No. 32284 (Sep. 26, 2016) [81 FR 68079 (Oct. 3, 2016)] (notice of application). We note that ETMFs are not required to provide such daily transparency under their orders, and thus would need to choose to provide such daily transparency if they wished to take advantage if this provision.

[851] *See* Item E.5 of Form N–CEN (''Is the Fund an 'In-Kind Exchange-Traded Fund' as defined in rule 22e–4 under the Act?''). In addition, ETFs (including In-Kind ETFs) will be required to report on Form N–CEN the average percentage value of creation units purchased and redeemed both with in-kind securities and assets and with cash, during the reporting period. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[852] We note that depending on the size of the position being substituted for, such a transaction may not always be *de minimis,* and thus the ETF may no longer be eligible to qualify for this provision.

[853] In-Kind ETFs are subject to rule 22e–4, including the obligation to establish written policies and procedures for a liquidity risk management program. As part of these written policies and procedures, we would expect that an In-Kind ETF would determine the amount of cash and the types of transactions that it will treat as *de minimis.* If for any reason, an In-Kind ETF was not able to meet redemptions with more than a *de minimis* amount of cash consistent with those policies and procedures, such a fund would no longer qualify as an In-Kind ETF and would thus no longer be eligible to rely on this provision. *See* rule 22e–4(b)(1)(ii).

[854] Rule 22e–4 requires that an In-Kind ETF adopt and implement a written liquidity risk management program reasonably designed to assess and manage the fund's liquidity risk. *See* rule 22e–4(b).

2. Tailored Program Elements for ETFs

By adopting certain tailored liquidity risk management program requirements for ETFs, we recognize, consistent with comments received, that both ETFs that redeem in cash and In-Kind ETFs present unique liquidity risks as compared to other funds. Some of these unique risks were not specifically addressed in the generally applicable liquidity risk management program as proposed, while still other aspects of the general program were less applicable to the actual operation of In-Kind ETFs, particularly those that offer daily transparency of holdings. Our final rule is designed to address both issues. Accordingly, an ETF will be required to adopt and implement a tailored liquidity risk management program that has the unique elements discussed below, in addition to the elements discussed elsewhere in this Release.

Liquidity Risk Assessment

An ETF, like other open-end funds, will be required to assess and manage the fund's ''liquidity risk''—defined as the risk that a fund could not meet requests to redeem shares issued by the fund without significant dilution of remaining investors' interests in the fund.[855] As discussed above, we believe that this definition, modified from the proposal as informed by commenter input, is appropriate for all open-end funds, whether the fund redeems in cash or in kind and whether the fund is a mutual fund or an ETF.[856]

Illiquidity in an ETF's portfolio or its basket assets can adversely impact investors by imposing costs on market participants that could then potentially be reflected in a widening of the bid-ask spread of the ETF shares. This widening could result in shareholders transacting in an ETF's shares at market prices that do not maintain a ''close tie'' to the NAV per share of the ETF. As we have previously stated, a close tie between ETF share market prices and the ETF's NAV per share is important because section 22(d) and rule 22c–1 under the Act are designed to require that all fund shareholders be treated equitably.[857] In addition, declining liquidity in an ETF's portfolio also could affect a market maker's ability or willingness to make a market in the product because arbitrage opportunities would be more difficult to evaluate.[858] This, in turn, could affect the liquidity of the ETF shares, making it difficult for market participants to price, trade and hedge.

Under the final rule, ETFs will be required to assess, manage, and periodically review the fund's liquidity risk and needs, taking into account, as applicable, the liquidity risk factors for all funds (as modified from the proposal) discussed previously.[859] ETFs also must consider the following additional factors, as applicable, that are specific to the structure and operation of ETFs:

- The relationship between the ETF's portfolio liquidity and the way in which, and the prices and spreads at which, ETF shares trade, including the efficiency of the arbitrage function and the level of active participation by market participants (including authorized participants);[860] and
- The effect of the composition of baskets on the overall liquidity of the ETF's portfolio.

We considered, in establishing these factors, comments received on the Proposing Release and the 2015 ETP Request for Comment, as well as the unique structure and operation of ETFs. We discuss these factors in more detail below. As we noted with regard to other open-end funds, the list of liquidity risk assessment factors for ETFs is not meant to be exhaustive. Rather, an ETF generally should incorporate other considerations in assessing its liquidity risk that it considers appropriate.

ETF Trading—Arbitrage Function and Level of Activity of Market Participants

As discussed above, the ETF structure permits only authorized participants to purchase or redeem shares from an ETF and to transact in the ETF's shares at the NAV per share. The combination of the creation and redemption process with secondary market trading in ETF shares provides arbitrage opportunities that, if effective, keep the market price of the ETF's shares at or close to the NAV per share of the ETF.[861] If an ETF has a significant amount of illiquid securities in its portfolio, market participants may find it more difficult to evaluate opportunities and ultimately participate in the arbitrage process (because of challenges in pricing, trading, and hedging their exposure to the ETF). If the arbitrage function fails to operate efficiently, investors could buy and sell the ETF shares at prices that are not at or close to the NAV per share of the ETF, which may raise concerns relating to section 22(d) of and rule 22c–1 under the Act regarding whether all fund shareholders (authorized participants and retail investors) are being treated equitably.[862] We discussed in the Proposing Release how the effective functioning of this arbitrage mechanism has been pivotal to the operation of ETFs (and to the Commission's approval of exemptions that allow their operation) and how the liquidity of the ETF's portfolio positions is a factor that contributes to the effective functioning of this arbitrage mechanism.[863]

Commenters to the 2015 ETP Request for Comment also highlighted the importance of portfolio liquidity on the efficiency of the ETF arbitrage mechanism. During an extraordinary period of market volatility on August 24, 2015 (''the August 24th Market Events''), for example, many ETFs traded at prices materially different from the NAV of the funds' underlying

[855] *See* rule 22e–4(a)(11) (defining liquidity risk); rule 22e–4(b) (requiring each fund and in-kind ETF to adopt and implement a written liquidity risk management program).

[856] *See supra* section III.B.1 for a discussion of the definition of liquidity risk, including comments received and modifications made from the proposal.

[857] *See generally* H.R. REP. NO. 2639, 76th Cong., 3d Sess., 8 (1940). *See also* Investment Trusts and Investment Companies: Report of the Securities and Exchange Commission, H.R. Doc. No. 279, 76th Cong., 1st Sess., pt. 3, at 860–874 (1939); Spruce ETF Trust, *et al.,* Investment Company Act Release No. 31301 (Oct. 21, 2014) [79 FR 63964 (Oct. 27, 2014)] (notice of application) (to the extent that investors would have to exit at a price substantially below the NAV of the ETF, this would be ''contrary to the foundational principle underlying section 22(d) and rule 22c–1 under the Act that all shareholders be treated equitably when buying and selling their fund shares''); Precidian ETFs Trust, *et al.,* Investment Company Act Release No. 31300 (Oct. 21, 2014) [79 FR 63971 (Oct. 27, 2014)] (notice of application) (''A close tie between market price and NAV per share of the ETF is the foundation for why the prices at which retail investors buy and sell ETF shares are similar to the prices at which Authorized Participants are able to buy and redeem shares directly from the ETF at NAV. This close tie between prices paid by retail investors and Authorized Participants is important because section 22(d) and rule 22c–1 under the Act are designed to require that all fund shareholders be treated equitably when buying and selling their fund shares.'').

[858] *See supra* footnote 843 and accompanying text.

[859] *See supra* section III.B.2 (discussing the factors as proposed and how the factors have been amended in the final rule to address commenter concerns). We recognize that not all of these factors may be applicable to all ETFs (and that some mutual funds would not need to consider certain factors relevant only to ETFs).

[860] We note that this factor will not be applicable to ETMFs to the same extent it applies to ETFs. ETMF market makers will not engage in the same kind of arbitrage as ETF market makers and will assume no intraday market risk with their positions in ETMF shares as all trading prices are linked to NAV. *See* ETMF Notice, *supra* at note 31 at n.21 and accompanying text.

[861] We recognize that an ETF is not as likely as a mutual fund to sell or in-kind transfer its portfolio holdings in order to meet redemptions because an authorized participant generally will not seek to create or redeem a basket with the ETF until there is a sufficient deviation between the ETF shares' market price and the ETF's NAV. As discussed previously, ETMF market makers would not engage in the same kind of arbitrage as ETF market makers because all trading prices of ETMF shares are linked to NAV. *See supra* footnote 836.

[862] *See supra* footnote 857.

[863] *See* Proposing Release, *supra* footnote 9, at nn.23–30 and accompanying text.

portfolio assets.[864] One commenter on the 2015 ETP Request for Comment, in observing the August 24th Market Events, noted that there are many reasons an ETF may trade at a substantial difference from the NAV of its underlying constituent stocks, including a lack of liquidity in the ETF constituents and a lack of liquidity in the ETF shares themselves.[865] Another commenter suggested that, where the market for an underlying asset is illiquid, no amount of arbitrage will be sufficient to equalize market discrepancies between underlying assets and the fund's price, especially during times of market stress.[866] In addition, the level of active participation by market participants, including market makers and authorized participants, in the trading of ETF shares is important to the way in which, and the prices and spreads at which, shares trade. As one commenter on the 2015 ETP Request for Comment noted, the more authorized participants that are active in the market, the more opportunities there are to trade and provide liquidity.[867] For these reasons, we are requiring that an ETF consider the relationship between the liquidity of its portfolio and the arbitrage function in assessing its liquidity risk (where applicable).

Basket Composition

In-Kind ETFs create and redeem using baskets of securities and other assets. These baskets may be highly correlated to the ETF's overall portfolio. As we noted in the Proposing Release, the composition of the basket can affect the liquidity of the ETF's portfolio.[868] For example, an ETF whose basket does not reflect a *pro rata* share of the fund's portfolio may alter the liquidity profile of the ETF's portfolio and may adversely affect the fund's future ability to meet cash redemptions or mitigate shareholder dilution.[869] We recognize that certain market incentives exist to mitigate the likelihood of significant or frequent divergence between an ETF's basket and the fund's portfolio. For example, if an ETF's basket is not correlated with the fund's portfolio, the ETF likely will develop a higher tracking error. Nonetheless, such divergence may occur, with potentially adverse consequences to the remaining shareholders in the fund. Accordingly, we are requiring an ETF to consider the effect of its basket composition on the fund's overall portfolio liquidity (even if an ETF's creation and redemption baskets reflect a *pro rata* share of the ETF's portfolio).[870]

A few commenters also suggested that increasing ETF basket flexibility and eliminating the two percent limitation on redemption fees for ETFs would help enhance ETF liquidity and the orderly and efficient operation of the arbitrage function.[871] We are not addressing these issues here because they are beyond the scope of this rulemaking.

Portfolio Liquidity Classification

Under the final rule, an open-end fund (other than an In-Kind ETF) will be required to classify each of the fund's portfolio investments (generally by asset class) into one of four categories: Highly liquid investments; moderately liquid investments; less liquid investments; and illiquid investments. A number of commenters noted, as the Commission recognized in the Proposing Release and as we reiterate above, that an open-end fund (including an open-end ETF) that redeems in cash has a different nature of liquidity risk than an ETF that redeems through in-kind transfers of securities, positions, and other assets.[872]

We note, for example, that when a mutual fund experiences daily net redemptions, the fund will likely be required to sell its portfolio holdings in order to generate cash to meet redemptions. To the extent that a fund must sell a less liquid security in order to generate the cash proceeds required, there is enhanced liquidity risk—that is, risk that a fund cannot meet redemptions without significant dilution of remaining investors. Therefore, we believe that it is appropriate for such a fund to assess its liquidity risk by analyzing the amount of time it will take, in current market conditions, to convert its portfolio assets (without the conversion (or in some cases, sale or disposition) significantly changing the market value of the investments).

As discussed above, an In-Kind ETF's liquidity risk is different from the liquidity risk of a fund that generally meets redemptions in cash. Rather than liquidity risk affecting investors directly in their ability to receive cash redemption proceeds, illiquidity in an ETF's portfolio or its basket assets can adversely impact investors by contributing to a widening of the bid-ask spread of the ETF shares. This widening could result in shareholders transacting in an ETF's shares at market prices that do not maintain a ''close tie'' to the NAV per share of the ETF. The declining liquidity in an ETF's portfolio also could affect the arbitrage function related to the ETF, as discussed above.

Despite our concern about the specific liquidity-related risks in ETFs described above, we view the liquidity classification information for In-Kind ETFs as less necessary for the Commission, investors, and other potential users of this information because, unlike for mutual funds, the daily identity and weightings of ETF portfolio holdings are well known to authorized participants and other ETF liquidity providers, and would be required to be disclosed daily under our final rules to qualify for the exemption from the classification requirement.[873]

---

[864] August 24 Staff Report, *supra* footnote 844, at 5 (discussing large ETFs that traded at ''substantial discounts'' to the ETFs' NAVs).

[865] *See* Comment Letter of Modern Markets Initiative on 2015 ETP Request for Comment (Sept. 14, 2015), *available at https://www.sec.gov/comments/s7-11-15/s71115-39.pdf*.

[866] *See* Comment Letter of Occupy the SEC on 2015 ETP Request for Comment (Aug. 21, 2015), *available at https://www.sec.gov/comments/s7-11-15/s71115-32.pdf*.

[867] *See* Comment Letter of Flow Traders Group on 2015 ETP Request for Comment (Aug. 17, 2015), *available at https://www.sec.gov/comments/s7-11-15/s71115-25.pdf*.

[868] *See* Proposing Release, *supra* footnote 9, at nn.23–24, 156–157 and accompanying text.

[869] Under limited circumstances, an index ETF's redemption basket also may differ from the portfolio deposit made by the authorized participant.

[870] One commenter on the 2015 ETP Request for Comment, discussing the potential effects of basket composition on an ETF's overall liquidity, noted that an ETF whose basket reflects a *pro rata* share of the ETF's portfolio will have a larger number of securities in the basket, with the size of each individual position potentially being smaller. This commenter suggested that, as a result: (i) The smaller lots can be more difficult for an authorized participant to trade efficiently, thereby increasing the bid/ask spreads of the ETF; and (ii) the *pro rata* basket is more likely to include less liquid or even illiquid securities that an ETF not subject to the *pro rata* requirement can exclude. *See* Comment Letter of Charles Schwab & Co. on the on 2015 ETP Request for Comment (Aug. 17, 2015), *available at https://www.sec.gov/comments/s7-11-15/s71115-28.pdf*.

[871] *See, e.g.,* BlackRock Comment Letter; ICI Comment Letter I; Fidelity Comment Letter.

[872] *See, e.g.,* BlackRock Comment Letter; Proposing Release, *supra* footnote 9.

[873] *See* rule 22e–4(a)(9). *See also,* Precidian ETFs Trust, *et al.,* Investment Company Act Release No. 31300 (Oct. 21, 2014) [79 FR 63971 (Oct. 27, 2014)] (notice of application) (''The Commission therefore has granted such exemptive relief to date only to those actively managed ETFs that have provided daily transparency of their portfolio holdings.''). The identity and weightings of the constituents of affiliated indices are required by exemptive application condition to be made publicly available on a daily basis. *See, e.g.,* Columbia ETF Trust I, et. al., Investment Company Act Release No. 32134 (May 31, 2016) (order) (related application with conditions *available at: https://www.sec.gov/Archives/edgar/data/1233991/000119312516578039/d194333d40appa.htm*). The identity and weightings of the constituents of non-affiliated indexes are not required to be made publicly available on a daily basis. However, because: (1) These index compositions are generally broadly available to liquidity providers either publicly, by subscription or by license; and (2) index-based ETFs publish their purchase and redemption baskets daily, and those baskets generally are tracking baskets that represent either

Continued

Authorized participants are the only shareholders that are permitted to transact with the ETF at NAV, and these sophisticated broker-dealers are more likely to be able to readily discern the ETF's liquidity profile from this daily portfolio information.

We continue to believe that it is important that an In-Kind ETF maintain sufficient liquidity in its portfolio. Accordingly, the final rule requires that an In-Kind ETF, in assessing liquidity risk, take into account certain factors that are more tailored to the way in which such funds operate and the resulting liquidity risks. For example, those factors include considering the relationship between portfolio liquidity and the arbitrage function, as well as the effect of the composition of in-kind baskets on the overall liquidity of the fund's portfolio. However, given the more limited utility of this classification information for the reasons described above, and considering the burdens of tracking and reporting it to us, we do not believe that it is appropriate to require an In-Kind ETF to classify its portfolio investments into liquidity categories based on a ''days-to-cash'' framework and report that information to the Commission.[874]

Highly Liquid Investment Minimum

Under the final rule, an open-end fund (other than an In-Kind ETF) will be required to determine a percentage of the fund's net assets that it will invest in assets that are highly liquid investments. The fund will determine its highly liquid investment minimum using the first category in the liquidity classification requirement (*i.e.,* cash and assets convertible into cash within three business days). The fund also will be required to take certain actions when the fund's highly liquid investments fall below its minimum.[875]

In determining to adopt a highly liquid investment minimum for certain open-end funds, we considered comments received on proposed rule 22e–4, which would have required a ''three-day liquid asset minimum.''[876] Multiple commenters suggested that the concept of a three-day liquid asset minimum does not take into account the unique structural aspects of ETFs.[877] One commenter suggested that the concept of ''convertible into cash within three business days'' has little relevance to an ETF that does not liquidate securities to meet cash redemptions.[878]

Consistent with the comments received, we are not requiring that an In-Kind ETF adopt a highly liquid investment minimum. First, an open-end fund will be required to establish its highly liquid investment minimum using its ''highly liquid investment'' portfolio classification. As discussed earlier, we have determined that it is not necessary to require that an In-Kind ETF classify its portfolio liquidity (*e.g.,* into ''highly liquid investment,'' or ''moderately liquid investment''). The portfolio liquidity classifications incorporate a ''convertible to cash'' concept that is generally not relevant for an In-Kind ETF (except in managing cash holdings to no greater than a *de minimis* amount of cash). Because the highly liquid investment minimum incorporates the same ''convertible to cash'' concept as the portfolio liquidity classifications (which, for the reasons discussed above, we are not requiring for In-Kind ETFs), we do not believe it is appropriate to require that an In-Kind ETF establish a highly liquid investment minimum.

Second, the highly liquid investment minimum, as discussed above, is intended to increase the likelihood that an open-end fund meets redemption requests without significant dilution of remaining investors. Open-end funds that redeem in cash and In-Kind ETFs operate differently, and therefore evaluate liquidity risk differently. We believe, for example, that it is necessary for an open-end fund that meets redemptions in cash (including an ETF) to manage its liquidity risk by establishing a minimum amount of highly liquid investments that, as defined in the final rule, are quickly convertible to cash (within 3 business days). In this way, the highly liquid investment minimum increases the likelihood that the fund will be able to meet redemption requests in cash without significant dilution of remaining investors. Conversely, we believe, for example, that it is more appropriate for an In-Kind ETF that meets redemptions through in-kind transfers of securities, positions, and other assets (and no more than a *de minimis* amount of cash) to, among other things, assess its liquidity risk through consideration of the factors we have discussed above (*e.g.,* assessing the relationship between portfolio liquidity and the arbitrage function). For these reasons, we are excluding In-Kind ETFs from the highly liquid investment minimum requirement in rule 22e4.

We discussed above the requirement that funds (including ETFs) other than In-Kind ETFs establish a highly liquid investment minimum.[879] One commenter noted that the three-day liquid asset minimum might increase tracking error, or force an ETF to either violate the terms of its exemptive order,[880] or refuse in-kind purchase requests from authorized participants, thus interfering with the arbitrage mechanism that keeps ETF market prices close to their underlying NAV.[881] An ETF that does not qualify as an In-Kind ETF necessarily meets redemptions through more than a *de minimis* amount of cash. For the reasons discussed above, we believe that it is appropriate to require a fund that meets redemptions, at least partially in cash, to comply with the liquidity classification and highly liquid investment minimum requirements.[882] With regard to tracking error, an ETF with an index-based strategy, like other open-end funds, needs to balance its implementation of its investment strategy with the need for appropriate liquidity risk management given its obligation to meet redemptions without significant dilution. We recognize that this balancing may result in tracking error, and such a fund may wish to address and manage this risk through appropriately designed policies and procedures. This concern, along with the concerns regarding potentially violating an exemptive order, or

a *pro rata* replication of the index or a sampling of the index, authorized participants and other ETF liquidity providers should nonetheless be able to determine the liquidity profile of a non-affiliated, index-based ETF on a daily basis. Unlike ETFs, ETMF are only required to provide the same disclosure about the identity and weightings of their portfolio holdings as mutual funds.

[874] In the Proposing Release, we proposed to apply the portfolio liquidity classification requirement to open-end ETFs (in addition to other open-end funds), in part, because, ETFs permit authorized participants to redeem in cash (even if these funds typically redeem in kind). *See* Proposing Release, *supra* footnote 9, at n. 129 and accompanying text. Accordingly, we determined that it was appropriate to require that all ETFs classify their portfolio liquidity by assessing the fund's ability to convert portfolio positions into cash. The final rule, however, establishes a more tailored regulatory regime for In-Kind ETFs, that, by definition, do not meet redemptions through more than a *de minimis* amount of cash. Thus, under the final rule, we do not believe it is necessary to require that In-Kind ETFs be subject to the portfolio liquidity classification requirement (which is based on a ''days-to-cash'' or ''days-to-sell'' framework).

[875] *See supra* section III.D; rule 22e–4(b)(1)(iii).

[876] *See supra* section III.D.

[877] *See, e.g.,* Dechert Comment Letter; ICI Comment Letter I; BlackRock Comment Letter; SIFMA Comment Letter I.

[878] *See* BlackRock Comment Letter.

[879] *See supra* section III.D.

[880] *See* ICI Comment Letter I (noting that if an ETF was prohibited from accepting a less liquid asset, the ETF may violate a requirement that that all creation baskets correspond *pro rata* to the ETF's portfolio positions).

[881] *Id.*

[882] An ETF that does not qualify as an In-Kind ETF would not be required to determine and periodically review a highly liquid investment minimum if it holds primarily highly liquid investments. *See supra* section III.D.

refusing an in-kind purchase request from an authorized participant, are also mitigated by the additional flexibility provided for in the final rule. Under the final rule (as compared with the proposal), a fund that breaches its highly liquid investment minimum will be subject to certain board reporting requirements, but will not be barred from purchasing non-conforming assets (as would have been required as proposed).[883] Under the final rule, therefore, a fund will have flexibility to address potentially adverse situations, including tracking error, that may arise as a result of complying with the highly liquid investment minimum.

K. Limitation on Unit Investment Trusts' Investments in Illiquid Investments

As noted above, the proposed scope of rule 22e4 did not include UITs, although we requested comment on whether UITs should be included within its scope, and whether we should include specific limitations on UIT's holdings of illiquid assets at inception.[884] As adopted today, UITs remain excluded from the rule's liquidity risk management program requirements. However, as suggested by some commenters, we are now requiring a limited liquidity review for UITs. Under the final rules, the UIT's principal underwriter or depositor must determine, on or before the initial deposit of portfolio securities into the UIT, that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues.[885]

As discussed in detail in the Proposing Release, most UITs serve as separate account vehicles used to fund variable annuity and variable life insurance contracts,[886] and these UITs essentially function as pass-through vehicles, investing principally in securities of one or more open-end investment companies that would be subject to rule 22e–4.[887] Also, UITs are not actively managed, and thus certain provisions of rule 22e–4 that require a fund's board to approve and oversee the fund's liquidity risk management program and the fund's adviser, officer, or officers to administer it are inapposite to the management structure of a UIT.[888]

Several commenters argued (in the context of ETFs organized as UITs) that UITs may be subject to liquidity risk comparable to other funds.[889] As discussed previously, in recognition of the different unmanaged organizational structure of UITs, we continue to believe that including UITs within the scope of rule 22e–4's liquidity risk management program requirements (or even the tailored program requirements for ETFs that redeem in kind) would not be feasible. However, we recognize that UITs may in some circumstances be subject to liquidity risk (particularly where the UIT is not a pass-through vehicle and the sponsor does not maintain an active secondary market for UIT shares) as investor redemption requests may lead to dissipation of UIT assets, forcing a UIT to sell securities that it holds to meet redemptions.

Accordingly, today we are adopting a limited liquidity review requirement for UITs to require that a UIT's principal underwriter or depositor determine upon initial deposit of a registered UIT that the level of illiquid investments it will hold is consistent with the redeemable nature of the securities it issues.[890] Though commenters focused their discussion on UITs that are ETFs, we believe it is appropriate for the principal underwriter or depositor of any registered UIT to conduct the initial liquidity assessment described above on or before the date of the initial deposit of securities into the UIT. The securities that the UIT is expected to hold should be examined so that they are consistent with the ability of a UIT to issue redeemable securities, much as an open-end fund will be required to evaluate whether its investment strategy and the securities it holds is appropriate for an open-end fund under the final liquidity risk management program.[891] Though UITs are not actively managed and do not have a board of directors, corporate officers, or an investment adviser to render advice during the life of the trust, making active liquidity risk management inapposite to the management structure of a UIT, we believe that this requirement of a tailored, one-time, initial liquidity risk management requirement for UITs is in line with the unmanaged structure of a UIT and its liquidity risk.[892]

We expect that this initial review requirement would in many respects be similar to the process for determining whether a fund's holding of illiquid investments is consistent with rule 22e–4's 15% limitation on illiquid investments, taking into account the unique structure and purpose of UITs. If a UIT were to hold or planned to hold more than 15% of its investments in illiquid investments at the time of initial deposit, such a level of illiquid investments is unlikely to be consistent with the nature of the redeemable securities it issues. Thus, if a UIT planned to hold significant amounts of illiquid securities (in excess of 15%), its principal underwriter or depositor would be unlikely to be able to make the determination that its investment's liquidity is consistent with its issuance of redeemable securities.

Due to the unmanaged structure of UITs and the fixed nature of their portfolios, it would be inconsistent with their structure and portfolios to require UITs to re-evaluate the securities they hold based on their liquidity characteristics and change their investments accordingly over time. Therefore, the requirement only applies at the time of the UIT's creation. Although this is a one-time determination at the time of the UIT's initial deposit, it should take into

[883] *See supra* section III.D.

[884] *See supra* section III.A.2.d; Proposing Release, *supra* footnote 9 at section III.A.3 and comment requests following n 156 (''alternatively, should we require UITs to meet certain minimum liquidity requirements at the time of deposit of the securities . . .'').

[885] *See* rule 22e–4(c). The rule also requires UITs to maintain a record of that determination for the life of the UIT and for five years thereafter. *See also* Rule 144A Release *supra* footnote 37 at n.61 (discussing liquidity requirements for UITs prior to the adoption of rule 22e–4).

[886] *See* Proposing Release, *supra* footnote 9, at n.139 and accompanying text. We currently estimate that approximately 92.9% of UITs serve as separate account vehicles (based on data as of December 31, 2015).

[887] *See id.,* at nn.139–140 and accompanying text.

[888] *See id.,* at nn.141–143 and accompanying text.

[889] *See* Anonymous Comment Letter I; BlackRock Comment Letter. One of these commenters also observed that, while there are few ETFs that are UITs, some of the largest ETFs in the world (by volume/value traded) are UIT ETFs, and thus any liquidity risks faced by these UIT ETFs could lead to significant adverse market consequences. The commenter also expressed concern that excluding UIT ETFs from the scope of rule 22e–4 may prompt more ETF sponsors to structure ETFs as UITs rather than open-end funds to avoid being subject to the liquidity risk management program requirement. *See* Anonymous Comment Letter I. We recognize the risks of excluding UIT's from 22e–4, and thus are adopting the liquidity review requirement discussed in this section, as a tailored approach that fits the unique unmanaged structure of UITs, including ETFs that are structured as UITs. (ETMFs are not structured as UITs because, as they are structured today, they are actively managed and thus cannot operate as UITs.)

[890] *See supra* footnote 885 and accompanying text.

[891] As noted above, all UITs are subject to the requirements of section 22(e) and therefore must meet redemptions within seven days. *See also* section 4(2).

[892] With regard to UITs structured as ETFs in particular, we agree with commenters' concerns that UIT ETFs' liquidity risks may be comparable to those faced by other ETFs and that the relatively large size of certain UIT ETFs could lead to significant market consequences if these UIT ETFs were to encounter liquidity issues. However, because UIT ETFs are unmanaged and must fully replicate their underlying indices, we believe that a one-time determination regarding liquidity concerns at the commencement of the offering of a registered UIT is the appropriate manner to mitigate such concerns.

account the planned structure of the UIT's holdings. In particular, if the UIT tracks an index, the determination should consider the index design and whether the index design is likely to lead to the UIT holding an amount of illiquid assets that is inconsistent with the redeemable nature of the securities it issues.

As discussed above, because of the unmanaged nature of an UIT, we recognize that depending on its particular circumstances, after initial deposit, an UIT might potentially hold a higher level of illiquid investments due to redemptions or changes in the liquidity of the investments it holds. Nonetheless, we expect that the requirement for the depositor or principal underwriter to determine that the liquidity of the investments the UIT holds is consistent with the nature of the redeemable securities it issues at the time of initial deposit should help enhance UIT liquidity.

L. Disclosure and Reporting Requirements Regarding Liquidity Risk and Liquidity Risk Management

Receiving relevant information about the operations of a fund and its principal investment risks is important to investors in choosing the appropriate fund for their risk tolerances. Investors in open-end funds generally expect funds to pay redemption proceeds promptly following their redemption requests based, in part, on representations made by funds in their disclosure documents. Currently, funds are not expressly required to disclose how they manage the liquidity of their investments, and limited information is available regarding fund liquidity and whether the liquidity of a fund's portfolio securities corresponds with its anticipated liquidity needs.

We are adopting, substantially as proposed with some modifications in response to comment, amendments to Form N–1A that will require a fund to further describe its procedures for redeeming the fund's shares including the number of days following receipt of shareholder redemption requests in which the fund typically expects to pay redemption proceeds to redeeming shareholders and the methods the fund typically uses to meet redemption requests, including whether those methods are used regularly or only in stressed market conditions.[893] We also are adopting an amendment to General Instruction A of Form N–1A to conform the definition of ''exchange-traded fund'' to the definition of ETF adopted today in connection with rule 22e–4 and the adoption of Form N–CEN in the Investment Company Reporting Modernization Adopting Release.[894]

In addition, we are adopting new Form N–LIQUID to incorporate information that would have previously been reported on Form N–PORT under the proposal concerning a fund's investments in illiquid investments, but with some modifications in response to comments. Under this new reporting form, a fund is required to notify the Commission when more than 15% of the fund's net assets are, or become, illiquid investments that are assets as defined in rule 22e–4 and report information about the investments affected.[895] A fund also is required to report on Form N–LIQUID if the fund's illiquid investments that are assets previously exceeded 15% of net assets and the fund determines that its illiquid investments that are assets have changed to be less than or equal to 15% of net assets.[896] In addition, under the new form, a fund is required to notify the Commission if the fund's holdings in highly liquid investments that are assets fall below the fund's highly liquid investment minimum for more than 7 consecutive calendar days.[897] Information reported on Form N–LIQUID will be non-public.

We are adopting, as proposed, the requirement that a fund report on Form N–CEN information regarding the use of lines of credit, interfund lending, and interfund borrowing.[898] In addition, we are adopting a new requirement that a fund report on Form N–CEN whether the fund is an ''In-Kind Exchange-Traded Fund'' as defined in rule 22e–4.[899]

Many commenters expressed general support for enhanced disclosures regarding fund liquidity risk management practices.[900] Some commenters noted that understanding the liquidity dynamics of an investment strategy employed by a fund would be beneficial to investors[901] and that enhanced information could assist the Commission in its role as the primary regulator of investment companies and help investors make more informed investing decisions by providing more transparency into fund investment practices.[902] Other commenters expressed concerns with specific disclosure and reporting requirements outlined in the proposal, which are discussed in detail below.

1. Amendments to Form N–1A

Form N–1A is used by open-end funds, including money market funds and ETFs, to register under the Investment Company Act and to register offerings of their securities under the Securities Act. We are adopting, substantially as proposed, amendments to Form N–1A that will require a fund to further describe its procedures for redeeming the fund's shares including the number of days following receipt of shareholder redemption requests in which the fund typically expects to pay redemption proceeds to redeeming shareholders.[903] A fund also will be required to describe the methods the fund typically expects to use to meet redemption requests in stressed and non-stressed market conditions.[904] Funds will not be required, however, to file as exhibits to their registration statements credit agreements as we proposed. We note that these amendments will apply to all open-end funds, including money market funds and ETFs.[905]

In addition, we are adopting an amendment to General Instruction A of Form N–1A to conform the definition of ''exchange-traded fund,'' which currently defines an ETF to mean, in part, a fund or class, ''the shares of which are *traded* on a national securities exchange'' to the definition of ETF adopted today in connection with rule /–4 and the adoption of Form N–PORT and Form N–CEN in the Investment Company Reporting Modernization Adopting Release, which both define an ETF, in part, to mean a fund or class, ''the shares of which are *listed and traded* on a national securities exchange.''[906]

---

[893] *See* Items 11(c)(7) and (c)(8) of Form N–1A.

[894] *See infra* footnote 906.

[895] *See* Part A and Part B of Form N–LIQUID.

[896] *See* Part C of Form N–LIQUID.

[897] *See* Part D of Form N–LIQUID.

[898] *See* Item C.20 of Form N–CEN. In the Proposing Release, we also proposed to add to Form N–CEN a requirement for funds to report whether the fund required that an authorized participant post collateral to the fund or any of its designated service providers in connection with the purchase or redemption of fund shares during the reporting period. *See* Proposing Release, *supra* footnote 9, at section III.G.3.a. We are adopting this requirement in the Investment Company Reporting Modernization Adopting Release. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[899] Item E.5 of Form N–CEN.

[900] *See, e.g.,* BlackRock Comment Letter; J.P. Morgan Comment Letter; LPL Comment Letter (supporting increased disclosure about liquidity); SIFMA Comment Letter I (expressing general support for the proposed amendments to Form N–1A and proposed Form N–CEN).

[901] *See* BlackRock Comment Letter.

[902] *See* Charles Schwab Comment Letter.

[903] *See* Item 11(c)(7) of Form N–1A.

[904] *See* Item 11(c)(8) of Form N–1A.

[905] *See supra* footnote 4; *see also infra* section V.H.; and Proposing Release, *supra* footnote 9, at section V.G.

[906] *See* General Instructions A of Form N–1A (emphasis added) and General Instruction E of Form N–CEN. *See also* Investment Company

Many commenters generally supported enhancing prospectus disclosure requirements,[907] noting, for example, that enhanced disclosures will improve shareholder and market participant knowledge regarding fund redemption procedures and liquidity risk management.[908] Several commenters expressed concerns with the proposed requirements to disclose the number of days or the methods in which a fund will pay redemption proceeds[909] and include lines of credit agreements as exhibits to the fund registration statement.[910] We discuss the comments received in response to the proposal, as well as the amendments to Form N–1A and modifications to the proposal, in more detail below.

a. Timing of the Redemption of Fund Shares

Form N–1A requires funds to describe their procedures for redeeming fund shares.[911] Disclosure regarding other important redemption information, such as the timing of payment of redemption proceeds to fund shareholders, varies across funds as today there are no specific requirements for this disclosure under the form. Some funds disclose that they will redeem shares at a price based on the next calculation of net asset value after the order is placed but may delay payment for up to seven days (consistent with section 22(e) of the Act), and others provide no specific time periods for the payment. Some funds disclose differences in the timing of payment of redemption proceeds based on the distribution channel or payment method through which the fund shares are redeemed, while others do not.

We proposed amendments to Item 11 of Form N–1A that would require a fund to disclose the number of days in which the fund would pay redemption proceeds to redeeming shareholders.[912] Under the proposal, if the number of days in which the fund would pay redemption proceeds differed by distribution channel, the fund also would be required to disclose the number of days for each distribution channel.[913] We also proposed amendments to Item 11 that would require a fund to disclose the methods that the fund uses to meet redemption requests.[914] Under the proposal, funds would have been required to disclose whether they use the methods regularly to meet redemptions or only in stressed market conditions.

Some commenters expressed general support for these new disclosure requirements under the proposal, stating that this information will improve shareholder and market participant knowledge regarding fund redemption procedures and liquidity risk management[915] and provide meaningful information about the general time taken to meet redemptions and the fund's approaches to liquidity risk management.[916]

Some commenters also expressed concerns with the proposed requirement that funds disclose the number of days in which a fund will pay redemption proceeds for each distribution channel, stating that the disclosure could present undue complexity to the prospectus and may lead to shareholder confusion.[917] In addition, commenters argued that a fund does not always have a direct contractual relationship with the ultimate beneficial owners of its shares, as there are often multiple intermediaries between the mutual fund and its shareholder, and that a fund is not in the best position to disclose to its shareholders a precise timeframe in which an intermediary will transmit the proceeds of a shareholder's redemption.[918]

We understand that in most cases, the distribution channel through which a shareholder transacts in fund shares is unlikely to have a material effect on the timing of the payment of redemption proceeds, but instead that the choice of *method* of payment of redemption proceeds will have the most significant effect on when an investor receives proceeds. For example, we understand that the industry's central fund transaction processing utility (the NSCC), typically debits or credits the cash accounts of users of the utility (such as funds or their transfer agents on one side of the transaction, and intermediaries on behalf of beneficial owners, on the other side of the transaction) regarding net purchase or redemption activities in shares of a fund on T+1 (and to a lesser extent with respect to certain funds on T+3). Such intermediary users of the utility would in turn update their account records, including the beneficial owner's activity, on that date regardless of the type of book entry securities, account structure, or intermediary that the beneficial owner holds through. However, if the beneficial owner wishes to receive remittance of redemption proceeds via check (for example, instead of reinvesting them in another investment), it may take a certain number of days for the intermediary (or fund, as applicable) to process and mail the check to the customer. Accordingly, in a change from the proposal, the final form amendments do not require disclosure on timing of redemption proceeds based on distribution channel, but instead only require a fund to disclose typical expected payout times based on the payment method chosen

Reporting Modernization Adopting Release, *supra* footnote 120. For purposes of reporting on proposed Form N–CEN, we proposed to define (i) ''exchange-traded fund'' as an open-end management investment company (or series or class thereof) or UIT, the shares of which are listed and traded on a national securities exchange at market prices, and that has formed and operates under an exemptive order under the Investment Company Act granted by the Commission or in reliance on an exemptive rule under the Act adopted by the Commission and (ii) ''exchange-traded managed fund'' as an open-end management investment company (or series or class thereof) or UIT, the shares of which are listed and traded on a national securities exchange at NAV-based prices, and that has formed and operates under an exemptive order under the Investment Company Act granted by the Commission or in reliance on an exemptive rule under the Act adopted by the Commission. *See* Investment Company Reporting Modernization, Investment Company Act Release No. 31610 (May 20, 2015) [80 FR 33590 (June 12, 2015)] (''Investment Company Reporting Modernization Proposing Release''), at n.446 and accompanying text. In the Investment Company Reporting Modernization Proposing Release, we requested comment on whether the definitions of the type of funds listed in proposed Form N–CEN were appropriate and if any different definitions should be used. We did not receive any comments on the proposed definitions of ETF and ETMF in proposed Form N–CEN, and are adopting the definitions of ETF and ETMF, as proposed. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[907] *See, e.g.,* CFA Comment Letter; LPL Comment Letter; Charles Schwab Comment Letter; Vanguard Comment Letter.

[908] *See* J.P. Morgan Comment Letter.

[909] *See, e.g.,* Fidelity Comment Letter; Federated Comment Letter; NYC Bar Comment Letter; Vanguard Comment Letter.

[910] *See, e.g.,* Fidelity Comment Letter; Invesco Comment Letter; T. Rowe Comment Letter; Voya Comment Letter.

[911] *See* Item 11(c) of Form N–1A, which requires a fund to describe procedures for redeeming fund shares, including (1) any restrictions on redemptions; (2) any redemption charges; (3) if the fund has reserved the right to redeem in kind; (4) any procedure that a shareholder can use to sell fund shares to the fund or its underwriter through a broker-dealer (noting any charges that may be imposed for such service); (5) the circumstances under which the fund may redeem shares automatically without action by the shareholder in accounts below a certain number or value of shares; (6) the circumstances under which the fund may delay honoring a request for redemption for a certain time after a shareholder's investment; and (7) any restrictions on, or costs associated with, transferring shares held in street name accounts.

[912] *See* proposed Item 11(c)(7) of Form N–1A; *see also* Proposing Release, *supra* footnote 9, section III.G.1.

[913] *Id.*

[914] *See* proposed Item 11(c)(8) of Form N–1A.

[915] *See* J.P. Morgan Comment Letter.

[916] *See* ICI Comment Letter I.

[917] *See, e.g.,* Fidelity Comment Letter. *See also e.g.,* Federated Comment Letter (stating that distribution channel level disclosure is unnecessary and could present undue complexity in prospectus if there are minor deviations).

[918] *See* Fidelity Comment Letter.

by the investor (*e.g.,* check, wire, automated clearing house).[919]

Thus, under the final amendments, if the number of days a fund expects to pay redemption proceeds differs by method of payment (*e.g.,* check, wire, automated clearing house), then the fund is required to disclose the typical number of days *or estimated range of days* that the fund expects it will take to pay out redemption proceeds for each method used.[920] This requirement focuses on disclosing when the fund expects to *make the payment,* not when the shareholder should expect to *receive* the proceeds, because receipt of proceeds is unlikely to be in the fund's control (for example, a fund cannot predict how long a mailed check will take to arrive). We believe narrowing the disclosure requirement to the effects of payment methods rather than the effects of all types of distribution channels addresses comments. We also believe that this modification will increase the quality of information provided to fund shareholders about the timing of their redemption proceeds and, at the same time, reduce the likelihood that disclosures regarding such timing will be overly granular and complex for investors and overly burdensome for registrants.[921]

Other commenters expressed concerns about specific aspects of the proposed disclosure amendments. For example, some commenters stated that requiring funds to disclose the number of days in which the fund will pay redemption proceeds to redeeming shareholders would pressure funds to disclose shorter redemption payment periods, thereby limiting funds from exercising discretion in stressed markets.[922] Other commenters opposed a requirement to disclose the number of days or methods used to pay redemption proceeds,[923] arguing, for example, that the disclosure requirement would inappropriately limit the flexibility of a fund to meet redemptions to timing and methods previously disclosed in its prospectus[924] or would cause generic disclosures because of the variety of methods available to funds to meet redemptions.[925] One commenter recommended that the Commission narrow the scope of the amendments to only the ''typical'' number of days, methods, and funding sources used for meeting redemption requests.[926]

In consideration of these comments, and in a modification to the proposal, we are adopting amendments to Item 11 of Form N–1A to require a fund to disclose the number of days following receipt of shareholder redemption requests in which the fund *typically expects* to pay redemption proceeds to redeeming shareholders,[927] rather than the number of days in which the fund will pay redemption proceeds as proposed. Funds may wish to consider also disclosing whether payment of redemption proceeds may take longer than the number of days that the fund typically expects and may take up to seven days as provided in the Investment Company Act.

We appreciate commenters' concerns, and believe that this adjustment to the language in Form N–1A will give funds flexibility to provide disclosures about redemption procedures that do not inappropriately limit a fund's ability to meet redemptions to the exact timing previously disclosed in its prospectus. We continue to believe that requiring this disclosure will inform the public about a critical aspect of a shareholder's relationship with a fund—when the shareholder can expect redemption proceeds. Funds generally should disclose timing that reflects their actual operational procedures for meeting redemption rather than generic disclosures about fund redemptions, regardless of what other funds in the industry may disclose. We continue to believe that it is in the public interest to inform investors on the timing of when fund shareholders should expect redemption proceeds. We believe that this disclosure requirement will also enhance consistency in fund disclosures regarding the timing in which a fund will pay redemption proceeds, thereby improving the information provided to shareholders and the ability of investors to compare redemption procedures across funds.

b. Methods Used To Meet Shareholder Redemption Obligations

As noted above, some commenters opposed a requirement to disclose the methods used (and number of days) to pay redemption proceeds, arguing, for example, that the disclosure requirement would inappropriately limit the flexibility of a fund to meet redemptions to timing and methods previously disclosed in its prospectus or would cause generic disclosures because of the variety of methods available to funds to meet redemptions.[928] Some commenters generally opposed requirements for funds to disclose the methods used to meet redemption requests, stating, for example, that it does not serve a purpose for investors to know precisely how the fund meets their redemption requests—so long as they receive their redemption proceeds within the period prescribed by regulation.[929] As noted above, one commenter suggested that we narrow the scope of the disclosure requirement to only the ''typical'' methods funds use for meeting redemption requests.[930]

In light of these comments, in a modification to the proposal, we are adopting amendments to Item 11 of Form N–1A to require a fund to disclose the methods that the fund *typically expects* to use to meet redemption requests, and whether those methods are used regularly, or only in stressed market conditions.[931] We believe requiring that the description of the procedures for redeeming fund shares include a description of the methods a fund typically expects to use to meet redemption requests will improve disclosure about another critical aspect of a shareholder's relationship with a fund—how a shareholder can expect to receive redemption proceeds. We appreciate the concerns expressed by commenters and believe that the modified language in the form provides some needed flexibility for funds while at the same time providing investors with improved information concerning redemption procedures. Furthermore, this disclosure requirement will increase consistency in fund disclosure documents regarding fund redemption practices and improve the comparability of such information across funds. Absent this amendment, disclosures concerning the methods funds use to pay redemption proceeds will continue to vary across funds.

We believe that requiring specific disclosure on the methods a fund uses to pay redemption proceeds could improve investor knowledge on how a fund manages liquidity and its redemption obligations to shareholders. At the foundation of the prospectus

[919] *See* Item 11(c)(7) of Form N–1A.

[920] *See id.* (emphasis added).

[921] *See* Proposing Release, *supra* footnote 9, section III.G.1.a.

[922] *See* FSR Comment Letter; NYC Bar Comment Letter.

[923] *See, e.g.,* Fidelity Comment Letter; Federated Comment Letter; Invesco Comment Letter; Vanguard Comment Letter.

[924] *See, e.g.,* Invesco Comment Letter; NYC Bar Comment Letter; Vanguard Comment Letter.

[925] *See* Federated Comment Letter.

[926] *See* ICI Comment Letter I.

[927] *See* Item 11(c)(7) of Form N–1A (emphasis added).

[928] *See, e.g.,* Federated Comment Letter; Invesco Comment Letter; NYC Bar Comment Letter; Vanguard Comment Letter.

[929] *See* Invesco Comment Letter.

[930] *See* ICI Comment Letter I; *see also* footnote 926 and accompanying text.

[931] *See* Item 11(c)(8) of Form N–1A (emphasis added).

disclosure framework is the provision to all investors of user-friendly information that is key to an investment decision.[932] Additionally, given the increase in open-end funds pursuing alternative and fixed income strategies with varied liquidity risks,[933] the sources of liquidity and methods used to meet shareholder redemptions are key information that investors need.

Methods to meet redemption obligations may include, for example, sales of portfolio assets, holdings of cash or cash equivalents, the use of lines of credit and/or interfund lending, and in-kind redemptions.[934] Funds may also use redemption fees to help mitigate dilution and address transaction costs associated with shareholder activity. We also believe that requiring this disclosure could encourage funds to consider their operations and ensure that the methods they may use to meet shareholder redemption obligations in normal and reasonably foreseeable stressed markets are viable.

As noted above, Form N–1A requires funds to disclose whether they reserve the right to redeem their shares in kind instead of in cash and to describe the procedures for such redemptions.[935] As proposed, we are amending Form N–1A to incorporate this disclosure requirement into Item 11(c)(8) discussed above. We understand that the use of in-kind redemptions (outside of the ETF context) historically has been rare and that many funds reserve the right to redeem in kind only as a tool to manage liquidity risk under emergency circumstances or to manage the redemption activity of a fund's large institutional investors.[936] We also are aware that there are often logistical issues associated with redemptions in kind and that these issues can limit the availability of in-kind redemptions as a practical matter. A fund should consider whether adding relevant detail to its disclosure regarding in-kind redemptions, including, for example, whether redemptions in kind will be pro-rata slices of the fund's portfolio or individual securities or a representative basket of securities, or revising its disclosure if the fund would be practically limited in its ability to redeem its shares in kind, would provide more accurate information to investors.

One commenter expressed concerns that the proposed additional disclosure requirements in Form N–1A runs against the Commission's goal of clear and concise, user-friendly disclosures.[937] We believe that the amendments adopted today in this Release, including specific modifications in response to commenters, respond appropriately to this commenter's concern and are designed to provide disclosures to investors with key information in a clear, concise, and understandable manner. We believe that investors in an open-end fund should have information on how the fund expects to meet redemptions and in what time period they expect to pay redemption proceeds.

c. Credit Agreements Exhibit

We also proposed to amend Item 28 of Form N–1A to require a fund to file as an exhibit to its registration statement any agreements related to lines of credit for the benefit of the fund to increase Commission, investor, and market participant knowledge concerning the arrangements funds have made in order to strengthen their ability to meet shareholder redemption requests and manage liquidity risk and the terms of those arrangements.[938] In light of concerns expressed by commenters, we are not adopting amendments to Form N–1A to require the filing of credit agreements as exhibits to a fund's registration agreement.

Many commenters objected to the credit agreements exhibit requirement,[939] with some arguing, for example, that credit agreements are often extremely lengthy documents that are not user-friendly,[940] the disclosure of which would be unnecessary in light of the lines of credit reporting requirements in Form N–CEN as well as information concerning lines of credit disclosed in a fund's statement of additional information and financial statements.[941] Other commenters expressed concern that public disclosure of line of credit agreements in a fund's registration statement could ultimately harm fund shareholders, noting that public disclosure could (1) disrupt and weaken a fund's ability to negotiate credit terms; [942] (2) make public proprietary and competitive information (*e.g.,* certain representations and warranties) that lenders and funds may wish to keep confidential and are not easily redacted; [943] and (3) ultimately discourage lending banks from granting lending terms to funds out of a concern that terms granted would become standard in other lending agreements.[944]

Rather than include line of credit agreements as exhibits, other commenters suggested including a narrative discussion of lines of credit information, similar to the data required to be disclosed in Form N–CEN, in a fund's statement of additional information.[945] Some commenters did not oppose requiring the filing of line of credit agreements as an exhibit to a fund's registration statement if, in addition to redacting fees as proposed, certain other portions of the agreement were permitted to be redacted.[946]

We find the concerns expressed by commenters persuasive and have determined to not adopt this amendment to Form N–1A. We acknowledge that credit agreements can be lengthy, complex documents that may be of limited value to retail investors and that the information provided in the proposed exhibits could be, in part, duplicative of information provided in a fund's statement of additional information and financial statements. We believe that requiring funds to report the use of lines of credit in response to reporting requirements in Form N–CEN is an appropriate means to increase Commission, investor, and market participant knowledge concerning the arrangements funds have made in order to strengthen their ability to meet shareholder redemption

[932] *See* Enhanced Disclosure and New Prospectus Delivery Option for Registered Open-End Management Investment Companies, Investment Company Act Release No. 28584 (Jan. 13, 2009) [74 FR 4546 (Jan. 26, 2009)] (''N–1A Release''), at section I.

[933] *See supra* section II.C.1.

[934] *See supra* footnote 686 and accompanying text.

[935] *See* Item 11(c)(3) of Form N–1A.

[936] *See supra* section III.J. We note that funds also have the ability to redeem in kind, subject to the limitations under rule 18f–1 under the Act for funds that have made an election under the rule. An 18f–1 election commits a fund to pay in cash all requests for redemption by any shareholder of record, limited in amount with respect to each shareholder during any 90-day period to the lesser of $250,000 or 1% of the fund's net asset value at the beginning of the period.

[937] *See* Federated Comment Letter.

[938] *See* Proposing Release, *supra* footnote 9, at section III.G.1 (where we also proposed to include an instruction related to credit agreements noting that the specific fees paid in connection with the credit agreements need not be disclosed in the exhibit filed with the Commission to preserve the confidentiality of this information).

[939] *See, e.g.,* Fidelity Comment Letter; CRMC Comment Letter; Oppenheimer Comment Letter; Voya Comment Letter.

[940] *See* CRMC Comment Letter; T. Rowe Comment Letter.

[941] *See, e.g.,* Oppenheimer Comment Letter; T. Rowe Comment Letter; Voya Comment Letter.

[942] *See* Oppenheimer Comment Letter; Fidelity Comment Letter.

[943] *See* CRMC Comment Letter; Invesco Comment Letter; Oppenheimer Comment Letter; Voya Comment Letter.

[944] *See* Fidelity Comment Letter.

[945] *See* ICI Comment Letter I; CRMC Comment Letter.

[946] *See* FSR Comment Letter (requesting redaction of the identity of the counterparty); Federated Comment Letter (requesting redaction of the rate payable by the fund on any drawdowns).

requests and manage liquidity risk and the terms of those arrangements.

d. Additional Disclosure Requirements

Some commenters recommended that the Commission require additional disclosures in a fund's registration statement about a fund's specific liquidity risk management policies and procedures [947] and the market impact costs associated with redemption activity.[948] For example, one commenter recommended requiring a fund to disclose a narrative of its liquidity risk management program in its statement of additional information as well as a statement in the fund prospectus about the liquidity risk appetite of each fund.[949] Another commenter expressed support for the Commission requiring funds to include a discussion of their liquidity risk management policies and procedures, similar to what is currently required on Form N–1A for policies and procedures regarding proxy voting (Items 17 and 27) and valuation procedures (Item 23), among others.[950] In addition, one commenter recommended that we consider requiring a fund to also disclose the level of ''position concentration'' that is appropriate for the fund in terms of portfolio liquidity in light of the fund's investment strategy and investor profile.[951] While another commenter recommended that, at a minimum, funds be required to provide disclosures noting the possibility of suspending redemptions and how the fund will handle redemption requests in that situation.[952]

We support commenters' goals of providing useful information about a fund's liquidity risk management practices to investors but also remain committed to encouraging statutory prospectuses that are simple, clear, and useful to investors [953] and registration statements that provide useful information, rather than boilerplate legal representations. In the interest of balancing these two goals, we are adopting the proposed amendments to Form N–1A substantially as proposed without including these specific additional disclosure requirements suggested by commenters in the text of the form. We note, however, that nothing in Form N–1A prohibits disclosures about the features of a fund's liquidity risk management program where relevant to understanding disclosures under existing reporting requirements.

2. New Form N–LIQUID

We are also adopting a new requirement that open-end investment companies, including In-Kind ETFs to the extent applicable [954] but not including money market funds (*i.e.,* registrants), file on a non-public basis a current report to the Commission on new Form N–LIQUID when certain significant events related to a fund's liquidity occur.[955] This requirement will be implemented through our adoption of new rule 30b1–10, which requires funds to file a report on new Form N–LIQUID in certain circumstances. The content of this report is similar to the information that we proposed to be reported on Form N–PORT under the proposal concerning a fund's investments in illiquid assets, but with some modifications in response to comments. A report on Form N–LIQUID is required to be filed, as applicable, within one business day of the occurrence of one or more of the events specified in the form.[956] Form N–LIQUID will be non-public. For the same reasons discussed previously regarding our determination to keep information regarding a fund's highly liquid investment minimum and specific position level disclosure of illiquid investments non-public, we find that it is neither necessary nor appropriate in the public interest or for the protection of investors to make the information filed on Form N–LIQUID publicly available.[957]

First, a registrant is required to file Form N–LIQUID within one business day when more than 15% of its net assets are, or become, illiquid investments that are assets as defined in rule 22e–4.[958] If this occurs, the registrant will be required to report on Form N–LIQUID general information about the registrant as well as (1) the date(s) of the event, (2) the current percentage of the registrant's net assets that are illiquid investments that are assets, and (3) identification information about the illiquid investments.[959]

Second, if a registrant whose illiquid investments that are assets previously exceeded 15% of net assets determines that its holdings in illiquid investments that are assets have changed to be less than or equal to 15% of the registrant's net assets, then the registrant also is required to report within one business day (1) the date(s) on which its illiquid investments that are assets fell to or below 15% of net assets and (2) the current percentage of the registrant's net assets that are illiquid investments that are assets.[960]

Lastly, a registrant also is required to notify the Commission on Form N–LIQUID within one business day if its holdings in highly liquid investments that are assets fall to or below the registrant's highly liquid investment minimum for more than 7 consecutive calendar days.[961] If this occurs, a fund is required to report the date(s) on which the fund's holdings in liquid investments that are assets fell below the fund's highly liquid investment minimum.[962]

As discussed above, we are modifying the 15% standard asset-reporting requirement originally proposed by incorporating this information into the fourth ''illiquid investment'' classification category reported on Form N–PORT.[963] Under the proposal, Form N–PORT would have required a fund to report, for each portfolio asset, whether the asset is a 15% standard asset in order to allow our staff and other interested parties to track the extent that funds are holding 15% standard assets and to discern the nature of those holdings and assist these groups in tracking the fund's exposure to liquidity risk.[964]

Some commenters recommended that the Commission require more detailed reporting data from funds that hold a larger percentage of securities that are

947 *See, e.g.,* Invesco Comment Letter; J.P. Morgan Comment Letter.

948 *See* BlackRock Comment Letter.

949 *See* Invesco Comment Letter.

950 *See* J.P. Morgan Comment Letter.

951 *See* BlackRock Comment Letter.

952 *See* CFA Comment Letter.

953 *See* N–1A Release, *supra* footnote 932.

954 As discussed below, some of the events required to be reported on Form N–LIQUID are in connection with the breach of a fund's highly liquid investment minimum. *See* Part D of Form N–LIQUID. Because In-Kind ETFs are not subject to the highly liquid investment minimum requirement under rule 22e–4(b)(1)(iii), they would not be subject to this Part D reporting requirement on Form N–LIQUID.

955 *See* rule 30b1–10.

956 Form N–LIQUID will also require a fund to report the following general information: (1) The date of the report; (2) the registrant's central index key (''CIK'') number; (3) the EDGAR series identifier; (4) the Securities Act file number; and (v) the name, email address, and telephone number of the person authorized to receive information and respond to questions about the filing. *See* Part A of Form N–LIQUID.

957 *See supra* footnote 615 and accompanying text and footnote 743 and accompanying text. Section 45(a) of the Investment Company Act requires information in reports filed with the Commission pursuant to the Investment Company Act to be made available to the public, unless we find that public disclosure is neither necessary nor appropriate in the public interest or for the protection of investors.

958 *See* Part A and Part B of Form N–LIQUID.

959 *See* Items A.1—A.5 and Items B.1—B.3 of Form N–LIQUID.

960 *See* Item C.1 and Item C.2 of Form N–LIQUID.

961 *See* Part D of Form N–LIQUID.

962 *See* Item D.1 of Form N–LIQUID.

963 *See* Item C.7 Form N–PORT; *see also supra* section III.C.6.

964 *See* Proposing Release, *supra* footnote 9, at section II.G.2.b.

less liquid or illiquid and that funds should notify the Commission more promptly than the Form N–PORT filing deadline when a fund's illiquid assets exceed 15% of net assets, or if the fund otherwise encounters indications of increased liquidity risk.[965] Other commenters expressed support for the addition of an early warning notification provision, under which funds would be required to notify the Commission when illiquid assets held at the end of a business day exceed 15% of net assets and continue to exceed 15% of net assets three business days after the threshold was first exceeded.[966] Another commenter expressed the belief that the sheer scale of Americans' reliance on open-end funds as an investment instrument and the potential for systemic contagion that arises when funds confront liquidity challenges must inform any consideration of the Commission's proposal.[967] In the commenter's view, the reporting requirements under the proposal with underlying factor-based analysis was largely discretionary and lacked mandatory requirements, and thereby failed to adequately account for the potential systemic threat to the nation's financial stability posed by liquidity risk.[968]

We appreciate the concerns and suggestions raised by commenters and agree that the Commission should be notified promptly when a fund encounters indications of increased liquidity risk and believe that new Form N–LIQUID addresses some concerns expressed by commenters that certain liquidity events that could affect the liquidity of a particular fund and/or indicate potential liquidity risks across the fund industry require particular attention by Commission staff. Pursuant to Part B of Form N–LIQUID, registrants will now be required to report to the Commission within one business day of when their percentage of illiquid investments that are assets exceeds (and subsequently falls to or below) 15% of their net assets.[969] Providing this information more promptly than monthly reporting on Form N–PORT, as proposed, will be the ''early warning notification'' that some commenters recommended[970] and will inform the Commission of potential liquidity stress events at the earliest possible juncture. Similarly, requiring a registrant to report when its holdings in highly liquid investments that are assets fall below the registrant's highly liquid investment minimum will add to this early warning system and ensure the Commission is made aware of such breaches promptly, rather than later in reports filed on Form N–PORT.[971] We believe that the information reported on Form N–LIQUID will assist Commission staff in its monitoring efforts of liquidity, including monitoring of not only the reporting fund but also funds that may have comparable characteristics to the reporting fund and could be similarly affected by market events.

Form N–LIQUID also includes general filing and reporting instructions, as well as definitions of specific terms referenced in the form.[972] These instructions and definitions are intended to provide clarity to funds and to assist them in filing reports on Form N–LIQUID.

3. Amendments to Form N–CEN

We proposed several reporting items under Part C of Form N–CEN to allow the Commission and other users to track certain liquidity risk management practices that we expect funds to use on a less frequent basis than the day-to-day portfolio construction techniques captured by Form N–PORT.[973] We are adopting these reporting requirements substantially as proposed. Where we have received comments on specific reporting requirements, we discuss them in more detail below.

a. Lines of Credit, Interfund Lending, and Interfund Borrowing

We are adopting, largely as proposed, but with a modification in response to comment, the requirement in Form N–CEN that a management company report information regarding the use of lines of credit, interfund lending, and interfund borrowing.[974] Several commenters expressed general support for these reporting requirements on Form N–CEN.[975] In a modification to the proposal, if a fund reports that it has access to a line of credit, for each line of credit the fund will be required to report whether the line of credit is a committed or *uncommitted* line of credit.[976] The fund will be required to report information concerning the size of the line of credit in U.S. dollars, the name of the institution(s) with which the fund has the line of credit, and whether the line of credit is for that fund alone or is shared among multiple funds.[977] If the line of credit is shared among multiple funds, the fund is required to disclose the names and SEC File numbers of the other funds (including any series) that may use the line of credit.[978] If the fund responds affirmatively to having available a line of credit, the fund is required to disclose whether it drew on the line of credit during the reporting period.[979] If the fund drew on that line of credit during the reporting period, the fund is required to disclose the average dollar amount outstanding when the line of credit was in use and the number of days that line of credit was in use.[980]

The Proposing Release included a request for comment on whether funds should be required to report information on uncommitted lines of credit on Form N–CEN.[981] In general, a committed line of credit represents a bank's obligation, in exchange for a fee, to make a loan to a fund subject to specified conditions. For uncommitted or standby lines of credit, however, a bank indicates a willingness, but no obligation, to lend to a fund.[982] As one commenter noted, funds may have certain tools like lines of credit from banks for temporary liquidity management purposes ''when more typical means (*e.g.,* use of new or existing cash or sales of portfolio holdings) are unavailable or otherwise

[965] *See, e.g.,* Charles Schwab Comment Letter (noting that this proposed approach could be similar to the Commission's 2015 Derivatives Proposing Release, which has proposed to enhance requirements for funds whose aggregate exposure to derivatives exceeds 50% of its net assets); *see also, e.g.,* SIFMA Comment Letter III.

[966] *See, e.g.,* SIFMA Comment Letter III (noting that this early warning notification could respond to concerns raised by the Third Avenue Fund liquidation); *see also* Third Avenue Temporary Order, *supra* footnote 12.

[967] *See* Better Markets Comment Letter.

[968] See id.

[969] *See* Part B and Part C of Form N–LIQUID; *see also* General Instruction A of Form N–LIQUID.

[970] *See* SIFMA Comment Letter III.

[971] *See* Part D of Form N–LIQUID.

[972] *See* General Instructions A (Rule as to Use of Form N–LIQUID), B (Application of General Rules and Regulations), C (Information to Be Included in Report Filed on Form N–LIQUID), D (Filing of Form N–LIQUID), E (Paperwork Reduction Act Information), and F (Definitions) of Form N–LIQUID.

[973] *See* Proposing Release, *supra* footnote 9, at section III.G.3.

[974] *See* Item C.20 of Form N–CEN. We have modified the numbering convention for items within Form N–CEN from the proposal to be consistent with Form N–CEN as adopted in the Investment Company Reporting Modernization Adopting Release and to clarify that responses regarding lines of credit, interfund lending, and interfund borrowing should apply to each line of credit or loan, as applicable.

[975] *See, e.g.,* CFA Comment Letter; Federated Comment Letter; Vanguard Comment Letter.

[976] *See* Item C.20.a.i of Form N–CEN (emphasis added).

[977] *See* Item C.20.a.ii–iv. of Form N–CEN.

[978] *See* Item C.20.a.iv.1 of Form N–CEN. Under Form N–CEN, ''SEC File number'' means the number assigned to an entity by the Commission when that entity registered with the Commission in the capacity in which it is named in Form N–CEN. *See* General Instruction E to Form N–CEN.

[979] *See* Item C.20.a.v of Form N–CEN.

[980] *See* Item C.20.a.vi. and vii of Form N–CEN.

[981] *See* Proposing Release, *supra* footnote 9, at section III.G.3.c.

[982] *See* Fortune, *supra* footnote 781 at 47.

sub-optimal.'' [983] One commenter suggested that funds report the availability of uncommitted lines of credit in addition to committed lines of credit in Form N–CEN.[984]

In consideration of these comments, we are including in Form N–CEN a requirement for funds to report the availability and use of committed and uncommitted lines of credit.[985] We believe that this information will allow our staff and other potential users to assess what sources of external liquidity are available to funds and to what extent funds rely on dedicated external sources of liquidity, rather than relying on the liquidity of fund portfolio investments alone, for liquidity risk management. In addition, we believe that if funds make substantial use of uncommitted lines of credit, the reporting of that reliance could flag potential vulnerabilities in a fund or the fund industry, particularly in the event of a market crisis when uncommitted lines of credit might become unavailable. Furthermore, having funds report information on lines of credit will also allow monitoring of whether lines of credit are concentrated in particular financial institutions.

We are adopting, as proposed, the requirement that a fund report whether it engaged in interfund lending or interfund borrowing during the reporting period, and, if so, the average amount of the interfund loan when the loan was outstanding and the number of days that the interfund loan was outstanding.[986] This information will provide some transparency regarding the extent to which funds use interfund lending or interfund borrowing. We understand that one reason that funds have sought exemptive relief to engage in interfund lending and borrowing is to meet redemption obligations if necessary.[987]

b. Additional Information Concerning ETFs

In a modification to the proposal, we are requiring that each ETF that complies with rule 22e–4 as an ''In-Kind ETF'' under the rule, identify itself accordingly in reports on Form N–CEN.[988] As discussed above, we are adopting certain tailored liquidity risk management program requirements for ETFs, and certain ETFs that qualify as In-Kind ETFs will not be required to classify their portfolio investments or comply with the highly liquid investment minimum requirement of rule 22e–4.[989] We believe that the In-Kind ETF information reported on Form N–CEN will be helpful in understanding the volume of ETFs that identify as In-Kind ETFs and thus are not required to classify their portfolio investments or comply with the highly liquid investment minimum requirement of rule 22e–4.[990]

4. Safe Harbors

Some commenters suggested that the Commission should include a safe harbor and/or protection from liability as part of the final rule for proposed liquidity-related disclosures.[991] One commenter recommended that the Commission provide a safe harbor for ''forward-looking statements'' given the speculative nature of the proposed disclosures.[992] Another commenter recommended that the Commission implement measures to shield from liability funds that in good faith make forward-looking assessments of liquidity at either the asset or portfolio level that subsequently turn out to materially differ from actual liquidity.[993] One commenter further suggested that the Commission should include a provision stating that funds and their affiliates will not face liability for errors in classification or otherwise in implementing their liquidity risk management programs, and related reports and (if applicable) disclosures, unless (i) the error is material and (ii) the fund or affiliate acted knowingly or recklessly. Commenters argued that any safe harbor provision should also make clear that funds and managers would not face liability for violation of rule 22e–4 based on second-guessing, either by the Commission or by fund shareholders, of the design of the liquidity risk management program.[994] One commenter expressed concern that, even if a safe harbor provision were established that protected funds and directors from Commission enforcement actions, funds and directors could still be subject to private litigation.[995] We decline to provide such a safe harbor.

M. Effective and Compliance Dates

We are adopting the following effective and compliance dates, as set forth below.

1. Liquidity Risk Management Program

The compliance date for our liquidity risk management program requirement is December 1, 2018 for larger entities, and June 1, 2019 for smaller entities. Thus all registered open-end management investment companies, including open-end ETFs, that are not smaller entities, will be required to adopt and implement a written liquidity risk management program, approved by a fund's board of directors on December 1, 2018, while smaller entities will be required to do so six months later, on June 1, 2019.[996]

In the Proposing Release, the Commission stated that it expected to provide a tiered set of compliance dates based on asset size.[997] The Commission expected that 18 months after the effective date would provide an adequate period of time for larger entities to prepare internal processes, policies, and procedures and implement liquidity risk management programs that would meet the requirements of the rule.[998] We believed that smaller entities would benefit from having an additional 12 months to establish and implement a written liquidity risk management program.[999]

Most of the commenters who discussed the proposed liquidity risk management program compliance

[983] ICI Comment Letter I.

[984] *See* Federated Comment Letter.

[985] *See* Item C.20.a.(i) of Form N–CEN.

[986] *See* Items C.20.b and c of Form N–CEN.

[987] For example, we understand that funds may engage in interfund lending and borrowing to pay out redemption proceeds same-day or T+1 while the fund awaits proceeds from sales of non-traded securities.

[988] *See* Item E.5 of Form N–CEN; *see also supra* section III.J regarding the definition and treatment of ''In-Kind ETFs'' under rule 22e–4.

[989] *Id.*

[990] ETFs that redeem in cash, or that do not qualify otherwise as ''In-Kind ETFs'' (as defined in rule 22e–4(a)(9)) will be subject to the full set of liquidity risk management program elements, including the classification and highly liquid investment minimum requirements. *See* rule 22e–4(b)(1)(i)–(iii).

[991] *See, e.g.,* ICI Comment Letter I; LSTA Comment Letter; SIFMA Comment Letter II; T. Rowe Comment Letter.

[992] *See* FSR Comment Letter.

[993] *See* ICI Comment Letter I (noting that the Commission has precedent for using its authority to shield from potential liability certain forward-looking information that registrants are required to provide (*see, e.g.,* rule 175 under the Securities Act; rule 3b–6 under the Exchange Act; Item 303(c) of Reg. S–K; and Disclosure in Management's Discussion and Analysis about Off-Balance Sheet Arrangements and Aggregate Contractual Obligations, Securities Act Release No. 33–8182 (Feb. 5, 2003) (regarding MD&A disclosures)).

[994] *See* SIFMA Comment Letter II.

[995] *See* Federated Comment Letter.

[996] The compliance date in the section applies to rule 22e–4, rule 30b1–10, and Form N–LIQUID.

[997] *See* Proposing Release, *supra* footnote 9, at section III.H. Specifically, for larger entities—namely, funds that together with other investment companies in the same ''group of related investment companies'' have net assets of $1 billion or more as of the end of the most recent fiscal year—the Commission proposed a compliance date of 18 months after the effective date to comply with the Proposed Rule. For smaller entities (*i.e.,* funds that together with other investment companies in the same ''group of related investment companies'' have net assets of less than $1 billion as of the end of the most recent fiscal year), the proposal provided for an extra 12 months (or 30 months after the effective date) to comply with proposed rule 22e–4.

[998] *Id.*

[999] *Id.*

date(s) opposed tiered compliance and requested at least 30 months to comply. Some argued larger funds would need at least 30 months to comply because of their size: More funds and a greater number and variety of investments to classify would require more time.[1000] Others cited operational limitations: A need of adequate time for (1) all funds to properly prepare processes, policies and procedures; (2) managers to adjust operations and develop reporting capabilities; and (3) mutual fund boards to review, approve, and implement the program.[1001] The only commenter that supported tiered compliance requested lengthier compliance dates for both larger and smaller entities.[1002]

After evaluating the comments received, we believe that larger entities would benefit from an additional period of time to come into compliance with the rules over the 18 months that was proposed. Therefore, we are providing an additional 6 months for these entities, for a total of 24 months (*i.e.,* December 1, 2018) to come into compliance. We continue to believe that smaller entities may face additional or different challenges in coming into compliance with the rules quickly, and are therefore providing an extended compliance period of a total of 30 months (*i.e.,* June 1, 2019) for such smaller entities.

2. Amendments to Form N–1A, Form N–PORT, and Form N–CEN

In the Proposing Release, the Commission expected to require all initial registration statements on Form N–1A, and all post-effective amendments that are annual updates to effective registration statements on Form N–1A, filed six months or more after the effective date, to comply with the proposed amendments to Form N–1A.[1003] Few commenters discussed the Form N–1A amendments. One commenter agreed that 6 months was sufficient to comply with the amendments;[1004] another commenter requested 30 months to comply.[1005] Because we do not expect that funds will require significant amounts of time to prepare these additional disclosures,[1006] we are adopting a compliance date for our amendments to Form N–1A of June 1, 2017. This will provide a six month compliance period for these amendments, as proposed.

Similar to the tiered compliance dates for the liquidity classification requirements (discussed above), we are providing a tiered set of compliance dates based on asset size for the additions to Form N–PORT and Form N–CEN.[1007] In the Proposing Release, for larger entities, we expected that 18 months would provide an adequate period of time for funds, intermediaries, and other service providers to conduct the requisite operational changes to their systems and to establish internal processes to prepare, validate, and file reports containing the additional information requested by the proposed amendments to Form N–PORT. Further, we believed that smaller entities would benefit from extra time to comply and from the lessons learned by larger investment companies during the adoption period for Form N–PORT. For Form N–CEN, we proposed a compliance date of 18 months after the effective date to comply with the new reporting requirements.[1008] We expected that 18 months would provide an adequate period of time for funds, intermediaries, and other service providers to conduct the requisite operational changes to their systems and to establish internal processes to prepare, validate, and file reports containing the additional information requested by the proposed amendments to Form N–CEN. Multiple commenters, restating their concerns about operational limitations, requested 30 months for all entities to comply with the Form N–PORT and Form N–CEN amendments.[1009]

As discussed above, we are persuaded that larger entities would benefit from extra time to comply and are therefore providing a compliance date of December 1, 2018 for larger entities to come into compliance with the additional liquidity-related reporting requirements of Form N–PORT and Form N–CEN. This will result in larger funds filing their first reports with additional liquidity-related information on Form N–PORT, reflecting data as of December 31, no later than January 31. For smaller entities, the compliance date will be June 1, 2019. This will provide smaller entities an additional six months to comply with the new liquidity-related reporting requirements.

IV. Economic Analysis

A. Introduction and Primary Goals of Regulation

1. Introduction

As discussed above, the Commission is adopting regulatory changes to require a liquidity risk management program, and to require new disclosures regarding liquidity risk and liquidity risk management (collectively, the ''final liquidity regulations''). Because of the significant diversity in liquidity risk management practices that we have observed in the fund industry, there exists the need for enhanced comprehensive baseline regulations instead of only guidance for fund liquidity risk management. In summary, and as discussed in greater detail in section III above, the final liquidity regulations include the following:

- New rule 22e–4 will require that each fund stablish a written liquidity risk management program. A fund's liquidity risk management program broadly requires a fund to assess, manage and review the fund's liquidity risk; to classify the liquidity of each of the fund's portfolio investments; to determine a highly liquid investment minimum (except for funds that hold primarily highly liquid investments); and to limit illiquid investments to 15% of fund investments. The final rule also provides for a tailored program for all ETFs, but offers some exemptions for In-Kind ETFs. Finally, the rule requires for board oversight of the liquidity risk management program.
- Amendments to Form N–1A and additional elements of new Form N–PORT and Form N–CEN will require enhanced fund disclosure and reporting regarding position liquidity and shareholder redemption practices. New Form N–LIQUID will require more prompt, non-public notification to the Commission when a fund's holdings of assets that are illiquid investments exceed 15% of net assets, or when a fund's holdings of highly liquid investments that are assets fall below the fund's highly liquid investment minimum for more than 7 consecutive calendar days.

The Commission is sensitive to the economic effects of the final liquidity regulations, including the benefits and costs as well as the effects on efficiency, competition, and capital formation. The economic effects are discussed below in the context of the primary goals of the final liquidity regulations.

2. Primary Goals

The primary goals of the final liquidity regulations are to promote

[1000] *See, e.g.,* Fidelity Comment Letter; FSR Comment Letter; ICI Comment Letter I; Invesco Comment Letter.

[1001] *See, e.g.,* BlackRock Comment Letter; CRMC Comment Letter; T. Rowe Comment Letter; Vanguard Comment Letter.

[1002] *See* Dechert Comment Letter.

[1003] *See* Proposing Release, *supra* footnote 9, at section III.H.

[1004] *See* ICI Comment Letter I.

[1005] *See* Vanguard Comment Letter.

[1006] *See* Proposing Release, *supra* footnote 9, at section III.H.

[1007] *Id.*

[1008] *Id.*

[1009] *See* Cohen & Steers Comment Letter; Fidelity Comment Letter; ICI Comment Letter I; Vanguard Comment Letter.

investor protection by reducing the risk that funds will be unable to meet their redemption obligations, elevate the overall quality of liquidity risk management across the fund industry, increase transparency of funds' liquidity risks and risk management practices, and mitigate potential dilution of non-transacting shareholders' interests. Funds are not currently subject to requirements under the federal securities laws or Commission rules that specifically require them to maintain a minimum level of portfolio liquidity (with the exception of money market funds), and follow Commission guidelines (not rules) that generally limit their investment in illiquid assets.[1010] Additionally, a fund today is only subject to limited disclosure requirements concerning the fund's liquidity risk and risk management.[1011] As discussed in the Proposing Release, staff outreach has shown that funds today engage in a variety of different practices—ranging from comprehensive and rigorous to minimal and basic—for assessing the liquidity of their portfolios, managing liquidity risk, and disclosing information about their liquidity risk, redemption practices, and liquidity risk management practices to investors.[1012] We believe that the enhanced requirements for funds' assessment, management, and disclosure of liquidity risk and enhanced limits on illiquid investment holdings could decrease the chance that funds would be unable to meet their redemption obligations and mitigate potential dilution of non-redeeming shareholders' interests.

The final liquidity regulations are also intended to lessen the possibility of early redemption incentives (and investor dilution) created by insufficient liquidity risk management, as well as the possibility that investors' share value will be diluted by costs incurred by a fund as a result of other investors' purchase or redemption activity. When a fund experiences significant redemption requests, it may sell portfolio securities or borrow funds in order to obtain sufficient cash to meet redemptions.[1013] However, sales of a fund's portfolio investments conducted in order to meet shareholder redemptions could result in significant adverse consequences to non-redeeming shareholders when a fund fails to adequately manage liquidity. For example, if a fund sells portfolio investments under unfavorable circumstances, this could create dilution for non-redeeming shareholders.[1014] Funds also may borrow from a bank or use interfund lending facilities to meet redemption requests, but there are costs (such as interest rates) associated with such borrowings. Both selling of portfolio investments and borrowing to meet redemption requests could cause funds to incur costs that would be borne mainly by non-redeeming shareholders.[1015] These factors could result in dilution of the value of non-redeeming shareholders' interests in a fund,[1016] which could create incentives for early redemptions in times of liquidity stress, and result in further dilution of non-redeeming shareholders' interests.[1017] There also is a potential for adverse effects on the markets when open-end funds fail to adequately manage liquidity. For example, the sale of less liquid portfolio investments at discounted or even fire sale prices when a fund is facing redemption pressures can produce significant negative price pressure on those investments and correlated investments, which can impact other investors holding these investments and may transmit stress to other funds or portions of the markets.[1018] For reasons discussed in detail below, we believe that the liquidity risk management program requirement, including the enhanced restrictions on holdings of assets that are illiquid investments, should mitigate the risk of potential shareholder dilution and decrease the incentive for early redemption in times of liquidity stress.

Finally, the final liquidity regulations are meant to address recent industry developments that have underscored the significance of funds' liquidity risk management practices. In recent years, there has been significant growth in the assets managed by funds with strategies that focus on holding relatively less liquid investments, such as fixed income funds (including emerging market debt funds), open-end funds with alternative strategies, and emerging market equity funds.[1019] There also has been considerable growth in assets managed by funds that exhibit characteristics that could give rise to increased liquidity risk, such as relatively high investor flow volatility.[1020] Additionally, as discussed in detail above, standard fund redemption and securities settlement periods have tended to become significantly shorter over the last several decades, which has caused funds to satisfy redemption requests within relatively short time periods (*e.g.,* within T + 3, T + 2, and next-day periods).[1021] But while fund redemption periods have become shorter, certain funds, for example, certain bank loan funds and emerging market debt funds, have increased their holdings of portfolio securities with relatively long settlement periods, which could result in a liquidity mismatch between when a fund plans or is required to pay redeeming shareholders, and when any asset sales that the fund has executed in order to pay redemptions will settle.[1022] Collectively, these industry trends have emphasized the importance of effective liquidity risk management among funds and enhanced disclosure regarding liquidity risk and risk management.

B. Economic Baseline

The final liquidity regulations will affect all funds and their investors, investment advisers and other service providers, all issuers of the portfolio securities in which funds invest, and other market participants potentially affected by fund and investor behavior. The economic baseline of the final liquidity regulations includes funds' current practices regarding liquidity risk management and liquidity risk disclosure, as well as the economic attributes of funds that affect their portfolio liquidity and liquidity risk. These economic attributes include industry-wide trends regarding funds' liquidity and liquidity risk management, as well as industry developments highlighting the importance of robust liquidity risk management by funds.

[1010] *See supra* section II.D; *infra* section IV.B.1.a.

[1011] *See supra* section II.D; *infra* section IV.B.1.c.

[1012] *See supra* section II.D; *infra* sections IV.B.1.a, IV.B.1.c.

[1013] *See supra* section II.B.2; *infra* sections IV.C.1, IV.C.2.

[1014] *See supra* footnotes 79–80 and accompanying text.

[1015] *See supra* footnote 259 and accompanying text.

[1016] *See supra* footnotes 79–80 and accompanying text; *infra* sections IV.C.1, IV.C.2.

[1017] *See supra* footnote 85 and accompanying text; *infra* sections IV.C.1, IV.C.2.

[1018] *See supra* footnote 89 and accompanying text.

[1019] *See supra* section II.C.1; *infra* section IV.B.3; *see also* DERA Study, *supra* footnote 95, at 6–9. Relevant statistics from the DERA Study were updated through 2015 using the CRSP US Mutual Fund Database.

[1020] *See infra* section IV.B.3.

[1021] *See supra* footnotes 102 and 103 and accompanying text.

[1022] *See supra* footnotes 104, 105, 377, and 378 and accompanying text.

1. Funds' Current Practices Regarding Liquidity Risk Management and Liquidity Risk Disclosure

a. Funds' Current Liquidity Risk Management Requirements and Practices

Under section 22(e) of the Investment Company Act, a registered investment company is required to make payment to shareholders for redeemable securities tendered for redemption within seven days of their tender.[1023] In addition to the seven-day redemption requirement in section 22(e), registered investment companies that are sold through broker-dealers are required as a practical matter to meet redemption requests within three business days because broker-dealers are subject to rule 15c6–1 under the Exchange Act, which establishes a three-day (T + 3) settlement period for purchases and sales of securities (other than certain types of securities exempted by the rule) effected by a broker or a dealer, unless a different settlement period is expressly agreed to by the parties at the time of the transaction. Furthermore, rule 22c–1 under the Act, the ''forward pricing'' rule, requires funds, their principal underwriters, and dealers to sell and redeem fund shares at a price based on the current NAV next computed after receipt of an order to purchase or redeem fund shares, even though cash proceeds from purchases may be invested or fund investments may be sold in subsequent days in order to satisfy purchase requests or meet redemption obligations.

With the exception of money market funds subject to rule 2a–7 under the Act, the Commission has not promulgated rules requiring open-end funds to hold a minimum level of liquid investments.[1024] The Commission historically has taken the position that open-end funds should maintain a high degree of portfolio liquidity to ensure that their portfolio securities and other assets can be sold and the proceeds used to satisfy redemptions in a timely manner in order to comply with section 22(e) and their other obligations.[1025] The Commission also has stated that open-end funds have a ''general responsibility to maintain a level of portfolio liquidity that is appropriate under the circumstances,'' and to engage in ongoing portfolio liquidity monitoring to determine whether an adequate level of portfolio liquidity is being maintained in light of the fund's redemption obligations.[1026] Open-end funds are also required by rule 38a–1 under the Act to adopt and implement written compliance policies and procedures reasonably designed to prevent violations of the federal securities laws, including policies and procedures that provide for the oversight of compliance by certain of the fund's service providers, and such policies and procedures should be appropriately tailored to reflect each fund's particular compliance risks; the rule also requires board approval and review of the service providers' compliance policies and procedures.[1027] An open-end fund that holds a significant portion of its assets in securities with long settlement periods or with infrequent trading, or an open-end fund that represents it will pay redemptions in fewer than seven days, for instance, may be subject to relatively greater liquidity risks than other open-end funds.

Additionally, long-standing Commission guidelines generally limit an open-end fund's aggregate investment in ''illiquid assets'' to no more than 15% of the fund's net assets (the ''15% guideline'').[1028] Under the 15% guideline, a portfolio security or other asset is considered illiquid if it cannot be sold or disposed of in the ordinary course of business within seven days at approximately the value at which the fund has valued the investment.[1029] The 15% guideline has generally limited funds' exposure to particular types of securities that cannot be sold within seven days and that the Commission and staff have indicated may be illiquid, depending on the facts and circumstances. Depositors of UITs are currently required to consider which of their restricted securities are illiquid.[1030]

As noted in the Proposing Release, staff outreach has shown that funds currently employ a diversity of practices with respect to assessing portfolio investments' liquidity, as well as managing liquidity risk. Section II.D.3 above provides an overview of these practices, which include, among others: Assessing the ability to sell particular investments within various time periods, taking into account relevant market, trading, and other factors; monitoring initial liquidity determinations for portfolio investments (and modifying these determinations, as appropriate); holding certain amounts of the fund's portfolio in highly liquid investments or cash equivalents; establishing committed back-up lines of credit or interfund lending facilities; and conducting stress testing relating to the extent the fund has liquid investments to cover possible levels of redemptions.[1031] Some commenters indicated that they view in-kind redemptions as an important liquidity risk management tool.[1032] Another commenter noted that ETFs are often used to help manage liquidity risk because they can allow funds to maintain market exposure while ensuring sufficient liquidity.[1033] As noted in the Proposing Release, the staff has observed that some of the funds with relatively more thorough liquidity risk management practices have appeared to be able to meet periods of high redemptions without significantly altering the risk profile of the fund or materially affecting the fund's performance, and thus with few dilutive impacts. It therefore appears that these funds have generally aligned their portfolio liquidity with their liquidity needs, and that their liquidity risk management permits them to efficiently meet redemption requests. Other funds, however, employ portfolio investment liquidity assessment and liquidity risk management practices that are substantially less rigorous.[1034] As discussed above in section II.D.3, some funds do not take different market conditions into account when

[1023] *See* section 22(e) of the Act. Section 22(e) of the Act provides, in part, that no registered investment company shall suspend the right of redemption or postpone the date of payment upon redemption of any redeemable security in accordance with its terms for more than seven days after tender of the security absent specified unusual circumstances.

[1024] *See supra* footnotes 61–62 and accompanying text.

[1025] *See* Restricted Securities Release, *supra* footnote 37.

[1026] *See supra* footnote 64 and accompanying text.

[1027] *See* Rule 38a–1 Adopting Release, *supra* footnote 65.

[1028] *See supra* footnote 38 and accompanying text.

[1029] *See supra* footnote 39 and accompanying text.

[1030] *See* Rule 144A Release, *supra* footnote 37 at n.61 (discussing liquidity requirements for UITs prior to the adoption of rule 22e–4).

[1031] *See also, e.g.,* Nuveen FSOC Notice Comment Letter, *supra* footnote 85 (discussing stress tests of a fund's ability to meet redemptions over certain periods); BlackRock FSOC Notice Comment Letter, *supra* footnote 85 (discussing several overarching principles that provide the foundation for a prudent market liquidity risk management framework for collective investment vehicles, including an independent risk management function, compliance checks to ensure portfolio holdings do not exceed regulatory limits, a risk management function that is independent from portfolio management, and measuring levels of liquid assets into ''tiers of liquidity''); Invesco FSOC Notice Comment Letter, *supra* footnote 248, at 11 (discussing liquidity analysis).

[1032] *See* BlackRock Comment Letter; Invesco Comment Letter.

[1033] *See* BlackRock Comment Letter.

[1034] *See infra* section IV.C.1.b, where the potential consequences of less rigorous liquidity risk management are discussed in the context of risk management program benefits.

evaluating portfolio investment liquidity, and do not conduct ongoing liquidity monitoring. Likewise, some funds do not have independent oversight of their liquidity risk management outside of the portfolio management process. As a result, funds' procedures for assessing the liquidity of their portfolio securities, as well as the comprehensiveness and independence of their liquidity risk management, vary significantly.

A fund may meet redemption requests in a variety of ways, including by using cash, borrowing under a line of credit, or by selling portfolio investments. The fund's portfolio liquidity as well as its value will be affected by the choice of which investments are sold. Subsequent portfolio transactions after redemptions are met will also affect portfolio liquidity and value. For example, a fund facing a large redemption request might lessen the impact on portfolio value of selling investments by selling the most liquid portion of the portfolio or using some of its cash or a line of credit.[1035] That choice benefits non-redeeming investors by minimizing transaction costs and the loss in fund value due to the price impact of selling, but it also could increase the liquidity risk of the fund portfolio and the fund may incur transaction costs if it subsequently engages in portfolio transactions such as rebalancing towards its previous portfolio allocation.[1036] If the fund instead were to sell a ''strip'' of the portfolio (*i.e.,* a cross-section or representative selection of the fund's portfolio investments), the immediate impact on fund value may be greater, but the liquidity of the fund portfolio would be unchanged as a result of the sale. Funds also could choose to meet redemptions by selling a range of investments in between their most liquid, on one end of the spectrum, and a perfect *pro rata* strip of investments, on the other end of the spectrum.[1037]

All of the above ways by which a fund may meet redemptions potentially occur in conjunction with other strategic portfolio management decisions, such as opportunistically paring back or eliminating holdings in a particular investment or sector while meeting redemptions.

Staff analysis of the impact of large redemptions on U.S. equity fund portfolio liquidity is consistent with the hypothesis that the average U.S. equity fund does not sell a strip of its portfolio investments to meet large redemptions, but instead appears—based on changes in funds' portfolio liquidity following net outflows—to disproportionately sell the more liquid portion of its portfolio for this purpose.[1038] Similarly, staff analysis shows that after a U.S. municipal bond fund encounters net outflows, the typical U.S. municipal bond fund will experience an increase in its holdings of municipal bonds (and a decrease in its holdings of cash and cash equivalents), potentially decreasing the fund's overall portfolio liquidity.[1039]

b. Funds' Current Liquidity Risk Disclosure Requirements and Practices

Items 4 and 9 of Form N–1A require a fund to disclose the principal risks of investing in the fund.[1040] A fund currently must disclose the risks to which the fund's portfolio as a whole is expected to be subject and the circumstances reasonably likely to adversely affect the fund's NAV, yield, or total return.[1041] Some funds currently disclose that liquidity risk is a principal risk of investing in the fund, but often do so in a generic way.

Item 11 of Form N–1A requires a fund to describe its procedure for redeeming fund shares, including restrictions on redemptions, any redemption charges, and whether the fund has reserved the right to redeem in kind.[1042] Disclosure regarding other redemption information, such as the timing of payment of redemption proceeds to fund shareholders, varies across funds as there are currently no specific requirements for this disclosure. Some funds disclose that they will redeem shares within a specific number of days after receiving a redemption request, other funds disclose that they will honor such requests within seven days (as required by section 22(e) of the Act), and others provide no specific time periods. Additionally, some funds disclose differences in the timing of payment of redemption proceeds based on the payment method by which the fund shares are redeemed, while others do not.

Funds are not currently required to disclose information about the liquidity of their portfolio investments. However, some funds voluntarily disclose in their registration statements any specific limitations applicable to the fund's investment in 15% guideline assets, as well as types of assets considered by the fund to be subject to the 15% guideline.

Form N–1A does not currently require funds to disclose information about liquidity risk management practices such as the establishment (or use) of committed back-up lines of credit. A fund is, however, required to disclose information regarding the amount and terms of unused lines of credit for short-term financing, as well as information regarding related party transactions in its financial statements or notes thereto.[1043]

2. Fund Industry Developments Regarding Funds' Liquidity Risk Management

a. Overview

Below we discuss the size and growth of the U.S. fund industry generally, as well as the growth of various investment strategies within the industry. We show that the fund industry has grown significantly in the past two decades, and during this period, funds with international strategies, fixed income funds, and funds with alternative strategies have grown particularly quickly. We also determine the types of funds that demonstrate notably volatile and unpredictable flows. Because volatility and predictability in a fund's flows can affect the extent to which the fund is able to meet expected and reasonably foreseeable redemption requests without diluting the interests of fund shareholders, assessing trends regarding these factors can provide information about sectors of the fund industry that could be particularly susceptible to liquidity risk.

While we believe that these trends are relevant from the perspective of addressing potential liquidity risk in the fund industry (and in funds' underlying portfolio investments), we emphasize

[1035] We note that in some instances, selling only the most liquid investments to meet a large redemption could be inconsistent with the fund's investment mandate. For example, if a fund's investment mandate required it to hold a certain percentage of its portfolio in equities, the fund might not be able to sell a large portion of its equity holdings to meet redemption requests and still hold the required percentage of its portfolio in equities.

[1036] *See, e.g., supra* footnote 71 (discussing recent circumstances in which, during a year of heavy redemptions that caused a high yield bond fund's assets to shrink 33% in this period, the fund's holdings of lower quality bonds grew to 47% of assets, from 35% before the redemptions).

[1037] *See, e.g.,* Hao Jiang, Dan Li, and Ashley Wang, *Dynamic Liquidity Management by Corporate Bond Mutual Funds* (May 6, 2016) (unpublished working paper), *available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2776829.* The study presents preliminary evidence consistent with the notion that corporate bond funds tend to sell proportional ''strips'' of their portfolios during periods of high market volatility and disproportionately sell more liquid assets during periods of lower market volatility.

[1038] DERA Study, *supra* footnote 95, at 43–46. The DERA Study analyzes U.S. equity mutual fund liquidity management trends using the Amihud liquidity measure. *See* Proposing Release, *supra* footnote 9, at n.621. We respond to comments on this result and other aspects of the DERA study in section IV.C.1.f.

[1039] DERA Study, *supra* footnote 95, at 47–49.

[1040] Item 4(b)(1)(i) and Item 9(c) of Form N–1A.

[1041] *Id.*

[1042] Item 11(c) of Form N–1A.

[1043] *See* §§ 210.5–02.19(b) and 210.4–08(k) of Regulation S–X.

that liquidity risk is not confined to certain types of funds or investment strategies. Although we recognize that certain fund characteristics could make a fund relatively more prone to liquidity risk, we believe that all types of funds entail liquidity risk to some extent.[1044] Thus, while in this section we discuss certain types of funds and strategies that are generally considered to exhibit increased liquidity risk, we are not asserting that *only* these types of funds and strategies involve liquidity risk, or that a fund of the type and with the strategy discussed below necessarily demonstrates greater liquidity risk than a fund that does not have these same characteristics.

b. Size and Growth of the U.S. Fund Industry and Various Investment Strategies Within the Industry

Open-end funds and ETFs manage a significant and growing amount of assets in U.S. financial markets. As of the end of 2015, there were 10,633 open-end funds (excluding money market funds, but including ETFs), as compared to 5,279 at the end of 1996.[1045] The assets of these funds were approximately $15.0 trillion in 2015, having grown from about $2.63 trillion in 1996.[1046] Within these figures, the number of ETFs and ETFs' assets have increased notably in the past decade. There were 1,594 ETFs in 2015, as opposed to a mere 119 in 2003, and ETFs' assets have increased from $151 billion in 2003 to $2.1 trillion in 2015.[1047]

U.S. equity funds represent the greatest percentage of U.S. open-end fund industry assets.[1048] Open-end U.S. equity funds, excluding ETFs, money market funds and variable annuities, held 44.7% of U.S. fund industry assets as of the end of 2015. The investment strategies with the next-highest percentages of U.S. fund industry assets are foreign equity funds (16.7%), general bond funds (13.2%), and mixed strategy funds (12.3%).[1049] Funds with alternative strategies[1050] only represent a small percentage of the U.S. fund industry assets, but as discussed below, the number of alternative strategy funds and the assets of this sector have grown considerably in recent years.[1051]

While the overall growth rate of funds' assets has been generally high (about 7.2% per year, between the years 2000 and 2015[1052]), it has varied significantly by investment strategy.[1053] U.S. equity funds' assets grew substantially in terms of dollars from the end of 2000 to 2015,[1054] but this sector's assets as a percentage of total U.S. fund industry assets decreased from about 65% to about 45% during that same period.[1055] Like U.S. equity funds, the assets of U.S. corporate bond funds, government bond funds, and municipal bond funds also increased in terms of dollars from 2000 to 2015, but each of these sectors' assets as a percentage of the fund industry decreased during this period.[1056] On the other hand, the assets of foreign equity funds, general bond funds, and foreign bond funds increased steadily and substantially as a percentage of the fund industry over the same period.[1057] For example, foreign equity funds increased steadily from 10.6% of total industry assets in 2000 to 16.7% in 2015. And within these three investment strategies, certain investment subclasses (emerging market debt and emerging market equity) have grown particularly quickly from 2000 to 2015.[1058] The overall growth rate of funds' assets between the years 2000 and 2015 was greater for index funds (12.3%) than actively managed funds (4.9%).[1059]

The assets of funds with alternative strategies[1060] also have grown rapidly in recent years. From 2005 to 2015, the assets of alternative strategy funds grew from $366 million to $310 billion, and from the end of 2011 to the end of 2013, the assets of alternative strategy funds grew by an average rate of almost 80% each year. However, as discussed above, funds with alternative strategies remain a relatively small portion of the U.S. fund industry as a percentage of total assets.[1061]

c. Significance of Fund Industry Developments

The industry developments discussed above are notable for several reasons. The growth of funds generally over the past few decades demonstrates that investors have increasingly come to rely on investments in funds to meet their financial needs.[1062] These trends also demonstrate growth in particular types of funds that may entail increased liquidity risk. In particular, there has been significant growth in high-yield bond funds, emerging market debt funds, and funds with alternative strategies. Commissioners and Commission staff have previously spoken about the need to focus on potential liquidity risks relating to fixed income assets and fixed income funds,[1063] and within this sector, funds that invest in high-yield bonds could be subject to greater liquidity risk as they invest in lower-rated bonds that tend to be less liquid than investment grade

[1044] *See supra* section III.A.2.

[1045] *See* 2016 ICI Fact Book, *supra* footnote 11, at 22, 176, 183. Specifically, as of the end of 2015, there were 9,039 open-end mutual funds (including funds that invest in other funds) and 1,594 ETFs. There were approximately 50 ETFs that invest in other ETFs, which are not included in our figures.

[1046] *See* 2016 ICI Fact Book, *supra* footnote 11, at 174, 182.

[1047] *See* 2016 ICI Fact Book, *supra* footnote 11, at 182, 183.

[1048] DERA Study, *supra* footnote 95, at Table 1.

[1049] *Id.* The figure for general bond funds does not include assets attributable to foreign bond funds (1.9%), U.S. corporate bond funds (0.8%), U.S. government bond funds (1.4%), and U.S. municipal bond funds (4.7%). The figure for mixed strategy funds includes assets of, among others, target date funds, convertible securities funds, and flexible portfolio funds.

[1050] Alternative funds are funds that seek total returns through the use of alternative investment strategies, including but not limited to equity market neutral, long/short equity, global macro, event driven, credit focus strategies.

[1051] DERA Study, *supra* footnote 95, at 7–8.

[1052] DERA Study, *supra* footnote 95, at Table 2.

[1053] The figures in this paragraph and the following paragraph, discussing the variance in growth rate of funds' assets by investment strategy, exclude ETF assets.

[1054] U.S. equity funds held about $5.6 trillion as the end of 2015, compared to about $2.9 trillion at the end of 2000. DERA Study, *supra* footnote 95, at Table 2.

[1055] DERA Study, *supra* footnote 95, at Table 2.

[1056] *Id.* U.S. corporate bond funds held about $95 billion at the end of 2015, as opposed to $66 billion in 2000; these funds' assets as a percentage of the U.S. fund industry decreased from 1.5% in 2000 to 0.8% in 2015. U.S. government bond funds held about $174 billion at the end of 2015, as opposed to $91 billion in 2000; these funds' assets as a percentage of the U.S. fund industry decreased from 2.1% in 2000 to 1.4% in 2015. U.S. municipal bond funds held about $592 billion at the end of 2015, as opposed to $278 billion in 2000; these funds' assets as a percentage of the U.S. fund industry decreased from 6.3% in 2000 to 4.7% in 2015.

[1057] *Id.* Foreign equity funds held about $2.1 trillion in 2015, as opposed to $465 billion in 2000. U.S. general bond funds held about $1.7 trillion at the end of 2015, as opposed to $240 billion in 2000; these funds' assets as a percentage of the U.S. fund industry increased from 5.4% in 2000 to 13.2% in 2015. Foreign bond funds held about $244 billion at the end of 2015, as opposed to $19 billion in 2000; these funds' assets as a percentage of the U.S. fund industry increased from 0.4% in 2000 to 1.9% in 2015.

[1058] DERA Study, *supra* footnote 95, at 9. Emerging market debt and emerging market equity funds held about $289 billion at the end of 2015, as opposed to $20 billion in 2000. The assets of emerging market debt funds and emerging market equity funds grew by an average of 18.1% and 19.8%, respectively, each year from 2000 through 2015.

These investment subclasses represent a small portion of the U.S. mutual fund industry (the combined assets of these investment subclasses as a percentage of the U.S. fund industry was 2.3% at the end of 2015).

[1059] *See* 2016 ICI Fact Book, *supra* footnote 11, at 174, 218.

[1060] *See supra* footnote 95 for a discussion of the primary investment strategies practiced by ''alternative strategy'' funds.

[1061] *See supra* footnote 1051 and accompanying text.

[1062] *See supra* footnote 21 and accompanying text.

[1063] *See supra* footnote 93 and accompanying text.

fixed income securities.[1064] Emerging market debt funds may invest in relatively illiquid securities with lengthy settlement periods.[1065] Likewise, funds with alternative strategies may hold portfolio investments that are relatively illiquid.[1066] Moreover, Commission staff economists have found that both foreign bond funds (including emerging market debt funds) and alternative strategy funds have historically experienced relatively more volatile and unpredictable flows than the average mutual fund,[1067] which could increase these funds' liquidity risks by making it more likely that a fund may need to sell portfolio investments in a manner that creates a market impact in order to pay redeeming shareholders.

One commenter has argued that flow volatility, which staff economists have used as a measure of liquidity risk, does not necessarily translate into liquidity risk.[1068] In this commenter's view, for example, a fund with volatile but predictable flows may have less liquidity risk than a fund with less volatile but less predictable flows. Likewise, a U.S. equity fund could have much greater flow volatility than a foreign bond mutual fund without having greater liquidity risk because the equity fund's assets are more liquid. However, differences in average flow volatility between fund categories persist after accounting for predictability, and the analysis suggests that changes in flow volatility may influence the management of fund liquidity.[1069] Flow volatility is not the sole determinant of liquidity risk for a fund, but it is an important determinant, which makes it useful in helping understand differences in potential liquidity risk within and between fund categories.

The same commenter has also suggested that the same approach of measuring liquidity risk does not consider the usage of derivatives in managing volatile flows, noting that they are often more liquid than their underlying assets.[1070] We acknowledge that derivatives could play a role in managing fund flows. As is the case for corporate bond holding data, data on fund holdings of derivatives is limited so our analysis of holdings level data was necessarily limited to U.S. equity funds.

C. Benefits and Costs, and Effects on Efficiency, Competition, and Capital Formation

Taking into account the goals of the final liquidity regulations and the economic baseline, as discussed above, this section discusses the benefits and costs of the final liquidity regulations, as well as the potential effects of the final liquidity regulations on efficiency, competition, and capital formation. This section also discusses reasonable alternatives to rule 22e–4 and the disclosure and reporting requirements regarding funds' liquidity risk and liquidity risk management.

1. Rule 22e–4

a. Summary of Rule 22e–4's Requirements

Rule 22e–4 will require each fund to establish a written liquidity risk management program. The rule specifies that a fund's liquidity risk management program shall include the following required program elements: (i) Assessment, management, and periodic review of the fund's liquidity risk; (ii) classification of the liquidity of each of the fund's portfolio investments based on asset class, so long as the fund or its adviser does not have information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of an investment that would suggest a different classification for that investment;[1071] (iii) determining and periodically reviewing a highly liquid investment minimum and adopting and implementing policies and procedures for responding to a shortfall of the fund's assets that are highly liquid investments below its highly liquid investment minimum; (iv) prohibiting the fund's acquisition of ''illiquid investments'' (that is, any investment that the fund reasonably expects cannot be sold or disposed of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment) if, following the acquisition, the fund would hold more than 15% of its net assets in assets that are illiquid investments; (v) requiring a fund whose illiquid investments that are assets exceed 15% of its net assets to conduct certain board reporting; and (vi) for funds that engage in, or reserve the right to engage in, redemptions in kind, establishing policies and procedures regarding how and when it will engage in such redemptions in kind.[1072] A fund's board, including a majority of the fund's independent directors, will be required to provide general oversight of the fund's liquidity risk management program, but the board would not have to approve the fund's highly liquid investment minimum.[1073] The fund will be required to designate the fund's adviser or officer(s) responsible for administering the program, and such designation is required to be approved by the fund's board of directors.[1074] The fund's board will also be required to review, at least annually, a written report prepared by the fund's investment adviser or officer(s) administering the liquidity risk management program reviewing the adequacy and effectiveness of the implementation of the fund's liquidity risk management program, including the fund's highly liquid investment minimum, and the effectiveness of its implementation.[1075]

Rule 22e–4 also includes certain recordkeeping requirements. A fund will be required to keep a written copy of its liquidity risk management policies and procedures, as well as copies of any materials provided to the fund's board in connection with the approval of the initial liquidity risk management program and annual board reporting requirement.[1076] A fund will also be required to keep a written record of how its highly liquid investment minimum, and any adjustments thereto, were determined.[1077]

[1064] The Commission and Commission staff have cautioned that high yield securities may be considered to be illiquid, depending on the facts and circumstances. *See* Interval Fund Proposing Release, *supra* footnote 41; *see also* SEC Investor Bulletin, What Are High-Yield Corporate Bonds?, SEC Pub. No. 150 (June 2013), *available at http://www.sec.gov/investor/alerts/ib_high-yield.pdf* (noting that high-yield bonds may be subject to more liquidity risk than, for example, investment-grade bonds). *But see* Who Owns the Assets?, *supra* footnote 378 (discussing the liquidity characteristics of high-yield bond funds in depth, and noting that these funds have weathered multiple market environments, and are generally managed with multiple sources of liquidity).

[1065] *See, e.g., supra* footnote 377 and accompanying text (discussing the settlement cycles associated with transactions in certain foreign securities); *see also* Reuters, *Fitch: Close Look at EM Corporate Bond Trading Reveals Liquidity Risks* (Apr. 16, 2015), *available at http://www.reuters.com/article/2015/04/16/idUSFit91829620150416. But see* Who Owns the Assets?, *supra* footnote 378 (discussing the liquidity characteristics of emerging market debt funds in depth, and noting that these funds tend to hold a portion of their assets in developed market government bonds (providing further liquidity), generally establish limits on less liquid issuers, and generally maintain allocations to cash for liquidity and rebalancing purposes).

[1066] *See supra* footnotes 99–100 and accompanying text.

[1067] DERA Study, *supra* footnote 95, at 16–24.

[1068] ICI Comment Letter II.

[1069] DERA Study, *supra* footnote 95, at 23–24, 37.

[1070] ICI Comment Letter II.

[1071] Rule 22e–4 (b)(1)(ii).

[1072] Proposed rule 22e–4(b)(2)(iv).

[1073] Proposed rule 22e–4(b)(3)(i).

[1074] Proposed rule 22e–4(b)(3)(iii).

[1075] Rule 22e–4(b)(3)(ii).

[1076] Rule 22e–4(c)(1) and (2).

[1077] Rule 22e–4(c)(3).

In addition, two types of funds are subject to tailored requirements by the final rule. First, funds that primarily hold highly liquid assets do not have to establish a highly liquid investment minimum as part of their liquidity risk management programs.[1078] Second, ETFs are required to assess and manage liquidity risk with respect to certain additional factors tailored to the specific risks of ETFs.[1079] However, an ETF that meets the final rule's definition of an ''In-Kind ETF'' is not required to establish a highly liquid investment minimum or to classify its individual portfolio holdings.[1080]

In addition to the special treatment of In-Kind ETFs and primarily highly liquid funds, the final rules differ from the proposed version in several ways that may have economic consequences: (1) It integrates the definition of illiquid investments subject to the 15% illiquid investment limit as a part of the portfolio classification process, requiring the consideration of market, trading, and investment-specific factors and market depth in determining whether an investment is illiquid, as well as the periodic review of this assessment at least monthly; (2) it reduces the number of categories used to classify portfolio investment liquidity from six to four and requires fewer long-term liquidity projections; (3) it simplifies portfolio position classification by allowing them to be based on asset classes, with customized exceptions for individual positions where necessary;[1081] (4) it does not prohibit the acquisition of less liquid investments if a fund goes below its highly liquid investment minimum, but instead requires that a fund report to its board if it goes below its highly liquid investment minimum, and, if the shortfall lasts more than 7 consecutive calendar days, also requires reporting to the Commission; (5) it requires that a fund's board approve and annually review a report concerning its liquidity risk management program, but generally does not require the board to approve the highly liquid investment minimum (except in some circumstances) or material changes to these programs; (6) it requires that a fund assess its liquidity risk with respect to several factors, where applicable, in both stressed and normal market conditions, whether its strategy is appropriate for an open-ended fund, and whether its strategy involves a concentrated portfolio or large positions in particular issuers;[1082] (7) it requires that principal underwriters or depositors of UITs to determine, on or before the date of the initial deposit of portfolio securities into a UIT, that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities that it issues; and (8) requires that In-Kind ETFs offer daily transparency by posting on the ETF's Web site on each day that the national securities exchange on which the fund's shares are listed is open for business, before commencement of trading of fund shares on the exchange, the identities and quantities of the securities, assets or other positions held by the fund, or its respective master fund, that will form the basis for the fund's calculation of net asset value at the end of the business day.

b. Benefits

Rule 22e–4, as adopted, should produce the same broad benefits for current and potential fund investors as discussed in the proposal. Where appropriate, we discuss below any changes in these benefits due to differences between the proposed and final rules. Specifically, the liquidity risk management program requirements are likely to improve investor protection by decreasing the chance that some funds may be unable to meet their redemption obligations, would meet such obligations by diluting the fund's shares, or would meet such obligations through methods that would have other adverse impacts on non-redeeming investors (*e.g.,* increased risk exposure and decreased liquidity). To the extent that some funds do not currently meet the liquidity risk management standards required by the rule—either by meeting the rule's minimum baseline requirements for fund assessment and management of liquidity risk or via alternative liquidity risk management approaches—investor protection will be enhanced by imposing these minimum requirements on funds.

We believe that the liquidity risk management program requirement should promote improved alignment of the liquidity of the fund's portfolio with the fund's expected (and reasonably foreseeable) levels of redemptions. As discussed above, rule 22e–4 will require each fund to classify the liquidity of its portfolio investments in assessing its liquidity risk, and to determine a highly liquid investment minimum to increase the likelihood that the fund will hold adequate liquid investments to meet redemption requests without significant dilution. Each fund will have flexibility to determine the particular investments that it holds in connection with its highly liquid investment minimum. Assets eligible for inclusion in a fund's highly liquid investment minimum could include a broad variety of securities, as well as cash and cash equivalents. While one fund may conclude that it is appropriate to hold a significant portion of its assets that are highly liquid investments in cash and cash equivalents, another could decide it is appropriate to hold assets that are convertible to cash within longer periods (but not exceeding three business days) as the majority of its highly liquid investments. The highly liquid investment minimum requirement should allow funds to continue to meet a wide variety of investors' investment needs by obliging funds to maintain appropriate liquidity in their portfolios. The proposed rule would have required funds to set a firm three-day liquid asset minimum, prohibiting the acquisition of relatively less liquid assets until a fund was back above its minimum, instead of allowing them to operate below the minimum with board notification, so the final rule should mitigate any unfavorable market effects related to the systematic purchase or sale of investments once a strict minimum was exceeded. In extreme cases—for example, if investments that the fund sought to purchase were trading at fire sale prices due to a market event—a fund could go below its minimum to trade opportunistically. However, that might cause the fund to operate below its highly liquid investment minimum for more than 7 consecutive calendar days, requiring reporting to the fund's board and the Commission within one business day, so funds may be hesitant to take advantage of attractive market prices when they are close to their minimum under the final rule. The ability to deviate from the minimum for up to 7 consecutive calendar days with required reporting at the next regular board meeting, or for longer periods provided the fund reports to the board and the Commission, could also reduce the likelihood that funds set artificially low minimums, which would be less protective of investors than a minimum with some flexibility built in such as the one we are adopting. The limitation on the acquisition of assets that are illiquid investments to no more than 15% of net assets, along with the corresponding enhancements to how investment illiquidity is assessed, complements the

[1078] Rule 22e–4(b)(1)(iii)(A).

[1079] Rule 22e–4(b)(1)(iii)(D)–(E).

[1080] *See infra* footnote 846 and accompanying text for the definition of ''In-Kind ETF.''

[1081] *See supra* footnote 408 and accompanying text.

[1082] Rule 22e–4(b)(1)(iii)(A)–(C).

highly liquid investment minimum requirement by increasing the likelihood that a fund's portfolio is not overly concentrated in investments whose liquidity is limited. Furthermore, the additional board reporting requirements triggered when a fund's illiquid investments that are assets exceed 15% of net assets decreases the likelihood that a fund's portfolio is overly concentrated in investments classified as illiquid for an extended period of time without board oversight.

We believe that the rule also will decrease the probability that a fund will need to meet redemption requests through activities that can materially affect the fund's NAV or risk profile or dilute the interests of fund shareholders. For example, when a fund is insufficiently liquid or does not effectively manage liquidity and is faced with significant redemptions, or both, it may be forced to sell portfolio investments under unfavorable circumstances, which could create significant negative price pressure on those investments.[1083] This, in turn, could disadvantage non-redeeming shareholders by decreasing the value of those shareholders' interests in the fund.[1084] Even if a fund were to sell the most liquid portion of its portfolio to meet redemption requests, which would minimize the loss in fund value due to the price impact of selling, these asset sales could decrease the liquidity of the fund portfolio, potentially creating increased liquidity risk for non-redeeming shareholders. As discussed above, staff analysis is consistent with the hypothesis that U.S. equity funds may disproportionally sell more liquid assets, especially when facing significant outflows, as opposed to selling a *pro rata* ''strip'' of the fund's portfolio assets, which minimizes price impact on a fund in the short term, but ultimately decreases the liquidity of the fund's portfolio.[1085] Short-term borrowings by a fund to meet redemption requests could also disadvantage non-redeeming shareholders by leveraging the fund, which requires the fund to pay interest on the borrowed funds (although, in some instances, the costs of borrowing may be less than the costs of selling assets to meet redemptions) and magnifies any gains or losses to non-redeeming shareholders. Moreover, the costs of borrowing (that is, the costs associated with maintaining a committed line of credit, as well as interest expenses associated with drawing on a credit line) could be passed on to fund shareholders in the form of fund operating expenses, which adversely affect a fund's NAV. To the extent that the program requirement results in liquidity risk assessment and management that enhance funds' ability to meet redemption obligations, it will be less likely that a fund takes actions to pay redemptions that cause dilution or have other adverse impacts on non-redeeming shareholders.

The potential negative consequences of asset sales undertaken to pay fund redemptions could create early redemption incentives in times of liquidity stress, or a ''first-mover advantage.'' [1086] For example, academic studies have suggested that an incentive exists for market participants to front-run trades conducted by a fund in response to significant changes in fund flows.[1087] This suggests that sophisticated fund investors could anticipate that significant fund outflows could lead a fund to conduct trades that would disadvantage non-redeeming shareholders, which could create an incentive to redeem ahead of such trades. If investors' redemptions are motivated by a first-mover advantage, this could lead to increasing levels of redemptions, and as the level of outflows from a fund increases, the incentive to redeem also increases. Any negative effects on non-redeeming shareholders thus could be magnified by a first-mover advantage to the extent that this dynamic produces growing redemptions and decreasing portfolio liquidity. The first-mover advantage is more commonly discussed with respect to money market funds, especially institutional prime money market funds that operated under a fixed NAV prior to the 2014 reform (that will become effective October 14, 2016), but the incentives that have been argued to create the first-mover advantage among those funds could in theory exist (in possibly weaker form) among other open-end funds. We agree with commenters that the empirical support for the existence of a first-mover advantage is not conclusive and that the mutual fund industry has been able to successfully navigate periods of historical market stress.[1088] While we understand that fund investors may not have historically been motivated to redeem on account of a perceived (or actual) first-mover advantage during previous periods of stress, we cannot predict how investors may behave in the future. To the extent that economic incentives exist to redeem fund shares prematurely, such redemptions could lead to investor dilution as discussed above, and the possibility of protecting against this potential dilution could be one benefit of rule 22e–4.

The program requirement aims to promote a minimum baseline for liquidity risk management in the fund industry. This should promote investor protection by elevating the overall quality of liquidity risk management across the fund industry, reducing the likelihood that funds will meet redemption obligations only through activities that could significantly dilute shareholders or adversely affect fund risk profiles. Shareholders in funds that already engage in strong liquidity risk management practices may be less likely to benefit from the program requirement, or may benefit less, than shareholders in funds that do not employ equally rigorous practices. We cannot quantify the total benefits to fund operations and investor protection that we discuss above, but to the extent that staff outreach has noted that some funds currently have no (or very limited) formal liquidity risk management programs in place, rule 22e–4 would enhance current liquidity risk management practices.

Finally, to the extent that the program requirement results in funds less frequently needing to sell portfolio investments in unfavorable market conditions in order to meet redemptions, the requirement also could lower potential spillover risks that funds could pose to the financial markets generally. If, as a result of the program requirement, a fund was prepared to meet redemption requests in other ways, the rule could decrease the

[1083] *See* Coval & Stafford, *supra* footnote 86 (discussing how mutual fund fire sales impact asset prices).

[1084] While the impact of fire sales on asset prices may be short lived in some instances, Coval and Stafford show that the impact of fire sales can often take many months to dissipate. *Id.*

[1085] *See supra* footnote 1038 and accompanying text.

[1086] *See supra* footnote 85 and accompanying text (discussing the possibility of a first-mover advantage with respect to the timing of shareholder redemption from funds, but also arguments that such a first-mover advantage does not exist in funds, as well as arguments that even if incentives to redeem ahead of other shareholders do exist, this does not necessarily imply that investors will in fact redeem *en masse* in times of market stress).

[1087] *See* Coval & Stafford, *supra* footnote 86; Dyakov & Verbeek, *supra* footnote 86.

[1088] *See, e.g.,* Comment Letter of Wellington Management Group LLP on the Notice Seeking Comment on Asset Management Products and Activities, Docket No. FSOC–2014–0001 (Mar. 25, 2015), at 4; ICI FSOC Notice Comment Letter, *supra* footnote 68, at 7; Nuveen FSOC Notice Comment Letter, *supra* footnote 85, at 10; Dechert Comment Letter; Vanguard Comment Letter; Comment Letter of the Independent Trustees of Fidelity Fixed Income and Asset Allocation Funds (Jan. 13, 2016) (all arguing that evidence shows that fund shareholders' redemptions are largely driven by other concerns rather than a theoretical first-mover advantage).

risk that the fund might indirectly transmit stress to other market sectors and participants. The rule should help ensure that all funds, not just those with liquidity risk management practices currently in place, operate in a manner that lessens the chance of spillover risks. We are unable to quantify this potential benefit because we cannot predict the extent to which funds would enhance their current liquidity risk management practices as a result of rule 22e–4, or predict the precise circumstances that could entail negative spillover effects in light of less-comprehensive liquidity risk management by funds.[1089]

Commenters generally did not disagree with the benefits of the proposed rule, with any exceptions noted in the above discussion of rule 22e–4's benefits. As discussed above, the final rule differs from the proposal in several key respects, but it largely preserves the proposed rule's benefits. First, funds that primarily hold assets that are highly liquid investments are not required to establish a highly liquid investment minimum, so any benefits that might have accrued to shareholders of these funds under the proposed rule may be diminished. However, these funds are less likely to be exposed to the liquidity risks discussed above to the same degree as other funds, so any loss in benefits should be negligible and is likely to be less than the costs of establishing a minimum. Similarly, In-Kind ETFs are exempt from certain aspects of the final rule, because the benefits of those aspects of the final rule would have been insignificant for In-Kind ETFs. The final rule instead achieves benefits with respect to ETFs by replacing these less-apposite requirements with new tailored requirements for ETFs that are designed to promote the proper management of ETF liquidity, focused on preventing the arbitrage mechanism that keeps ETFs priced properly from being adversely impacted by a lack of liquidity. In addition, the new requirement for daily transparency will permit the sophisticated authorized participants that directly interact with the ETF to effectively evaluate the liquidity of the ETF's holdings. Since nearly all In-Kind ETFs already provide daily transparency as a matter of course, we believe no additional costs arise for In-Kind ETFs.[1090]

Second, modifications to the proposal allow funds to classify portfolio investments via assignments to asset classes as a default, but require them to classify specific investments separately if they merit special attention,[1091] which preserves the benefits of investment liquidity classification without imposing the additional cost of individually classifying each portfolio position in all cases. Third, the rule's simplification of classification categories from six to four, with shorter-term horizons, still provides a reasonably nuanced view of a fund portfolio's position-level liquidity while responding to commenters' concerns that the proposed rule's more detailed classification would have required too much precision at long-term horizons and would not accurately reflect a fund's actual liquidity profile. Fourth, the final rule should preserve the benefits of board oversight of a fund's liquidity risk management program without requiring that board members approve the highly liquid investment minimum (except in certain circumstances). The modifications to the board's role make the board's involvement in the liquidity risk management more consistent with the board's historical duty to provide oversight (instead of day-to-day management).

Changes to the final rule could also provide additional benefits relative to the proposal. While the final rule clarifies that the factors a fund should consider in devising a liquidity risk management program may be considered as appropriate, it also requires that funds consider two additional factors—whether a given strategy is appropriate in an open-ended fund or involves a concentrated portfolio or concentrated positions in particular issuers—which could improve the risk management program's effectiveness for funds that do not already consider these factors. The final rule also more precisely specifies criteria for both the initial and ongoing assessment of whether investments should be classified as illiquid under the 15% illiquid investment limit by tying it to the same criteria used in assigning investments to other liquidity categories (including considering relevant market, trading, and investment-specific considerations, and market depth), which should reduce a firm's compliance burdens relative to the proposed rule while at the same time providing a more precise picture of how exposed to illiquid investments a given fund is. Finally, while UITs were not subject to rule 22e–4 under the proposal, the final rule requires that the principal underwriter or depositor of a UIT will be required to determine, on or before the date of the initial deposit of portfolio securities into the UIT, that the portion of illiquid investments the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues. This enhancement of the final rule over the proposal could benefit investors by reducing the likelihood that a UIT could be created that holds an excessive amount of illiquid securities, which in turn would reduce the liquidity risk associated with UITs.

c. Costs

One-Time and Ongoing Costs Associated With Program Establishment and Implementation

Funds will incur one-time costs to establish and implement a liquidity risk management program in compliance with rule 22e–4, as well as ongoing program-related costs. As discussed above, funds today employ a range of different practices, with varying levels of quality, for assessing the liquidity of their portfolio investments and managing fund liquidity risk. Accordingly, funds whose practices regarding portfolio investment liquidity classification and liquidity risk assessment and management most closely align with the liquidity risk management program requirements would incur relatively lower costs to comply with rule 22e–4. Funds whose practices for classifying the liquidity of their portfolio investments and for assessing and managing liquidity risk are less thorough or not closely aligned with the rule, on the other hand, may incur relatively higher initial compliance costs.

Some commenters suggested that the estimates of costs in the rule proposal were significantly understated and that the true costs of compliance with the rule requirements would likely exceed the expected benefits.[1092] Another

[1089] The ability of the Commission to perform such analysis is limited by difficulties in both gathering data about funds' liquidity risk management practices and quantifying such data.

[1090] We note that ETMFs are not required to provide such daily transparency under their orders, and thus would need to choose to provide such daily transparency if they wished to take advantage if this provision. Choosing to take advantage of this provision is within the discretion of ETFs that could potentially qualify as In-Kind. As discussed in the PRA section below, we estimate that not all ETFs would qualify as In-kind, either because of their use of cash for redemptions or because of their choice not to provide daily transparency of holdings.

[1091] *See supra* footnote 1064 and accompanying text.

[1092] *See* CFA Comment Letter; Cohen & Steers Comment Letter; Dechert Comment Letter; Dodge & Cox Comment Letter; Federated Comment Letter; FSR Comment Letter; ICI Comment Letter I; Invesco Comment Letter; LSTA Comment Letter; MFDF Comment Letter; SIFMA Comment Letter I; T. Rowe

Continued

commenter suggested that costs were underestimated because other fund systems would also have to be modified to ensure compliance with the entirety of the requirements of the rule.[1093] For example, if funds are required to maintain or target a certain level of fund liquidity, then the trade order management system would have to be modified to ensure accurate monitoring of such limitations. We have revised the discussion of costs to both reflect new information on the potential costs of compliance and changes in the rule that are designed to lessen the potential costs. Specifically, we use estimates provided by commenters to approximate costs for each fund complex under the proposed rule and then qualitatively discuss how changes to the proposed rule affect these estimates. Because most changes to the final rule reduce requirements for some segment of funds relative to the proposal, the estimates below can generally be considered an upper bound on fund costs except where explicitly noted.

Staff estimates of the one-time costs in the proposal, which ranged from $1.3 million to $2.25 million per fund complex, were partly based on estimates from another Commission rulemaking.[1094] Some commenters expressed concern about the calculation of this estimate because it was based on assumptions driven by analysis performed with respect to money market fund reform.[1095] While some of the large scale system modifications required by rule 22e–4 will be similar to those required for money market funds due to regulatory reform, and we attempted to adjust our estimates for differences between the two rules, one commenter suggested that the process of classifying portfolio assets was more akin to a fund's costs in analyzing the value of its assets.[1096] We acknowledge that could be an informative approach to estimating costs, but absent concrete estimates associated with that approach, which the commenter did not provide, we have updated our estimates based on the limited quantitative information available from commenters.[1097] One commenter estimated that there would be $2 million in initial implementation costs and more than $650,000 in annual recurring costs for automating a classification process that would have to manage 63,000 different portfolio positions.[1098] Another commenter estimated the costs of building a system to classify the liquidity of its investments, which is not currently commercially available, in the millions of dollars to manage their 44,000 different portfolio positions.[1099] We use the former as a basis for our analysis because it is comparable in magnitude to the latter.[1100] Because there are likely to be economies of scale in developing the policies, procedures, and systems required to comply with rule 22e–4, we approximate the cost per fund complex by assuming fixed costs constitute 30% of the commenter's estimates, and extrapolate using the number of funds per complex to scale variable costs up or down.[1101] In addition, because the process of classifying assets under the proposal would likely constitute a majority of a fund's costs, we assume the classification process constitutes approximately 75% of a fund's cost of complying with proposed rule 22e–4. This method results in one-time costs for funds under the proposed rule that range from approximately $0.8 million to $10.2 million, that the average cost per fund complex is $1 million, and the aggregate cost is approximately $855 million. The estimated range of costs using this approach is wider than our approach in the proposal, but the estimated aggregate cost is lower than our initial estimate of $1.3 billion. While these estimates would change if we varied our assumption that fixed costs comprise 30% of the commenter's estimate—for example, increasing this percentage would compress the range of costs and the aggregate may increase or decrease—they are of the same order of magnitude as our estimates in the proposal.

These estimated one-time costs are attributable to the following activities, as applicable to each of the funds within the complex: (i) Developing policies and procedures relating to each of the required program elements,[1102] and the related recordkeeping requirements of the rule; (ii) planning, coding, testing, and installing any system modifications relating to each of the required program elements; (iii) integrating and implementing policies and procedures relating to each of the required program elements (including classifying the liquidity of each of the fund's portfolio investments pursuant to rule 22e–4(b)(1)(ii)), as well as the recordkeeping requirements of the rule; (iv) preparing training materials and administering training sessions for staff in affected areas; and (v) costs associated with educating the fund's board and obtaining approval of the program. These activities are likely to cut across many different functional groups within a fund or fund complex, including legal, compliance, risk, portfolio management, accounting, and technology staff. To the extent that some of the systems needed to support the required program elements are developed by third parties, fund complexes may be able to implement their liquidity risk management programs for less than our estimated cost of developing these

---

Comment Letter; Vanguard Comment Letter; Voya Comment Letter.

[1093] *See* Federated Comment Letter.

[1094] *See* Proposing Release, *supra* footnote 9, at n.702 and accompanying text.

[1095] *See* FSR Comment Letter; SIFMA Comment Letter I.

[1096] *See* Dechert Comment Letter.

[1097] As in the proposal, the estimates assume that each fund would not bear all of the costs (particularly, the costs of systems modification) on an individual basis, but instead that these costs would likely be allocated among the multiple users of the systems, that is, each of the members of a fund complex. Accordingly, we expect that, in general, funds within large fund complexes would incur fewer costs on a per fund basis than funds within smaller fund complexes, due to economies of scale in allocating costs among a group of users.

[1098] *See* Invesco Comment Letter.

[1099] *See* T. Rowe Comment Letter.

[1100] We estimate that there were 146 funds in the second commenter's fund complex as of December 31, 2015, which implies an estimated cost of approximately $4 million using our estimation procedure, in line with the commenter's statement that its cost would be ''in the millions.'' *See supra* footnote 1094 for discussion of the estimation procedure.

[1101] We use CRSP U.S. Mutual Fund Database to obtain the number of funds for each complex. As of December 31, 2015, there were 7551 mutual funds (excluding money market funds and annuities), 1484 ETFs (excluding non-40-act ETFs, ETNs, and Commodity ETFs), and 847 fund complexes (334 of them with only one fund). The commenter, Invesco, consisted of 87 funds as of that date, and we assume the fixed cost component of their estimate is $0.6 million (30% of $2 million). The remaining $1.4 million is assumed to be a variable cost that scales linearly with the number of funds. To arrive at a total cost of 22e–4, each of these estimates is scaled so that the classification process constitutes 75% of the total costs of proposed rule 22e–4.

[1102] Specifically, a fund would be required, where applicable, to establish policies and procedures relating to: (i) Assessment, management, and periodic review of the fund's liquidity risk; (ii) classification of the liquidity of each of the fund's portfolio investments, as well as at-least-monthly reviews of the fund's liquidity classifications; (iii) the requirements to determine and periodically review a highly liquid investment minimum, and to adopt and implement policies and procedures for responding to a shortfall of the fund's highly liquid investments below its highly liquid investment minimum; (iv) the requirement to limit the fund's acquisition of illiquid investments over 15% of the fund's net assets; and (v) for funds that engage in, or reserve the right to engage in, redemptions in kind, the requirement to establish policies and procedures regarding how it will engage in such redemptions in kind. The final rule also provides for a tailored program for ETFs that redeem in kind, excluding them from the classification and highly liquid investment minimum requirements, but requiring them to consider additional factors as part of their liquidity risk assessment and management that reflect potential liquidity-related concerns that could arise from the structure and operation of ETFs. The final rule also provides an exclusion from the highly-liquid investment minimum requirement for funds that primarily hold highly liquid investments. The rule also provides for board oversight of the liquidity risk management program.

programs themselves, but the final rule emphasizes that it is ultimately each fund's responsibility to classify its positions, so these potential cost reductions may be limited. For example, we understand that third parties have already developed programs that include certain market, trading, and investment-specific factors which could be useful in classifying the liquidity of portfolio investments, and are currently available for purchase.[1103]

We have also revised our estimates of the ongoing costs of complying with rule 22e–4 using the same approach and based on the same commenter's estimate as above for one-time costs. While our analysis in the proposal assumed ongoing costs ranged from 10% to 25% of the one-time costs resulting from the rule, we've reduced the low end of the range to 5% to reflect changes from the Proposing Release, discussed below, that should lower some funds' compliance burdens, and increased the high end of the range to 32.5% to reflect the commenter's estimate that ongoing costs for their fund under the proposed rule would be $0.65 million (compared to one-time costs of $2 million). We again extrapolate from the commenter's estimate as above to arrive at a minimum and maximum cost estimate for each fund, which implies a range of ongoing costs across all funds of $40,000 to $3.3 million per fund complex. These costs are attributable to the following activities, as applicable to each of the funds within the complex: (i) Classification of the liquidity of each of the fund's portfolio investments, as well as at-least-monthly reviews of the fund's liquidity classifications (rule 22e–4(b)(1)(ii)); (ii) periodic review of the fund's liquidity risk (rule 22e–4(b)(1)(i)); (iii) periodic review of the adequacy of the fund's highly liquid investment minimum (rule 22e–4(b)(1)(iii)(A)(2)); (iv) systems maintenance; (v) additional staff training; (vi) approval, annual review, and general oversight by the board of the fund's liquidity risk management program (rule 22e–4(b)(2)); and (viii) recordkeeping relating to the fund's liquidity risk management program (rule 22e–4(b)(3)).[1104] Relative to the proposed rule, the final rule reduces the responsibilities of a fund's board, which is not required to approve the fund's highly liquid investment minimum or material changes to the fund's liquidity risk management program, which should reduce the board-related costs embedded in the above estimates of rule 22e–4's one-time and ongoing costs.

The original classification scheme would have mandated significant micro-level analysis of instruments not currently conducted by fund advisers according to many commenters.[1105] Such an analysis would have required entirely new systems for many fund complexes and would have required funds to incur significant expenses (especially for smaller fund complexes).[1106] The new classification system lowers the potential costs of compliance with the liquidity classification requirement by (i) reducing the number of classification categories reduced from six to four, (ii) only requiring ''days-to-cash'' estimates out to 7 days, (iii) allowing funds to generally classify based on asset class (subject to an exception process), (iv) changing the process for considering position size to reduce complexity, and (v) simplifying the classification factors to be considered into a single requirement that funds consider market, trading, and investment-specific data when classifying an investment. As a whole, these changes should lower the potential costs of compliance with the classification requirement relative to the proposal estimates above without significantly reducing the potential benefits of the requirement.

Specifically with respect to position size, commenters argued that evaluating ''days-to-cash'' was inherently biased against large funds and could lead to ''plain vanilla'' funds that generally invest in only highly-liquid securities (*e.g.,* S&P 500 funds) being classified as highly illiquid if they manage a large amount of assets.[1107] The rule now only requires a fund to determine whether trading varying portions of a position in a particular portfolio investment or asset class, in sizes that the fund reasonably anticipates trading, is reasonably expected to significantly affect its liquidity. This change should prevent large ''plain vanilla'' funds from appearing to be very illiquid under the classification scheme while still maintaining the idea that position size is an important consideration in the evaluation of liquidity. Relative to the proposed rule, this should reduce the costs associated with determining how position size affects the number of days required to liquidate an investment and eliminate the cost of classifying separate portions of a position into separate liquidity buckets.

The classification process has also been revised in response to commenter concerns about the need to evaluate whether an investment can be sold for cash without materially affecting the security's price, which investors could interpret as an indication that they can redeem out of funds at a known or protected NAV.[1108] One commenter expressed concern that if investors were given estimates of liquidity that are speculative or stale, or both, which might fail to predict liquidity with accuracy during periods of market stress, then funds could be potentially subject to significant litigation costs.[1109] The value impact component of the rule has been modified so that determinations of market impact can be based on a reasonable expectation that an investment can be converted to cash (or in some cases, sold or disposed of) without the conversion (or in some cases, sale or disposition) significantly changing the market value, rather than a price ''that does not materially affect the value of that asset immediately prior to sale.'' This modification in the definition should relieve funds of the need to develop precise security-by-security expectations of forward looking liquidity while still emphasizing the need to consider the potential market impact of buying or selling an investment, reducing compliance costs relative to the proposed rule.

Commenters also expressed concern about the use of third-party vendors in the process of liquidity classification.[1110] If only a few vendors were able to provide the necessary data, such data would likely cause significant expenses for the funds, and those expenses would likely be passed on, at least in part, to fund investors through

[1103] *See supra* footnote 323 and accompanying text (discussing Commission guidance on a fund's use of third-party service providers to obtain data to inform or supplement its consideration of the liquidity classification factors). We understand, based on staff outreach, that annual costs to subscribe to the liquidity classification services provided by third-party data and analytics providers currently range from $50,000–$500,000.

[1104] As discussed in greater detail below, we anticipate that, depending on the personnel (and/or third-party service providers) involved in the activities associated with administering a liquidity risk management program, certain of the estimated ongoing costs associated with these activities could be borne by the fund, and others could be borne by the adviser.

[1105] *See* Credit Suisse Comment Letter; Dechert Comment Letter; Federated Comment Letter; Fidelity Comment Letter; Oppenheimer Comment Letter; SIFMA Comment Letter I; Wellington Comment Letter.

[1106] *See* Dechert Comment Letter; ICI Comment Letter I; SIFMA Comment Letter I; T. Rowe Comment Letter.

[1107] *See* Dodge & Cox Comment Letter; Oppenheimer Comment Letter; Vanguard Comment Letter; ICI Comment Letter I; ICI Comment Letter II; Invesco Comment Letter.

[1108] *See* ICI Comment Letter II.

[1109] *See* Dodge & Cox Comment Letter.

[1110] *See* Dechert Comment Letter; Federated Comment Letter; ICI Comment Letter I; ICI Comment Letter II; MFDF Comment Letter; Nuveen Comment Letter; SIFMA Comment Letter I; T. Rowe Comment Letter; Wells Fargo Comment Letter.

higher fees. Another commenter suggested that the cost of third-party liquidity data should be included in any estimate of the potential costs of the classification system because of the strong likelihood that all funds would need to subscribe to a third-party vendor to ensure compliance with the rule.[1111] As discussed in the proposal, we believe outsourcing program functions to vendors should, if anything, reduce compliance costs, and we noted that liquidity classification services already exist.[1112] In addition, our updated estimate of costs above is based on a large investment manager's estimate of constructing an internal system from scratch, so we would expect the cost of a vendor-based solution, which would be partially amortized across all of its clients, to be lower. The changes made to the classification system from the proposal could also lessen the costs associated with third-party vendors relative to the proposed rule. In particular, to the extent that requiring less precision via fewer classification categories and shorter time horizons, allowing funds to generally classify according to asset class (subject to an exception process), and requiring a simpler position size evaluation criterion reduce the scope and intensity of the investment classification process, funds may not rely as much on vendors to comply with the rule, and vendors themselves may experience reduced costs in developing programs, leading to lower prices if they pass on some of the savings to funds.

If all funds use a small number of third-party vendors, there could be other indirect, but potentially large, costs. According to one commenter, the vendors could become de facto liquidity ''rating agencies'' and their ''upgrades'' and ''downgrades'' of asset liquidity could have systemic effects on the market.[1113] For example, if a vendor were to remove a widely-held investment from the highly liquid investment category, then many funds could simultaneously attempt to sell that investment, which could harm both fund investors and the wider market. Given the data limitations and difficulties in estimating liquidity for many less liquid investments, that potential effect might be driven by error-prone modeling instead of true changes in liquidity. We emphasize above that while third-party products can serve as a useful input to the classification process, it is the fund's responsibility to determine the liquidity of each investment, which should lessen the potential for systemic issues by reducing fund reliance on third-party vendors and allowing more of the necessary liquidity analysis to be performed within each fund complex.[1114]

Several additional components of the final rule will affect costs relative to the proposal. First, by excluding any fund that primarily holds assets that are highly liquid investments from the requirement to have a highly liquid investment minimum, the final rule avoids imposing any potential costs related to the minimum on some funds that would benefit less from having a minimum. It is possible that some funds that do not qualify as primarily highly liquid funds will incur the costs of establishing a minimum without a significant benefit. Second, whereas funds may currently use back-office operations to limit their acquisition of illiquid assets under exiting Commission guidelines, the final rule's enhanced illiquid investment standard may require funds to incur direct costs associated with a shift of these operations to other business functions (we also discuss indirect costs associated with the enhanced illiquid investment limit below).[1115] Third, the final rule does not require In-Kind ETFs to establish a highly liquid investment minimum or classify the liquidity of their portfolios, which will reduce their costs relative to other funds, but it also requires them—as it does all ETFs—to consider several additional factors as part of their liquidity risk programs, which may increase their implementation costs. Finally, principal underwriters or depositors of UITs, which had no liquidity risk requirements under the proposed rule, will now have to incur a one-time cost on or before the date of the initial deposit of the portfolio securities into the UITs to assess whether the amount of illiquid investments they expect the UITs to hold is compatible with the redeemable nature of the securities they issue. This cost should be comparable in magnitude to incurring a fraction of the ongoing costs of an open-ended fund under rule 22e–4 because it involves an analysis that is similar to complying with the rule's 15% illiquid investment limit without having to establish all of the systems and processes that are required to perform that task on a continuing basis. Assuming that this activity accounts for 20% of an open-ended fund's ongoing costs, we estimate that it would cost a UIT $8,000 to $52,000, and note that it will only be incurred by UITs that are launched after the rule's compliance date.[1116] UITs are already required to consider which of their restricted securities are illiquid, so this estimate should be considered an upper bound on the costs imposed on UITs by the rule. Finally, the rule's provision requiring board oversight when a fund's holding of illiquid assets exceed 15% of its net assets may impose additional costs on the fund to hold a special board meeting, including the cost of preparing materials for the board's deliberation, the cost of board members' time, as well as the cost of consultations with outside counsel.

Depending on the personnel (and/or third-party service providers) involved with respect to the activities associated with establishing and implementing a liquidity risk management program, certain of the estimated one-time costs could be borne by the fund, and others could be borne by the fund's adviser or other service providers. This cost allocation would be dependent on the facts and circumstances of a particular fund's liquidity risk management program, and thus we cannot specify the extent to which the estimated costs would typically be allocated to the fund as opposed to the adviser. Estimated costs that are allocated to the fund would likely be borne by fund shareholders in the form of fund operating expenses.

Certain elements of the program requirement may entail marked variability in related compliance costs, depending on a fund's particular circumstances and sources of potential liquidity risk. The process of classifying the liquidity of each of a fund's portfolio investments could give rise to varying costs depending on the fund's particular investment strategy. For example, a U.S. large cap equity fund would likely incur relatively few costs to obtain the data necessary to classify its portfolio positions, specifically given that, relative to the proposed rule, the final rule allows such a fund to generally classify its positions based on asset classes (subject to an exception process). On the other hand, funds that hold investments for which relevant market,

[1111] *See* Interactive Data Comment Letter.

[1112] See Proposing Release, *supra* footnote 9, at n.705 and accompanying text.

[1113] *See* ICI Comment Letter II.

[1114] *See supra* section III.C.1.b. (providing guidance on the appropriate use of data vendors).

[1115] *See supra* section III.C.4.a.

[1116] These figures are based on the same comment letter used to estimate one-time and ongoing costs for open-ended funds. We assume the costs associated with launching a UIT under rule 22e–4 are equivalent to 20% of the ongoing costs of a one fund complex. Under the assumptions above that ongoing costs for open-ended funds are 5% to 32.5% of their initial costs, fund complexes with one fund have estimated ongoing costs of approximately $40,000 to $260,000. Multiplying that range by 20% produces the UIT estimate.

trading, and other investment-specific data is less readily available, for which a general asset-class-based classification is more difficult to apply, or funds that require more exceptions to their asset-class-based classification would incur relatively greater costs associated with the classification of their portfolio positions' liquidity. In addition, funds with multiple sub-advisers may incur relatively more costs to coordinate the process of classifying position liquidity as well as monitoring whether the fund is compliant with its highly liquid investment minimum and the 15% illiquid investment limit.

Certain factors that the rule's guidance suggests a fund should consider in assessing its liquidity risk also could entail relatively greater costs, depending on the fund's circumstances. For instance, a fund with a relatively short operating history could incur greater costs in assessing the fund's cash flow projections than a similarly situated fund with a relatively long operating history. This is because the newer fund could find it appropriate to assess redemption activity in similar funds during normal and stressed periods (to predict its future cash flow patterns), which could entail additional costs to gather and analyze relevant data about these comparison funds. Also, a fund whose shares are held largely through omnibus accounts may wish to periodically request shareholder information from financial intermediaries in order to determine how the fund's ownership concentration may affect its cash flow projections. These data requests, and related analyses, could cause a fund to incur costs that another fund, whose shares are largely held directly, would not. A fund that deems it appropriate to establish and implement additional liquidity risk management policies and procedures beyond those specifically required under the rule also would incur additional related costs. While we recognize that, as described above, the costs to establish and implement a liquidity risk management program in compliance with rule 22e–4 will depend to some degree on the level of liquidity risk facing the fund, we are unable to quantify the various ways in which a fund's individual risks and circumstances could affect the costs associated with establishing a liquidity risk management program.

Commenters suggested that the proposed three-day liquid asset minimum requirement could have had a number of unintended consequences. As discussed above, if third-party vendors become de facto ''rating agencies'' for liquidity, then a liquidity minimum could force many funds to sell the same investments simultaneously after a liquidity ''downgrade,'' which could have a systemic impact on funds and the overall market.[1117] Similarly, if a fund were forced into predictable trading behavior during a market downturn because of the highly liquid investment minimum requirement, the liquidity and performance of that fund would be negatively impacted.[1118] It is possible that the proposed three-day liquid asset minimum requirements could have created these types of unintended consequences by prohibiting a fund from acquiring less liquid assets if it was below its three-day liquid asset minimum, but the final rule does not include this prohibition. Instead, as discussed above, a fund is only required to report to its board and, possibly, the Commission when it is below its highly liquid investment minimum. This requirement should provide fund management the flexibility to avoid forced, predictable trading behavior while maintaining the emphasis on effective liquidity risk management the minimum is designed to provide. While fund liquidity may vary more under this approach, the reporting requirements surrounding any shortfall, including a requirement to provide the fund's board with an explanation of how the fund plans to restore its minimum if a shortfall lasts more than 7 consecutive calendar days, should help provide oversight to prevent a fund from continually failing to meet its liquidity minimum. As a whole, this approach should result in lower costs for funds compared to the proposed three-day liquid asset minimum and, because we anticipate that lengthy breaches of the minimum will be relatively rare, it should not significantly decrease the benefits of having a highly liquid investment minimum.

One commenter suggested that investor choice could be negatively impacted because of the implementation and on-going costs of the liquidity risk management program.[1119] The commenter asserted that the costs could overwhelm small fund complexes and force them to either cease operations or consolidate with a larger complex.[1120] Most of the changes made to the rule since its proposal—exclusions for funds that primarily hold assets that are highly liquid investments and In-Kind ETFs, a reduction in the number of investment classification categories, and the ability to generally classify investments based on asset classes (subject to an exception process)—should decrease the estimated implementation and on-going costs compared to the proposal. Yet it remains possible that some fund complexes will still find the costs burdensome. While investor choice may be harmed if a fund is closed because the costs of the rule are burdensome, remaining funds will be better positioned to avoid the negative consequences of inadequate liquidity management if that fund exited because it was unable to provide a minimum acceptable baseline of liquidity. To the extent that there are funds that are currently able to provide effective liquidity risk management, but would be forced to cease operations because of the costs of complying with the rule (even after changes from the proposal that increase flexibility and decrease implementation and on-going costs), investor choice may be negatively affected.

A fund may incur costs if it reallocates its portfolio to correspond with its initial or subsequently modified highly liquid investment minimum, or if the rule's definition of an illiquid investment results in the fund holding more than 15% of its net assets in assets that are illiquid investments. While we are unable to anticipate how many funds may reallocate their portfolios for these two reasons, or the extent of such reallocation by any fund that does so, we anticipate that the transaction-related costs of any such reallocation will not be significant for most funds. This is because some funds may not need to reallocate their portfolios at all to correspond with their highly liquid investment minimum or the 15% illiquid investment limit, and those that do so would be able to gradually adjust their portfolios in order to buy and sell portfolio positions during times that are financially advantageous given the delayed compliance date. Thus, while a fund may reallocate its portfolio to comply with its highly liquid investment minimum and the 15% illiquid investment limit by the time of the compliance date, a fund would not be required to conduct transactions in portfolio investments in any particular timeframe prior to the compliance date. If a fund wishes to reallocate its portfolio by the compliance date, we anticipate that the compliance date would provide sufficient time to do so with relatively few associated transaction costs. Along with the transaction-related costs associated with any portfolio reallocation, we recognize that this reallocation in turn could affect

[1117] ICI Comment Letter II.

[1118] ICI Comment Letter II.

[1119] Charles Schwab Comment Letter.

[1120] *Id.*

the performance and/or risk profiles of funds that modify their composition, which in turn could result in costs associated with decreased investment options available to investors and any changes to the market for relatively less liquid investments; these costs are discussed below. Finally, it is worth noting that, because the rule excludes both In-Kind ETFs and funds that primarily hold assets that are highly liquid investments from the requirement of having a highly liquid investment minimum, these funds will not incur any of the costs associated with transactions, reduced fund performance, or altered risk profiles associated with a minimum, though they will still incur these costs as they apply to the rule's 15% illiquid investment limit.

Potential for Decreased Investment Options and Adverse Effects

We recognize that the rule requires a fund to determine the liquidity profile of its current portfolio and evaluate its potential liquidity needs, which could result in a fund concluding that its current portfolio lacks sufficient liquidity. This could lead a fund to modify its portfolio composition to meet its appropriate highly liquid investment minimum (*e.g.,* one commenter stated that funds may decrease their holdings of long-term municipal bonds) or to comply with the more specific 15% illiquid investment limit.[1121] The rule could therefore result in certain funds increasing their investments in relatively more liquid investments or altering the way in which their portfolios are managed, which in turn could affect the performance, tracking error, and/or risk profiles of these funds.[1122] This is most likely to affect funds that currently hold investments with relatively lower liquidity. Such modifications to funds' portfolio compositions could in turn decrease certain investment options available to investors or reduce investor returns. However, because these portfolio composition shifts are most likely to occur if a fund needs to adjust its existing liquidity level to comply with the rule, we anticipate that the potential for decreased yield is most likely to affect funds currently holding portfolios whose liquidity levels have the potential to create redemption-related liquidity risk for fund investors. Thus, the potential for decreased investment options for certain investors, and any related decrease in investment yield, has the potential offsetting benefit of decreased liquidity risk in the funds in which these investors hold shares. However, there could be other reasons funds may choose to invest in more liquid investments as a result of the rule even if this reallocation is not required, including the possibility that they do not want to appear less liquid than their peer funds in their publicly disclosed liquidity profile, or because increased disclosure requirements regarding the timing of a fund's redemption payments may result in funds holding more liquid investments.[1123]

We cannot quantify the number of funds that would need to significantly modify their portfolios' risk profile as a result of the rule because we lack the information necessary to provide a reasonable estimate. Such an estimate would depend on the number of funds that might need to modify their current portfolio composition as a result of the rule, as well as the availability of relatively liquid investments that can act as adequate substitutes to existing investments for those affected funds. We are unable to quantify the total potential costs discussed in this section because: (1) We cannot anticipate the highly liquid investment minimum that each fund would determine to be appropriate based on its liquidity risk or the extent to which fund holdings exceed the rule's more specific 15% illiquid investment limit relative to the current 15% guideline; (2) we cannot determine what relatively more liquid investments funds would purchase as substitutes; (3) we are unable to estimate the resulting changes to funds' yields and risk profiles, nor how investors would react to these changes. In-Kind ETFs and funds that primarily hold assets that are highly liquid investments will not be subject to the highly liquid investment minimum, so this may reduce the aggregate costs associated with decreased investment options relative to the proposed rule. Commenters did not specifically object to our assessment of the rule's impact on investment options in the proposed rule.

Market for Relatively Less Liquid Investments

As discussed above, the rule could result in certain funds increasing their investments in relatively more liquid investments, which would effectively mean that these funds would decrease their investments in relatively less liquid investments. If funds decrease their investments in relatively less liquid investments, the market for those investments could become even less liquid. This could discourage new issuances of similar investments and decrease the liquidity of relatively less liquid investments that are still outstanding. The impact of decreased investment by funds in relatively less liquid markets will depend on how much current investment in those markets is driven by the funds, which varies between markets. Further, these market effects could be partially offset if other opportunistic investors with greater capacity to hold less liquid investments are attracted to the market by any lower prices for these investments that result if funds decrease their holdings of less liquid investments.[1124] In addition, if the rule leads funds to better assess the liquidity risk associated with certain investments, any decrease in the prices of these investments could reflect more efficient pricing of the investments (that is, risk would be better reflected in asset prices than it is currently). Because funds currently are not required to report or disclose information concerning the liquidity of their investments, and because we cannot anticipate the highly liquid investment minimum that each fund would determine to be appropriate based on its liquidity risk or the extent to which the more specific 15% illiquid investment limit will apply to current fund holdings, it is difficult to predict the extent to which the rule could lead funds to modify their portfolio holdings, or whether such modifications would discourage the issuance of certain investment. As a result, we cannot quantify the potential costs discussed in this section. Commenters did not specifically object to our assessment of the costs related to decreased investment in illiquid assets in the proposed rule.

d. Effects on Efficiency, Competition, and Capital Formation

The liquidity risk management program requirement would require a fund to assess its liquidity risk and to determine its highly liquid investment minimum based on this risk assessment. For funds that do not already engage in liquidity risk management practices that meet the rule's requirements, the requirements should improve the

[1121] GFOA Comment Letter.

[1122] *See, e.g., supra* footnote 767 (discussing how index funds that use full replication strategies might need to move towards other techniques for tracking an index if full replication requires them to exceed the 15% illiquid asset limit).

[1123] *See infra* section IV.c.2.a (discussing the effects of the rule's disclosure requirements).

[1124] Relatively less liquid investments have a higher expected return compared to relatively more liquid investments, thereby compensating longer-term investors for holding relatively less liquid investments. *See* Yakov Amihud & Haim Mendelson, *Asset Pricing and the Bid-Ask Spread,* 17 J. Fin. Econ. 223 (1986), *available at http://pages.stern.nyu.edu/~lpederse/courses/LAP/papers/TransactionCosts/AmihudMendelson86.pdf.*

alignment between fund portfolio liquidity and fund liquidity needs. This improved alignment could enhance funds' ability to meet redemptions in a manner that mitigates potential dilution of shareholders' interests, and thus this improved alignment could be viewed as increasing efficiency to the extent that dilution is perceived as a drag on the ability of a fund's NAV to reflect the performance of its portfolio. Additionally, the requirement for each fund to classify the liquidity of its portfolio investments and publicly report the aggregated percentage of its portfolio assigned to each of the four classifications categories could increase allocative efficiency by assisting investors in making investment choices that better match their risk tolerances. However, this potential efficiency gain will only hold to the extent that these portfolio-level classification aggregates, which are based on non-public subjective assessments of investment liquidity, are comparable across funds. Furthermore, this potential efficiency gain will only be achieved if this classification sufficiently contrasts the tradeoff between portfolio liquidity and performance across funds.

By enhancing funds' liquidity risk assessment and risk management, the program requirement also could promote pricing efficiency in the sense that it could decrease the likelihood that a fund would be forced to sell portfolio investments under unfavorable circumstances in order to meet redemptions, potentially creating significant negative price pressure on those investments. If a fund's asset sales were to cause temporary changes in market prices unrelated to an investment's fundamentals, this could create a temporary pricing inefficiency. By decreasing the likelihood that these types of price movements would occur, the program requirement could decrease pricing inefficiency. However, the program requirement could negatively affect the efficient pricing of investments with lower liquidity if it indirectly discourages funds from investing in them (for example, if a fund were to decrease its holdings in investments that have lower liquidity if it determines, as a result of the fund's liquidity risk assessment, that its appropriate highly liquid investment minimum or the more specific 15% illiquid investment limit do not correspond with the fund's current portfolio composition). But as discussed above, this market effect could be partially offset if other investors are incentivized to buy relatively less liquid investments on account of any lower prices for these investments that result if funds decrease their holdings of these investments.[1125] Alternatively, any price decreases experienced as a result of decreased mutual fund investment could be considered efficient price adjustments given the reduction in liquidity of the investments.

If the liquidity risk management program requirement results in a material decrease in funds' investment in relatively less liquid investments, competition for these investments would initially be negatively affected. Under this scenario, the relatively less liquid investments in which funds formerly would have invested may become less liquid, since the number of current or potential market participants would be reduced. However, because this reduction in demand and liquidity results in larger illiquidity discounts and higher expected returns, some investors might become willing to invest in these assets, which in turn would partially offset the initial reduction in competition. As a corollary, if the liquidity risk management program requirement results in a material increase in funds' investment in highly liquid investments, competition for these investments would be positively affected. However, as funds increase their investments, the liquidity of those investments should increase and their liquidity premium decrease, which in turn could lead some investors to reduce their demand for these investments, partially offsetting the initial increase in competition. Relative to the proposal, the competitive effects of fund demand for highly liquid investments relative to lower liquidity investments should, if anything, be reduced because the rule only requires a fund to consider stressed conditions that are reasonably foreseeable in determining its minimum.

The size of a fund, or the family of funds to which a fund belongs, could have certain competitive effects with respect to the fund's implementation of its liquidity risk management program. If there are economies of scale in creating and administering multiple liquidity risk management programs, funds in large families would have a competitive advantage. For a fund in a smaller complex, however, a greater portion of the fund's (and/or adviser's [1126]) resources may be needed to create and administer a liquidity risk management program, which may increase barriers to entry in the fund industry, and lead to an adverse effect on competition. The size of a fund family also could produce competitive advantages or disadvantages with respect to a fund's use of products developed by third parties to assist in classifying the liquidity of their portfolio investments, or to assess the fund's liquidity risk. Funds in a large complex also could receive relatively more favorable pricing for third-party liquidity risk management tools, if the fund complex were to purchase discounted bulk services from the developer or receive relationship-based pricing discounts. To the extent that they choose to use liquidity risk management tools such as committed lines of credit and interfund lending,[1127] funds in larger complexes likewise could receive more favorable rates on committed lines of credit than funds in smaller complexes, and could have opportunities to establish interfund lending arrangements more easily than funds in smaller complexes.

Any changes in certain investments' or asset classes' liquidity that could indirectly result from the liquidity risk management program requirement (for example, as discussed above, if the number of buyers and sellers for certain investments becomes significantly reduced as a result of the program requirement) could also affect capital formation among issuers of these investments. Because lower asset liquidity implies higher illiquidity premiums and larger asset price discounts some firms and other issuers of securities could be discouraged from issuing new securities in asset classes that are associated with lower liquidity. If changes in liquidity are not equal across all asset classes, firms and other entities may begin to shift their capital structure (*e.g.,* begin to issue equity instead of debt) or to change the terms of certain securities that they issue in order to increase their liquidity (*e.g.,* by standardizing the terms of certain debt securities, or modifying the securities' terms to promote electronic trading).[1128]

Commenters did not specifically object to our assessment of the proposed rule's effects on efficiency, competition, and capital formation. With the exception of the potential efficiency changes due to modifications reflected in the adoption of a highly liquid investment minimum and the more specific 15% illiquid investment limit discussed above, our assessment of the

[1125] *See supra* section IV.C.1.c.

[1126] *See supra* footnote 446 and accompanying text.

[1127] *See supra* footnote 258 and accompanying text (discussing and providing guidance on the use of these tools).

[1128] *See* GFOA Comment Letter (discussing these types of effects on municipal bond issuers).

final rule's effects largely corresponds with those of the proposed rule.

e. Reasonable Alternatives

The Commission considered various alternatives to the individual elements of rule 22e–4. Those alternatives are outlined above in the sections discussing the rule elements.[1129] The following discussion addresses economically significant alternatives to rule 22e–4, which involve broader issues than the more granular alternatives to the individual rule elements discussed above.

Liquidity Risk Management Program and Scope

The Commission considered, but ultimately decided against, excluding certain types of funds from rule 22e–4.[1130] For example, the rule could have carved out funds with investment strategies that historically have entailed relatively little liquidity risk, or funds with relatively low asset levels. We are not excluding any subset of open-end funds, other than money market funds, from the scope of the rule, although we have tailored the rule for certain kinds of investment companies that present different liquidity risks (In-Kind ETFs, funds that primarily hold assets that are highly liquid investments, and UITs). Some funds with investment strategies that historically have involved little liquidity risk invest in assets that have lower liquidity, or in more liquid assets that can experience episodes of lower liquidity.[1131] To the extent that these types of investments create potential liquidity risk for a fund, excluding funds with investment strategies that have historically involved little liquidity risk could expose investors to more potential liquidity risk than they would face under the rule. Furthermore, investors in small funds could suffer from insufficient liquidity risk management just as investors in larger funds could. Indeed, staff analysis suggests that funds with relatively low total assets can experience greater flow volatility, including more volatility in unexpected flows, than funds with higher assets, which could indicate increased liquidity risk.[1132] The program requirement permits a fund to customize and calibrate its liquidity risk management program to reflect the liquidity risks that it typically faces (and that it could face in stressed market conditions). This flexibility is meant to result in programs whose scope, and related costs and burdens beyond the fixed cost of establishing a minimum liquidity risk management program, are appropriate to manage the actual liquidity risks facing a particular fund. For example, funds that primarily hold assets that are highly liquid investments are not required to adopt a highly liquid investment minimum because any benefits associated with this requirement as applied to these funds are less likely to justify the associated burdens.

Instead of adopting rule 22e–4, the Commission could issue guidance surrounding the assessment and management of liquidity risk, which would give funds more flexibility in managing liquidity risk and could reduce costs relative to the requirements of the rule. However, on account of the significant diversity in liquidity risk management practices that we have observed in the fund industry, we believe that the need exists for an enhanced comprehensive baseline requirement instead of only guidance for fund liquidity risk management.

Commenters suggested the rule could have also taken a purely principles-based approach instead of a prescriptive approach.[1133] The final rule is not a purely prescriptive rule; while it does specify certain standards, it provides funds with a substantial degree of flexibility in implementing those standards. That said, a purely principles-based approach that specified few or no requirements could give funds more flexibility in tailoring risk management programs to their needs and could reduce compliance costs, but it would be less certain to create a comprehensive baseline for fund liquidity risk management, which in turn would diminish the comparability (and thus the value) of information reported to the Commission and to the public about funds' liquidity. Under a purely principles-based approach, an investor with investments in multiple funds would be aware that those funds are all generally required to manage liquidity risk, but may not have sufficient clarity about how each of the funds may have chosen to interpret and implement general principles so as to permit the investor to understand how this variation across funds affects the liquidity risk to which the investor is exposed. Finally, funds are not prohibited from developing or maintaining their own, tailored risk management programs to the extent that they are supplemental to the baseline that the Commission's program requires.

The Commission considered proposing liquidity requirements similar to those imposed on money market funds—that is, the requirement to hold a specified minimum level of highly liquid investment holdings, and the ability to impose redemption fees and gates.[1134] The requirements imposed on money market funds, and the tools available to these funds to manage heavy redemptions, are specifically tailored to the assets held by money market funds and the behavior of money market fund investors.[1135] Imposing similar regulatory requirements on funds that are not money market funds would ignore significant differences between money market funds and other funds. We discuss the costs and benefits of requiring funds to hold a specified minimum level of highly liquid investments below (similar to the portfolio liquidity requirements applicable to money market funds). With respect to redemption fees, funds are already permitted to use them under existing regulations (up to a maximum fee of two percent), although those fees are largely used by certain funds to recoup costs incurred as a result of excessive short-term trading of mutual fund shares, rather than mitigating dilution arising from shareholder transaction activity generally, and are viewed as unpopular with investors and intermediaries. Redemption gates would allow funds to limit the potential dilution shareholders face in circumstances where they face extreme redemptions, but they would also impose constraints on shareholders' access to their assets in those situations, and commenters were not in favor of extending rule 22e–3 to permit funds to make broader use of suspensions of redemptions.[1136] In addition, funds that are not money market funds have not demonstrated the same risk of significant redemptions during times of

[1129] *See supra* sections III.A.3, III.B.1.b, III.B.2.j, III.B.3.b, III.C.1.c, III.C.1.d, III.C.2.a, III.C.2.b, III.C.3.a, III.C.3.a, III.C.6.a, III.C.6.b, II.C.5.c, III.D.4, and III.E.

[1130] *See* section III.A.2 for more detailed discussion of rule 22e–4's scope.

[1131] *See* Proposing Release, *supra* footnote 9, at n.123–124 (discussing liquidity issues in microcap stocks as well as treasury bonds during the ''Flash Crash'').

[1132] DERA Study, *supra* footnote 95, at 16–24. *See infra* footnote 1159 and accompanying paragraph regarding comments on small funds.

[1133] AIMA Comment Letter; CFA Comment Letter; Cohen & Steers Comment Letter; Dodge & Cox Comment Letter; Eaton Vance Comment Letter I; FSR Comment Letter; ICI Comment Letter I; ICI Comment Letter III; LSTA Comment Letter; MFDF Comment Letter; Nuveen Comment Letter; NYC Bar Comment Letter; Oppenheimer Comment Letter; State Street Comment Letter; Vanguard Comment Letter; Wellington Comment Letter; Wells Fargo Comment Letter; Dechert Comment Letter.

[1134] *See supra* footnotes 153–155 and accompanying text.

[1135] *See* 2014 Money Market Fund Reform Adopting Release, *supra* footnote 43, at section II.

[1136] *See* ICI Comment Letter I.

market stress that money market funds may face and which redemption gates are meant to prevent, implying that the benefits of gates are less applicable to funds that are not money market funds.[1137]

Classifying Portfolio Investment Liquidity

The Commission considered multiple alternatives to the rule's requirement that funds classify the liquidity of their portfolio investments, which establishes one component of a uniform baseline for fund liquidity risk management. As discussed above, commenters raised three primary structural alternatives to the proposed classification requirement: (i) A ''principles-based'' liquidity classification approach, where each fund would have to classify the liquidity of its portfolio assets, but the Commission would not require any specific classification scheme; [1138] (ii) a simplified version of the proposed classification system, with fewer classification categories based on shorter time projections than the proposal; [1139] and (iii) an approach with new classification categories based on qualitative distinctions in the market- and trading-related characteristics of different asset classes under different market conditions, which generally would rely on the Commission mapping different asset classes to each of these new classification categories.[1140]

A purely principles-based approach to classifying assets, as suggested by several commenters, would have the benefit of allowing each fund to tailor its classification scheme to the liquidity factors most relevant to the assets it invests in rather than imposing a one-size-fits-all approach that may be less applicable to some funds. However, as discussed above, this approach would not provide a uniform methodology for funds' liquidity assessment procedures and would not promote reasonably comparable reporting to the Commission and disclosure to the public about funds' portfolio liquidity.[1141] Instead, also as discussed above, we are largely adopting commenters' suggested approach of reducing the number of liquidity classifications from six to four.[1142]

The Commission considered but is not adopting commenters' alternative of having the Commission establish a fixed classification schema to which all funds must adhere—for example, an enumeration of asset classes and a mapping of those classes to a liquidity classification.[1143] This approach would have the benefit of producing liquidity classifications that are objectively comparable across funds, but the Commission may not be able to respond as quickly as market participants to dynamic market conditions that might necessitate changes to asset class liquidity classifications, and would be unable to account for determinants of investment liquidity that are fund-specific.

Relatedly, some commenters also suggested classification categories based on alternatives to the ''days-to-cash'' criterion of the proposed and final rule, including, in whole or in part, on the fraction of average daily trading volume (''ADTV'') that each position size corresponds to, the expected behavior of bid-ask spreads in a given asset, or more qualitative liquidity buckets (*e.g.,* ''converted to cash quickly under most circumstances'').[1144] Some of these more specific criteria may be appropriate for particular assets (*e.g.,* ADTV is a reasonable measure for exchange-traded securities), but do not apply to all assets (*e.g.,* bid-ask spreads are not readily available for some asset classes). Also, more qualitative criteria make it more difficult to compare classifications across funds relative to the ''days-to-cash'' approach in the final rule.

Highly Liquid Investment Minimum

The final rules require funds that do not primarily hold assets that are highly liquid investments to establish a highly liquid investment minimum as part of their liquidity risk management program and provides some flexibility by not prohibiting the acquisition of less liquid investments, but instead requiring a fund to report to the board and, in some cases, the Commission if it goes below its minimum. The first type of alternative the Commission considered with respect to this requirement concerns which investments satisfy a minimum, which could have varied along a spectrum from more liquid (*e.g.,* only cash would qualify as a highly liquid investment) to less liquid (*e.g.,* investments reasonably expected to convert to cash in the 7-day timeframe associated with open-ended fund redemption and settlement requirements would qualify). While there are various marginal benefits and costs associated with defining investments that satisfy the minimum at points along that spectrum—for example, cash is more liquid but does not provide any yield—the final rule aligns the definition of what investments are subject to the minimum with the definition of the first (most liquid) category of investments in the liquidity risk management program's liquidity classification requirement.[1145] This consistency in treatment means that fund advisers, investors, and the Commission can focus on a smaller number of clearly-defined concepts when broadly evaluating fund liquidity.

The Commission also considered whether to make the highly liquid investment minimum purely a target instead of a minimum. The proposed rule would have precluded funds from acquiring less liquid investments anytime they were below their highly liquid investment minimum. Commenters suggested this could lead to several potential costs, as discussed above regarding the rule's costs and benefits, including the possibility that it could lead to herding behavior among funds.[1146] Some commenters instead suggested that a target or range be used instead of a minimum, which could provide funds more flexibility in returning to their target without incurring unnecessary trading costs, as well as the ability to trade more opportunistically during periods of market stress.[1147] However, a target

[1137] *See* 2014 Money Market Fund Reform Adopting Release, *supra* footnote 43, at section III.A.1.

[1138] *See, e.g.,* AIMA Comment Letter; LSTA Comment Letter; Street Comment Letter; Wellington Comment Letter.

[1139] *See, e.g.,* Eaton Vance Comment Letter I; Interactive Data Comment Letter; Markit Comment Letter; Wells Fargo Comment Letter. Commenters generally suggested three, four, or five classification categories.

[1140] *See, e.g.,* BlackRock Comment Letter; MFS Comment Letter; Nuveen Comment Letter; CSRC Comment Letter.

[1141] *See supra* section III.C.6.

[1142] The Commission also could have, as described in the Proposing Release, required funds to classify each portfolio position as ''liquid'' or ''illiquid,'' but commenters did not support such an alternative, and we continue to believe that a two-category approach would be insufficiently nuanced to capture the full spectrum of portfolio position liquidity. *See also supra* section III.C.1.a for a more detailed discussion of commenter suggestions with respect to the number of liquidity classification categories.

[1143] For examples suggesting this approach *see, e.g.,* AFR Comment Letter; BlackRock Comment Letter; SRC Comment Letter.

[1144] *See* Nuveen Comment Letter; BlackRock Comment Letter; Dodge & Cox Comment Letter; SIFMA Comment Letter I.

[1145] *See* the Proposing Release, *supra* footnote 9 at n.730 and associated text for a further discussion of cash and ''seven day liquid assets'' as alternatives for a minimum. We did not receive explicit comments on the merits of which types of investments should satisfy a minimum.

[1146] For example, any market event that increases the value of the less liquid portion of many funds' portfolios could place them below the minimum, and could indirectly result in some funds selling less liquid investments at the same time to bring their allocations back in line with their minimums.

[1147] For comments discussing the costs and benefits of a target vs. a minimum, *see, e.g.,*

Continued

might have been interpreted as an ''average'' level of highly liquid investments funds should hold and, without further requirements such as board reporting, may not have provided a sufficient incentive to fund managers to ensure that the percentage of a fund's investments invested in relatively liquid investments is at (or above) the level deemed appropriate by the fund. The final rules strike a balance: Funds are not prohibited from acquiring less liquid investments if they go below their highly liquid investment minimum, but they must report any shortfall to their boards (and the Commission where required). This should reduce concerns regarding herding behavior,[1148] but does make it more burdensome for a fund to buy any assets that are not highly liquid investments opportunistically if the fund is at or below its highly liquid investment minimum, insofar as funds may not want to trigger their reporting obligation to their board, the Commission, or both.

Some commenters were generally opposed to a highly liquid investment minimum,[1149] and the final rule could have excluded this requirement altogether. Doing so would still require that funds manage liquidity risk appropriately but would provide even more flexibility in how that is achieved. However, the highly liquid investment minimum requires funds to directly consider the assets they need to have on hand to meet redemptions in a flexible manner to reduce dilution that may result from forced sales, and funds have flexibility in setting a minimum that is appropriate to the needs of their fund as well as adjusting the minimum dynamically to adapt to changing market conditions.[1150] We note that the final rule does not require funds that primarily hold assets that are highly liquid investments to establish a minimum.

The Commission also considered requiring a uniform highly liquid investment minimum for all funds. This alternative approach would have the advantage of being simple for investors to understand, easy for funds to apply, and simple for our examination staff to verify. However, this alternative would fail to account for notable differences between funds with respect to investment strategy, fund flow patterns, and other characteristics that contribute to funds' liquidity risk, which in turn would make it reasonable for funds' portfolios to have varying liquidity profiles. We believe that the fund-specific highly liquid investment minimum requirement will promote alignment of a fund's liquidity needs with the liquidity of fund investments, while still permitting funds reasonable flexibility in implementation. In light of the significant diversity within the fund industry, we believe that flexibility is appropriate to help minimize the potential costs to investors of the requirement. This approach still includes elements that will help our staff to assess whether funds are holding an appropriate level of assets that are highly liquid investments. Each fund will be required to maintain a written record of how its highly liquid investment minimum was determined, as well as copies of materials submitted to the fund's board in connection with the highly liquid investment minimum.[1151] One benefit of a Commission-determined uniform highly liquid investment minimum would be to ensure that funds do not set their minimum at an artificially low level (*e.g.,* 0) that is divorced from their liquidity risk. We believe that the requirement for a fund to consider certain specified factors in determining its minimum, as well as the recordkeeping and board review requirements discussed above, will help promote funds' establishing realistic minimums, and discourage inappropriately low or zero minimums.

Instead of requiring funds to determine and invest their assets in compliance with a highly liquid investment minimum, we could require funds to conduct stress tests of their own design assessing the extent to which the fund has a level of highly liquid investments necessary to cover possible levels of redemptions. This would have the benefit of granting a fund flexibility in determining whether its portfolio liquidity profile is appropriate given its liquidity needs. However, because the quality and comprehensiveness of funds' liquidity risk management currently varies significantly, we believe that requiring funds to have a highly liquid investment minimum is important in reducing the risk that funds will be unable to meet their redemption obligations, in minimizing dilution, and in elevating the overall quality of liquidity risk management across the fund industry. Also, we believe that it would be difficult to determine, depending on the level of discretion a fund would have in developing stress scenarios, whether these scenarios would accurately depict liquidity risk and lead funds to determine the appropriate level of portfolio liquidity they should hold. For example, if a fund's liquidity needs were generally high during normal periods, but were not correspondingly extreme during stress events, basing this fund's portfolio liquidity on the results of stress testing alone could cause a fund to hold too little liquidity during non-stressed periods. Therefore, we do not believe that a general stress testing requirement would be an adequate substitute for the highly liquid investment minimum requirement.

15% Illiquid Investment Limit

Instead of the adopted illiquid investment definition, the Commission could have codified a definition of illiquid investments that reflects the current 15% guideline. This approach would have had the benefit of already being accepted and understood by the industry, and would have entailed few additional implementation costs for funds. However, it would not have been harmonized with the rule's requirements with respect to other liquidity classifications, particularly the requirement that funds review at least monthly whether their investments are illiquid with respect to relevant market, trading, and investment-specific factors, and also incorporate market depth considerations into this process.[1152] To the extent that the rule's liquidity classification requirement results in funds more accurately assessing the amount of illiquid investments in their portfolios, funds may improve on their liquidity risk management under the rule as adopted than under a codification of the 15% guideline.

f. Comments on the DERA Study

We received substantial comments on the DERA Study from one commenter. The Commission has carefully considered these comments and adjusted our analysis where appropriate. In terms of broader concerns, the commenter suggested that the analysis in the DERA Study does not provide a strong basis for the specifics

Blackrock Comment Letter; Federated Comment Letter; Invesco Comment Letter; PIMCO Comment Letter.

[1148] For example, if an asset ceased to be a highly liquid investment, it could indirectly lead funds to sell that asset in order to meet their minimum. Coordinated selling could produce further downward pressure on the value of the investment. Some funds could be interested in purchasing such an investment if they viewed it to be undervalued and thus good for fund investors—which could also help counteract the downward pricing pressure caused by funds exiting their positions—but if such a purchase would cause them to violate their minimum, it would have been prohibited under the proposed rule.

[1149] *See, e.g.,* Invesco Comment Letter; Blackrock Comment Letter.

[1150] *See supra* footnote 638 and accompanying text.

[1151] *See* proposed rule 22e–4(c)(2)–(3).

[1152] *See supra* sections III.C.1.b and III.C.3.b.

of the rule.[1153] For example, the commenter asserts that the DERA Study's analysis does not provide a justification for funds sorting their assets into six liquidity categories and does not apply this classification in the DERA Study. The DERA Study's analysis was not designed to justify each policy choice made in the rule. Rather, the analysis in the DERA Study makes certain findings and reports certain empirical results designed to inform the Commission more generally about the current state of fund liquidity.

With respect to the proposal's interpretation of the DERA Study's results, the commenter expressed the concern that the results in the DERA Study provide only indirect evidence on the selling behavior of funds in response to redemptions. While a direct test would be preferable, such a test would require data on both daily fund flows and fund daily transactions, neither of which are available in sufficient detail for analysis. The commenter states that the DERA Study itself only shows that fund liquidity tends to decrease following outflows and that other endogenous factors, such as broad changes in market conditions due to macroeconomic events, could be causing changes in both fund liquidity and fund flows.[1154] To demonstrate its concerns about endogeneity, the commenter uses a vector autoregression (VAR) to present evidence that a proxy for market returns causes changes to both the Amihud liquidity of the S&P 500 and net U.S. equity mutual fund flows in a manner consistent with its alternative hypothesis that a fund's average Amihud liquidity may decrease due to an increase in market volatility rather than because of fund managers' trading behavior.[1155] The analysis performed in the DERA Study does control for broad changes in market liquidity at the fund class-level.[1156] To the extent that broad market effects drive variation in fund liquidity within a fund class in a way that is also correlated with fund flows, we acknowledge the commenter's concern about endogeneity and have modified our interpretation in the discussion above, but we also note that there is anecdotal evidence that supports this interpretation.[1157] With respect to the Amihud liquidity measure used in the study, the commenter states that the DERA Study's conclusion that a ''10% outflow increases the impact of selling $10 million of the asset-weighted average equity portfolio holding by 11 basis points'' is a key result supporting the proposal's hypothesis that funds sell their more liquid assets first to meet redemptions. We disagree that the specific economic interpretation of the Amihud measure cited by the commenter is necessary to support the hypothesis that funds tend to sell their more liquid assets: To the extent that the Amihud measure reflects the liquidity of underlying fund assets, a decline in the average Amihud liquidity of a fund's portfolio is consistent with the fund disproportionately selling its more liquid assets.

The commenter concludes that the analysis in the DERA Study does not demonstrate that funds are managing portfolios and redemptions in a manner that harms the interests of non-redeeming shareholders.[1158] We acknowledge that the analysis does not establish a direct link between redemptions and quantifiable harm to non-redeeming shareholders; as discussed above, it was designed to inform the Commission more generally about the current state of fund liquidity. The commenter also states the DERA Study's finding that municipal bond funds hold less cash following redemptions implies that a 40% outflow would be required to deplete the average municipal bond fund's cash holdings. We acknowledge the commenter's interpretation of the analysis, but note that the results do not imply that all municipal bond funds would necessarily require outflows of a similar magnitude to deplete a significant portion of their cash holdings.

The commenter makes several statements regarding results related to the volatility of fund flows. First, the commenter provides evidence that flow volatility declines with fund size, notes that the DERA Study's use of simple averages to calculate average flow volatility in a given fund category overstates the highly volatile flows of small funds, and shows that asset-weighted flow volatility measures are significantly smaller for all fund categories.[1159] We acknowledge that the simple average will overstate smaller funds relative to an asset-weighted average, but the opposite view holds too: Asset-weighted averages will understate flow volatility for small funds, and the rule is concerned with the potential liquidity risk problems at all funds. The commenter also states that the relatively higher flow volatility of alternative funds may simply be attributable to the fact that they are generally smaller in size (because small funds generally tend to have more volatile flows as a percentage of their assets) and that, as they have grown, the volatility of their flows has, if anything, decreased. We acknowledge that the flow volatility of alternative funds may be a function of their smaller size, but also note that small funds are also subject to the rule and that other fund categories, such as foreign bond funds, exhibit higher flow volatility despite being relatively larger in size. The commenter also notes that, as the DERA Study acknowledged, the predictability of fund flows is likely understated. The purpose of analyzing the predictability of flows in the analysis was to determine, using a simple model of fund flows, the extent which flow volatility was predictable and whether, after accounting for predictability, the unexpected component of flow volatility varied across fund types in the same way as total flow volatility. While fund managers may be able to predict a larger fraction of flow volatility, the evidence in the DERA Study supports the notion that unexpected flow volatility varies proportionally with total flow volatility, and the relative ranking of unexpected flow volatility by fund type is not likely to change with a better model of flows. The commenter also states that the DERA Study provides evidence that funds already successfully manage volatile flows.[1160] The proposal acknowledged that this evidence supports the view that funds do manage volatile flows by holding larger amounts of cash and liquid assets, and this evidence provides support for the rule's inclusion of flow volatility as a factor for funds to consider when managing risk.[1161] Finally, the commenter points out that, while the DERA Study finds smaller funds have more volatile flows, small funds may find it easier to trade assets with minimal price effects. We agree that small funds may have less price impact, but note that any fixed trading costs incurred via smaller trades will involve larger proportional trading costs.

The commenter also provides evidence on the relationship between fund flows and holdings of short-term

[1153] ICI Comment Letter II.

[1154] ICI Comment Letter II.

[1155] ICI Comment Letter II.

[1156] DERA Study, *supra* footnote 95, at 43–44. The model includes Lipper class fixed effects, year-quarter fixed effects, and interactions of those fixed effects. The year-quarter and interaction fixed effects should capture any broad changes in liquidity within different fund styles over time, which could be related to macroeconomic events.

[1157] *See, e.g., supra* footnote 71.

[1158] ICI Comment Letter II.

[1159] ICI Comment Letter II.

[1160] ICI Comment Letter II.

[1161] *See* Proposing Release, *supra* footnote 9, at n.631 and accompanying discussion.

assets for alternative strategy and high-yield bond funds. It finds no relationship between the two, asserting that the lack of a relationship shows funds are not systematically selling short-term assets to meet redemptions. However, this result is at the aggregate level, and does not necessarily preclude a relationship between the two quantities at the fund level for some funds. It also provides a fund-level analysis across high-yield bond funds in 5 separate months and also does not find a relationship between the two in four of the months. In one of the months, it does find statistically significant evidence that a decrease in short-term assets is associated with outflows, consistent with the DERA Study's finding. The commenter's inability to find a relationship is not evidence that there is no relationship *per se:* It is possible the commenter's test simply had low statistical power. To the extent that the commenter's evidence does support the claim that funds do not sell short-term assets in response to fund flows, the DERA Study used a different measure of liquidity and did not claim any evidence found using another measure, such as the short-term asset ratio used by the commenter, would produce the same result. More specifically, while funds may not sell their most liquid investments (which would be reflected in the short-term asset ratio used by the commenter), they could still be disproportionately selling their more liquid investments.

With respect to the liquidity measure used in the DERA Study, the commenter points out that it only uses a single measure of market liquidity (Amihud illiquidity) and claims that the measure is not sufficient to support the interpretations the proposal draws from the study.[1162] We acknowledge that the use of alternative measures could alter some of the results and interpretations in the DERA Study, but also emphasize that the DERA Study was intended to generally inform the Commission about the current state of fund liquidity, not to justify each policy choice made in the rule.

The commenter stated that the academic studies used in support of the DERA Study and the proposal are either (1) theoretical and ignore important institutional details or (2) based on empirical fund-level results which by their design cannot provide any commentary on market-wide concerns. With respect to the theoretical study cited in the proposal, it shows one mechanism by which mutual fund shareholders may have a first-mover incentive using a simplified model of the world for tractability; it is possible that in a model which captures more institutional details as proposed by the commenter—taxes, longer investor horizons, and reinvestment risk—this incentive is reduced or eliminated, but we are not aware of any other studies that reach such a conclusion. With respect to any empirical studies, the primary goal of the rule is to improve the fund-level management of liquidity and redemptions, which makes the cited fund-level academic studies relevant for the discussion. The commenter also points out that one of the empirical studies (Coval and Stafford), which provides evidence of negative price pressure due to forced selling by mutual funds, also states that the ex-ante probability of an equity mutual fund being affected by this risk is small because less than one percent of stocks are affected in a given quarter. The proposal did not claim that forced selling by mutual funds was a pervasive phenomenon, but did highlight that it is a possible risk that funds and their shareholders face.

2. Disclosure and Reporting Requirements Regarding Liquidity Risk and Liquidity Risk Management

a. Disclosure and Reporting Requirements

We are adopting amendments to Form N–1A as well as adopting new items to Form N–PORT, Form N–CEN, and adopting Form N–LIQUID, to enhance fund disclosure and reporting regarding liquidity and redemption practices. Specifically, amendments to Form N–1A will require a fund to disclose: (i) The number of days in which the fund typically expects to pay redemption proceeds to redeeming shareholders[1163] and (ii) the methods the fund typically expects to use to meet redemption requests in stressed and non-stressed market conditions.[1164]

New items on Form N–PORT will require a fund to confidentially disclose monthly: (i) The fund's highly liquid investment minimum and the number of days a fund's holdings in assets that are highly liquid investments fell below that minimum during a given reporting period;[1165] (ii) the liquidity classification of each investment as determined pursuant to rule 22e–4(b)(2)(i) including the determination of whether the investment qualifies as an illiquid investment, and (iii) the percentage of the fund's highly liquid investments that the fund has segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions in each of the other liquidity classification categories.[1166] Once per quarter, funds will be required to publicly disclose (with a 60-day delay): (i) The aggregated percentage of their portfolios invested in each of the four liquidity classification categories, but funds will not be required to publicly disclose the liquidity classification of each individual position;[1167] and (ii) the percentage of the fund's highly liquid investments that it has segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions in each of other liquidity classification categories.[1168]

New items on Form N–CEN will require a fund to disclose certain information regarding the use of committed lines of credit and interfund borrowing and lending.[1169] We have also adopted a new item on Form N–CEN that will require an ETF to report whether it qualifies as an In-Kind ETF.[1170]

The final form amendments differ from the proposal in several ways that may have potential economic consequences. In response to commenters' suggestions, the rule does not require funds to file credit agreements as part of Form N–1A. While Form N–PORT requires funds to report position-level liquidity classifications to the Commission, these classifications will not be publicly released. Instead, a fund will only be required to publicly disclose the aggregate percentage of the fund's holdings invested in each of the four liquidity classification categories and the percentage in each of the four liquidity classification categories of the fund's highly liquid investments that are segregated to cover derivatives transactions. The adopted rule also incorporates commenters' suggestions that the Commission be notified more quickly if a fund's assets that are illiquid investments exceed 15% of its net assets by requiring funds to file Form N–LIQUID indicating such a breach immediately after it occurs. With respect to the highly liquid investment minimum, a fund is required to report any decline below the minimum that lasts more than 7 consecutive calendar days to the Commission by filing Form N–LIQUID, whereas the proposal would have required that a fund not purchase

[1162] ICI Comment Letter II.

[1163] Item 11(c)(7) of Form N–1A.

[1164] Item 11(c)(8) of Form N–1A.

[1165] Item B.7 of Form N–PORT.

[1166] Item C.7 of Form N–PORT.

[1167] Item B.8 of Form N–PORT.

[1168] Item B.8.b of Form N–PORT.

[1169] Item C.20 of Form N–CEN.

[1170] Item E.5 of Form N–CEN.

less liquid investments while below its minimum. Any significant economic effects of these changes are discussed below.

b. Benefits

The disclosure and reporting requirements will promote investor protection by improving the availability of information regarding funds' liquidity risks and risk management practices, as well as funds' redemption practices. As discussed above, funds' disclosures to shareholders regarding their redemption practices are currently varied in content and comprehensiveness.[1171] To the extent that the requirement for funds to disclose the number of days in which the fund will pay redemption proceeds to redeeming shareholders fosters competition among funds to minimize the timing of redemptions, and assuming funds are able to meet redemptions in the time advertised, such competition could potentially be to the benefit of investors. Relative to the proposal, final Form N–1A requires that funds disclose estimated payment times for each payment method, which should reduce any potential investor confusion associated with the complexity of estimates based on funds' distribution channels under the proposal.[1172]

While some funds voluntarily include disclosure regarding fund limitations on illiquid asset holdings that track the 15% guideline, a fund is not currently required to disclose information about the liquidity of its portfolio investments. In light of the relatively few disclosure requirements regarding funds' liquidity risks, liquidity risk management practices, and redemption practices, as well as the current inconsistency in funds' liquidity-related disclosures, we believe that the disclosure and reporting requirements would increase shareholders' and the Commission's understanding of particular funds' liquidity-related risks and redemption policies. This in turn should assist investors in making investment choices that better match their risk tolerances.

We note that, while Form N–PORT and Form N–CEN are designed primarily to assist the Commission and its staff, we believe that the information in these forms (including the liquidity-related information to be included in these forms) also will be valuable to investors and other potential users.[1173] In particular, we believe that both sophisticated institutional investors and third-party users that provide services to retail investors may find the publically disclosed liquidity-related information to be useful. And we believe that individual investors could benefit indirectly from the information collected on reports on Form N–PORT through analyses prepared by third-party service providers.

The liquidity-related information that funds will be required to provide on Form N–PORT and Form N–CEN will enhance investor protection by improving the Commission's ability to monitor funds' liquidity using relevant and targeted data. This monitoring will permit us to analyze liquidity trends in individual funds, and, to the extent that liquidity profiles are comparable across funds, among certain types of funds and the fund industry as a whole, as well as to better understand funds' liquidity risk management practices. As discussed in our release adopting rules and forms to modernize investment company reporting, the information we receive on these reports will facilitate the oversight of funds and will assist the Commission, as the primary regulator of such funds, to better effectuate its mission to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation.[1174] Some commenters supported the reporting of asset-level liquidity classifications if such information was only provided to the Commission (*i.e.,* made non-public),[1175] although some did object to the disclosure regardless of whether or not it was made public.[1176]

Form N–LIQUID will complement rule 22e–4's enhanced focus on the limits on illiquid investments and the highly liquid investment minimum discussed above by requiring reporting to the SEC every time: (1) A fund's assets that are illiquid investments exceed 15% of its net assets (as well as additional reporting when the fund's assets that are illiquid investments fall back to or below 15% of its net assets); and (2) a fund's investments in highly liquid investments that are assets fall below its highly liquid investment minimum for more than 7 consecutive calendar days. This enhanced reporting could produce significant benefits. For example, the SEC's market monitoring capacity could be enhanced, in that multiple close-in-time filings by similar types of funds may be an indication of market stress in a market segment. Similarly, multiple close-in-time filings by the same fund may be an indication that the fund is failing to adequately manage its liquidity.

Form N–PORT as adopted does not require that the asset-level liquidity classifications be publicly disclosed in order to address commenter concerns about the potential costs of such disclosure (which are discussed in the costs section below). This change reduces some of the proposal's potential public disclosure benefits. Under the proposal, investors—by their own efforts or via third-party products—could have compared how assets were classified according to different funds' subjective approaches and resolved discrepancies across funds to arrive at more directly comparable fund liquidity profiles. Under the form as adopted, a fund will publicly disclose a new aggregate liquidity profile by reporting the percentage of its portfolio assigned to each of the four liquidity classification categories on Form N–PORT. This will provide a useful snapshot of fund liquidity to investors and will increase the amount of information available to investors about fund liquidity, but this snapshot may not be as informative as liquidity profiles under the proposed rule. The final form requires funds to confidentially report their investment liquidity classifications to the Commission via Form N–PORT. This maintains a major benefit of the proposal, allowing the Commission to monitor funds' liquidity levels and take action when significant aberrations are discovered.

Similarly, the final form amendments do not require the public disclosure of a fund's highly liquid investment minimum in order to address commenter concerns, but it is not likely that this change will significantly reduce the benefits of reporting this minimum: The primary investor protection benefit of reporting the minimum via Form N–PORT is to encourage funds' holding of highly liquid investments that correspond to the liquidity risks of their strategies. By confidentially reporting the minimum, a fund will give the Commission the capability to monitor whether the minimum is an outlier relative to other funds with similar investment strategies. The oversight role of the fund's board under rule 22e–4 is yet another safeguard in this respect.

Finally, Form N–PORT's requirement that funds disclose the percentage of the fund's highly liquid investments that it

[1171] *See supra* section III.G.1.a.

[1172] *See* Fidelity Comment Letter.

[1173] *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1174] See id.

[1175] *See* CFA Comment Letter; Dechert Comment Letter; State Street Comment Letter; Interactive Data Comment Letter; Nuveen Comment Letter; Oppenheimer Comment Letter; Charles Schwab Comment Letter; T. Rowe Comment Letter; Voya Comment Letter; Wellington Comment Letter.

[1176] *See* Federated Comment Letter; Fidelity Comment Letter; Invesco Comment Letter; SIFMA Comment Letter I.

has segregated to cover or pledged to satisfy margin requirements in connection with derivatives transactions that are classified as moderately liquid investments, less liquid investments, and illiquid investments, should more accurately reflect the amount of highly liquid investments that are available to manage a fund's liquidity risk. For example, without such a disclosure, investors might assume a fund whose highly liquid investments are all segregated to cover derivatives positions that are not highly liquid is better prepared to handle redemption requests than it actually is.

Because we cannot predict the extent to which the requirements will enhance investors' awareness of funds' portfolio liquidity and liquidity risk, influence investors' investments in certain funds, or increase the Commission's ability to protect investors, we are unable to quantify the potential benefits discussed in this section.

c. Costs

Funds will incur one-time and ongoing annual costs to comply with the disclosure and reporting requirements regarding liquidity and shareholder redemption practices. Commenters' responses to the estimates of these costs are discussed in the PRA discussion below, and we have updated all estimates in this section to reflect changes in the PRA.[1177]

We estimate that the one-time costs to comply with the amendments to Form N–1A will be approximately $324 per fund (plus printing costs).[1178] We estimate that each fund will incur an ongoing cost associated with compliance with the amendments to Form N–1A of approximately $81 each year to review and update the disclosure regarding redemptions.

The amendments to Form N–PORT will require funds to report on Form N–PORT the liquidity classification of each portfolio investment, and we estimate that the average one-time compliance costs associated with this reporting will be $15,576 per fund.[1179] Furthermore, we estimate that 9,347 funds will be required to file, on a monthly basis, additional information on Form N–PORT as a result of the amendments.[1180] Assuming that 35% of funds (3,271 funds) will choose to license a software solution to file reports on Form N–PORT in house,[1181] we estimate an upper bound on the initial annual costs to file the additional information associated with the amendments for funds choosing this option of $783 per fund[1182] with annual ongoing costs of $261 per fund.[1183] We further assume that 65% of funds (6,076 funds) will choose to retain a third-party service provider to provide data aggregation and validation services as part of the preparation and filing of reports on Form N–PORT,[1184] and we estimate an upper bound on the initial costs to file the additional information associated with the amendments for funds choosing this option of $1,044 per fund[1185] with annual ongoing costs of $131 per fund.[1186]

Likewise, compliance with the amendments to Form N–CEN will involve ongoing costs as well as one-time costs. We estimate that 10,633 funds will be required to file responses on Form N–CEN as a result of the amendments to the form. We estimate that the one-time and ongoing annual compliance costs associated with providing additional responses to Form N–CEN as a result of the amendments will be approximately $162 per fund.[1187]

Based on these estimates, staff further estimates that the total one-time costs to comply with the disclosure and reporting requirements will be approximately $55 million for all funds that would file reports on Form N–PORT in house[1188] and approximately

[1177] *See infra* section V.

[1178] This estimate is based on the following calculation: 1 (1 hour to update registration statement disclosure about redemption procedures) × $324 (blended rate for a compliance attorney ($340) and a senior programmer ($308)) = $324. This figure incorporates the costs we estimated for each fund to update its registration statement to include the required disclosure about: (i) The number of days in which the fund will pay redemption proceeds to redeeming shareholders; and (ii) the methods the fund uses to meet redemption requests in stressed and non-stressed market conditions. The costs associated with these activities are all paperwork-related costs and are discussed in more detail *infra* at section V.F.

[1179] This estimate is based on the following calculation: (i) Project planning and systems design (24 hours × $264 (hourly rate for a senior systems analyst) = $6,336) and (ii) systems modification integration, testing, installation and deployment (30 hours × $308 (hourly rate for a senior programmer) = $9,240). $6,336 + $9,240 = $15,576. Estimates for drafting, integrating, implementing policies and procedures are addressed in the discussion of rule 22e–4. This figure incorporates the costs that we estimated associated with preparing the section of the fund's report on Form N–PORT that will incorporate the information that will be required under Item C.7. The costs associated with these activities are all paperwork-related costs and are discussed in more detail *infra* at section V.E. As discussed in section V.E *infra,* we believe that any external annual costs associated with filing Form N–PORT will be only incrementally affected by compliance with Item C.7 of Form N–PORT, and thus Item C.7 does not affect our previous estimates of these costs.

[1180] There were 10,633 open-end funds (excluding money market funds, and including ETFs) as of the end of 2015. *See* 2016 ICI Fact Book, *supra* footnote 11, at 22, 176, 183. As discussed in note 1253, infra, we assume that 75% of ETFs, or 1,196 ETFs, will identify as In-Kind ETFs, which are exempt from the classification requirement, thereby reducing the total number of funds filing classification information to 9,347.

[1181] This assumption tracks the assumption made in the Investment Company Reporting Modernization Adopting Release that 35% of funds will choose to license a software solution to file reports on Form N–PORT. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1182] This estimate is based upon the following calculations: $783 in internal costs = ($783 = 3 hours × $261 (blended hourly rate for senior programmer ($308), senior database administrator ($312), financial reporting manager ($266), senior accountant ($192), intermediate accountant ($157), senior portfolio manager ($306), and compliance manager ($283)). We do not anticipate any change to external annual costs as a result of the amendments. *See infra* at section V.E. The hourly wage figures in this and subsequent footnotes are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

[1183] This estimate is based upon the following calculations: $261 in internal costs ($261 = 1 hour × $261 (blended hourly rate for senior programmer ($308), senior database administrator ($312), financial reporting manager ($266), senior accountant ($192), intermediate accountant ($157), senior portfolio manager ($306), and compliance manager ($283)). We do not anticipate any change to external annual costs as a result of the amendments. *See infra* at section V.E.

[1184] This assumption tracks the assumptions made in the Investment Company Reporting Modernization Adopting Release that 65% of funds will choose to retain a third-party service provider to provide data aggregation and validation services as part of the preparation and filing of reports on Form N–PORT. *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1185] This estimate is based upon the following calculations: $1,044 in internal costs ($1,044 = 4 hours × $261 (blended hourly rate for senior programmer ($308), senior database administrator ($312), financial reporting manager ($266), senior accountant ($192), intermediate accountant ($157), senior portfolio manager ($306), and compliance manager ($283)). We do not anticipate any change to external annual costs as a result of the amendments.

[1186] This estimate is based upon the following calculations: $130.5 in internal costs ($130.5 = (0.5 hours × $261 (blended hourly rate for senior programmer ($308), senior database administrator ($312), financial reporting manager ($266), senior accountant ($192), intermediate accountant ($157), senior portfolio manager ($306), and compliance manager ($283)). We do not anticipate any change to external annual costs as a result of the amendments.

[1187] This estimate is based on the following calculation: 0.5 hour × $324 (blended hourly rate for a compliance attorney ($340) and a senior programmer ($308)) = $162. This figure incorporates the costs that we estimated associated with preparing the section of the fund's report on Form N–CEN that will incorporate the information that will be required under Item C.20. We do not estimate any additional costs in connection with proposed Item E.5 of Form N–CEN because the new item only requires a yes or no response. We do not estimate any change to the external costs associated with Form N–CEN. The costs associated with these activities are all paperwork-related costs and are discussed in more detail *infra* at section V.E.

[1188] This estimate assumes that 35% of funds (3,271 funds) would choose to file reports on

$103 million for all funds that will use a third-party service provider to prepare and file reports on Form N–PORT.[1189] In addition, staff estimates that the total ongoing annual costs associated with the disclosure and reporting requirements would be approximately $1.6 million for all funds that file reports on Form N–PORT in house[1190] and approximately $2.3 million for all funds that use a third-party service provider to prepare and file reports on Form N–PORT.[1191]

Commenters expressed concern that it was not appropriate to require public disclosure of liquidity classifications by position via Form N–PORT, arguing that reporting position-level liquidity classifications creates significant costs which outweigh the potential benefits. For example, they suggested this disclosure could create potential litigation exposures, create investor confusion surrounding the perceived precision of the classifications, stifle innovation in liquidity risk management, or facilitate predatory trading and/or first-mover incentives, particularly during times of stress.[1192] We agree that funds could have encountered costs related to the above concerns if they were required to follow the disclosure regime contemplated in the original proposal. While investors already have access to fund portfolio positions, to the extent that position-level liquidity classifications could have been valuable to professional traders, predatory trading opportunities could have increased under the proposal. The final form mitigates these costs by requiring that a fund's most competitively-sensitive information—its individual position liquidity classifications—be filed confidentially with the Commission.

The costs of the adopted form amendments differ from the proposal in several ways. First, as discussed above, the Form N–PORT only requires that funds publicly disclose an aggregate liquidity profile, which should significantly mitigate many of the potential costs associated with the potential front running of mutual funds by sophisticated investors. Second, Form N–PORT requires a fund to disclose the percentage of the fund's highly liquid investments that it has segregated to cover or pledged to satisfy margin requirements in connection with derivatives transactions that are classified as moderately liquid investments, less liquid investments, and illiquid investments. By contrast, the proposed rules required a fund to pair each segregated asset with the derivative it was covering. The final rule's approach should lower costs relative to the proposal. We also are not requiring funds to file credit agreements as exhibits to Form N–1A. Many commenters objected to the proposed requirement to file line of credit agreements[1193] with some arguing that such filings would be unnecessary because lines of credit are often already disclosed under existing requirements of Form N–1A, in a fund's statement of additional information, in footnotes to fund financial statements, and potentially in Form N–CEN.[1194] In addition, commenters stated that public disclosure of line of credit agreements could (1) weaken their ability to negotiate credit terms;[1195] (2) make public proprietary and competitive information;[1196] and (3) discourage lending banks from granting certain lending terms to funds (out of a concern that terms granted would become standard in other lending agreements).[1197] Removing the requirement to file credit agreements as exhibits to Form N–1A should, if anything, lead to a reduction in the costs associated with filing that form, vis-à-vis the proposed rule.

The requirement to file Form N–LIQUID in three circumstances—if more than 15% of a fund's net assets are, or become, illiquid investments that are assets; if the fund's illiquid investments that are assets previously exceeded 15% of net assets and the fund determines that its illiquid investments that are assets have changed to be less than or equal to 15% of net assets; or if a fund's holdings in highly liquid investments that are assets fall below the fund's highly liquid investment minimum for more than 7 consecutive calendar days—may impose small incremental costs on funds. The adopted rule's liquidity risk management framework should help encourage funds to avoid exceeding the 15% illiquid investment limit, but in cases where they must file Form N–LIQUID, there will be incidental costs associated with filing the form itself. There will be similar incidental costs associated with filing Form N–LIQUID should a fund breach its highly liquid investment minimum for more than 7 consecutive calendar days. We estimate these costs as $1,745 per filing, and estimate the total number of filings to be roughly 90 per year, for an aggregate cost of $157,050.[1198] Finally, any potential indirect costs associated with filing the form, such as spillover effects or investor flight due to a breach, should be limited because Form N–LIQUID filings will not be publicly disclosed. Because Form N–LIQUID filings will be triggered by events that are part of a fund's periodic review of its investment classifications under rule 22e–4, the monitoring costs associated with Form N–LIQUID are included in our estimates of the compliance costs for rule 22e–4 above.

d. Effects on Efficiency, Competition, and Capital Formation

We believe the final rules' disclosure requirements could increase informational efficiency by providing additional information about the aggregate liquidity profile of funds' portfolios to investors and third-party service providers. To the extent that aggregate liquidity profiles—the percentages a fund holds in each of the four liquidity classification categories—are comparable across funds, this could assist investors in evaluating the risks associated with certain funds, which could increase allocative efficiency by assisting investors in making more informed investment choices that better match their risk tolerances. However, because each fund has discretion in how it defines both the asset type and liquidity classification of its portfolio positions, the publicly disclosed aggregation of these classifications may not be directly comparable across funds; in this case, allocative efficiency may not be enhanced, and, if fund liquidity profiles are misinterpreted as being comparable, efficiency could be reduced. Enhanced disclosure regarding funds' liquidity and liquidity risk

proposed Form N–PORT in house (*see infra* section V.D) and is based on the following calculation: 3,271 funds × $16,845 ($324 + $15,576 + $783 + $162) = $55,099,995.

1189 This estimate assumes that 65% of funds (6,076) would choose to file reports on proposed Form N–PORT with the assistance of third-party service providers (*see infra* section V.D) and is based on the following calculation: 6,076 funds × $17,106 ($324 + $15,576 + $1,044 + $ 162) = $103,850,526.

1190 This estimate is based on the following calculation: 3,271 funds × $502.63 ($79.63 + $261 + $162) = $1,644,102.73.

1191 This estimate is based on the following calculation: 6,071 funds × $372.63 ($79.63 + $131 + $162) = $2,262,236.73

1192 *See, e.g.,* Federated Comment Letter; Dodge & Cox Comment Letter; PIMCO Comment Letter; Invesco Comment Letter.

1193 Fidelity Comment Letter; CRMC Comment Letter; Invesco Comment Letter; Oppenheimer Comment Letter; T. Rowe Comment Letter; Voya Comment Letter.

1194 Oppenheimer Comment Letter; T. Rowe Comment Letter; Voya Comment Letter.

1195 Oppenheimer Comment Letter; Fidelity Comment Letter.

1196 CRMC Comment Letter; Invesco Comment Letter; Oppenheimer Comment Letter; Voya Comment Letter.

1197 Fidelity Comment Letter.

1198 *See infra* footnotes 1280–1287 and surrounding discussion for more details on these estimates.

management practices could positively affect competition by permitting investors to choose whether to invest in certain funds based on this information. However, if investors were to move their assets among funds as a result of the disclosure requirements (for example, if the disclosure made clear that a certain fund was able to generate higher returns than its peers only because of high exposures to relatively less liquid positions, which then led investors with limited risk tolerance to move assets out of this fund), this could negatively affect the competitive stance of certain funds.

Increased investor awareness of funds' portfolio liquidity and liquidity risk management practices also could promote capital formation if investors find certain funds' liquidity profiles or risk management practices, or both, attractive, and this awareness promotes increased investment in these funds (assuming these investments consist of assets that were not otherwise invested in the capital markets) and in turn in the assets in which the funds invest. On the other hand, disclosure which reveals liquidity risk could negatively impact capital formation if the disclosure causes investors to perceive that some funds pose too great an investment risk. Investors could consequently decide not to invest in these funds or to decrease their investment in these funds. If these foregone investments are not reinvested elsewhere in capital markets, capital formation would be negatively affected. Conversely, to the extent that investors assume that funds investing in relatively less liquid investments could obtain a liquidity risk premium in the form of higher returns over some period of time, the potential for higher returns could draw certain investors to funds investing in relatively less liquid asset classes, which could positively affect capital formation. If investors shift their invested investments between funds based on liquidity, there could be capital formation effects stemming from increased (or decreased) investment in the funds' portfolio investments, even if the total capital invested in funds remains constant. For example, if fund investors move assets from an investment strategy that entails relatively high liquidity risk to one whose investment strategy involves relatively low liquidity risk, less liquid portfolio asset classes could experience an adverse impact on capital formation while the more liquid portfolio asset classes could experience a positive impact on capital formation, although the total capital invested in funds would remain constant.

Relative to the proposal, the final disclosure and reporting requirements do not significantly alter our assessment of the requirements' impact on efficiency, competition, and capital formation. The exclusion of individual portfolio position classification from public disclosure requirements reduces the potential efficiency and capital formation gains that might accrue from better informed investors: position-level data could have been used (directly or via third-party vendor applications) to construct a detailed breakdown of a fund's liquidity profile, but any public analysis is now limited to an aggregate liquidity profile for each fund to address the concerns of commenters regarding the potential costs of disclosing position-level liquidity data publicly. At the same time, to the extent position-level liquidity classifications could be valuable to professional traders, requiring less public disclosure may reduce any potential inefficiencies that could have resulted from predatory trading or front running associated with the disclosure of individual investment classifications.

In addition, while we are also imposing a new filing requirement via Form N–LIQUID, this form will be filed confidentially with the Commission and will only be necessary when a fund breaches the 15% illiquid investment limit, returns to compliance with the 15% illiquid investment limit, or breaches its highly liquid investment minimum for longer than 7 consecutive calendar days. Requiring notice to the Commission of these events may itself provide an incentive for funds to manage their liquidity in such a way as to avoid triggering the reporting obligation; where a reporting obligation is triggered, Form N–LIQUID will provide the Commission with timely information that may prompt the Commission to inquire further into the circumstances that gave rise to the requirement to file Form N–LIQUID. As discussed above, for example, if a number of similarly-situated funds each file a report in close temporal proximity to one another, or if a single fund files a series of reports, such information is likely to be of value to the Commission in taking appropriate action to protect investors, if required. If Form N–LIQUID provides an early warning of potential fund liquidity issues that is sufficiently timely and clear to permit Commission involvement when needed to respond to the potential for disruptive fund closures and associated negative consequences, including fund shareholder dilution and any spillover effects, Form N–LIQUID could enhance efficiency to the extent that negative price pressure on investments due to fire sales is avoided and, to the extent mutual fund investors associate this with lower liquidity risk in the mutual fund industry, Form N–LIQUID may promote capital formation.

e. Reasonable Alternatives

The following discussion addresses significant alternatives to the disclosure and reporting requirements. More detailed alternatives to the individual elements of the requirements are discussed in detail above.[1199]

The Commission considered requiring each fund to disclose information about the liquidity of its portfolio positions in the fund's prospectus or on the fund's Web site, in addition to in reports filed on Form N–PORT. For example, we could have required a fund to disclose its highly liquid investment minimum, or the percentage of the fund's portfolio invested in each of the liquidity categories specified under rule 22e–4(b)(2)(i), in its prospectus or on its Web site. This additional disclosure could further increase transparency with respect to funds' portfolio liquidity and liquidity-related risks. But this additional disclosure could inappropriately emphasize risks relating to a fund's portfolio liquidity over other significant risks associated with an investment in the fund. In addition, funds are not precluded from voluntarily disclosing any of the information contained in the rule's required disclosure forms on their Web sites, so it is likely more efficient to allow investor demand for this information to drive whether or not funds publicly disclose this information of their own volition.

Conversely, the Commission also considered both limiting and expanding the enhancements to funds' liquidity-related disclosures on Form N–PORT. As discussed above, we are sensitive to the possibility that any amendments to the form could facilitate front-running, predatory trading, and other activities that could be detrimental to a fund and its investors. We likewise carefully considered costs and benefits with respect to the new liquidity-related disclosures required under Form N–PORT and concluded that these disclosures appropriately balance related costs with the benefits that could arise from the ability of the Commission, and members of the public, to monitor and analyze the liquidity of individual funds, as well as liquidity trends within the fund industry.

[1199] *See supra* sections III.G.1.a, III.G.1.b, III.G.2.d, and III.G.3.c.

In response to the proposal, which would have required that certain position-level data be reported publicly (albeit with a 60 day delay) commenters suggested that the Commission require (1) no reporting of any kind, or (2) no public disclosure, in light of potential negative competitive effects of public reporting and the limited benefits of stale data in understanding current fund liquidity levels.[1200] The Commission considered these alternatives, but rejected the first alternative because it would have provided no useful information to investors to permit them to better understand their funds' liquidity profiles, and no useful information to the Commission to enable the Commission to better monitor funds' liquidity. With regard to the second alternative, providing no information to investors would have the same defect of not permitting investors the opportunity to assess and make investment decisions based on better information about funds' liquidity. However, recognizing commenters' concern about voluminous, stale data, the final form provides investors with aggregated information—the percentage of the funds' portfolio falling into each of the four liquidity categories—and reserves the more detailed data for confidential submission to the Commission. We believe the approach in the final form strikes an appropriate balance, by mitigating many of the concerns expressed by commenters while preserving significant benefits for investors (both directly, and through the Commission's improved ability to monitor funds).

V. Paperwork Reduction Act Analysis

A. Introduction

New rule 22e–4 contains ''collections of information'' within the meaning of the Paperwork Reduction Act of 1995 (''PRA'').[1201] In addition, the amendments to Form N–1A will impact the collections of information burden under those rules and form. The new reporting requirements on Form N–CEN and Form N–PORT will impact the collections of information burdens associated with these forms described in the Investment Company Reporting Modernization Adopting Release.[1202] New rule 30b1–10 and new Form N–LIQUID also contain a collection of information within the meaning of the PRA.[1203]

The titles for the existing collections of information are: ''Form N–1A under the Securities Act of 1933 and under the Investment Company Act of 1940, Registration Statement of Open-End Management Investment Companies'' (OMB Control No. 3235–0307). In the Investment Company Reporting Modernization Adopting Release, we submitted new collections of information for Form N–CEN and Form N–PORT.[1204] The titles for these new collections of information are: ''Form N–CEN Under the Investment Company Act, Annual Report for Registered Investment Companies'' and ''Form N–PORT Under the Investment Company Act, Monthly Portfolio Investments Report.''

We are submitting new collections of information for new rule 22e–4, new rule 30b1–10, and new Form N–LIQUID under the Investment Company Act of 1940. The titles for these new collections of information will be: ''Rule 22e–4 Under the Investment Company Act of 1940, Liquidity risk management programs,'' ''Rule 30b1–10 Under the Investment Company Act of 1940, Current report for open-end management investment companies,'' and ''Form N–LIQUID, Current Report, Open-end Management Investment Company Liquidity.'' The Commission is submitting these collections of information to the OMB for review in accordance with 44 U.S.C. 3507(d) and 5 CFR 1320.11. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid control number.

The Commission is adopting new rule 22e–4, new rule 30b1–10, new Form N–LIQUID, and amendments to Form N–1A. The Commission also is adopting new items to Form N–CEN and Form N–PORT. The new rules and amendments are designed to promote effective liquidity risk management throughout the open-end fund industry and enhance disclosure and Commission oversight of fund liquidity and shareholder redemption practices. We discuss below the collection of information burdens associated with these reforms. In the Proposing Release, the Commission solicited comment on the collection of information requirements and the accuracy of the Commission's statements in the Proposing Release.

B. Rule 22e–4

Rule 22e–4 requires a ''fund'' and an In-Kind ETF, each within the meaning of rule 22e–4,[1205] to establish a written liquidity risk management program that is reasonably designed to assess and manage the fund's or In-Kind ETF's liquidity risk. This program includes policies and procedures that incorporate certain program elements, including: (i) For funds, the classification of the liquidity of a fund's portfolio positions; (ii) for funds and In-Kind ETFs, the assessment, management, and periodic review of liquidity risk (with such review occurring no less frequently than annually); (iii) for funds that do not primarily hold assets that are highly liquid investments, the determination of and periodic review of the fund's highly liquid investment minimum and establishment of policies and procedures for responding to a shortfall of the fund's highly liquid investment minimum, which includes reporting to the fund's board of directors; and (iv) for funds and In-Kind ETFs, the establishment of policies and procedures regarding redemptions in kind, to the extent that the fund engages in or reserves the right to engage in redemptions in kind. The rule also requires board approval and oversight of a fund's or In-Kind ETF's liquidity risk management program and recordkeeping. Rule 22e–4 also requires a limited liquidity review, under which a UIT's principal underwriter or depositor determines, on or before the date of the initial deposit of portfolio securities into the UIT, that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues and retains a record of such determination for the life of the UIT and for five years thereafter.

The requirements under rule 22e–4 that a fund and In-Kind ETF adopt a written liquidity risk management program, report to the board, maintain a written record of how the highly liquid investment minimum was determined and written policies and procedures for responding to a shortfall of the fund's highly liquid investment

[1200] *See supra* section III.C.6.

[1201] 44 U.S.C. 3501 through 3521.

[1202] *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1203] *See* rule 30b1–10 requiring certain funds to file Form N–LIQUID.

[1204] *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1205] The term ''funds'' is defined under rule 22e–4(a)(4) to mean an open-end management investment company that is registered or required to be registered under section 8 of the Act and includes a separate series of such an investment company, *but does not include* a registered open-end management investment company that is regulated as a money market fund under § 270.2a–7 or an In-Kind ETF, as defined under rule 22e–4(a)(9).

minimum, which includes reporting to the fund's board of directors (for funds that do not primarily hold highly liquid investments), establish written policies and procedures regarding how the fund will engage in redemptions in kind, and retain certain other records are all collections of information under the PRA. In addition, the requirement under rule 22e–4 that the principal underwriter or depositor of a UIT assess the liquidity of the UIT on or before the date of the initial deposit of portfolio securities into the UIT and retain a record of such determination for the life of the UIT, and for five years thereafter, is also a collection of information under the PRA. The respondents to rule 22e–4 will be open-end management investment companies (including, under certain circumstances, In-Kind ETFs but excluding money market funds), and the principal underwriters or depositors of UITs under certain circumstances.

1. Preparation of Written Liquidity Risk Management Program

We believe that some open-end funds regularly monitor the liquidity of their portfolios as part of the portfolio management function, but they may not have written policies and procedures regarding liquidity management. Rule 22e–4 requires funds and In-Kind ETFs to have a written liquidity risk management program. We believe such a program will minimize dilution of shareholder interests by promoting stronger and more effective liquidity risk management across open-end funds and will reduce the risk that a fund or In-Kind ETF will be unable to meet redemption obligations.

In the Proposing Release, we estimated that funds within 867 fund complexes would be subject to rule 22e–4.[1206] Compliance with rule 22e–4 would have been mandatory for all such funds. We further estimated that a fund complex would incur a one-time average burden of 40 hours associated with documenting the liquidity risk management programs adopted by each fund within the complex. Under the proposal, rule 22e–4 would have required fund boards to approve the liquidity risk management program and any material changes to the program, and we estimated a one-time burden of nine hours per fund complex associated with fund boards' review and approval of the funds' liquidity risk management programs and preparation of board materials. Amortized over a 3-year period, we estimated this would be an annual burden per fund complex of about 16 hours. Accordingly, we estimated that the total burden for initial documentation and review of funds' written liquidity risk management program would be 42,483 hours.[1207] We also estimated that it would cost a fund complex approximately $38,791 to document, review and initially approve these policies and procedures, for a total cost of approximately $33,631,797.[1208]

We did not receive any comments on the estimated hour and costs burdens associated with the overall preparation of written liquidity risk management programs under rule 22e–4 discussed above. We did, however, receive comments on the costs associated with the classification of the liquidity of a fund's portfolio positions, which we address below in connection with Form N–PORT. The Commission has modified the estimated increase in annual burden hours and total time costs that will result from the new written liquidity risk management requirements of rule 22e–4 based on certain modifications made to rule 22e–4 and updates to the industry data figures that were utilized in the Proposing Release. Based upon our review of industry data, we estimate that funds within 873 fund complexes would be subject to rule 22e–4,[1209] updated from 867 in our proposal. Compliance with rule 22e–4 will be mandatory for all such funds and In-Kind ETFs, with certain program elements applicable to certain funds within a fund complex based upon whether the fund is an In-Kind ETF or does not primarily hold assets that are highly liquid investments, as noted above. We discuss mandatory compliance with rule 22e–4 with respect to principal underwriters and depositors of UITs in section V.B.5. below.

The Commission continues to estimate that a fund complex will incur a one-time average burden of 40 hours associated with documenting the liquidity risk management programs adopted by each fund within a fund complex. In light of the requirement that a fund subject to the highly liquid investment minimum requirement adopt and implement policies and procedures for responding to a shortfall of the fund's highly liquid investment minimum, and responding to any potential excesses of the 15% illiquid asset limit, both of which include reporting to the fund's board of directors, we estimate a one-time burden of 10 hours, rather than 9 hours, per fund complex associated with fund boards' review and approval of the funds' liquidity risk management programs and preparation of board materials. Amortized over a 3-year period, we estimate this will be an annual burden per fund complex of about 16.67 hours. Accordingly, we estimate that the total burden for initial documentation and review of funds' written liquidity risk management program will be 43,650 hours.[1210] We also estimate that it will cost a fund complex approximately $41,467.5 to document, review, and initially approve these policies and procedures, for a total cost of approximately $36,201,127.5.[1211]

2. Reporting Regarding the Highly Liquid Investment Minimum

Rule 22e–4 requires any fund that does not primarily hold assets that are highly liquid investments to determine

[1206] *See* Proposing Release, *supra* footnote 9, at n.819 and accompanying text. This estimate excluded ETFs and UITs. *See also* 2016 ICI Fact Book, *supra* footnote 11, at Fig. 1.8.

[1207] This estimate was based on the following calculation: (40 + 9) hours × 867 fund complexes = 42,483 hours.

[1208] These estimates were based on the following calculations: 20 hours × $301 (hourly rate for a senior portfolio manager) = $6,020; 20 hours × $455.5 (blended hourly rate for assistant general counsel ($426) and chief compliance officer ($485)) = $9,110; 5 hours × $4,465 (hourly rate for a board of 8 directors) = $22,325; 4 hours (for a fund attorney's time to prepare materials for the board's determinations) × $334 (hourly rate for a compliance attorney) = $1,336. $6,020 + $9,110 + $22,325 + $1,336 = $38,791; $38,791 × 867 fund complexes = $33,631,797. The hourly wages used are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1800-hour work-year and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead. The staff previously estimated in 2009 that the average cost of board of director time was $4,000 per hour for the board as a whole, based on information received from funds and their counsel. Adjusting for inflation, the staff estimates that the current average cost of board of director time is approximately $4,465.

[1209] *See* 2016 ICI Fact Book, *supra* footnote 11, at Fig. 1.8.

[1210] This estimate is based on the following calculation: (40 +10) hours × 873 fund complexes = 43,650 hours.

[1211] These estimates are based on the following calculations: 20 hours × $306 (hourly rate for a senior portfolio manager) = $6,120; 20 hours × $463 (blended hourly rate for assistant general counsel ($433) and chief compliance officer ($493)) = $9,260; 5.5 hours × $4,465 (hourly rate for a board of 8 directors) = $24,557.5; 4.5 hours (for a fund attorney's time to prepare materials for the board's determinations) × $340 (hourly rate for a compliance attorney) = $1,530. $6,120 + $9,260 + $24,557.5 + $1,530 = $41,467.5; $41,467.5 × 873 fund complexes = $36,201,127.5. The hourly wages used are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead. The staff previously estimated in 2009 that the average cost of board of director time was $4,000 per hour for the board as a whole, based on information received from funds and their counsel. Adjusting for inflation, the staff estimates that the current average cost of board of director time is approximately $4,465.

a highly liquid investment minimum for the fund, which must be reviewed at least annually, and may not be changed during any period of time that a fund's assets that are highly liquid investments are below the determined minimum without approval from the fund's board of directors.[1212] The fund's investment adviser or officers designated to administer the liquidity risk management program must provide a written report to the fund's board at least annually that describes a review of the adequacy and effectiveness of the fund's liquidity risk management program, including, if applicable, the operation of the highly liquid investment minimum.[1213] In addition, the fund must adopt and implement policies and procedures for responding to a shortfall of the fund's assets that are highly liquid investments below its highly liquid investment minimum, which must include reporting to the fund's board of directors with a brief explanation of the causes of the shortfall, the extent of the shortfall, and any actions taken in response, and, if the shortfall lasts more than 7 consecutive calendar days, an explanation of how the fund plans to come back into compliance with its minimum within a reasonable period of time.[1214]

Similar to the highly liquid investment minimum, in the Proposing Release, we proposed that funds be required to establish a three-day liquid asset minimum as part of a fund's liquidity risk management program, subject to board review, and we estimated that, for each fund complex, compliance with this reporting requirement would entail: (i) Five hours of portfolio management time, (ii) five hours of compliance time, (iii) five hours of professional legal time and (iv) 2.5 hours of support staff time, requiring an additional 17.5 burden hours at a time cost of approximately $5,193 per fund complex to draft the required report to the board.[1215] We estimated that the total burden for preparation of the board report would be 15,173 hours, at an aggregate cost of $4,502,331.[1216]

We received several comments addressing, in general, the potential costs associated with a fund establishing and implementing a liquid asset minimum. To minimize the costs of implementing a liquid asset minimum, one commenter recommended that funds that have demonstrated a history of investing in only three-day liquid assets be excluded from the proposed three-day liquid asset minimum requirements and thus not incur the costs of related board reporting requirements.[1217] Other commenters characterized the program requirements under the proposal as a one-size-fits-all approach to liquidity risk management and expressed the belief that such requirements were expensive and unsuitable for many funds.[1218]

As discussed above, the Commission has modified the proposed three-day liquid asset minimum requirement to a highly liquid investment minimum requirement that is tailored to apply only to funds that do not primarily hold highly liquid investments, thereby potentially reducing the number of funds required to establish, maintain, and report a highly liquid investment minimum. In addition, the final rule retains a role for the board in overseeing the fund's liquidity risk management program, but eliminates certain of the more specific and detailed approval requirements originally proposed.[1219] Unlike the proposal, however, rule 22e–4 requires a fund that is subject to the highly liquid investment minimum requirement to also adopt and implement policies and procedures to respond to a shortfall of assets that are highly liquid investments below the fund's highly liquid investment minimum, which includes reporting to the fund's board of directors.

In light of these modifications, we estimate that the burdens associated with board reporting will decrease overall in comparison to the proposal due to the elimination of certain board oversight requirements originally proposed and the potential reduction in the number of funds that would require board oversight of a highly liquid investment minimum. Therefore, we have modified the estimated annual burden hours and total costs that will result from the highly liquid investment minimum requirement under rule 22e–4.[1220] We estimate that, for each fund complex, compliance with the reporting requirement would entail: (i) 4 Hours, rather than five hours, of portfolio management time; (ii) 4 hours, rather than five hours, of compliance time; (iii) 4 hours, rather than five hours, of professional legal time; and (iv) 2 hours, rather than 2.5 hours, of support staff time, requiring an additional 14 burden hours at a time cost of approximately $4,224 per fund complex to draft the required report to the board.[1221] We estimate that fund complexes will have at least one fund that will be subject to the highly liquid investment minimum requirement. Thus, we estimate that 873 fund complexes will be subject to this requirement under rule 22e–4 and that the total burden for preparation of the board report associated will be 12,222 hours, at an aggregate cost of $3,687,552.[1222]

3. Recordkeeping

Final rule 22e–4 requires a fund or In-Kind ETF to maintain a written copy of the policies and procedures adopted pursuant to its liquidity risk management program for five years in

[1212] *See* rule 22e–4(b)(1)(iii)(A).

[1213] *See* rule 22e–4(b)(3)(iii).

[1214] *See* rule 22e–4(b)(1)(iii)(A)(3).

[1215] This estimate was based on the following calculation: 5 hours × $301 (hourly rate for a senior portfolio manager) = $1,505; 5 hours × $283 (hourly rate for compliance manager) = $1,415; 5 hours × $426 (hourly rate for assistant general counsel) = $2,130; and 2.5 hours × $57 (hourly rate for general clerk) = $143. $1,505 + $1,415 + $2,130 + $143 = $5,193. The hourly wages used were from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified to account for an 1800-hour work-year and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead. The hourly wage used for the general clerk was from SIFMA's Office Salaries in the Securities Industry 2013, modified to account for an 1800-hour work-year and multiplied by 2.93 to account for bonuses, firm size, employee benefits, and overhead.

Because, under the proposal, each fund within a fund complex would be required to determine its own three-day liquid asset minimum, this estimate assumed that the report at issue would incorporate an assessment of the three-day liquid asset minimum for each fund within the fund complex.

[1216] These estimates were based on the following calculations: 867 fund complexes × 17.5 hours = 15,173 hours; and $5,193 × 867 fund complexes = $4,502,331.

[1217] *See* CFA Comment Letter.

[1218] *See, e.g.,* Dechert Comment Letter; Federated Comment Letter.

[1219] *See supra* section III.H.3.

[1220] Under the proposal, because each fund within a fund complex would have been required to determine its own three-day liquid asset minimum, the estimate under the proposal assumed that the report at issue would incorporate an assessment of the three-day liquid asset minimum for each fund within the fund complex. As adopted, rule 22e–4 only requires the assessment of the highly liquid investment minimum for funds that do not primarily hold assets that are highly liquid investments.

[1221] The estimate is based on the following calculation: 4 hours × $306 (hourly rate for a senior portfolio manager) = $1,224; 4 hours × $288 (hourly rate for compliance manager) = $1,152; 4 hours × $433 (hourly rate for assistant general counsel) = $1,732; and 2 hours × $58 (hourly rate for general clerk) = $116. $1,224 + $1,152 + $1,732 + $116 = $4,224. The hourly wages used are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead. The hourly wage used for the general clerk is from SIFMA's Office Salaries in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

[1222] These estimates are based on the following calculations: 873 fund complexes × 14 hours =12,222 hours; and $4,224 × 873 fund complexes = $3,687,552.

an easily accessible place.[1223] The rule also requires a fund to maintain copies of materials provided to the board in connection with its initial approval of the liquidity risk management program and any written reports provided to the board, for at least five years, the first two years in an easily accessible place.[1224] If applicable, a fund must also maintain a written record of how its highly liquid investment minimum and any adjustments to the minimum were determined, as well as any reports to the board regarding a shortfall in the fund's highly liquid investment minimum, for five years, the first two years in an easily accessible place.[1225] The retention of these records would be necessary to allow the staff during examinations of funds to determine whether a fund is in compliance with the liquidity risk management program requirements.

Under the proposal, the recordkeeping requirements were substantially similar to those being adopted. In the Proposing Release, we estimated that the burden to retain these records would be five hours per fund complex, with 2.5 hours spent by a general clerk and 2.5 hours spent by a senior computer operator, with an estimated time cost per fund complex of $361.[1226] We also estimated that the total burden for recordkeeping related to the liquidity risk management program would be 4,335 hours, at an aggregate cost of $312,987.[1227]

We did not receive any comments on the estimated hour and cost burdens associated with the recordkeeping requirements of rule 22e–4. The Commission has modified the estimated increase in annual burden hours and total time costs that will result from these requirements in light of modifications to change those subject to the requirements to funds and In-Kind ETFs and to require them to maintain reports to boards concerning a shortfall of the fund's highly liquid investment minimum and the new requirement to retain records submitted to the board related to shortfalls of the minimum. We believe that, on an annual basis, the burden to retain records in connection with rule 22e–4 will be four hours, rather than five hours per fund complex, with 2 hours, rather than 2.5 hours, spent by a general clerk, and 2 hours, rather than 2.5 hours, spent by a senior computer operator, with an estimated time cost per fund complex of $292, rather than $361, based on updated data concerning funds and fund personnel salaries.[1228] In addition, we estimate that the total burden for recordkeeping related to the liquidity risk management program requirement of rule 22e–4 will be 3,492 hours, rather than 4,335 hours, at an aggregate cost of $254,916, rather than $312,987.[1229]

4. Estimated Total Burden for Open-End Funds

Amortized over a three-year period, we estimate that the hour burdens and time costs associated with rule 22e–4 for open-end funds, including the burden associated with (1) funds' initial documentation and review of the required written liquidity risk management program, (2) reporting to a fund's board regarding the fund's highly liquid investment minimum, and (3) recordkeeping requirements will result in an average aggregate annual burden of 26,190 hours, rather than 28,611 hours as proposed, and average aggregate time costs of $14,780,326.5, rather than $14,431,215 as proposed.[1230] We continue to estimate that there are no external costs associated with this collection of information.

5. UIT Liquidity Determination

As discussed above, we recognize that UITs may in some circumstances be subject to liquidity risk (particularly where the UIT is not a pass-through vehicle and the sponsor does not maintain an active secondary market for UIT shares). We believe that UITs may not have written policies and procedures regarding liquidity management and are adopting a new requirement under rule 22e–4 with respect to UITs. On or before the date of initial deposit of portfolio securities into a registered UIT, the UIT's principal underwriter or depositor is required to determine that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues, and maintain a record of that determination for the life of the UIT and for five years thereafter. The retention of these records would be necessary to allow the staff during examinations to determine whether a UIT is in compliance with the liquidity risk assessment required under rule 22e–4. This assessment would occur on or before the initial deposit of portfolio securities of a new UIT and thus would only need to occur once. Maintenance of the records would be required for the life of the UIT and for five years thereafter.

We estimate that 1615 newly registered UITs will be subject to the UIT liquidity determination requirement under rule 22e–4 each year.[1231] Compliance with rule 22e–4(c) will be mandatory for all principal underwriters or depositors of such UITs. We estimate that the principal underwriter or depositor of a UIT will incur a one-time average burden of 10 hours to document its determination that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues. Amortized over a 3 year period, we estimate this would be an annual burden per UIT of about 3 hours. Accordingly, we estimate that the total burden for the initial documentation and review of funds' written liquidity risk management program would be 16,150 hours.[1232] We also estimate that it will cost the principal underwriter or depositor of a UIT approximately $2,466 to perform and document this review, for a total cost of approximately $3,982,590.[1233]

We estimate that the burden to retain these records will be two hours per UIT, with 1 hour spent by a general clerk and 1 hour spent by a senior computer operator, with an estimated time cost

[1223] *See* rule 22e–4(b)(4)(i).

[1224] *See* rule 22e–4(b)(4)(ii).

[1225] *See* rule 22e–4(b)(4)(iii).

[1226] This estimate was based on the following calculations: 2.5 hours × $57 (hourly rate for a general clerk) = $143; 2.5 hours × $87 (hour rate for a senior computer operator) = $218. $143 + $218 = $361.

[1227] This estimate was based on the following calculations: 867 fund complexes × 5 hours = 4,335 hours. 867 fund complexes × $361 = $312,987.

[1228] This estimate is based on the following calculations: 2 hours × $58 (hourly rate for a general clerk) = $116; 2 hours × $88 (hour rate for a senior computer operator) = $176. $116 + $176 = $292.

[1229] This estimate is based on the following calculations: 873 fund complexes × 4 hours = 3,492 hours. 873 fund complexes × $292 = $254,916.

[1230] These estimates are based on the following calculations: 43,650 hours (year 1) + (2 × 12,222 hours) (years 2 and 3) + (3 × 3,492 hours) (years 1, 2 and 3) ÷ 3 = 26,190 hours; $36,201,127.5 (year 1) + (2 × $3,687,552) (years 2 and 3) + (3 × $254,916) (years 1, 2 and 3) ÷ 3 = $14,780,326.5.

[1231] This estimate is based upon staff review of new UIT registration statements and semi-annual reporting on Form N–SAR filed with the Commission and Monthly Unit Investment Trust Data released by the Investment Company Institute, *available at https://www.ici.org/research/stats*, for the months of January through December of 2015.

[1232] This estimate is based on the following calculation: 10 hours × 1615 new UITs = 16,150 hours.

[1233] These estimates are based on the following calculations: 5 hours × $308 (hourly rate for a senior programmer) = $1540; 2 hours × $463 (blended hourly rate for assistant general counsel ($433) and chief compliance officer ($493)) = $926. $1,540 + $926 = $2,466; $2,466 × 1615 estimated new UITs = $3,982,590. The hourly wages used are from SIFMA's Management & Professional Earnings in the Securities Industry 2013, modified by Commission staff to account for an 1800-hour work-year and inflation, and multiplied by 5.35 to account for bonuses, firm size, employee benefits, and overhead.

per UIT of $146.[1234] We also estimate that the total burden for recordkeeping related to the liquidity risk management program will be 3,230 hours, at an aggregate cost of $235,790.[1235] We estimate that there are no external costs associated with this collection of information.

C. Form N–PORT

Today, the Commission is adopting Form N–PORT, which will require funds to report information within thirty days after the end of each month about their monthly portfolio holdings to the Commission in a structured data format.[1236] Preparing a report on Form N–PORT is mandatory and a collection of information under the PRA, and the information required by Form N–PORT will be data-tagged in XML format. Except for certain reporting items specified in the form, responses to the reporting requirements will be kept confidential for reports filed with respect to the first two months of each quarter; the third month of the quarter will not be kept confidential, but made public sixty days after the quarter end.

In the Investment Company Reporting Modernization Adopting Release, we estimate that, for the 35% of funds that would file reports on Form N–PORT in house, the per fund average aggregate annual hour burden will be 144 hours per fund, and the average cost to license a third-party software solution will be $4,805 per fund per year.[1237] For the remaining 65% of funds that would retain the services of a third party to prepare and file reports on Form N–PORT on the fund's behalf, we estimate that the average aggregate annual hour burden will be 125 hours per fund, and each fund will pay an average fee of $11,440 per fund per year for the services of third-party service provider. In sum, we estimate that filing reports on Form N–PORT will impose an average total annual hour burden of 144 hours on applicable funds, and all applicable funds will incur on average, in the aggregate, external annual costs of $103,787,680, or $9,118 per fund.[1238]

Today, we are also adopting amendments to Form N–PORT concerning liquidity information that require a fund to report information about the fund's highly liquid investment minimum (if applicable),[1239] the liquidity classification for each portfolio investment among four liquidity categories (with the fourth category covering investments that qualify as ''illiquid investments'' under the 15% illiquid investment limit),[1240] certain information on the percentage of the fund's highly liquid investments that is segregated to cover, or pledged to satisfy margin requirements in connection with, fund's derivatives transactions in each of the other liquidity categories,[1241] and the aggregate percentage of the fund representing each of the four liquidity categories.[1242] Unlike the proposal, the amendments adopted today will not require funds to indicate the dollar amount attributable to different classifications for different portions within a given holding.[1243] We believe that requiring funds to report information about the liquidity of portfolio investments will enhance the Commission's ability to assess liquidity risk in the open-end fund industry and assist in our regulatory oversight efforts. Moreover, we believe that this information will help investors and other potential users of information on Form N–PORT better understand the liquidity risks in funds.

1. Liquidity Classification

Under rule 22e–4(b)(1)(ii), an open-end management investment company (other than a money market fund or an In-Kind ETF) is required as part of its liquidity risk management program to classify the liquidity of each of its portfolio investments (including each of the fund's derivatives transactions) as a highly liquid investment, moderately liquid investment, less liquid investment, or illiquid investment.

Under the proposal, all open-end funds would be required to classify portfolio assets under a days-to-cash framework and report such classifications on Form N–PORT.[1244] In the Proposing Release, we estimated that 8,734 funds would be required to file, on a monthly basis, additional information on Form N–PORT as a result of the proposed amendments to N–PORT to require funds provide additional liquidity information.[1245] We stated our expectation that funds would incur a one-time internal burden to initially classify a fund's portfolio securities and program existing systems to conduct the ongoing classifications and reviews required under the proposal for reporting purposes. We estimated that each fund would incur an average one-time burden of 54 hours at a time cost of $15,330.[1246] Amortized over a three-year period, we estimated that this would result in an average annual hour burden of approximately 18 burden hours and a time cost of $5,110.[1247]

Many commenters expressed concerns over the operational costs associated with the assignment of liquidity classifications and the reporting of this information on Form N–PORT. Several commenters expressed the belief that the liquidity classification requirement could impose significant direct costs to a fund and its shareholders (*e.g.,* new operational systems, trade order management systems, and other processes to handle complex classification schemes), which commenters anticipated to be in excess of the Commission's estimates under the proposal.[1248] One commenter estimated that the costs associated with building a liquidity classification system could range in the millions of dollars for fund complexes that have large numbers of portfolio positions.[1249] Another commenter estimated $2 million in initial implementation costs and more than $650,000 in annual recurring costs in connection with automating the classification process for over 63,000 portfolio positions.[1250] This commenter also expressed the belief that substantial resources, including additional investment professionals and

[1234] This estimate is based on the following calculations: 1 hour × $58 (hourly rate for a general clerk) = $58; 1 hours × $88 (hour rate for a senior computer operator) = $88. $58 + 88 = $146.

[1235] This estimate is based on the following calculations: 1615 UITs × 2 hours = 3,230 hours. 1615 UITs × $146 = $235,790.

[1236] *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1237] *See id.* at n. 1426 and accompanying text.

[1238] *See id.* at n. 1499 and accompanying text.

[1239] *See* Item B.7 of Form N–PORT.

[1240] *See* Item C.7.a of Form N–PORT.

[1241] *See* Item C.7.b of Form N–PORT. The fourth classification category incorporates data that, under the proposal, would have been reported as a 15% standard asset in response to proposed Item C.7 of proposed Form N–PORT.

[1242] *See* Item C.7.c of Form N–PORT.

[1243] *See supra* section III.C

[1244] *See id.; see also* Proposing Release, *supra* footnote 9, at section III.B.

[1245] *See* Proposing Release, *supra* footnote 9, at n.850 and accompanying text. This was based on estimates that there were 8,734 open-end funds (excluding money market funds, and including ETFs (for purposes of these calculations, we excluded non-1940 Act ETFs)) as of the end of 2014.

[1246] *See* Proposing Release, *supra* footnote 9, n.851 and accompanying text. We estimated that these systems modifications would include the following costs: (i) Project planning and systems design (24 hours × $260 (hourly rate for a senior systems analyst) = $6,240) and (ii) systems modification integration, testing, installation and deployment (30 hours × $303 (hourly rate for a senior programmer) = $9,090. $6,240 + $9,090 = $15,330.

[1247] $15,330 ÷ 3 = $5,110. *See* Proposing Release, *supra* footnote 9, at n.852 and accompanying text.

[1248] *See, e.g.,* CFA Comment Letter; Federated Comment Letter; ICI Comment Letter; Voya Comment Letter.

[1249] *See* T. Rowe Comment Letter (noting that its fund complex has just under 44,000 portfolio positions combined as of December 31, 2015).

[1250] *See* Invesco Comment Letter.

compliance personnel, and additional expenses associated with third-party service providers would increase costs associated with the classification requirement.[1251] Some commenters also expressed concern that the costs of diverting resources and key personnel were not considered in the Commission's cost estimates.[1252]

As discussed above, we are adopting a liquidity classification requirement under rule 22e–4 with a number of modifications to address commenters' concerns. Unlike the proposal which would have applied to all open-end funds, In-Kind ETFs are not subject to the classification requirements under rule 22e–4(b)(ii). The classification categories have been reduced from six to four and the timeframe for projections substantially reduced, with the fourth category designated for those investments that qualify as ''illiquid investments'' harmonized with the codified 15% illiquid investment limit. Furthermore, a fund may classify portfolio investments based on asset class, rather than position-by-position, so long as the fund or its adviser does not have information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of an investment and would suggest a different classification for that investment.

We believe that these modifications to the liquidity classification requirements will reduce the number of funds subject to the liquidity classification requirements and will address some of the costs commenters anticipate funds and fund shareholders would bear to establish new operational, trade, and other systems to process and report fund liquidity classification information. However, we recognize, as discussed above, that several commenters suggested that implementation of liquidity classification systems would be more costly than we estimated. Accordingly, we believe, on balance, that the per fund estimates that we proposed are reasonable and are not reducing them, despite having adopted some modifications to rule 22e–4 that we believe reduce the burden relative to the proposal.

We estimate that 9,347 funds, rather than 8,734 funds, will be required to file, on a monthly basis, additional information on Form N–PORT as a result of the modifications to Form N–PORT to require additional liquidity information.[1253] We continue to expect that funds will incur a one-time internal burden to initially classify a fund's portfolio securities and program new and/or existing systems to conduct the ongoing classifications and reviews required under rule 22e–4 for reporting purposes. We continue to estimate that each fund will incur an average one-time burden of 54 hours, at a time cost of $15,576, rather than $15,330 based on updated data concerning funds and fund personnel salaries.[1254] Amortized over a three-year period, we estimate that this will result in an average annual hour burden of approximately 18 burden hours, and a time cost of $5,192, rather than $5,110.[1255]

2. Reporting on Form N–PORT

In addition to the classification and review of securities, we estimated in the Proposing Release that 8,734 [1256] funds would be required to file, on a monthly basis, additional information on Form N–PORT. We estimated that each fund that files reports on Form N–PORT in house (35%, or 3,057 funds) would require an average of approximately 3 burden hours to compile (including review of the information), tag, and electronically file the additional information in light of the proposed additions regarding liquidity information for the first time and an average of approximately 1 burden hours for subsequent filings. Therefore, we estimated the per fund average annual hour burden associated with the incremental changes to Form N–PORT as a result of the proposed additions for these funds would be an additional 14 hours for the first year [1257] and an additional 12 hours for each subsequent year.[1258] Amortized over three years, we estimated that the average annual hour burden would be an additional 12.67 hours per fund.[1259]

In the Proposing Release, we also estimated that 65% of funds (5,677) would retain the services of a third party to provide data aggregation, validation and/or filing services as part of the preparation and filing of reports on proposed Form N–PORT on the fund's behalf.[1260] For these funds, we estimated that each fund would require an average of approximately 4 hours to compile and review the information with the service provider prior to electronically filing the report for the first time and an average of 0.5 burden hours for subsequent filings.

Therefore, in the Proposing Release, we estimated that the per-fund average annual hour burden associated with the incremental changes to proposed Form N–PORT as a result of the proposed additions related to liquidity information for these funds would be an additional 9.5 hours for the first year [1261] and an additional 6 hours for each subsequent year.[1262] Amortized over three years, we estimated that the average aggregate annual hour burden would be an additional 7.17 hours per fund.[1263] In sum, we estimated that the proposed additions to Form N–PORT would impose an average total annual hour burden of an additional 79,436.28 hours on applicable funds.[1264] We did not anticipate any change to the total external annual costs of $97,674,221 associated with Form N–PORT.[1265]

As discussed in section V.E.2 above, many commenters expressed concerns over the operational costs associated with the assignment of liquidity classifications and the reporting of this information on Form N–PORT. In addition, one commenter recommended that estimated costs to purchase third-party liquidity assessment data be included in the total estimated costs to comply with proposed rule given the

[1251] *Id.*

[1252] *See, e.g.,* Dechert Comment Letter; ICI Comment Letter I; Nuveen Comment Letter; Wells Fargo Comment Letter.

[1253] This is based on estimates that there are 9,039 open-end mutual funds (excluding money market funds) and 1,594 ETFs as of the end of 2015. *See supra* footnote 1045 and accompanying text. Based on staff experience, we estimate that more than 75% of ETFs or 1,196 ETFs will identify as In-Kind ETFs and thus will not be subject to the classification requirement. 9,039 + (1,594 − 1,196) = 9,437.

[1254] We estimate that these systems modifications will include the following costs: (i) Project planning and systems design (24 hours × $264 (hourly rate for a senior systems analyst) = $6,336) and (ii) systems modification integration, testing, installation and deployment (30 hours × $308 (hourly rate for a senior programmer) = $9,240. $6,336 + $9,240 = $15,576.

[1255] $15,576 ÷ 3 = $5,192.

[1256] *See* Proposing Release, *supra* footnote 9, at section V.E. There were 8,734 open-end funds (excluding money market funds, and including ETFs) as of the end of 2014. *See* 2016 ICI Fact Book, *supra* footnote 11, at 177, 184.

[1257] The estimate was based on the following calculation: (1 filing × 3 hours) + (11 filings × 1 hour) = 14 burden hours in the first year.

[1258] This estimate was based on the following calculation: 12 filings × 1 hour = 12 burden hours in each subsequent year.

[1259] The estimate was based on the following calculation: (14 + (12 × 2)) ÷ 3 = 12.67.

[1260] Proposing Release, *supra* footnote 9.

[1261] The estimate was based on the following calculation: (1 filing × 4 hours) + (11 filings × 0.5 hour) = 9.5 burden hours in the first year.

[1262] This estimate was based on the following calculation: 12 filings × 0.5 hour = 6 burden hours in each subsequent year.

[1263] The estimate was based on the following calculation: (9.5 + (6 × 2)) ÷ 3 = 7.17.

[1264] The estimate was based on the following calculation: (3,057 funds × 12.67 hours) + (5,677 funds × 7.17 hours) = 79,436.28 hours.

[1265] *See* Proposing Release, *supra* footnote 9*; see also* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

likelihood that many funds will subscribe to such services to operationally comply with the rule 22e–4.[1266]

The Commission has modified the estimated increase in annual burden hours and total time costs that will result from Form N–PORT and the liquidity related amendments to Form N–PORT in consideration of commenters' concerns that the Commission underestimated the operational requirements for reporting and to reflect updates to the industry data figures that were utilized in the Proposing Release. We estimate that 9,347 funds would be required to file, on a monthly basis, additional information on Form N–PORT as a result of the additional liquidity-related reporting items adopted today.[1267]

We estimate that each fund that files reports on Form N–PORT in house (35%, or 3,271) will require an average of approximately 6 burden hours, rather than 3 burden hours, to compile (including review of the information), tag, and electronically file the additional liquidity information required on Form N–PORT for the first time and an average of approximately 2 burden hours, rather than 1 burden hour, for subsequent filings. Therefore, we estimate the per fund average annual hour burden associated with the incremental changes to Form N–PORT as a result of the added liquidity information for these funds would be an additional 28 hours, rather than 14 hours for the first year [1268] and an additional 24 hours for each subsequent year.[1269] Amortized over three years, the average annual hour burden would be an additional 25.33 hours per fund.[1270]

We further estimate that 65% of funds (9,076) will retain the services of a third party to provide data aggregation, validation and/or filing services as part of the preparation and filing of reports on Form N–PORT on the fund's behalf. For these funds, we estimate that each fund will require an average of approximately 8 hours, rather than 4 hours, to compile and review the added liquidity-related information with the service provider prior to electronically filing the report for the first time and an average of 1 burden hour, rather than 0.5 burden hours, for subsequent filings. Therefore, we estimate the per fund average annual hour burden associated with the liquidity-related changes to Form N–PORT for these funds would be an additional 19 hours, rather than 9.5 hours, for the first year [1271] and an additional 12 hours, rather than 6 hours, for each subsequent year.[1272] Amortized over three years, the average aggregate annual hour burden would be an additional 14.33 hours per fund, rather than 7.17 hours per fund.[1273]

In sum, we estimate that the adopted additional liquidity reporting information on Form N–PORT will impose an average total annual hour burden of an additional 169,923.51 hours, rather than 79,436.28 hours, on applicable funds.[1274] As we stated in the Proposing Release, we believe that the changes to Form N–PORT associated with reporting liquidity classifications will not result in third party service providers charging additional fees above those estimated in the Investment Company Modernization Proposing Release. Therefore, we have revised our estimates of number of funds affected as discussed previously, but are continuing to estimate the same external costs for hiring third party service providers as in the Investment Company Modernization Adopting Release. Accordingly, we estimate that the total external annual cost burden of compliance with the information collection requirements of Form N–PORT will be $103,787,680, or $9,118 per fund.[1275]

D. Form N–LIQUID and Rule 30b1–10

As discussed above, we are adopting a new requirement that open-end investment companies, including In-Kind ETFs but not including money market funds, file a current report on Form N–LIQUID on a non-public basis when certain events related to their liquidity occur.[1276] Similar to Form 8–K under the Exchange Act,[1277] or Form N–CR under the Investment Company Act for money market funds,[1278] Form N–LIQUID requires disclosure, by means of a current report filed with the Commission, of certain specific reportable events. The information reported on Form N–LIQUID concerns events under which more than 15% of a fund's or In-Kind ETF's net assets are, or become, illiquid investments that are assets as defined in rule 22e–4 and when holdings in illiquid investments are assets that previously exceeded 15% of a fund's net assets have changed to be less than or equal to 15% of the fund's net assets.[1279] The information reported on Form N–LIQUID also regards events under which a fund's holdings in assets that are highly liquid investments fall below the fund's highly liquid investment minimum for more than 7 consecutive calendar days. A report on Form N–LIQUID is required to be filed, as applicable, within one business day of the occurrence of one or more of these events.[1280]

This reporting requirement on Form N–LIQUID is a collection of information under the PRA. The information provided on Form N–LIQUID will enable the Commission to receive information on fund liquidity events more uniformly and efficiently and will enhance the Commission's oversight of funds when significant liquidity events occur and its ability to respond to market events. The Commission will be able to use the information provided on Form N–LIQUID in its regulatory, disclosure review, inspection, and policymaking roles. This collection of information will be kept confidential.

The staff estimates that the Commission will receive, in the aggregate, an average of 30 reports [1281] per year filed in response to an event specified on Part B (''Above 15% Illiquid Investments''), an average of 30 reports [1282] per year filed in response to an event specified on Part C (''At or Below 15% Illiquid Investments''), and

[1266] *See* Interactive Data Comment Letter.

[1267] *See* footnote 1253 and accompanying text.

[1268] The estimate is based on the following calculation: (1 filing × 6 hours) + (11 filings × 2 hour) = 28 burden hours in the first year.

[1269] This estimate is based on the following calculation: 12 filings × 2 hour = 24 burden hours in each subsequent year.

[1270] The estimate is based on the following calculation: (28 + (24 × 2)) ÷ 3 = 25.33.

[1271] The estimate is based on the following calculation: (1 filing × 8 hours) + (11 filings × 1 hour) = 19 burden hours in the first year.

[1272] This estimate is based on the following calculation: 12 filings × 1 hour = 12 burden hours in each subsequent year.

[1273] The estimate is based on the following calculation: (19 + (12 × 2)) ÷ 3 = 14.33.

[1274] The estimate is based on the following calculation: (3,271 funds × 25.33 hours) + (6,076 funds × 14.33 hours) = 169,923.51 hours.

[1275] *See* Investment Company Reporting Modernization Adopting Release, *supra* footnote 120.

[1276] This requirement will be implemented through our adoption of new rule 30b1–10, which requires funds to file a report on new Form N–LIQUID in certain circumstances. *See* rule 30b1–10; Form N–LIQUID. For purposes of the PRA analysis, therefore, the burden associated with the requirements of rule 30b1–10 is included in the collection of information requirements of Form N–LIQUID.

[1277] 17 CFR 249.308.

[1278] 17 CFR 270.30b1–8.

[1279] *See* Item C.1 and Item C.2 of Part A of Form N–LIQUID.

[1280] *See* General Instruction A.2 of Form N–LIQUID.

[1281] Commission staff estimates this figure based, in part, by reference to the total of 28 Form N–CR filings received by the Commission from mid-July 2015 to mid-July 2016. We recognize that the circumstances under which money market funds report events on Form N–CR are not the same as the liquidity events reported on Form N–LIQUID and that reported occurrences may be less than or more than 30. We believe, however, that Form N–CR provides a helpful guidepost for estimation purposes and believe an estimation of 30 reports is appropriate for purposes of this PRA.

[1282] See id.

an average of 30 reports [1283] per year filed in response to an event specified on Part D (''Highly Liquid Investments Below the Highly Liquid Investment Minimum'') of the form.

When filing a report on Form N–LIQUID,[1284] staff estimates that a fund will spend on average approximately 4 hours [1285] of an in-house attorney's time and one [1286] hour of an in-house accountant's time to prepare, review, and submit Form N–LIQUID, at a total time cost of $1,745.[1287] Accordingly, in the aggregate, staff estimates that compliance with new rule 30b1–10 and Form N–LIQUID will result in a total annual burden of approximately 450 burden hours and total annual time costs of approximately $157,050.[1288] Given an estimated 10,633 funds will be required to comply with new rule 30b1–10 and Form N–LIQUID,[1289] this would result in an annual burden of approximately 0.04 burden hours and annual time costs of approximately $15 on a per-fund basis. Staff estimates that there will be no external costs associated with this collection of information.

E. Form N–CEN

On May 20, 2015, we proposed to amend rule 30a–1 to require all funds to file reports with certain census-type information on proposed Form N–CEN with the Commission on an annual basis. Proposed Form N–CEN would have been a collection of information under the PRA, and was designed to facilitate the Commission's oversight of funds and its ability to monitor trends and risks. The collection of information under Form N–CEN would be mandatory for all funds, and responses would not be kept confidential.

In the Investment Company Reporting Modernization Proposing Release, we estimated that the average annual hour burden per response for proposed Form N–CEN for the first year would be 32.37 hours and 12.37 hours in subsequent years.[1290] Amortizing the burden over three years, we estimated that the average annual hour burden per fund per year would be 19.04 and the total average annual hour burden would be 59,900 hours.[1291] We also estimated that all applicable funds would incur, in the aggregate, external annual costs of $1,748,637, which would include the costs of registering and maintaining LEIs for funds.

We are adopting, substantially as proposed, amendments to Form N–CEN to enhance the reporting of a fund's liquidity risk management practices. Specifically, the amendments to Form N–CEN will require a fund to report information about lines of credit, but in a modification to the proposal, funds will report about both committed *and uncommitted* lines of credit.[1292] As proposed, funds will be required to report information such as the size of the line of credit, the number of days that the line of credit was used, and the identity of the institution with whom the line of credit is held.[1293] The amendments to Form N–CEN also will require a fund to report whether it engaged in interfund lending or interfund borrowing.[1294] In addition, amendments to Form N–CEN will require an ETF to report whether it qualifies as an ''In-Kind ETF'' for purposes of rule 22e–4.[1295]

In the Proposing Release, we estimated that 8,734 funds would be required to file responses on Form N–CEN as a result of the proposed amendments to the form. We estimated that the average annual hour burden per additional response to Form N–CEN as a result of the proposed amendments would be 0.5 hour per fund per year for a total average annual hour burden of 4,367 hours.[1296] We did not estimate any change to the external costs associated with proposed Form N–CEN.

We did not receive any comments on these estimated hour and cost burdens. The Commission has modified the estimated increase in annual burden hours and total time costs that will result from the amendments based on the modifications to the proposal to require funds to report information on uncommitted lines of credit in addition to committed lines of credit as well as in light of updated data concerning funds and fund personnel salaries. We estimate that 10,633 funds, rather than 8,734 funds will be required to file responses on Form N–CEN as a result of the amendments to the form based on updates to the industry data figures that were utilized in the Proposing Release.[1297] We estimate that the average annual hour burden per additional response to Form N–CEN as a result of the adopted additions to Form N–CEN will be one hour per fund per year, instead of 0.5 hour per fund per year, for a total average annual hour burden of 10,633, rather than 4,367 hours.[1298] We do not estimate any change to the external costs associated with proposed Form N–CEN.

F. Form N–1A

Form N–1A is the registration form used by open-end investment companies. The respondents to the amendments to Form N–1A adopted today are open-end management investment companies registered or registering with the Commission. Compliance with the disclosure requirements of Form N–1A is mandatory, and the responses to the disclosure requirements are not confidential. We currently estimate for Form N–1A a total hour burden of 1,579,974 hours, and the total annual external cost burden is $124,820,197.[1299]

We are adopting amendments to Form N–1A that require funds to disclose additional information concerning the procedures for redeeming a fund's shares. Funds will be required to describe the number of days following receipt of shareholder redemption requests in which the fund reasonably

[1283] See id.

[1284] For purposes of this estimate, the staff expects that it would take approximately the same amount of time to prepare and file a report on Form N–LIQUID, regardless under which Part of Form N–LIQUID it is filed.

[1285] This estimate is derived in part from our current PRA estimate for Form N–CR and Form 8–K.

[1286] *Id.*

[1287] This estimate is based on the following calculations: (4 hours × $386/hour for an attorney = $1,544), plus (1 hour × $201/hour for a senior accountant = $201), for a combined total of 5 hours at total time costs of $1,745.

[1288] This estimate is based on the following calculations: (30 reports filed per year with respect to Part B) + (30 reports filed per year with respect to Part C) + (30 reports filed per year with respect to Part D) = 90 reports filed per year. 90 reports filed per year × 5 hours per report = approximately 450 total annual burden hours. 90 reports filed per year × $1,745 in costs per report = $157,050 total annual costs.

[1289] This estimate is based on the number of funds the staff estimates will be required to file reports on Form N–PORT with the Commission. For purposes of this PRA, the staff assumes that the universe of funds affected by rule 30b1–9 for Form N–PORT would be similar to the universe of funds affected by rule 30b1–10 for Form N–LIQUID.

[1290] Investment Company Reporting Modernization Proposing Release, *supra* footnote 120.

[1291] *Id.* at n.765 and accompanying text.

[1292] *See* Item C.20.a. of Form N–CEN.

[1293] See Id.

[1294] *See* Item C.20.b. of Form N–CEN.

[1295] *See* Item E.5 of Form N–CEN. We do not estimate any change in burden as a result of Item E.5 of Form N–CEN because the item only requires a yes or no response. In the Proposing Release, we also proposed to add to Form N–CEN a requirement for funds to report whether the fund required that an authorized participant post collateral to the fund or any of its designated service providers in connection with the purchase or redemption of fund shares during the reporting period. We are adopting this requirement in the Reporting Modernization Release. *See supra* footnote 898.

[1296] This estimate was based on the following calculation: 8,734 funds × 0.5 hours = 4,367 hours.

[1297] *See* 2016 ICI Fact Book, *supra* footnote 11, at 22, 176, 183.

[1298] This estimate is based on the following calculation: 10,633 funds × 1 hour = 10,633 hours.

[1299] These estimates are based on the last time the rule's information collections were submitted for PRA renewal in 2014.

expects to pay redemption proceeds to redeeming shareholders.[1300] Funds also will be required to describe the methods used to meet redemption requests in stressed and non-stressed market conditions.[1301] Funds, however, will not be required to file as exhibits to their registration statements credit agreements as originally proposed. Overall, we believe that requiring funds to provide this additional disclosure regarding redemption procedures will provide Commission staff, investors, and market participants with improved information about the procedures funds use to meet their redemption obligations.

Form N–1A generally imposes two types of reporting burdens on investment companies: (i) The burden of preparing and filing the initial registration statement; and (ii) the burden of preparing and filing post-effective amendments to a previously effective registration statement (including post-effective amendments filed pursuant to rule 485(a) or 485(b) under the Securities Act, as applicable). In the Proposing Release, we estimated that each fund would incur a one-time burden of an additional 2 hours,[1302] at a time cost of an additional $637,[1303] to draft and finalize the required disclosure and amend its registration statement in response to the proposed Form N–1A disclosure requirements. In aggregate, we estimated that funds would incur a one-time burden of an additional 17,468 hours,[1304] at a time cost of an additional $5,563,558,[1305] to comply with the Form N–1A disclosure requirements originally proposed. We estimated that amortizing the one-time burden over a three-year period would result in an average annual burden of an additional 5,823 hours at a time cost of an additional $1,854,519.[1306]

In the Proposing Release, we also estimated that each fund would incur an ongoing burden of an additional 0.25 hours, at a time cost of an additional $80,[1307] each year to review and update the proposed disclosure in response to Item 11 and Item 28 of Form N–1A regarding the pricing and redemption of fund shares and the inclusion of credit agreements as exhibits, respectively. In aggregate, we estimated that funds would incur an annual burden of an additional 2,184 hours,[1308] at a time cost of an additional $695,604,[1309] to comply with the proposed Form N–1A disclosure requirements.

In the Proposing Release, we further estimated that amortizing these one-time and ongoing hour and cost burdens over three years would result in an average annual increased burden of approximately 0.50 hours per fund,[1310] at a time cost of $265.42 per fund.[1311]

In total, we estimated in the Proposing Release that funds would incur an average annual increased burden of approximately 8,007 hours,[1312] at a time cost of approximately $2,550,123,[1313] to comply with the proposed Form N–1A disclosure requirements. We did not estimate any change to the external costs associated with the proposed amendments to Form N–1A.

One commenter stated that the cost estimates under the proposal were overly optimistic, including as an example our estimated $637 cost per fund to implement the proposed Form N–1A disclosure requirements.[1314] As discussed above, our amendments to Form N–1A include several modifications or clarifications from the proposal that address concerns raised by commenters and that are intended, in part, to decrease implementation burdens relative to the proposal. For example, we are not adopting the proposed requirement that funds file credit agreements as exhibits to their registration statements. Furthermore, instead of a requirement for funds to disclose the exact number of days in which a fund would pay redemption proceeds, including the number of days that apply for each distribution channel of the fund, funds are required to disclose the number of days a fund reasonably expects to pay redemption proceeds and are not required to account for all distribution channels, only varied payment methods, if applicable. We believe that these modifications will increase the quality of information provided to fund shareholders about the timing of their redemption proceeds and, at the same time, reduce the likelihood that disclosures regarding such timing will be overly granular and complex for investors and overly burdensome for registrants.

We believe that certain modifications from and clarifications to the proposal that we are adopting today as well as the removal of the swing pricing disclosure requirements from this Release will generally reduce the estimated burden hours and costs associated with the adopted amendments to Form N–1A relative to the proposal. Furthermore, we have considered the concern expressed by one commenter that the burdens and costs estimated in the proposal were overly optimistic and believe that any possible underestimates in burdens and costs expressed in the proposal have been offset by the adopted modifications that reduce such burdens. For these reasons, we believe that the amendments to Form N–1A adopted today, including modifications from the proposal, will reduce the estimated burden hours and costs stated in the Proposing Release.

We estimate that each fund will incur a one-time burden of an additional hour, rather than 2 hours, to draft and finalize the required disclosure and amend its registration statement,[1315] but at a time cost of an additional $324, rather than $637,[1316] based on updated data concerning funds and fund personnel salaries and the removal of the swing pricing disclosure requirement. In

[1300] *See* Item 11(c)(7) of Form N–1A.

[1301] *See* Item 11(c)(8) of Form N–1A.

[1302] This estimate was based on the following calculation: 1 hour to update registration statement to include swing pricing-related disclosure statements + 1 hour to update registration statement disclosure about redemption procedures = 2 hours.

[1303] This estimate was based on the following calculation: 2 hours × $318.5 (blended rate for a compliance attorney ($334) and a senior programmer ($303)) = $637.

[1304] This estimate was based on the following calculations: 2 hours × 8,734 funds = 17,468 hours.

[1305] This estimate was based on the following calculation: 17,468 hours × $318.50 (blended rate for a compliance attorney ($334) and a senior programmer ($303)) = $5,563,558.

[1306] This estimate was based on the following calculation: 17,468 hours ÷ 3 = 5,823 average annual burden hours; $5,563,558 burden costs ÷ 3 = $1,854,519 average annual burden cost.

[1307] This estimate was based on the following calculations: 0.25 hours × $318.50 (blended hourly rate for a compliance attorney ($334) and a senior programmer ($303)) = $79.63.

[1308] This estimate was based on the following calculation: 0.25 hours × 8,734 funds = 2,183.5 hours.

[1309] This estimate was based on the following calculation: 2,184 hours × $318.50 (blended hourly rate for a compliance attorney ($334) and a senior programmer ($303)) = $695,604.

[1310] This estimate was based on the following calculation: 1 burden hour (year 1) + 0.25 burden hour (year 2) + 0.25 burden hour (year 3) ÷ 3 = 0.50 hours.

[1311] This estimate was based on the following calculation: $637 (year 1 monetized burden hours) + $79.63 (year 2 monetized burden hours) + $79.63 (year 3 monetized burden hours) ÷ 3 = $265.42.

[1312] This estimate was based on the following calculation: 5,823 hours + 2,184 hours = 8,007 hours.

[1313] This estimate was based on the following calculation: $1,854,519 + $695,604 = $2,550,123.

[1314] *See* FSR Comment Letter (noting that changes to a fund's disclosure typically involve a number of stakeholders and several rounds of drafting and review, such that costs associated with even modest changes to fund disclosure can have a serious cost component). With the exception of this comment, we did not receive comments on the estimated hour and costs burdens associated with the disclosure amendments to Form N–1A under the proposal.

[1315] This estimate is based on the following calculation: 1 hour to update registration statement disclosure about redemption procedures = 1 hour.

[1316] This estimate is based on the following calculation: 1 hour × $324 (blended rate for a compliance attorney ($340) and a senior programmer ($308)) = $324.

aggregate, we estimate that funds will incur a one-time burden of an additional 11,114 hours,[1317] rather than 17,468 hours, at a time cost of an additional $3,600,936,[1318] rather than $5,563,558, to comply with the Form N–1A disclosure requirements as adopted. We estimate that amortizing the one-time burden over a three-year period will result in an average annual burden of an additional 3,705 hours, rather than 5,823 hours at a time cost of an additional $1,200,312, rather than $1,854,519.[1319]

In addition, we estimate that each fund will incur an ongoing burden of an additional 0.25 hours, but at a time cost of an additional $81,[1320] each year to review and update disclosures required in response to the amendments to Form N–1A. In aggregate, we estimate that funds will incur an annual burden of an additional 2,778.50 hours,[1321] at a time cost of an additional $900,234,[1322] to comply with the Form N–1A disclosure requirements adopted today.

Furthermore, we estimate that amortizing these one-time and ongoing hour and cost burdens over three years will result in an average annual increased burden of approximately 0.50 hours per fund,[1323] at a time cost of $162 per fund.[1324]

In total, we estimate that funds will incur an average annual increased burden of approximately 6,483.17 hours,[1325] at a time cost of approximately $3,300,858,[1326] to comply with the Form N–1A disclosure requirements adopted today. We do not estimate any change to the external costs associated with these amendments to Form N–1A.

VI. Final Regulatory Flexibility Act Analysis

This Final Regulatory Flexibility Analysis has been prepared in accordance with section 3 of the Regulatory Flexibility Act (''RFA'').[1327] It relates to: new rule 22e–4; new Rule 30b–10, Form N–LIQUID; and amendments to Form N–1A, Form N–PORT, and Form N–CEN. We prepared an Initial Regulatory Flexibility Analysis (''IRFA'') in conjunction with the Proposing Release in September 2015.[1328] The Proposing Release included, and solicited comment, on the IRFA. In the Proposing Release, we also proposed amendments to rule 22c–1, rule 31a–2, and Form N–1A as well as additions to Form N–CEN regarding the use of swing pricing.[1329]

A. Need for the Rule

With the exception of money market funds, open-end funds (including both in-kind and other ETFs) and UITs are not currently subject to requirements under the federal securities laws or Commission rules that specifically require them to manage their liquidity risk,[1330] although there are guidelines stating that such entities should limit their investments in illiquid assets.[1331] In addition, funds are only subject to limited disclosure and reporting requirements concerning a fund's liquidity risk and risk management.[1332] We understand that funds today engage in a variety of different practices, with varying levels of comprehensiveness, for classifying the liquidity of their portfolio investments, assessing and managing liquidity risk, and disclosing information about their liquidity risk, redemption practices, and liquidity risk management practices to investors.[1333]

The Commission is adopting a new rule, amendments to current rules, a new form and amendments to current forms to promote effective liquidity risk management throughout the open-end fund industry and thereby reduce the risk that funds will be unable to meet redemption obligations and mitigate dilution of the interests of fund shareholders. The changes also seek to enhance disclosure regarding fund liquidity and redemption practices. Specifically, a primary objective of these liquidity regulations is to promote shareholder protection by elevating the overall quality of liquidity risk management across the fund industry, as well as by increasing transparency of funds' liquidity risks and risk management. The liquidity regulations are also intended to lessen the possibility of investor dilution created by insufficient liquidity risk management. Finally, the liquidity regulations are meant to address recent industry developments that have underscored the significance of funds' liquidity risk management practices. Each of these objectives is discussed in detail in section III above.

B. Significant Issues Raised by Public Comment

In the Proposing Release, we requested comment on the IRFA, requesting in particular comment on the number of small entities that would be subject to the proposed liquidity regulations and whether the proposed liquidity regulations would have any effects that have not been discussed. We requested that commenters describe the nature of any effects on small entities subject to the proposed liquidity regulations and provide empirical data to support the nature and extent of such effects. We also requested comment on the estimated compliance burdens of the proposed liquidity regulations and how they would affect small entities. We received a number of comments related to the impact of our proposal on small entities, with some commenters expressing concern that liquidity risk management programs, as proposed, would require building entirely new systems and/or maintaining parallel system, which certain of the commenters believed could generate disproportionate burdens on small funds.[1334] We discuss these costs in detail in section V., above, and conclude that such costs are justified by the benefits of liquidity risk management programs.

C. Small Entities Subject to the Rule

An investment company is a small entity if, together with other investment companies in the same group of related investment companies, it has net assets of $50 million or less as of the end of its most recent fiscal year.[1335] Commission staff estimates that, as of

[1317] This estimate was based on the following calculations: 1 hour × 11,114 funds (including money market funds and ETFs) = 11,114 hours.

[1318] This estimate is based on the following calculation: 11,114 hours × $324 (blended rate for a compliance attorney ($340) and a senior programmer ($308)) = $3,600,936.

[1319] This estimate is based on the following calculation: 11,114 hours ÷ 3 = 3,704.67 average annual burden hours; $3,600,936 burden costs ÷ 3 = $1,200,312 average annual burden cost.

[1320] This estimate is based on the following calculations: 0.25 hours × $324 (blended hourly rate for a compliance attorney ($340) and a senior programmer ($308)) = $81.

[1321] This estimate is based on the following calculation: 0.25 hours × 11,114 funds = 2,778.50 hours.

[1322] This estimate is based on the following calculation: 2,778.50 hours × $324 (blended hourly rate for a compliance attorney ($340) and a senior programmer ($308)) = $900,234.

[1323] This estimate is based on the following calculation: 1 burden hour (year 1) + 0.25 burden hour (year 2) + 0.25 burden hour (year 3) ÷ 3 = 0.50 hours.

[1324] This estimate is based on the following calculation: $324 (year 1 monetized burden hours) + $81 (year 2 monetized burden hours) + $81 (year 3 monetized burden hours) ÷ 3 = $162.

[1325] This estimate is based on the following calculation: 3,704.67 hours + 2,778.50 hours = 6,483.17 hours.

[1326] This estimate is based on the following calculation: $1,200,312 + $900,234 = $2,100,546.

[1327] 5 U.S.C. 604.

[1328] *See* Proposing Release, *supra* footnote 9, at section VI.

[1329] *See* Proposing Release, *supra* footnote 9, at section III.G.1.b.

[1330] *See supra* sections II.D and IV.B.1.a.

[1331] See id.

[1332] *See supra* sections II.D and IV.B.1.c.

[1333] *See supra* sections II.D, IV.B.1.a and IV.B.1.c.

[1334] *See* Dechert Comment Letter; ICI Comment Letter I; SIFMA Comment Letter I; T. Rowe Comment Letter.

[1335] *See* rule 0–10(a) under the Act.

December 31, 2015, there were 78 small open-end investment companies (within 76 fund complexes) that would be considered small entities; this number includes open-end ETFs.

D. Projected Reporting, Recordkeeping, and Other Compliance Requirements

1. New Rule 22e–4

Rule 22e–4 generally requires each registered open-end fund (but not including money market funds), including each small entity, to establish a written liquidity risk management program.[1336] A fund's board will be required to approve the fund's liquidity risk management program, as well as the fund's designation of the fund's investment adviser or officers as responsible for administering the fund's liquidity risk management program, and review a report on the program's effectiveness no less than annually. In addition, for funds that do not primarily hold assets that are highly liquid investments, the new rule requires the determination of and periodic review of the fund's highly liquid investment minimum and establishment of policies and procedures for responding to a shortfall of the fund's highly liquid investment minimum, which includes reporting to the fund's board of directors. The new rule also requires a fund's liquidity risk management program to incorporate certain specified elements.[1337] Rule 22e–4 includes tailored liquidity risk management program requirements for ETFs, intended to target ETFs' unique risks while eliminating requirements that are largely inapplicable to ETFs that redeem in kind.[1338] The rule also includes liquidity-related requirements for UITs, intended to recognize the unmanaged structure of UITs while requiring that principal underwriters or depositors of UITs to determine, on or before the date of the initial deposit of portfolio securities into a UIT, that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities that it issues.[1339] Rule 22e–4 also includes certain recordkeeping requirements.[1340] We estimate that 76 fund complexes are small fund groups that have funds that would be required to comply with the proposed liquidity risk management program requirement.[1341] As discussed above, we estimate that a fund complex would incur one-time costs ranging from $0.8 million to $10.2 million, depending on the fund's particular circumstances and current liquidity risk management practices, to establish and implement a liquidity risk management program.[1342] We further estimate that a fund complex would incur ongoing annual costs associated with proposed rule 22e–4 that would range from $40,000 to $3.3 million.[1343] Finally, we estimate that any UITs launched after the rule's compliance date will incur one-time costs associated with rule 22e–4 of $8,000 to $52,000.[1344]

2. Disclosure and Reporting Requirements Regarding Liquidity Risk and Liquidity Risk Management

New Form N–LIQUID, along with amendments to Form N–1A, Form N–PORT, and Form N–CEN are intended to enhance fund disclosure and reporting regarding a fund's redemption practices, portfolio liquidity, and certain liquidity risk management practices. New Form N–LIQUID will require a fund to confidentially notify the Commission if the fund's illiquid investment holdings exceed 15% of its net assets or if its highly liquid investments decline below its minimum for more than a brief period of time.[1345] The amendments to Form N–1A require funds to disclose additional information concerning the procedures for redeeming a fund's shares.[1346] The amendments to Forms N–PORT and N–CEN require reporting of certain information regarding the liquidity of a fund's holdings and the fund's liquidity risk management practices. We estimate that 78 funds are small entities that would be required to comply with the proposed disclosure and reporting requirements.[1347]

As discussed above, for each fund, including a fund that is a small entity, when filing a report on Form N–LIQUID, staff estimates that a fund will spend on average approximately 4 hours [1348] of an in-house attorney's time and one [1349] hour of an in-house accountant's time to prepare, review, and submit Form N–LIQUID, at a total time cost of $1,745.[1350] Staff estimates that there will be no external costs associated with this collection of information.

As discussed above, we estimate that each fund, including funds that are small entities, would incur a one-time burden of an additional 1 hour,[1351] at a time cost of an additional $324 (plus printing costs), to comply with the amendments to Form N–1A.[1352] We also estimate that each fund, including small entities, would incur an ongoing burden of an additional 0.25 hours, at a time cost of approximately an additional $81 each year associated with compliance with the amendments to Form N–1A.[1353] We do not estimate any change to the external costs associated with the proposed amendments to Form N–1A.

We also estimate that each fund that files reports on Form N–PORT (35% of funds) in house will require an average of approximately 6 burden hours to compile (including review of the information), tag, and electronically file the additional liquidity information required on Form N–PORT for the first time and an average of approximately 2 burden hours, rather than 1 burden hour, for subsequent filings. Therefore, we estimate the per fund average annual hour burden associated with the incremental changes to Form N–PORT as a result of the added liquidity information for these funds would be an additional 28 hours for the first year and an additional 24 hours for each subsequent year.[1354] Amortized over three years, the average annual hour burden would be an additional 25.33 hours per fund.[1355] We further estimate that 65% of funds will retain the services of a third party to provide data aggregation, validation and/or filing services as part of the preparation and filing of reports on Form N–PORT on the fund's behalf. For these funds, we estimate that each fund will require an average of approximately 8 hours to compile and review the added liquidity-related information with the service provider prior to electronically filing the report for the first time and an average of 1 burden hour for subsequent filings. Therefore, we estimate the per fund

[1336] *See supra* footnote 113.

[1337] *See id.* and accompanying and preceding text.

[1338] See id.

[1339] *See supra* section III.K.

[1340] *See supra* section III.I.

[1341] Commission staff estimate as of December 31, 2015.

[1342] *See supra* paragraph accompanying footnote 1101.

[1343] *See supra* paragraph accompanying footnote 1104.

[1344] *See supra* footnote 1116 and accompanying text.

[1345] *See supra* section III.L.2.

[1346] *See supra* section III.L.1.

[1347] Commission staff estimate as of December 31, 2015.

[1348] *See supra* footnote 1285 and accompanying text.

[1349] *Id.*

[1350] *See supra* footnote 1287 and accompanying text.

[1351] *See supra* footnote 1302 and accompanying text.

[1352] *See supra* footnote 1303 and accompanying text.

[1353] *See supra* footnote 1307 and accompanying text.

[1354] *See supra* footnote 1269 and accompanying paragraph.

[1355] *See supra* footnote 1270 and accompanying text.

average annual hour burden associated with the liquidity-related changes to Form N–PORT for these funds would be an additional 19 hours for the first year [1356] and an additional 12 hours for each subsequent year.[1357] Amortized over three years, the average aggregate annual hour burden would be an additional 14.33 hours per fund.[1358] We further estimate that the total external annual cost burden of compliance with the information collection requirements of Form N–PORT will be $9,118 per fund.[1359]

As discussed above, we also estimate that the average annual hour burden per additional response to Form N–CEN as a result of the adopted additions to Form N–CEN will be one hour per fund per year.[1360] We do not estimate any change to the external costs associated with proposed Form N–CEN.[1361]

E. Agency Action To Minimize Effect on Small Entities

The Regulatory Flexibility Act directs the Commission to consider significant alternatives that would accomplish the stated objective, while minimizing any significant impact on small entities. Alternatives in this category would include: (i) Establishing different compliance or reporting standards that take into account the resources available to small entities; (ii) clarifying, consolidating, or simplifying the compliance requirements under the rules and amendments for small entities; (iii) using performance rather than design standards; and (iv) exempting small entities from coverage of the rules and amendments, or any part of the rules and amendments.

The Commission does not presently believe that these rules and amendments would require the establishment of special compliance requirements or timetables for small entities. These rules and amendments are specifically designed to reduce any unnecessary burdens on all funds (including small funds). To establish special compliance requirements or timetables for small entities may in fact disadvantage small entities by encouraging larger market participants to focus primarily on the needs of larger entities when making the operational changes envisioned by certain of the rules and amendments, and possibly ignoring the needs of smaller funds.

With respect to further clarifying, consolidating, or simplifying the compliance requirements of the rules and amendments, using performance rather than design standards, and exempting small entities from coverage of these rules and amendments or any part of the rules and amendments, we believe additional such changes would be impracticable. Small entities are as vulnerable to the risks of being unable to meet redemption obligations and of dilution of the interests of fund shareholders as larger funds. We believe that the rules and amendments are necessary to help mitigate these risks. Exempting small funds from coverage under these rules and amendments or any part of the rules and amendments could compromise the effectiveness of the rules and amendments or any part of the rules and amendments.

VII. Statutory Authority and Text of Amendments

The Commission is adopting new rule 22e–4 under the authority set forth in sections 22(c), 22(e), 34(b) and 38(a) of the Investment Company Act [15 U.S.C. 80a–22(c), 80a–22(e), 80a–35(b), and 80a–37(a)], the Investment Advisers Act, particularly, section 206(4) thereof [15 U.S.C. 80b–6(4)], the Exchange Act, particularly section 10(b) thereof [15 U.S.C. 78a *et seq.*], the Securities Act, particularly section 17(a) thereof [15 U.S.C. 77a *et seq.*]. The Commission is adopting amendments to Form N–1A, Form N–PORT, and Form N–CEN under the authority set forth in the Securities Act, particularly section 19 thereof [15 U.S.C. 77a *et seq.*], the Trust Indenture Act, particularly, section 19 thereof [15 U.S.C. 77aaa *et seq.*], the Exchange Act, particularly sections 10, 15, and 23, and 35A thereof [15 U.S.C. 78a *et seq.*], and the Investment Company Act, particularly, sections 8, and 38 thereof [15 U.S.C. 80a *et seq.*].

List of Subjects in 17 CFR Parts 270 and 274

Investment companies, Reporting and recordkeeping requirements, Securities.

For the reasons set out in the preamble, title 17, chapter II of the Code of Federal Regulations is amended as follows:

PART 270—RULES AND REGULATIONS, INVESTMENT COMPANY ACT OF 1940

■ 1. The authority citation for part 270 continues to read, in part, as follows:

Authority: 15 U.S.C. 80a–1 *et seq.,* 80a–34(d), 80a–37, 80a–39, and Pub. L. 111–203, sec. 939A, 124 Stat. 1376 (2010), unless otherwise noted.

* * * * *

■ 2. Section 270.22e–4 is added to read as follows:

§ 270.22e–4 Liquidity risk management programs.

(a) *Definitions.* For purposes of this section:

(1) *Acquisition (or acquire)* means any purchase or subsequent rollover.

(2) *Business day* means any day, other than Saturday, Sunday, or any customary business holiday.

(3) *Convertible to cash* means the ability to be sold, with the sale settled.

(4) *Exchange-traded fund* or *ETF* means an open-end management investment company (or series or class thereof), the shares of which are listed and traded on a national securities exchange, and that has formed and operates under an exemptive order under the Act granted by the Commission or in reliance on an exemptive rule adopted by the Commission.

(5) *Fund* means an open-end management investment company that is registered or required to register under section 8 of the Act (15 U.S.C. 80a–8) and includes a separate series of such an investment company, but does not include a registered open-end management investment company that is regulated as a money market fund under § 270.2a–7 or an In-Kind ETF.

(6) *Highly liquid investment* means any cash held by a fund and any investment that the fund reasonably expects to be convertible into cash in current market conditions in three business days or less without the conversion to cash significantly changing the market value of the investment, as determined pursuant to the provisions of paragraph (b)(1)(ii) of this section.

(7) *Highly liquid investment minimum* means the percentage of the fund's net assets that the fund invests in highly liquid investments that are assets pursuant to paragraph (b)(1)(iii) of this section.

(8) *Illiquid investment* means any investment that the fund reasonably expects cannot be sold or disposed of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment, as determined pursuant to the provisions of paragraph (b)(1)(ii) of this section.

(9) *In-Kind Exchange Traded Fund* or *In-Kind ETF* means an ETF that meets redemptions through in-kind transfers

[1356] *See supra* footnote 1271 and accompanying text.

[1357] *See supra* footnote 1272 and accompanying text.

[1358] *See supra* footnote 1273 and accompanying text.

[1359] *See supra* footnote 1275 and accompanying text.

[1360] *See supra* footnote 1298 and accompanying paragraph.

[1361] *Id.*

of securities, positions, and assets other than a *de minimis* amount of cash and that publishes its portfolio holdings daily.

(10) *Less liquid investment* means any investment that the fund reasonably expects to be able to sell or dispose of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment, as determined pursuant to the provisions of paragraph (b)(1)(ii) of this section, but where the sale or disposition is reasonably expected to settle in more than seven calendar days.

(11) *Liquidity risk* means the risk that the fund could not meet requests to redeem shares issued by the fund without significant dilution of remaining investors' interests in the fund.

(12) *Moderately liquid investment* means any investment that the fund reasonably expects to be convertible into cash in current market conditions in more than three calendar days but in seven calendar days or less, without the conversion to cash significantly changing the market value of the investment, as determined pursuant to the provisions of paragraph (b)(1)(ii) of this section.

(13) *Person(s) designated to administer the program* means the fund or In-Kind ETF's investment adviser, officer, or officers (which may not be solely portfolio managers of the fund or In-Kind ETF) responsible for administering the program and its policies and procedures pursuant to paragraph (b)(2)(ii) of this section.

(14) *Unit Investment Trust* or *UIT* means a unit investment trust as defined in section 4(2) of the Act (15 U.S.C. 80a–4).

(b) *Liquidity Risk Management Program.* Each fund and In-Kind ETF must adopt and implement a written liquidity risk management program (''program'') that is reasonably designed to assess and manage its liquidity risk.

(1) *Required program elements.* The program must include policies and procedures reasonably designed to incorporate the following elements:

(i) *Assessment, management, and periodic review of liquidity risk.* Each fund and In-Kind ETF must assess, manage, and periodically review (with such review occurring no less frequently than annually) its liquidity risk, which must include consideration of the following factors, as applicable:

(A) The fund or In-Kind ETF's investment strategy and liquidity of portfolio investments during both normal and reasonably foreseeable stressed conditions, including whether the investment strategy is appropriate for an open-end fund, the extent to which the strategy involves a relatively concentrated portfolio or large positions in particular issuers, and the use of borrowings for investment purposes and derivatives;

(B) Short-term and long-term cash flow projections during both normal and reasonably foreseeable stressed conditions;

(C) Holdings of cash and cash equivalents, as well as borrowing arrangements and other funding sources; and

(D) For an ETF:

(1) The relationship between the ETF's portfolio liquidity and the way in which, and the prices and spreads at which, ETF shares trade, including, the efficiency of the arbitrage function and the level of active participation by market participants (including authorized participants); and

(2) The effect of the composition of baskets on the overall liquidity of the ETF's portfolio.

(ii) *Classification.* Each fund must, using information obtained after reasonable inquiry and taking into account relevant market, trading, and investment-specific considerations, classify each of the fund's portfolio investments (including each of the fund's derivatives transactions) as a highly liquid investment, moderately liquid investment, less liquid investment, or illiquid investment. A fund must review its portfolio investments' classifications, at least monthly in connection with reporting the liquidity classification for each portfolio investment on Form N–PORT in accordance with § 270.30b1–9, and more frequently if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of its investments' classifications.

Note to paragraph (b)(1)(ii)introductory text: If an investment could be viewed as either a highly liquid investment or a moderately liquid investment, because the period to convert the investment to cash depends on the calendar or business day convention used, a fund should classify the investment as a highly liquid investment. For a discussion of considerations that may be relevant in classifying the liquidity of the fund's portfolio investments, see Investment Company Act Release No. IC–32315 (Oct. 13, 2016).

(A) The fund may generally classify and review its portfolio investments (including the fund's derivatives transactions) according to their asset class, provided, however, that the fund must separately classify and review any investment within an asset class if the fund or its adviser has information about any market, trading, or investment-specific considerations that are reasonably expected to significantly affect the liquidity characteristics of that investment as compared to the fund's other portfolio holdings within that asset class.

(B) In classifying and reviewing its portfolio investments or asset classes (as applicable), the fund must determine whether trading varying portions of a position in a particular portfolio investment or asset class, in sizes that the fund would reasonably anticipate trading, is reasonably expected to significantly affect its liquidity, and if so, the fund must take this determination into account when classifying the liquidity of that investment or asset class.

(C) For derivatives transactions that the fund has classified as moderately liquid investments, less liquid investments, and illiquid investments, identify the percentage of the fund's highly liquid investments that it has segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions in each of these classification categories.

Note to paragraph (b)(1)(ii)(C): For purposes of calculating these percentages, a fund that has segregated or pledged highly liquid investments and non-highly liquid investments to cover derivatives transactions classified as moderately liquid, less liquid, or illiquid investments first should apply segregated or pledged assets that are highly liquid investments to cover these transactions, unless it has specifically identified segregated non-highly liquid investments as covering such derivatives transactions.

(iii) *Highly liquid investment minimum.* (A) Any fund that does not primarily hold assets that are highly liquid investments must:

(1) Determine a highly liquid investment minimum, considering the factors specified in paragraphs (b)(1)(i)(A) through (D) of this section, as applicable (but considering those factors specified in paragraphs (b)(1)(i)(A) and (B) only as they apply during normal conditions, and during stressed conditions only to the extent they are reasonably foreseeable during the period until the next review of the highly liquid investment minimum). The highly liquid investment minimum determined pursuant to this paragraph may not be changed during any period of time that a fund's assets that are highly liquid investments are below the determined minimum without approval from the fund's board of directors, including a majority of directors who are not interested persons of the fund;

(2) Periodically review, no less frequently than annually, the highly liquid investment minimum; and

(3) Adopt and implement policies and procedures for responding to a shortfall of the fund's highly liquid investments below its highly liquid investment minimum, which must include requiring the person(s) designated to administer the program to report to the fund's board of directors no later than its next regularly scheduled meeting with a brief explanation of the causes of the shortfall, the extent of the shortfall, and any actions taken in response, and if the shortfall lasts more than 7 consecutive calendar days, must include requiring the person(s) designated to administer the program to report to the board within one business day thereafter with an explanation of how the fund plans to restore its minimum within a reasonable period of time.

(B) For purposes of determining whether a fund primarily holds assets that are highly liquid investments, a fund must exclude from its calculations the percentage of the fund's assets that are highly liquid investments that it has segregated to cover all derivatives transactions that the fund has classified as moderately liquid investments, less liquid investments, and illiquid investments, or pledged to satisfy margin requirements in connection with those derivatives transactions, as determined pursuant to paragraph (b)(1)(ii)(C) of this section.

(iv) *Illiquid investments.* No fund or In-Kind ETF may acquire any illiquid investment if, immediately after the acquisition, the fund or In-Kind ETF would have invested more than 15% of its net assets in illiquid investments that are assets. If a fund or In-Kind ETF holds more than 15% of its net assets in illiquid investments that are assets:

(A) It must cause the person(s) designated to administer the program to report such an occurrence to the fund's or In-Kind ETF's board of directors within one business day of the occurrence, with an explanation of the extent and causes of the occurrence, and how the fund or In-Kind ETF plans to bring its illiquid investments that are assets to or below 15% of its net assets within a reasonable period of time; and

(B) If the amount of the fund's or In-Kind ETF's illiquid investments that are assets is still above 15% of its net assets 30 days from the occurrence (and at each consecutive 30 day period thereafter), the fund or In-Kind ETF's board of directors, including a majority of directors who are not interested persons of the fund or In-Kind ETF, must assess whether the plan presented to it pursuant to paragraph (b)(1)(iv)(A) continues to be in the best interest of the fund or In-Kind ETF.

(v) *Redemptions in Kind.* A fund that engages in, or reserves the right to engage in, redemptions in kind and any In-Kind ETF must establish policies and procedures regarding how and when it will engage in such redemptions in kind.

(2) *Board oversight.* A fund or In-Kind ETF's board of directors, including a majority of directors who are not interested persons of the fund or In-Kind ETF, must:

(i) Initially approve the liquidity risk management program;

(ii) Approve the designation of the person(s) designated to administer the program; and

(iii) Review, no less frequently than annually, a written report prepared by the person(s) designated to administer the program that addresses the operation of the program and assesses its adequacy and effectiveness of implementation, including, if applicable, the operation of the highly liquid investment minimum, and any material changes to the program.

(3) *Recordkeeping.* The fund or In-Kind ETF must maintain:

(i) A written copy of the program and any associated policies and procedures adopted pursuant to paragraphs (b)(1) through (b)(2) of this section that are in effect, or at any time within the past five years were in effect, in an easily accessible place;

(ii) Copies of any materials provided to the board of directors in connection with its approval under paragraph (b)(2)(i) of this section, and materials provided to the board of directors under paragraph (b)(2)(iii) of this section, for at least five years after the end of the fiscal year in which the documents were provided, the first two years in an easily accessible place; and

(iii) If applicable, a written record of the policies and procedures related to how the highly liquid investment minimum, and any adjustments thereto, were determined, including assessment of the factors incorporated in paragraphs (b)(1)(iii)(A) through (B) of this section and any materials provided to the board pursuant to paragraph (b)(1)(iii)(A)(*3*) of this section, for a period of not less than five years (the first two years in an easily accessible place) following the determination of, and each change to, the highly liquid investment minimum.

(c) *UIT liquidity.* On or before the date of initial deposit of portfolio securities into a registered UIT, the UIT's principal underwriter or depositor must determine that the portion of the illiquid investments that the UIT holds or will hold at the date of deposit that are assets is consistent with the redeemable nature of the securities it issues, and must maintain a record of that determination for the life of the UIT and for five years thereafter.

■ 3. Section 270.30b1–10 is added to read as follows:

§ 270.30b1–10 Current report for open-end management investment companies.

Every registered open-end management investment company, or series thereof but not a fund that is regulated as a money market fund under § 270.2a–7, that experiences any event specified on Form N–LIQUID, must file with the Commission a current report on Form N–LIQUID within the period specified in that form.

PART 274—FORMS PRESCRIBED UNDER THE INVESTMENT COMPANY ACT OF 1940

■ 4. The general authority citation for part 274 continues to read, in part, as follows, and the sectional authorities for §§ 274.101 and 274.130 are removed:

Authority: 15 U.S.C. 77f, 77g, 77h, 77j, 77s, 78c(b), 78*l*, 78m, 78n, 78o(d), 80a–8, 80a–24, 80a–26, 80a–29, and Pub. L. 111–203, sec. 939A, 124 Stat. 1376 (2010), unless otherwise noted.

* * * * *

§ 274.11A [Amended]

■ 5. Amend Form N–1A (referenced in § 274.11A) by:

■ a. In General Instruction A. Definitions, revising the definition of Exchange-Trade Fund;

■ b. In Item 11 removing paragraph (c)(3) and redesignating paragraphs (c)(4), (c)(5), (c)(6) and (c)(7) as paragraphs (c)(3), (c)(4), (c)(5) and (c)(6), respectively; and

■ c. In Item 11 adding new paragraph (c)(7) and paragraph (c)(8);

The revisions and additions read as follows:

Note: The text of Form N–1A does not, and this amendment will not, appear in the Code of Federal Regulations.

Form N–1A

* * * * *

General Instructions

A. Definitions * * *

''Exchange-Traded Fund'' means a Fund or Class, the shares of which are listed and traded on a national securities exchange, and that has formed and operates under an exemptive order granted by the Commission or in reliance on an exemptive rule adopted by the Commission.

* * * * *

Item 11. Shareholder Information

(a) * * *

(c) * * *

(7) The number of days following receipt of shareholder redemption requests in which the fund typically expects to pay out redemption proceeds to redeeming shareholders. If the number of days differs by method of payment (*e.g.,* check, wire, automated clearing house), then disclose the typical number of days or estimated range of days that the fund expects it will take to pay out redemptions proceeds for each method used.

(8) The methods that the fund typically expects to use to meet redemption requests, and whether those methods are used regularly, or only in stressed market conditions (*e.g.,* sales of portfolio assets, holdings of cash or cash equivalents, lines of credit, interfund lending, and/or ability to redeem in kind).

* * * * *

§ 274.101 [Amended]

■ 6. Effective June 1, 2018, amend Form N–CEN [(referenced in § 274.101), as published elsewhere in this issue by:

■ a. In Part C, adding Item C.20; and

■ b. In Part E, adding Item E.5.

The additions read as follows:

Form N–Cen

Annual Report for Registered Investment Companies

* * * * *

Part C. Additional Questions for Management Investment Companies

* * *

Item C.20. Lines of credit, interfund lending, and interfund borrowing. For open-end management investment companies, respond to the following:

a. Does the Fund have available a line of credit? [Yes/No] If yes, for each line of credit, provide the information requested below:

i. Is the line of credit a committed or uncommitted line of credit? [committed/uncommitted]

ii. What size is the line of credit? [insert dollar amount]

iii. With which institution(s) is the line of credit? [list name(s)]

iv. Is the line of credit just for the Fund, or is it shared among multiple funds? [sole/shared]

1. If shared, list the names of other funds that may use the line of credit. [list names and SEC File numbers]

v. Did the Fund draw on the line of credit this period? [Yes/No]

vi. If the Fund drew on the line of credit during this period, what was the average amount outstanding when the line of credit was in use? [insert dollar amount]

vii. If the Fund drew on the line of credit during this period, what was the number of days that the line of credit was in use? [insert amount]

b. Did the Fund engage in interfund lending? [Yes/No] If yes, for each loan provide the information requested below:

i. What was the average amount of the interfund loan when the loan was outstanding? [insert dollar amount.]

ii. What was the number of days that the interfund loan was outstanding? [insert amount]

c. Did the Fund engage in interfund borrowing? [Yes/No] If yes, for each loan provide the information requested below:

i. What was the average amount of the interfund loan when the loan was outstanding? [insert dollar amount.]

ii. What was the number of days that the interfund loan was outstanding? [insert amount]

* * * * *

Part E. Additional Questions for Exchange-Traded Funds and Exchange-Traded Managed Funds

* * * * *

Item E.5

* * * * *

In-Kind ETF. Is the Fund an ''In-Kind Exchange-Traded Fund'' as defined in rule 22e–4 under the Act? [Y/N]

* * * * *

§ 274.150 [Amended]

■ 7. Amend Form N–PORT (referenced in § 274.150), as published elsewhere in this issue by:

■ a. In the General Instructions E. Definitions, adding definitions of ''Highly Liquid Investment Minimum'' and ''Illiquid Investment'' in alphabetical order;

■ b. In the General Instructions, revising the second paragraph of F. Public Availability;

■ c. In Part B, adding Item B.7 and Item B.8; and

■ d. In Part C, adding Item C.7.

The revisions and additions read as follows:

Form N-Port

Monthly Portfolio Investments Report

* * * * *

E. Definitions

* * * * *

''Highly Liquid Investment Minimum'' has the meaning defined in rule 22e–4(a)(7).

''Illiquid Investment'' has the meaning defined in rule 22e–4(a)(8).

* * * * *

F. Public Availability

* * * * *

The SEC does not intend to make public the information reported on Form N–PORT for the first and second months of each Fund's fiscal quarter that is identifiable to any particular Fund or adviser, or any information reported with regards to a Fund's Highly Liquid Investment Minimum (Item B.7 of this Form), country of risk and economic exposure (Item C.5.b), delta (Items C.9.f.5, C.11.c.vii, or C.11.g.iv), liquidity classification for portfolio investments (Item C.7), or miscellaneous securities (Part D of this Form), or explanatory notes related to any of those topics (Part E) that is identifiable to any particular Fund or adviser. However, the SEC may use information reported on this Form in its regulatory programs, including examinations, investigations, and enforcement actions.

* * * * *

Part B. Information About the Fund

* * * * *

Item B.7 Highly Liquid Investment Minimum Information.

a. If applicable, provide the Fund's current Highly Liquid Investment Minimum.

b. If applicable, provide the number of days that the Fund's holdings in Highly Liquid Investments fell below the Fund's Highly Liquid Investment Minimum during the reporting period.

c. Did the Fund's Highly Liquid Investment Minimum change during the reporting period? [Y/N]

1. If yes, provide any Highly Liquid Investment Minimums set by the fund during the reporting period.

Item B.8 Liquidity aggregate classification information. For portfolio investments of open-end management investment companies, provide the following information:

a. The aggregate percentage of investments that are assets (excluding any investments that are reflected as liabilities on the Fund's balance sheet) compared to total investments that are assets of the Fund for each of the following categories as specified in rule 22e–4:

1. Highly Liquid Investments
2. Moderately Liquid Investments
3. Less Liquid Investments
4. Illiquid Investments

b. Derivatives Transactions. The percentage of the Fund's highly

liquid investments that it has segregated to cover or pledged to satisfy margin requirements in connection with derivatives transactions that are classified as:
1. Moderately Liquid Investments
2. Less Liquid Investments
3. Illiquid Investments

* * * * *

Part C. Schedule of Portfolio Investments

* * * * *

Item C.7. Liquidity classification information. For portfolio investments of open-end management investment companies, provide the liquidity classification for each portfolio investment among the following categories as specified in rule 22e–4:
1. Highly Liquid Investments
2. Moderately Liquid Investments
3. Less Liquid Investments
4. Illiquid Investments

* * * * *

■ 8. Section 274.223 is added to subpart C to read as follows:

§ 274.223 Form N–LIQUID, Current report, open-end investment company liquidity.

This form shall be used by registered open-end management investment companies, or series thereof, but not including a company or series thereof that is regulated as a money market fund under § 270.2a–7 of this chapter, to file reports pursuant to § 270.30b1–10 of this chapter.

Note: The text of Form N–LIQUID will not appear in the *Code of Federal Regulations.*

United States Securities and Exchange Commission

Washington, DC 20549

Form N–LIQUID

Current Report

Open-End Management Investment Company Liquidity

Form N–LIQUID is to be used by a registered open-end management investment company, or series thereof (''fund''), under the Investment Company Act of 1940 [15 U.S.C. 80a] (''Act'') but not including a fund that is regulated as a money market fund under rule 2a–7 under the Act (17 CFR 270.2A–7), to file current reports with the Commission pursuant to [rule 30b1–10] under the Act [(17 CFR 270.30b1–10)]. The Commission may use the information provided on Form N–LIQUID in its regulatory, disclosure review, inspection, and policymaking roles.

General Instructions

A. Rules as to Use of Form N–LIQUID

(1) Form N–LIQUID is the reporting form that is to be used for current reports of open-end management investment companies (''registrants'') required by section 30(b) of the Act and rule 30b1–10 under the Act. The Commission does not intend to make public information reported on Form N–LIQUID that is identifiable to any particular registrant, although the Commission may use Form N–LIQUID information in an enforcement action.

(2) Unless otherwise specified, a report on this Form N–LIQUID is required to be filed, as applicable, within one business day of the occurrence of the event specified in Parts B–D of this form. If the event occurs on a Saturday, Sunday, or holiday on which the Commission is not open for business, then the one business day period shall begin to run on, and include, the first business day thereafter.

B. Application of General Rules and Regulations

The General Rules and Regulations under the Act contain certain general requirements that are applicable to reporting on any form under the Act. These general requirements should be carefully read and observed in the preparation and filing of reports on this form, except that any provision in the form or in these instructions shall be controlling.

C. Information To Be Included in Report Filed on Form N–LIQUID

Upon the occurrence of the event specified in Parts B–D of Form N–LIQUID, a registrant must file a report on Form N–LIQUID that includes information in response to each of the items in Part A of the form, as well as each of the items in the applicable Parts B–D of the Form.

D. Filing of Form N–LIQUID

A fund must file Form N–LIQUID in accordance with rule 232.13 of Regulation S–T (17 CFR part 232). Form N–LIQUID must be filed electronically using the Commission's Electronic Data Gathering, Analysis and Retrieval System (''EDGAR'').

E. Paperwork Reduction Act Information

A registrant is not required to respond to the collection of information contained in Form N–LIQUID unless the form displays a currently valid Office of Management and Budget (''OMB'') control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to the Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. 3507.

F. Definitions

References to sections and rules in this Form N–LIQUID are to the Investment Company Act (15 U.S.C. 80a), unless otherwise indicated. Terms used in this Form N–LIQUID have the same meaning as in the Investment Company Act or rule 22e–4 under the Investment Company Act, unless otherwise indicated. In addition, as used in this Form N–LIQUID, the term registrant means the registrant or a separate series of the registrant.

United States Securities and Exchange Commission

Washington, DC 20549

Form N–LIQUID

Current Report

Open-End Management Investment Company Liquidity

Part A. General Information

Item A.1. Report for [mm/dd/yyyy].
Item A.2. CIK Number of registrant.
Item A.3. EDGAR Series Identifier.
Item A.4. Securities Act File Number.
Item A.5. Provide the name, email address, and telephone number of the person authorized to receive information and respond to questions about this Form N–LIQUID.

Part B. Above 15% Illiquid Investments

If more than 15 percent of the registrant's net assets are, or become, illiquid investments that are assets as defined in rule 22e–4, then report the following information:

Item B.1. Date(s) on which the registrant's illiquid investments that are assets exceeded 15 percent of its net assets.
Item B.2. The current percentage of the registrant's net assets that are illiquid investments that are assets.
Item B.3. Identification of Illiquid investments. For each investment that is an asset that is held by the registrant that is considered illiquid, disclose (1) the name of the issuer, the title of the issue or description of the investment, the CUSIP (if any), and at least one other identifier, if available (*e.g.,* ISIN, Ticker, or other unique identifier (if ticker and ISIN are not

available)) (indicate the type of identifier used), and (2) the percentage of the fund's net assets attributable to that investment.

Part C. At or Below 15% Illiquid Investments

If a registrant that has filed part B of Form N–LIQUID determines that its holdings in illiquid investments that are assets have changed to be less than or equal to 15 percent of the registrant's net assets, then report the following information:

Item C.1. Date(s) on which the registrant's illiquid investments that are assets fell to or below 15 percent of net assets.

Item C.2. The current percentage of the registrant's net assets that are illiquid investments that are assets.

Part D. Assets That Are Highly Liquid Investments Below the Highly Liquid Investment Minimum

If a registrant's holdings in assets that are highly liquid investments fall below its highly liquid investment minimum for more than 7 consecutive calendar days, then report the following information:

Item D.1. Date(s) on which the registrant's holdings of assets that are highly liquid investments fell below the fund's highly liquid investment minimum.

Signatures

Pursuant to the requirements of the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

____

(Registrant)

Date ________________________________

____

(Signature)*

* Print name and title of the signing officer under his/her signature.

By the Commission.

Dated: October 13, 2016.

Brent J. Fields,

Secretary.

[FR Doc. 2016–25348 Filed 11–17–16; 8:45 am]

BILLING CODE 8011–01–P

FEDERAL REGISTER

Vol. 81 Friday,

No. 223 November 18, 2016

Book 2 of 3 Books

Pages 82271–82492

Part V

Environmental Protection Agency

40 CFR Part 82

Protection of Stratospheric Ozone: Update to the Refrigerant Management Requirements Under the Clean Air Act; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 82

[EPA–HQ–OAR–2015–0453; FRL–9950–28–OAR]

RIN 2060–AS51

Protection of Stratospheric Ozone: Update to the Refrigerant Management Requirements Under the Clean Air Act

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Clean Air Act prohibits the knowing release of ozone-depleting and substitute refrigerants during the course of maintaining, servicing, repairing, or disposing of appliances or industrial process refrigeration. The existing regulations require that persons maintaining, servicing, repairing, or disposing of air-conditioning and refrigeration equipment containing more than 50 pounds of refrigerant observe certain service practices that reduce emissions of ozone-depleting refrigerant. This rule updates those existing requirements as well as extends them, as appropriate, to non-ozone depleting substitute refrigerants, such as hydrofluorocarbons. Updates include strengthened leak repair requirements, recordkeeping requirements for the disposal of appliances containing more than five and less than 50 pounds of refrigerant, revisions to the technician certification program, and revisions for improved readability and compliance. As a result, this action reduces emissions of ozone-depleting substances and gases with high global warming potentials.

DATES: This final rule is effective on January 1, 2017. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of on January 1, 2017. This rule contains information collection activities that have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act (PRA). Under the PRA, comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before December 19, 2016.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2015–0453. All documents in the docket are listed on the *www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, *e.g.,* CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through *www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: Jeremy Arling, Stratospheric Protection Division, Office of Atmospheric Programs, Mail Code 6205T, 1200 Pennsylvania Avenue NW., Washington, DC 20460; telephone number (202) 343–9055; email address *arling.jeremy@epa.gov.* You may also visit *www.epa.gov/section608* for further information about refrigerant management, other Stratospheric Ozone Protection regulations, the science of ozone layer depletion, and related topics.

SUPPLEMENTARY INFORMATION:

Table of Contents

List of Acronyms

AHRI Air Conditioning, Heating, and Refrigeration Institute
ARI Air Conditioning and Refrigeration Institute (now AHRI)
ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
CAA Clean Air Act
CARB California Air Resources Board
CBI Confidential Business Information
CFC Chlorofluorocarbon
CO_2 Carbon Dioxide
GHG Greenhouse Gas
GWP Global Warming Potential
HCFC Hydrochlorofluorocarbon
HFC Hydrofluorocarbon
HFO Hydrofluoroolefin
IPCC Intergovernmental Panel on Climate Change
IPR Industrial Process Refrigeration
$MMTCO_2eq$ Million Metric Tons Carbon Dioxide Equivalent
MVAC Motor Vehicle Air Conditioner
NAICS North American Industry Classification System
ODP Ozone depletion potential
ODS Ozone-depleting substance
PFC Perfluorocarbon
RCRA Resource Conservation and Recovery Act
RMP Refrigerant Management Program
SCAQMD South Coast Air Quality Management District
SNAP Significant New Alternatives Policy
UL Underwriters Laboratories

I. General Information

A. Does this action apply to me?

Categories and entities potentially regulated by this action include those who own, operate, maintain, service, repair, recycle, or dispose of refrigeration and air-conditioning appliances and refrigerants, as well as entities that manufacture or sell refrigerants, products and services for the refrigeration and air-conditioning industry, including motor vehicle air conditioning. Regulated entities include, but are not limited to, the following:

TABLE 1—POTENTIALLY AFFECTED ENTITIES

Category	North American industry classification system (NAICS) code	Examples of regulated entities
Industrial Process Refrigeration (IPR).	111, 11251, 11511, 21111, 2211, 2212, 2213, 311, 3121, 3221, 3222, 32311, 32411, 3251, 32512, 3252, 3253, 32541, 3256, 3259, 3261, 3262, 3324, 3328, 33324, 33341, 33361, 3341, 3344, 3345, 3346, 3364, 33911, 339999.	Owners or operators of refrigeration equipment used in agriculture and crop production, oil and gas extraction, ice rinks, and the manufacture of frozen food, dairy products, food and beverages, ice, petrochemicals, chemicals, machinery, medical equipment, plastics, paper, and electronics
Commercial Refrigeration	42374, 42393, 42399, 4242, 4244, 42459, 42469, 42481, 42493, 4451, 4452, 45291, 48422, 4885, 4931, 49312, 72231.	Owners or operators of refrigerated warehousing and storage facilities, supermarkets, grocery stores, warehouse clubs, supercenters, convenience stores, and refrigerated transport
Comfort Cooling	45211, 45299, 453998, 512, 522, 524, 531, 5417, 551, 561, 6111, 6112, 6113, 61151, 622, 7121, 71394, 721, 722, 813, 92.	Owners or operators of air-conditioning equipment used in the following: hospitals, office buildings, colleges and universities, metropolitan transit authorities, real estate rental & leased properties, lodging and food services, property management, schools, and public administration or other public institutions
Plumbing, Heating, and Air-Conditioning Contractors.	238220, 811111, 81131, 811412	Plumbing, heating, and air-conditioning contractors, and refrigerant recovery contractors, including automotive repair
Manufacturers and Distributors of Small Cans of Refrigerant.	325120, 441310, 447110	Automotive parts and accessories stores and industrial gas manufacturers
Reclaimers	325120, 423930, 424690, 562920, 562212.	Industrial gas manufacturers, recyclable material merchant wholesalers, materials recovery facilities, solid waste landfills, and other chemical and allied products merchant wholesalers
Disposers and Recyclers of Appliances.	423990, 562212, 562920	Materials recovery facilities, solid waste landfills, and other miscellaneous durable goods merchant wholesalers
Refrigerant Wholesalers	325120, 42, 424690	Industrial gas manufacturers, other chemical and allied products merchant wholesalers, wholesale trade
Certifying Organizations	541380	Environmental test laboratories and services

This table is not intended to be exhaustive, but rather provides a guide for readers regarding the types of entities that could potentially be regulated by this action. Other types of entities not listed in the table could also be affected. To determine whether your facility, company, business organization, or other entity is regulated by this action, you should carefully examine the regulations in subpart F and this rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

B. What action is the Agency taking?

The regulations in 40 CFR part 82, subpart F (subpart F) that are in effect before this final action takes effect (often referred to in this notice as the ''prior'' or ''previous'' regulations) require that persons servicing, maintaining, repairing, or disposing of air-conditioning and refrigeration equipment observe certain service practices that reduce emissions of ozone-depleting refrigerant. Specifically, these provisions include: Restricting the servicing of appliances and the sale of refrigerant to certified technicians; specifying the proper evacuation levels before opening an appliance; requiring the use of certified refrigerant recovery and/or recycling equipment; requiring the maintenance and repair of appliances that meet size and leak rate thresholds; requiring that refrigerant be removed from appliances prior to disposal; requiring that appliances have a servicing aperture or process stub to facilitate refrigerant recovery; requiring that refrigerant reclaimers be certified in order to reclaim and sell used refrigerant; and establishing standards for technician certification programs, recovery equipment, and quality of reclaimed refrigerant.

This rule updates the prior refrigerant management requirements in subpart F that apply to ozone-depleting refrigerants. It also extends those requirements, as appropriate, to non-ozone depleting substitute refrigerants that are not exempt from the venting prohibition, including but not limited to hydrofluorocarbons (HFCs), in order to interpret, explain, and enforce the venting prohibition.

C. What is the Agency's authority for taking this action?

Section 608 of the CAA provides EPA authority for these revisions to the regulations found at 40 CFR part 82, subpart F. EPA's authority for this rulemaking is supplemented by section 301(a), which provides authority to ''prescribe such regulations as are necessary to carry out [the EPA Administrator's] functions under this Act,'' and section 114, which provides authority for the EPA Administrator to require recordkeeping and reporting in carrying out any provision of the CAA (with certain exceptions that do not apply here). More detail on EPA's authority for this action is provided in subsequent sections.

D. What are the incremental costs and benefits of this action?

The revisions in this rule require certain businesses to take actions that have associated costs, such as conducting leak inspections, repairing leaks, and keeping records. Total annual incremental compliance costs associated with this rule are estimated to be $24.5 million per year in 2014 dollars using a 7 percent discount rate. Costs were modeled for a single typical year in which all the requirements were in effect, based on the appliance distribution modeled for 2015. Total annual operating savings associated with reduced refrigerant use are estimated to be $44 million; thus incremental compliance costs and refrigerant savings combined are estimated to be approximately $19.5 million per year. A detailed description of the comments received on the proposed analysis can be found in Section VI of this preamble as well as the response to comments document found in the docket. A full description of the technical analysis can be found in the document *Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program* in the docket.

EPA estimates that this rule will prevent damage to the stratospheric ozone layer by reducing emissions of ozone-depleting refrigerants by approximately 114 metric tons per year, weighted by the ozone-depletion potential (ODP) of the gases emitted. Avoided emissions of ozone-depleting refrigerants and non-ozone depleting substitutes will also reduce climate impacts because most of these refrigerants are potent greenhouse gases. Weighted by their global warming potentials (GWP) [1], EPA estimates that the revisions will prevent annual emissions of greenhouse gases equivalent to 7.3 million metric tons of carbon dioxide ($MMTCO_2eq$). The reductions in emissions of GHGs and ODS have benefits for human health and the environment because of the threats these substances pose to human health and the environment. Such threats are discussed further in Section II.D of this notice.

TABLE 2—ANNUAL GHG AND ODS EMISSIONS AVOIDED

Rule component	GHG emissions avoided ($MTCO_2eq$)			ODS emissions avoided (ODP-weighted MT)
	HFC	ODS	Total	ODS
Leak Repair and Inspection				
Comfort Cooling	1,425,000	2,487,000	3,912,000	78
Commercial Refrigeration	1,246,000	1,077,000	2,323,000	30
IPR	275,000	169,000	444,000	5
Reporting & Recordkeeping				
Self-sealing Valves on Small Cans	657,000		657,000	
Total	3,603,000	3,733,000	7,336,000	114

Totals may not sum due to independent rounding.

Details of the methods used to estimate the benefits are discussed in Section VI of this notice and the *Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program* in the docket.

E. Judicial Review

Under CAA section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by January 17, 2017. This final action is a nationally applicable regulation and has nationwide scope and effect because it makes revisions to the EPA's regulations for the National Recycling and Emission Reduction Program found at 40 CFR part 82, subpart F, which are nationally applicable regulations that have nationwide scope and effect. Under CAA section 307(d)(7)(B), only an objection to this final action that was raised with reasonable specificity during the period for public comment can be raised during judicial review. This section also provides a mechanism for EPA to convene a proceeding for reconsideration, ''[i]f the person raising an objection can demonstrate to [EPA] that it was impracticable to raise such objection within [the period for public comment] or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of this rule.'' Any person seeking to make such a demonstration to us should submit a Petition for Reconsideration to the Office of the Administrator, Environmental Protection Agency, Room 3000, William Jefferson Clinton Building, 1200 Pennsylvania Ave. NW., Washington, DC 20460, with a copy to the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344–A), Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460.

II. Background

A. What are ozone-depleting substances?

The stratospheric ozone layer protects life on Earth from the sun's harmful ultraviolet (UV) radiation. ODS are generally man-made chemicals that, when transported by winds into the stratosphere, release chlorine or bromine and damage that protective ozone layer. ODS are used as refrigerants, solvents, foam blowing

[1] Unless otherwise stated, GWPs stated in this document are 100-year integrated GWPs, relative to a GWP of 1 for carbon dioxide, as reported in IPCC, 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. This document is accessible at *www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html*. For blends of multiple compounds, we are weighting the GWP of each component by mass percentage in the blend.

agents, aerosol propellants, fire suppression agents, and in other smaller applications. The Clean Air Act divides ODS into two categories: Class I and class II substances. The production of new class I ODS, which includes chlorofluorocarbons (CFCs), methyl chloroform, carbon tetrachloride, halons, and other compounds has been banned for over a decade. The production of new class II substances, which are all hydrochlorofluorocarbons (HCFCs), will be phased down 99.5 percent by 2020.

The initial concern about the ozone layer in the 1970s led to a ban on the use of CFCs as aerosol propellants in several countries, including the United States. In 1985, the Vienna Convention on the Protection of the Ozone Layer was adopted to formalize international cooperation on this issue. Additional efforts resulted in the adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer in 1987. Today, all Parties to the Montreal Protocol have agreed to phase out the production and consumption of ODS controlled by the Protocol.

B. What is the National Recycling and Emission Reduction Program?

Section 608 of the CAA bears the title ''National Recycling and Emissions Reduction Program.'' Under the structure of section 608, this program has three main components. First, section 608(a) requires EPA to establish standards and requirements regarding use and disposal of class I and II substances, including a comprehensive refrigerant management program to limit emissions of ozone-depleting refrigerants. This program is to include regulations that reduce the use and emissions of class I and II substances to the lowest achievable level and that maximize the recapture and recycling of such substances. The second component, section 608(b), requires that the regulations issued pursuant to subsection (a) contain requirements for the safe disposal of class I and class II substances. The third component, section 608(c), prohibits the knowing venting, release, or disposal of ozone-depleting refrigerants and their substitutes during the maintenance, service, repair, or disposal of air-conditioning and refrigeration appliances or IPR. This prohibition is also referred to as the ''venting prohibition'' in this action. Section 608 is described in greater detail in Section III.

EPA first issued regulations under section 608 of the CAA on May 14, 1993 (58 FR 28660, ''1993 Rule''), to establish the national refrigerant management program for ozone-depleting refrigerants recovered during the maintenance, service, repair, and disposal of air-conditioning and refrigeration appliances. These regulations were intended to substantially reduce the use and emissions of ozone-depleting refrigerants.

The regulations first established in the 1993 Rule require that persons servicing air-conditioning and refrigeration equipment containing an ozone-depleting refrigerant observe certain practices that reduce emissions. They also established requirements for refrigerant recovery equipment, reclaimer certification, and technician certification, and restricted the sale of refrigerant so that only certified technicians could purchase it. In addition, they required the removal of ODS from appliances prior to disposal, and that all air-conditioning and refrigeration equipment using an ODS be provided with a servicing aperture or process stub to facilitate refrigerant recovery.

The 1993 Rule also established a requirement to repair leaking appliances containing 50 or more pounds of ODS refrigerant. The rule set an annual leak rate of 35 percent for commercial refrigeration appliances and IPR and 15 percent for comfort cooling appliances. If the applicable leak rate was exceeded, the appliance must be repaired within 30 days.

EPA revised these regulations through subsequent rulemakings published on August 19, 1994 (59 FR 42950), November 9, 1994 (59 FR 55912), August 8, 1995 (60 FR 40420), July 24, 2003 (68 FR 43786), March 12, 2004 (69 FR 11946), January 11, 2005 (70 FR 1972), May 23, 2014 (79 FR 29682), and April 10, 2015 (80 FR 19453). EPA also issued proposed rules to revise the regulations in subpart F on June 11, 1998 (63 FR 32044), elements of which were not finalized, and on December 15, 2010 (75 FR 78558), which was also not finalized. EPA is withdrawing and therefore not finalizing the 2010 proposed rule. Instead, EPA re-proposed elements of both the 1998 and the 2010 proposed rules in the notice of proposed rulemaking (80 FR 19453) for this rule.

The August 19, 1994, rule amended specific definitions, required practices, and reporting and recordkeeping requirements, as well as adopted industry standards for reclaimed ODS refrigerants.

The November 9, 1994, rule clarified the conditions under which technician certification programs were grandfathered, allowing technicians who had participated in voluntary technician training and certification programs prior to the publication of the 1993 Rule to receive formal certification. The rule also clarified the scope of the technician certification requirement and provided a limited exemption from certification requirements for apprentices.

The August 8, 1995, rule responded to a settlement agreement between EPA and the Chemical Manufacturers Association to give additional flexibility to repair or retrofit IPR appliances containing ODS. EPA allowed owners or operators additional time beyond 30 days to complete repairs and more than one year to retrofit appliances where certain conditions applied (*i.e.,* federally owned equipment located in areas subject to radiological contamination, unavailability of necessary parts for IPR, or instances where adherence to local, state, or federal laws hinder immediate repairs for IPR). EPA also clarified that purged refrigerants that have been captured and destroyed can be excluded from the leak rate calculations.

The July 24, 2003, rule finalized portions of a proposed rulemaking (61 FR 7858; February 29, 1996) that amended the recordkeeping aspects of the section 608 technician certification program, refined aspects of the refrigerant sales restriction, adopted updated versions of ARI Standards 700 [2] and 740 [3], amended several definitions, and set forth procedures for the revocation and/or suspension of approval to certify technicians and refrigerant recovery and/or recycling equipment and revocation and/or suspension procedures for certification as a refrigerant reclaimer.

The March 12, 2004, rule exempted from the venting prohibition under section 608(c)(2) specific non-ozone depleting substances that the Agency found did not pose a threat to the environment (69 FR 11946). Notably, EPA did not exempt HFC or perfluorocarbon (PFC) refrigerants from the venting prohibition. The rule clarified that regulations affecting the handling and sales of ozone-depleting refrigerants apply to blends that contain an ODS.

The January 11, 2005, rule clarified that the leak repair requirements also apply to blends that contain an ODS (70

[2] The Air Conditioning and Refrigeration Institute Standard 700, *Specification for Fluorocarbons and Other Refrigerants,* contains standards for the reclamation of used refrigerants.

[3] The Air Conditioning and Refrigeration Institute Standard 740, *Performance Rating of Refrigerant Recovery Equipment and Recovery/Recycling Equipment,* contains standards for the equipment used to recover refrigerant from air-conditioning and refrigeration appliances.

FR 1927). The rule amended the required practices and associated reporting/recordkeeping requirements and clarified certain leak repair requirements.

On December 15, 2010 (75 FR 78558, ''proposed 2010 Leak Repair Rule''), EPA proposed to create a streamlined set of leak repair requirements that are applicable to all types of appliances containing 50 or more pounds of ozone-depleting refrigerant. The rule also proposed to reduce the leak repair rates. EPA did not finalize that rule and EPA has withdrawn that proposal through this rulemaking, although, as noted above, EPA also re-proposed elements of that proposal in the notice of proposed rulemaking for this rule.

Finally, on May 23, 2014 (79 FR 29682), and April 10, 2015 (80 FR 19453), EPA expanded the list of substitute refrigerants that EPA has exempted from the CAA venting prohibition to include certain hydrocarbons in specific end-uses.

C. What developments have occurred since EPA first established the National Recycling and Emission Reduction Program?

1. Phaseout of CFCs and HCFCs

In 1993, when EPA established the refrigerant management requirements of subpart F, CFCs and HCFCs were the most commonly used refrigerants, depending on the specific application. Just six months prior, in November 1992, the Parties to the Montreal Protocol accelerated the phaseout schedule for CFCs through the Copenhagen Amendment, so that there would be a complete phaseout by 1996. The Copenhagen Amendment also established a phaseout schedule for HCFCs. The schedule for HCFCs was later amended and now calls for a 35 percent reduction in production and consumption from each Article 2 Party's (developed country's) cap by 2004, followed by a 75 percent reduction by 2010, a 90 percent reduction by 2015, a 99.5 percent reduction by 2020, and a total phaseout by 2030. From 2020 to 2030, production and consumption at only 0.5 percent of baseline is allowed solely for servicing existing air-conditioning and refrigeration equipment.

The United States chose to implement the Montreal Protocol phaseout schedule on a chemical-by-chemical basis. In 1993, as authorized by section 606 of the CAA, EPA established a phaseout schedule that eliminated HCFC–141b first and would greatly restrict HCFC–142b and HCFC–22 next, due to their high ozone depletion potentials (ODPs), followed by restrictions on all other HCFCs, and ultimately a complete phaseout (58 FR 15014, March 18, 1993, and 58 FR 65018, December 10, 1993). EPA continues to issue allowances for the production and consumption of HCFCs that have not yet been phased out. The allowance levels reflect not only phaseout schedules but also use restrictions under section 605(a) of the CAA. The phaseout schedule and allowance levels can be found at 40 CFR part 82, subpart A.

EPA established the refrigerant management program shortly before the CFC phaseout. Similarly, today's rule to update those regulations closely precedes the phaseout of HCFCs. In 2020, production and consumption of HCFCs will be limited to 0.5% of baseline, and may not include HCFC–22, the most commonly used HCFC refrigerant. The reasons for encouraging a viable CFC recycling program support the same approach for HCFCs. The 1993 Rule discussed a 1990 advance notice of proposed rulemaking regarding a national CFC recycling program. As the 1993 Rule discussed, that 1990 notice emphasized that recycling is important because it would allow the continued use of equipment requiring CFCs for service past the year in which CFC production is phased out, thereby eliminating or deferring the cost of early retirement or retrofit of such equipment. Because of the continued use of these substances in existing equipment, recycling can serve as a useful bridge to alternative products while minimizing disruption of the current capital stock of equipment. (58 FR 28661).

More than twenty years later, with the experience gained through the phaseout of CFCs, reducing emissions of HCFCs and maximizing their recovery and reclamation remains just as important for ensuring the continued viability of the current stock of equipment. The transition out of CFC and now HCFC refrigerants is one reason that it is important to update the refrigerant management regulations in subpart F.

2. Development of Non-ODS Alternatives

The universe of available refrigerants has expanded dramatically since EPA first established the refrigerant management regulations in subpart F. Under the Significant New Alternatives Policy (SNAP) program (CAA section 612), EPA identifies substitutes that pose lower overall risks to human health and the environment and must prohibit the use of substitutes for which there are other available or potentially available alternatives posing lower overall risk to human health and the environment for the same use. Thus, EPA's SNAP program does not provide a static list of alternatives. Instead, the SNAP list evolves as EPA makes decisions informed by our overall understanding of the environmental and human health impacts as well as our current knowledge about available substitutes. Under SNAP, EPA has reviewed over 400 substitutes in the refrigeration and air-conditioning; fire suppression; foam blowing; solvent cleaning; aerosols; adhesives, coatings, and inks; sterilants; and tobacco expansion sectors. To date, SNAP has issued 31 notices and 20 rulemakings listing alternatives as acceptable, acceptable subject to use conditions, acceptable subject to narrowed use limits, or unacceptable for those various end-uses.

For example, on April 10, 2015, the SNAP Program listed as acceptable, subject to use conditions, three hydrocarbons, one hydrocarbon blend, and HFC–32 as substitute refrigerants in a number of refrigeration and air-conditioning end-uses (80 FR 19454). The SNAP program has also recently listed a number of additional refrigerant options, including blends of hydrofluoroolefins (HFOs) and HFCs that have lower global warming potentials (GWPs) (October 21, 2014, 79 FR 62863; July 20, 2015, 80 FR 42870). EPA anticipates that industry will continue to develop safer alternatives and that EPA will continue to review information concerning additional refrigerant options and determine the appropriate action needed to safeguard human health and the environment.

Due to the change in the suite of acceptable refrigerants available for some end-uses, EPA anticipates that the relative amounts of different refrigerants in stocks in the United States will change, and thus that the universe of refrigerants subject to the refrigerant management program will continue to evolve. The diversity of refrigerants and the potential for cross-contamination are two reasons why it is important to clarify how all refrigerants, including non-exempt substitute refrigerants, should be handled under the refrigerant management regulations in subpart F.

3. Increased Attention to HFCs as Climate Pollutants

Domestic and international efforts to protect the ozone layer have also helped to protect the global climate, because in addition to damaging ozone in the stratosphere, CFCs and HCFCs are also potent GHGs. HFCs, which are the predominant class of compounds being used as replacements for ODS, also can have high GWPs. As their use has increased, concern has grown over the environmental damage caused by heat trapped in the atmosphere by HFCs.

On December 7, 2009, (74 FR 66496) the Administrator issued an Endangerment Finding regarding GHGs under section 202(a) of the CAA. As part of this finding, EPA concluded that the current and projected concentrations of six key well-mixed GHGs in the atmosphere—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), HFCs, PFCs, and sulfur hexafluoride (SF_6)—endanger both the health and welfare of current and future generations. While this finding was made specifically for the purposes of section 202(a) of the CAA, EPA is cognizant of the global climate risks generally discussed in the finding in its work to reduce emissions of HFCs and other GHGs.

i. Climate Action Plan

In June 2013, the President announced the Climate Action Plan.[4] Among the many actions called for, the Climate Action Plan outlined a set of measures to address HFCs. The Climate Action Plan states: ''to reduce emissions of HFCs, the United States can and will lead both through international diplomacy as well as domestic actions.'' Part of this international diplomacy is the proposed Amendment to the Montreal Protocol discussed below. The Climate Action Plan also directed EPA to use its authority through the SNAP program ''to encourage private sector investment in low-emissions technology by identifying and approving climate-friendly chemicals while prohibiting certain uses of the most harmful chemical alternatives.'' In July 2015, EPA finalized a rule that revised the listing status for certain substitutes previously listed as acceptable under the SNAP program (80 FR 42870). That rule revised the status of certain HFCs and HCFCs for various end-uses in the aerosols, refrigeration and air-conditioning, and foam blowing sectors. EPA made these revisions based on information showing that other substitutes are available for the same uses that pose lower risk overall to human health and the environment. A copy of the Climate Action Plan is available in the docket to this rule.

The President's Climate Action Plan also calls on the federal government to reduce emissions of HFCs by purchasing alternatives whenever feasible and transitioning to equipment that uses safer and more sustainable alternatives to HFCs. To implement the Climate Action Plan, the Department of Defense, General Services Administration, and National Aeronautics and Space Administration recently amended the Federal Acquisition Regulation to encourage the purchase of alternatives to high GWP HFCs (81 FR 30429; May 16, 2016). This rule is designed to promote the use of safer chemical alternatives to HFCs by service and vendor contractors. To help agencies monitor progress, the amendment requires contractors to keep records of and report on the amounts of HFCs added or removed during the routine maintenance, repair, or disposal of appliances with a full charge of 50 or more pounds of HFC or HFC blend refrigerant.

Minimizing the emissions and maximizing the recovery and reuse of ODS and HFC refrigerants are consistent with the Climate Action Plan. EPA estimates that the revisions finalized in this action will prevent annual emissions of refrigerant equivalent to 7.3 $MMTCO_2eq$. Of this amount, 3.6 $MMTCO_2eq$ are due to HFCs and 3.7 $MMTCO_2eq$ are due to ODS. Because of the significant environmental benefit to be gained by addressing HFC refrigerants, it is important to update the refrigerant management regulations in subpart F.

ii. Trends in HFC Use and Future Projections

Although HFCs represent a small fraction of current GHG emissions by weight, their warming impact per kilogram is very strong. The most commonly used HFC, HFC–134a, has a GWP of 1,430, which means it traps 1,430 times as much heat per kilogram as carbon dioxide does over 100 years. The majority of global, and U.S., HFC use is in the refrigeration and air conditioning sector. HFC emissions are projected to increase substantially and at an increasing rate over the next several decades if their production is left uncontrolled. In the United States, emissions of HFCs are increasing more quickly than those of any other group of GHGs, and globally they are increasing 10 to 15 percent annually. At that rate, emissions are projected to double by 2020 and triple by 2030.

HFCs are also rapidly accumulating in the atmosphere. The atmospheric concentration of HFC–134a has increased by about 10 percent per year from 2006 to 2012, and the concentrations of HFC–143a and HFC–125, which are components of commonly used refrigerant blends, have risen over 13 and 16 percent per year from 2007 to 2011, respectively. Without action, annual global emissions of HFCs are projected to rise to about 6,400 to 9,900 $MMTCO_2eq$ in 2050, which is comparable to the drop in annual GHG emissions of ODS of 8,000 $MMTCO_2eq$ between 1988 and 2010 (UNEP, 2011).

As these HFCs accumulate in the atmosphere, they change the balance between energy entering the Earth's climate from the sun and energy escaping the Earth into space. The change in the net rate at which energy enters the atmosphere is called radiative forcing. By 2050, the buildup of HFCs in the atmosphere is projected to increase radiative forcing to 0.22–0.25 W m^2. To appreciate the significance of the projected HFC radiative forcing within the context of all GHGs, the forcing from HFCs would be 6–9% of that from CO_2 in the IPCC's representative concentration pathways (RCP6 and RCP8.5) in 2050 (Velders *et al.*, 2015).

iii. Montreal Protocol Amendment Proposal

For the past six years, the United States, Canada, and Mexico have proposed an amendment to the Montreal Protocol to phase down the production and consumption of HFCs. The United States seeks adoption of an amendment that is acceptable to all Parties. Global benefits of the amendment proposal would yield significant reductions of over 90 gigatons of carbon dioxide equivalent (CO_2eq) through 2050. A number of other Parties to the Montreal Protocol have also proposed amendments to phase down global production and consumption of HFCs. These proposals were introduced by a group of Island States; the European Union; and India. On November 6, 2015, the Parties to the Montreal Protocol adopted the ''Dubai Pathway'' on HFCs, which provides that the Parties would work together, within the Montreal Protocol, to adopt an HFC amendment in 2016.

4. Petition From the Alliance for Responsible Atmospheric Policy

On January 31, 2014, the Alliance for Responsible Atmospheric Policy (the Alliance) petitioned the Agency to initiate a rulemaking to apply the section 608 refrigerant management regulations to HFCs and other substitute refrigerants. In that petition, the Alliance requested that EPA extend the section 608 regulations relating to refrigerant sales and distribution restrictions, and the evacuation, certification, reclamation and recovery, leak repair, reporting and recordkeeping

[4] The President's Climate Action Plan, 2013, *https://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf.*

requirements to HFCs. The petition argues that applying the section 608 requirements to HFCs ''would increase the environmental benefits already realized from the section 608 regulations, through reduced HFC emissions, and would complement the United States' goal of a global phase down in HFC production and consumption.'' The petition cites sections 608(c)(2) and 301(a) of the CAA as authority for these revisions. A copy of the petition is included in the docket for this rulemaking. While EPA is not taking today's action solely as a result of the Alliance petition, this rulemaking constitutes the Agency's response to the petition.

D. What are the goals of this rule?

The Agency has two goals for this rulemaking. The first is to promote the proper handling and use of ozone-depleting and substitute refrigerants. Doing so will protect the stratospheric ozone layer by reducing emissions of ODS refrigerants and protect the climate system by reducing emissions of refrigerant gases with high GWPs. High-GWP refrigerants include both ODS refrigerants and most substitute refrigerants, including HFCs, that EPA has not exempted from the venting prohibition under CAA section 608. The second goal of this rulemaking is to harmonize the requirements across all major refrigerant types and update the regulations in plain language to reduce uncertainty and complexity for the regulated community, as well as increase clarity, encourage compliance, and facilitate enforcement.

1. Promoting the Proper Handling of Refrigerants

Today's rule will reduce the use and emission of refrigerants, maximize the recapture and recycling of such substances, and further interpret, explain, and enforce the prohibition on knowingly venting or releasing refrigerants during the maintenance, service, repair, or disposal of appliances.

EPA estimates that this rule will result in annual reductions in emissions of approximately 114 ODP-weighted metric tons. A separate support document *Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program* contains a full discussion of the benefits of this rule and is available in the docket.

Stratospheric ozone depletion decreases the atmosphere's ability to shield life on the Earth's surface from the sun's UV radiation. The links between stratospheric ozone depletion and public health concerns are well established. Emissions of ODS lead to chemical reactions that reduce the amount of ozone in the stratosphere. Less ozone in the stratosphere means that more UVA and UVB radiation reaches the earth's surface and is incident on exposed organisms, including humans. Adverse health effects associated with exposure to UV radiation include skin cancer, cataracts, and immune suppression. The *Scientific Assessment of Ozone Depletion*,[5] prepared by the Scientific Assessment Panel to the Montreal Protocol, and *Environmental Effects of Ozone Depletion and its Interactions with Climate Change*,[6] prepared by the Environmental Effects Assessment Panel to the Montreal Protocol provide comprehensive information regarding the links between emissions of ODS, ozone layer depletion, UV radiation, and human health effects. Both documents are available in the docket for this rule.

The most common forms of skin cancer are strongly associated with UV radiation, and UV exposure is the most preventable cause of skin cancer (U.S. Department of Health and Human Services. The Surgeon General's Call to Action to Prevent Skin Cancer. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General; 2014). Skin cancer is the most common form of cancer in the United States, with more than 3.5 million new cases diagnosed annually (American Cancer Society, Cancer Facts and Figures, 2015). Rates for new cases of melanoma, the most serious form of skin cancer, have been rising on average 1.4 percent each year over the last 10 years (National Cancer Institute, SEER Stat Fact Sheets: Melanoma of the Skin, available at *http://seer.cancer.gov/statfacts/html/melan.html*, accessed May 5, 2015). In 2015, it is estimated that 70,000 Americans will have been diagnosed with melanoma and almost 10,000 will have died as a result of the disease (American Cancer Society, Cancers Facts and Figures, 2015).

Non-melanoma skin cancers are less deadly than melanomas, but if left untreated they can spread, causing disfigurement and more serious health problems. There are two primary types of non-melanoma skin cancers. Basal cell carcinomas are the most common type of skin cancer tumors. Basal cell carcinoma grows slowly, and rarely spreads to other parts of the body. It can, however, penetrate to the bone and cause considerable damage. Squamous cell carcinomas are tumors that may appear as nodules or as red, scaly patches. This cancer can develop into large masses and can spread to other parts of the body.

Other UV-related skin disorders include actinic keratoses and premature aging of the skin. Actinic keratoses are skin growths that occur on body areas exposed to the sun. The face, hands, forearms, and neck are especially susceptible to this type of lesion. Although premalignant, actinic keratoses are a risk factor for squamous cell carcinoma. Chronic exposure to the sun also causes premature aging, which over time can make the skin become thick, wrinkled, and leathery.

Research has shown that UV radiation increases the likelihood of certain cataracts. (Taylor, H.R., *et al.*, 1988. *Effect of ultraviolet radiation on cataract formation*, New England Journal of Medicine, 319, 1429–33; West, S. *et al.*, 2005. *Model of Risk of Cortical Cataract in the US Population with Exposure to Increased Ultraviolet Radiation due to Stratospheric Ozone Depletion*, American Journal of Epidemiology, 162, 1080–1088.) Cataracts are a form of eye damage in which a loss of transparency in the lens of the eye clouds vision. If left untreated, cataracts can lead to blindness. Although curable with modern eye surgery, cataracts diminish the eyesight of millions of Americans. Other kinds of eye damage caused by UV radiation include pterygium (*i.e.*, tissue growth that can block vision), skin cancer around the eyes, and degeneration of the macula which contains the part of the retina where visual perception is most acute.

Another benefit of reducing refrigerant emissions is protection of the climate system. Many refrigerants, including ODS and substitutes for ODS, are potent GHGs, having GWPs thousands of times higher than that of carbon dioxide (CO_2), which has a GWP of one. For example, HCFC–22 has a GWP of 1,810. R–404A, a commonly used HFC refrigerant blend, has a GWP of 3,922. Other common HFC refrigerants, with their GWPs, include R–134a (1,430), R–410A (2,088), R–407A (2,107), and R–507A (3,985). EPA estimates that today's rule will reduce GWP-weighted emissions by approximately 7.3 $MMTCO_2eq$ per year.

[5] World Meteorological Organization (WMO), Scientific Assessment of Ozone Depletion: 2014, World Meteorological Organization, Global Ozone Research and Monitoring Project—Report No. 55, 416 pp., Geneva, Switzerland, 2014.

[6] United Nations Environment Programme, Environmental Effects Assessment Panel, Environmental effects of ozone depletion and its interactions with climate change: progress report, 2011, Photochem. Photobiol. Sci., 2012, 11, DOI: 10.1039/c1pp90033a.

To briefly summarize, GHGs cause climate change by trapping heat on Earth. The Earth is constantly receiving energy from the sun in the form of radiation, while at the same time, energy is radiating away into space, mostly as infrared radiation. By absorbing and scattering radiation that otherwise would escape into space, GHGs throw off the balance between incoming and escaping radiation, resulting in more energy in the Earth's climate system.

As described in the EPA's 2009 Endangerment Finding (74 FR 66496) and subsequent reports by the IPCC, the United States Global Change Research Program, and the National Research Council, climate change impacts threaten the health of Americans in multiple ways and touch on nearly every aspect of public welfare. For more information on GHGs and climate change in the United States, visit *www.epa.gov/climatechange*.

2. Improving Rule Effectiveness

The second goal of today's rule is to improve the clarity and effectiveness of the subpart F regulations. Achieving the health and environmental benefits of these rules depends on widespread compliance, and understanding of the regulations by the regulated community enhances compliance.

EPA has begun an initiative to improve the effectiveness of its rules called Next Generation Compliance. The vision for this initiative is to make it easier for the regulated community to understand and comply with environmental laws and inform the public about their performance. Most importantly, this initiative will help ensure that all Americans are protected from significant risks to human health and the environment and have access to information that allows them to more fully engage in environmental protection efforts.

The Agency has identified several interconnected components in the Office of Enforcement and Compliance Assurance's 2014–2017 strategic plan for its Next Generation Compliance initiative that can improve the effectiveness of rules:

- Effective Regulations: Design regulations that are clear, as easy to implement as possible, and that contain self-reinforcing drivers. For example, where possible, design regulations such that regulated facilities can take steps to monitor their own performance to prevent violations, or be certified by an independent 3rd party.
- *Advanced Monitoring:* Use advanced monitoring technology for the government, industry, and the public to more easily find information on pollutant discharges/emissions, environmental conditions, and noncompliance.
- *Electronic Reporting:* Implement electronic systems to make reporting easier, more efficient, and less costly. For the user, these systems offer speed, convenience, expanded information choices, and filing capabilities. For government, they offer the ability to increase transparency, improve our ability to spot pollution and compliance issues, and respond quickly to emerging problems.
- *Transparency:* Make the information we have today more accessible, and make new information obtained from advanced monitoring and electronic reporting publicly available.
- *Innovative Enforcement:* Use Next Generation Compliance principles and tools in enforcement planning and cases.

Effective Regulations. The Agency and industry have more than 20 years of experience implementing and operating under the refrigerant management regulations in subpart F. Through that experience, it has become clear that there are elements of the program that could be made more effective. This rule revises the structure of these regulations to clearly lay out the process for repairing refrigerant leaks and adds steps to ensure that the repairs were successful. This rule also for the first time addresses chronically leaking systems in a manner that minimizes the burden on compliant systems. EPA has reorganized the subpart so affected entities can more easily find the provisions that apply to them, including recordkeeping and reporting. This rule removes outdated requirements and, where appropriate, removes unnecessary distinctions between refrigerants, appliance types, and recovery equipment types. Clearer regulations will also be supported by comprehensive compliance assistance materials for each industry segment affected by this final regulation. EPA hopes to make it easier for the regulated community to understand their obligations when handling refrigerants, thereby improving compliance and reducing damage to the environment.

Advanced Monitoring. EPA is encouraging owners/operators of appliances containing 50 or more pounds of refrigerant to install automatic leak detection equipment. Such systems provide continuous information about whether a system is leaking, allowing leaks to be caught sooner. This can reduce both refrigerant costs and labor costs of manually inspecting refrigeration systems.

Electronic Reporting. EPA has established the email address *608reports@epa.gov* and this rule requires that all reports that do not contain confidential business information be submitted to EPA at that address. EPA is also revising the regulations to explicitly state that owners and operators of appliances subject to the leak repair provisions may use electronic systems to track when and how much refrigerant is added to equipment and to keep other required records.

Transparency. EPA is requiring members of the regulated community to post additional information online that is of use to this sector. For example, equipment testing organizations must post lists of certified recovery and/or recycling equipment on their Web sites rather than submit paper reports to EPA. Certifying organizations must also publish lists of technicians that they certify online to assist technicians who have lost their certification cards. EPA also posts to its Web site data on the amount of ODS refrigerant reclaimed each year. Under this final rule EPA will begin collecting and making available reclamation data for non-exempt substitute refrigerants which should provide EPA and the general public a greater understanding of the extent of HFC recovery and reclamation.

Innovative Enforcement. EPA has incorporated innovative enforcement principles into subpart F since its inception, and this rule updates and strengthens those principles. For example, the refrigerant sales restriction is an effective way to ensure that anyone maintaining, servicing, or repairing an appliance is a certified technician. EPA has also required certification of refrigerant recovery equipment by independent third parties (*i.e.*, UL and Air Conditioning, Heating, and Refrigeration Institute (AHRI)) to ensure that recovery equipment meets the applicable standards. This ensures that technicians who use these devices to recover refrigerant are also using equipment that, when following the manufacturer's instructions, will meet the minimum refrigerant evacuation requirements. EPA also relies on third parties to administer the technician certification exam.

E. What are the major revisions being finalized in this rule?

EPA is finalizing most of the proposed revisions to the regulations for the National Recycling and Emission Reduction Program. Some of these revisions strengthen the existing program, in particular by requiring owners and operators to repair systems that leak at lower rates than what is currently required and to verify that those repairs were successful. Others extend, as appropriate, the regulations to HFCs and other non-exempt substitute refrigerants. Still other revisions improve the effectiveness of the regulations. After considering comments, EPA has decided not to finalize certain aspects of the proposal. This section briefly discusses the major proposed revisions and the final actions that EPA is taking. Detailed discussions of all of the revisions to the regulations finalized in this action, changes from the proposal, and responses to significant comments are in Section IV of this notice. EPA also summarizes and responds to all significant comments on the proposed action in the comment response document in the docket.

1. Extend the Regulations To Cover Substitute Refrigerants

EPA is finalizing the proposed extension of the requirements of the National Recycling and Emission Reduction Program to substitute refrigerants that have not been exempted from the venting prohibition (also referred to in this action as ''non-exempt substitutes'').

2. Strengthen Leak Repair Requirements

Prior to this rule, the leak rates for ODS equipment were 35 percent for IPR and commercial refrigeration appliances, and 15 percent for comfort cooling and other appliances. EPA proposed leak rates of 20 percent for IPR and commercial refrigeration and 10 percent for comfort cooling and other appliances. Based in part on comments received on the proposal, EPA is finalizing leak rates for ODS equipment as follows: 30 percent for IPR, 20 percent for commercial refrigeration appliances, and 10 percent for comfort cooling and other appliances. EPA is also extending the new leak rates to equipment using HFCs and other substitute refrigerants that are not exempt from the venting prohibition.

After considering public comments, EPA is modifying the proposed leak inspection requirements in this final rule. EPA proposed to require quarterly or annual leak inspections for all appliances with a full charge of 50 pounds or greater, with the more frequent inspections applying to larger systems. In the revisions finalized in this rule, EPA is requiring quarterly or annual leak inspections only for appliances that have exceeded the applicable leak rate. Similar to the proposal, owners or operators can forgo leak inspections if they install, continuously operate, and maintain automatic leak detection systems.

Based on comments, EPA has given particular attention to situations where the proposed regulations would have required the retrofit or retirement of an appliance. EPA has modified the final rule in numerous places to support the proper repair of leaking systems. Most notably, EPA is modifying the proposed chronic leaker provision. EPA proposed that appliances containing 50 or more pounds of ODS or substitute refrigerant that leak more than 75 percent of the appliance's full charge in each of two consecutive 12-month periods would have to be retired or mothballed. EPA is finalizing a requirement that owners or operators of appliances that leak 125 percent of their full charge in a calendar year must submit a report to EPA detailing their repair efforts. The report must be submitted no later than March 1 following the calendar year of the ≥125 percent leak.

3. Extend the Sales Restriction to Substitute Refrigerants, With an Exception for Small Cans of MVAC Refrigerant

EPA is finalizing the proposed restriction that non-exempt substitute refrigerants may only be sold to technicians certified under sections 608 or 609 of the CAA. In the case of MVAC refrigerant, EPA is exempting the sale of small cans of non-ODS substitutes to allow the do-it-yourself (DIY) community to continue servicing their personal vehicles. EPA is requiring that small cans of non-exempt substitute refrigerant be outfitted with self-sealing valves by January 1, 2018. Based on comments, EPA is not finalizing the proposal to prohibit the sale of small cans that do not contain self-sealing valves that were manufactured or imported prior to that requirement taking effect.

4. Establish Recordkeeping for Appliances Containing More Than 5 and Less Than 50 Pounds of ODS and Non-Exempt Substitute Refrigerant

EPA is finalizing revisions to the regulations that require that technicians, or the company employing technicians, keep records when disposing of appliances containing more than five and less than 50 pounds of refrigerant. These records include the company name, location of the appliance, date of recovery, and type of refrigerant recovered for each appliance. EPA is also finalizing, with some modification, the revision to the regulations requiring that technicians keep records of the amounts of ODS and non-exempt substitute refrigerant transferred for reclamation by refrigerant type.

EPA is reducing the burden in this final rule by only requiring maintaining records typically generated in the field during the normal disposal of appliances. Therefore, EPA is not finalizing the proposed requirement to keep records indicating the amount of refrigerant recovered from each appliance. Instead, EPA is finalizing a requirement to record the total amount of refrigerant, by type, recovered from all appliances they disposed of over a calendar month. This tally can be performed less frequently and at a central location.

5. Update the Technician Certification Program

EPA is finalizing the requirement that technicians be certified to handle HFCs and other non-exempt substitutes, as proposed. EPA is also finalizing the proposed requirement for certifying organizations to publish lists or create online databases of technicians that they certify.

6. Improving Readability and Restructuring the Requirements

EPA is finalizing the extensive revisions to the regulations in subpart F to more clearly state the requirements of the National Recycling and Emission Reduction Program and to remove potentially ambiguous language, with minor changes from the proposal. EPA is modifying some of the proposed revisions to address additional suggestions raised by commenters. EPA's intent with these edits is to improve readability, not to change the substantive content or requirements of the regulations. For edits to the regulations that are intended to be substantive, EPA is discussing those revisions in this notice. EPA is adding to the docket a red-line version of the final regulatory text from subpart F that shows the final revisions to the prior regulations to assist the regulated community in identifying the differences.

F. Enforcement of Subpart F Regulations

Subpart F regulations must be enforced to realize their full environmental and human health benefit. This section briefly presents examples of recent actions that EPA has taken to enforce the venting prohibition, leak repair, and safe disposal provisions of subpart F. Several provisions that EPA is finalizing in this rule are based on lessons learned in taking these enforcement actions. These revisions are intended to encourage compliance and facilitate potential future enforcement of the requirements actions of these and other sections of the subpart F regulations. EPA's Web site contains more information on these enforcement actions.[7]

Some commenters stated that EPA should seek better ways to enforce the pre-existing regulations for Class I and II ODS. One commenter encouraged EPA to continue to identify cost-effective means of ensuring that the entire regulated community supports and follows lawful policies and regulations. Another commenter wrote that venting of HFCs above *de minimis* levels must be severely penalized for the rule to be as effective as possible. That commenter encouraged EPA to reiterate that EPA welcomes information and reporting on an anonymous basis regarding parties known to be venting ODS, HFCs, and any non-exempt substitute.

EPA responds that the Agency has enforced and continues to enforce these regulations in actions that range from civil fines to criminal prosecutions. EPA encourages anyone who suspects or witnesses unlawful releases of refrigerants or other violations of CAA regulations to report an environmental violation to EPA (*www.epa.gov/enforcement/report-environmental-violations*). In 2014 and 2015, EPA brought or assisted in three cases against individuals for violating the venting prohibition when cutting into the refrigerant lines to steal metal from HCFC–22 containing air conditioners. Under the plea agreement in a case from 2014, the individual cutting the refrigerant line must serve 31 months in federal prison and then remain under court supervision for an additional 12 months during which time he must perform 200 hours of community service.

EPA entered into consent decrees with the supermarket chains Safeway in 2013, Costco in 2015, and Trader Joe's in 2016 for violations of the leak repair provisions of subpart F for their commercial refrigeration units. In 2015, EPA obtained corrective action with the United States Navy to resolve allegations of failing to perform leak rate calculations when servicing comfort cooling equipment, and with DuPont for improper maintenance and repair of two large IPR units. In 2012, EPA executed consent decrees with Icicle Seafoods, American Seafoods Co. LLC, and Pacific Longline Co. LLC for failure to repair refrigerant leaks at chilling units aboard its fishing vessels and failure to verify the adequacy of repairs before resuming operations, among other violations. In March of 2016, Ocean Gold Seafoods, Inc. and Ocean Cold, LLC entered into a consent decree with EPA that resolved alleged violations for failing to promptly repair refrigerant leaks and failing to keep adequate records of the servicing of their IPR equipment necessary to prevent leaks.

EPA has executed consent decrees to resolve alleged violations of the safe disposal regulations in subpart F. These include decrees in 2016 with Parkway Iron and Metal, and in 2015 with Metal Dynamics and Basic Recycling, as well as at least forty-five non-judicial settlements against scrap recyclers in 2014 and 2015.

EPA also continues to take steps to maintain the integrity of the certification programs under subpart F. EPA recently revoked over a dozen technician certification programs that had failed to submit the required biannual activity report (81 FR 28864). EPA is also ensuring that certified refrigerant reclaimers continue to operate in accordance with § 82.164 and maintain records and submit reports in accordance with § 82.166. EPA recently published a notice announcing the previous revocation of the certification of eight refrigerant reclaimers and giving a ninth reclaimer notice of impending revocation (80 FR 75455).

G. Incorporation by Reference

This action involves technical standards. In some instances, EPA is deciding to use a modified version of an industry standard for purposes of this rule; in others, EPA is deciding to use an industry standard by incorporating it by reference exactly as written. This section summarizes the technical standards that EPA is incorporating by reference and describes how interested parties can access those standards. Sections IV.C (small cans of MVAC refrigerant), Section IV.G (recovery and/or recycling equipment), and IV.K (reclamation requirements) contain further discussion of these technical standards including comments received on EPA's proposal to incorporate certain standards by reference.

EPA is incorporating by reference UL 1963, *Requirements for Refrigerant Recovery/Recycling Equipment*, Fourth Edition, June 1, 2011 in appendix B4. This establishes standards for refrigerant recovery and refrigerant recovery/recycling equipment to ensure the equipment can be used safely with flammable refrigerants. The standard is available at *www.comm-2000.com* or by writing to Comm 2000, 151 Eastern Avenue, Bensenville, IL 60106. The cost is $798 for an electronic copy and $998 for hardcopy. UL also offers a subscription service to the Standards Certification Customer Library (SCCL) that allows unlimited access to their standards and related documents. The cost of obtaining this standard is not a significant financial burden for equipment manufacturers. Therefore, EPA concludes that the UL standard being incorporated by reference is reasonably available.

EPA is not incorporating by reference AHRI Standard 700–2016, *Specifications for Refrigerants.* Rather EPA is basing the content found in appendix A on this standard. This standard establishes purity specifications for refrigerants, and specifies the associated methods of testing for acceptability of refrigerants. The standard is available at *www.ahrinet.org* or by mail at Air-Conditioning, Heating, and Refrigeration Institute (AHRI), 2111 Wilson Boulevard, Suite 500, Arlington, VA 22201. EPA is incorporating by reference publically available versions of the standards referenced in AHRI Standard 700–2016. Specifically, these standards are:

—*2008 Appendix C for Analytical Procedures for AHRI Standard 700–2014—Normative.* This document establishes definitive test procedures for determining the quality of new, reclaimed and/or repackaged refrigerants in support of the standards established in AHRI–700. An electronic copy of the appendix is available at *www.ahrinet.org*. It is also available by mail at Air-Conditioning, Heating, and Refrigeration Institute (AHRI), 2111 Wilson Boulevard, Suite 500, Arlington, VA 22201. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

—*2012 Appendix D for Gas Chromatograms for AHRI Standard 700–2014—Informative* Air-Conditioning, Heating, and Refrigeration Institute. This appendix provides figures for the gas chromatograms used with Appendix C to AHRI Standard 700–2015: Normative. An electronic copy of the appendix is available at *www.ahrinet.org*. It is also available by mail at Air-Conditioning, Heating, and Refrigeration Institute (AHRI), 2111 Wilson Boulevard, Suite 500, Arlington, VA 22201. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

—Federal Specification for ''Fluorocarbon Refrigerants,'' BB–F–1421 B, dated March 5, 1982. This section of this standard establishes a method to determine the boiling point and boiling point range of a refrigerant. The standard is available in the docket for this rulemaking. Therefore, EPA concludes that the standard being

[7] *https://www.epa.gov/ozone-layer-protection/enforcement-actions-under-title-vi-clean-air-act.*

incorporated by reference is reasonably available.

—GPA STD–2177, *Analysis of Natural Gas Liquid Mixtures Containing Nitrogen and Carbon Dioxide by Gas Chromatography*, 2013, Gas Processors Association. This standard establishes methods for analyzing demethanized liquid hydrocarbon streams containing nitrogen/air and carbon dioxide, and purity products such as ethane/propane mix that fall within compositional ranges indicated in the standard. The standard is available at *www.techstreet.com* or by writing to Techstreet, 6300 Interfirst Drive, Ann Arbor, MI 48108. The cost of this standard is $55 for an electronic copy or $65 for a printed edition. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

—ASTM Standard D1296–01–2012, *Standard Test Method for Odor of Volatile Solvents and Diluents*, July 1, 2012, ASTM International. This test method covers a comparative procedure for observing the characteristic and residual odors of volatile organic solvents and diluents to determine their odor acceptability in a solvent system. The standard is available at *www.astm.org* or by writing to ASTM, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959. The cost of this standard is $39. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

EPA is not incorporating by reference AHRI Standard 740–2016, *Performance Rating of Refrigerant Recovery Equipment and Recovery/Recycling Equipment.* Rather EPA is basing the content found in appendices B3 and B4 on this standard. This standard establishes methods of testing for rating and evaluating the performance of refrigerant recovery equipment and recovery/recycling equipment. The standard is available at *www.ahrinet.org* or by mail at Air-Conditioning, Heating, and Refrigeration Institute (AHRI), 2111 Wilson Blvd., Suite 500, Arlington, VA 22201. EPA is incorporating by reference the standards referenced in AHRI Standard 740–2016. Specifically, these standards are:

—ANSI/ASHRAE Standard 63.2–1996 (RA 2010) Method of Testing Liquid-Line Filter Drier Filtration Capability, 2010, American National Standards Institute/American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. The purpose of this standard is to prescribe a laboratory test method for evaluating the filtration capability of filters and filter driers used in liquid lines of refrigeration systems. The standard is available at *www.ashrae.org* or by mail at AHSRAE, 1791 Tullie Circle NE., Atlanta, GA 30329. The cost is $39 for an electronic copy or printed edition. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

—UL Standard 1963–2011, *Refrigerant Recovery/Recycling Equipment*, Fourth Edition, 2011, American National Standards Institute/Underwriters Laboratories, Inc. This standard establishes safety requirements for and methods to evaluate refrigerant recovery and refrigerant recovery/recycling equipment. The standard is available at *www.comm-2000.com* or by writing to Comm 2000, 151 Eastern Avenue, Bensenville, IL 60106. The cost is $798 for an electronic copy and $998 for hardcopy. UL also offers a subscription service to the Standards Certification Customer Library (SCCL) that allows unlimited access to their standards and related documents. The cost of obtaining this standard is not a significant financial burden for equipment manufacturers. Therefore, EPA concludes that the UL standard being incorporated by reference is reasonably available.

—AHRI Standard 110–2016, *Air-Conditioning, Heating and Refrigerating Equipment Nameplate Voltages*, 2016, Air-Conditioning, Heating, and Refrigeration Institute. This standard establishes voltage rating requirements, equipment performance requirements, and conformance conditions for air-conditioning, heating, and refrigerating equipment. A free electronic copy of this standard is available at *www.ahrinet.org*. It is also available by mail at Air-Conditioning, Heating, and Refrigeration Institute (AHRI), 2111 Wilson Boulevard, Suite 500, Arlington, VA 22201. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

—International Standard IEC 60038, *IEC Standard Voltages,* Edition 7.0, 2009–06, International Electrotechnical Commission. This standard specifies standard voltage values which are intended to serve as preferential values for the nominal voltage of electrical supply systems, and as reference values for equipment and system design. The standard is available at *www.techstreet.com* or by writing to Techstreet, 6300 Interfirst Drive, Ann Arbor, MI 48108. The cost of this standard is $50. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

EPA is not incorporating by reference California Air Resources Board, *Test Procedure for Leaks from Small Containers of Automotive Refrigerant*, TP–503, as amended January 5, 2010. Rather EPA is basing the content found in appendix E on this standard. This standard establishes methods for assessing the leak rate from small containers of refrigerant. A copy of this standard is available in the docket and *www.arb.ca.gov/regact/2009/hfc09/hfc09.htm*.

III. EPA's Authority Under the Clean Air Act

A. Summary of EPA's Authority for the Revisions to Subpart F

The authority for this action is provided primarily by section 608 of the CAA. Section 608 is divided into three subsections, which together comprise the ''National Recycling and Emission Reduction Program.'' Among other things, section 608 of the CAA requires EPA to establish a comprehensive program to limit emissions of ozone-depleting refrigerants. It also prohibits the knowing release or disposal of ozone-depleting refrigerants and their substitutes in the course of maintaining, servicing, repairing, or disposing of air-conditioning and refrigeration equipment in a manner which permits such a substance to enter the environment. The three subsections of section 608 are described in more detail in the following paragraphs.

Section 608(a) requires EPA to establish standards and requirements regarding use and disposal of class I and II substances. With regard to refrigerants, EPA is to promulgate regulations establishing standards and requirements for the use and disposal of class I and class II substances during the maintenance, service, repair, or disposal of air-conditioning and refrigeration appliances or IPR. Regulations under section 608(a) are to include requirements to reduce the use and emission of ODS to the lowest achievable level, and to maximize the recapture and recycling of such substances. Section 608(a) further provides that ''such regulations may include requirements to use alternative substances (including substances which are not class I or class II substances) or to minimize use of class I or class II substances, or to promote the use of safe alternatives pursuant to section [612] or any combination of the foregoing.''

Section 608(b) requires that the regulations issued pursuant to section 608(a) contain requirements for the safe disposal of class I and class II substances, including requirements that such substances shall be removed from such appliances, machines, or other goods prior to the disposal of such items or their delivery for recycling.

Section 608(c) establishes a self-effectuating prohibition, commonly called the ''venting prohibition,'' that generally speaking, makes it unlawful to knowingly release ODS and substitute refrigerants in a way that allows the refrigerant to enter the environment while maintaining, servicing, repairing, or disposing of air-conditioning or refrigeration equipment. More specifically, section 608(c)(1), effective July 1, 1992, makes it unlawful for any person in the course of maintaining, servicing, repairing, or disposing of an appliance or IPR to knowingly vent, release, or dispose of any ODS used as a refrigerant in such equipment in a manner that permits that substance to enter the environment. The statute exempts from this prohibition ''[d]e minimis releases associated with good faith attempts to recapture and recycle or safely dispose'' of such a substance. Section 608(c)(2) extends the provisions of (c)(1), including the prohibition on venting, to substitutes for class I or class II refrigerants, effective November 15, 1995, unless the Administrator determines that such venting, release, or disposal ''does not pose a threat to the environment.'' EPA has determined through prior rulemakings that specific substances do not pose a threat to the environment when vented, released, or disposed of and has exempted those specific substitutes from the venting prohibition. The full list of substitutes that EPA has exempted from this prohibition is at 40 CFR 82.154(a). For some substitutes that have been exempted from the venting prohibition under section 608(c)(2) and § 82.154(a) the exemption only applies when the substitute is used in specified applications, but for others, the exemption is for the substitute refrigerant as used in all applications.[8]

The statutory standards under section 608(a) against which the regulations concerning the use and disposal of ozone-depleting substances are to be measured are whether they ''reduce the use and emission of such substances to the lowest achievable level'' and ''maximize the recapture and recycling of such substances.'' These standards are often complementary in the context of maintenance, service, repair, and disposal of air conditioning and refrigerant equipment. For example, in the context of recycling, maximizing recycling will also help reduce the use and emission of these substances to the lowest achievable level. These statutory standards also bear a relationship to the *de minimis* releases addressed in section 608(c). More specifically, emissions that occur while complying with EPA's recovery and recycling regulations are considered *de minimis,* because those regulations set forth practices and requirements which result in the lowest achievable level of emissions. EPA has established this interpretation in its regulations under section 608 for ODS refrigerants.

On May 14, 1993, EPA published the original regulations implementing subsections (a), (b), and (c)(1) for ODS refrigerants (58 FR 28660). These regulations include evacuation requirements for appliances being serviced or disposed of, standards and testing requirements for recovery and/or recycling equipment, certification requirements for technicians, purity standards and testing requirements for used refrigerant sold to a new owner, certification requirements for refrigerant reclaimers, leak repair requirements, and requirements for the safe disposal of appliances that enter the waste stream with the charge intact. This rule also stated that the Agency interprets ''*de minimis*'' to mean releases that occur while the recycling and recovery requirements of regulations under sections 608 and 609 are followed. However, those requirements only applied to ODS refrigerants, and these regulations did not explain how the venting prohibition or the *de minimis* exemption applied for substitute refrigerants. Among other things, this rulemaking addresses that gap in the regulations.

1. Applying Regulations Under Section 608 to Substitute Refrigerants

In this rule, EPA is extending, as appropriate, provisions of the refrigerant recovery and/or recycling regulations, which previously had only applied to ODS refrigerants, to non-exempt substitute refrigerants. To summarize briefly, EPA's authority for this action rests largely on section 608(c), which EPA interprets to provide it authority to promulgate regulations that interpret, explain, and enforce the venting prohibition and the *de minimis* exemption, as they apply to both ODS refrigerants and non-exempt substitute refrigerants. Accordingly, this rule establishes a comprehensive and consistent framework that applies to both ODS and non-exempt substitute refrigerants. This, in turn, provides clarity to the regulated community concerning the measures that should be taken to comply with the venting prohibition for non-exempt substitutes and reduces confusion and enhances compliance for both ODS and non-exempt substitutes.[9] EPA's authority to issue regulations for section 608(c) is supplemented by section 301(a), which provides authority for EPA to ''prescribe such regulations as are necessary to carry out [the EPA Administrator's] functions under this Act.'' In addition, EPA's authority to extend the recordkeeping and reporting requirements to non-exempt substitutes is supplemented by section 114, which provides authority to the EPA Administrator to require recordkeeping and reporting in carrying out provisions of the CAA. Finally, the extension of requirements under section 608 to non-exempt substitutes in this rule is also supported by section 608(a) because having a consistent regulatory framework for non-exempt substitutes and ODS is expected to reduce emissions of ODS refrigerants, as well as non-exempt substitutes.

Section 608 of the CAA is ambiguous with regard to EPA's authority to establish refrigerant management regulations for substitute refrigerants. As Congress has not precisely spoken to this issue, EPA has the discretion to adopt a permissible interpretation of the CAA. *Chevron, U.S.A., Inc.* v. *Natural Res. Def. Council, Inc.*, 467 U.S. 837, 843–44 (1984). Primarily under the authority of section 608(a), EPA has established standards for the proper handling of ODS refrigerants during the maintenance, service, repair, or disposal of an appliance to maximize the recovery and/or recycling of such substances and reduce the use and emission of such substances. Section 608(a) expressly requires EPA to promulgate regulations that apply to class I and class II substances, but is silent on whether its requirements apply to substitute substances. On the other hand, section 608(c)(2) contains provisions for substitute refrigerants which parallel those for ODS refrigerants in section 608(c)(1). For instance, as for ODS refrigerants under section 608(c)(1), section 608(c)(2) prohibits knowingly venting, releasing, or disposing of any substitute refrigerant in the course of maintaining, servicing, repairing, or disposing of an appliance

[8] EPA is using the term ''non-exempt substitute'' in this notice to refer to substitute refrigerants that have not been exempted from the venting prohibition under CAA section 608(c)(2) and 40 CFR 82.154(a) in the relevant end-use. Similarly, the term ''exempt substitute'' refers to a substitute refrigerant that has been exempted from the venting prohibition under section 608(c)(2) and § 82.154(a) in the relevant end-use.

[9] EPA used an analogous analysis in promulgating the regulations for section 608 originally. In that rulemaking, EPA explained that extending regulatory requirements to class II substances (rather than only regulating class I substances) would facilitate compliance with the venting prohibition, in part by providing clear guidance to technicians recovering class II substances on what releases do and do not constitute violations of the prohibition. 58 FR 28667. EPA also explained that it was desirable to provide a ''clear, consistent framework for fully implementing the prohibition on venting for all refrigerants'' to ''minimize confusion and maximize compliance with the prohibition.'' 58 FR 28666.

in a manner which permits the substance to enter the environment.[10] This creates a tension or ambiguity because the regulated community is subject to an explicit and self-effectuating prohibition on venting, releasing, or disposing of non-exempt substitute refrigerants while maintaining, servicing, repairing, or disposing of equipment but at the same time is not explicitly required by section 608(a) to recover substitute refrigerant prior to servicing or disposing of equipment or to engage in any of the practices or behaviors that EPA has established to minimize the emission and release of ODS refrigerants during such maintenance, service, repair, or disposal.

Moreover, some amount of refrigerant, whether ODS or substitute, is inevitably released during the maintenance, servicing, repair, and disposal of air-conditioning or refrigeration appliances or equipment. Without a clear regulatory framework for determining what requirements apply during the maintenance, servicing, repair, and disposal of such equipment containing a non-exempt substitute refrigerant, the regulated community and the public would not have the same measure of certainty as to whether such releases violate the venting prohibition or fall within the *de minimis* exemption to that prohibition, and what steps must be taken to comply with CAA obligations for such substitute refrigerants in undertaking such actions. Accordingly, this rulemaking finalizes regulations to interpret and explain how the venting prohibition and the *de minimis* exemption apply to non-exempt substitute refrigerants. In doing so, EPA is clarifying that the regulated community that uses non-exempt substitute refrigerants may rely on the *de minimis* exemption to the venting prohibition if they follow the amended requirements in subpart F.

Consistent with the language of sections 608(c)(1) and (2), this rule aims to avoid knowing releases of non-exempt substitute refrigerants into the environment in the course of maintaining, servicing, repairing, or disposing of an appliance or IPR, unless those releases meet the criteria for the *de minimis* exemption. Section 608(c)(1) provides an exemption from the venting prohibition for ''[d]e minimis releases associated with good faith attempts to recapture and recycle or safely dispose of any such [class I or class II] substance.'' In this context, EPA interprets this provision to exempt releases that occur while the recycling and recovery requirements of regulations under sections 608 and 609 are followed and has promulgated regulations consistent with that interpretation.

In particular, EPA has incorporated both the venting prohibition and the *de minimis* exemption into the regulations at § 82.154(a). Further, the last sentence in the existing regulations at § 82.154(a)(2) provides that ''refrigerant releases shall be considered de minimis only if they occur when'' enumerated regulatory practices in subpart F or, alternatively, subpart B are followed. These subpart F requirements are the ones established in the 1993 rule mentioned above, and as periodically amended. The term *refrigerant*, however, was defined in § 82.152 for purposes of subpart F to mean ''any substance consisting in part or whole of a class I or class II ozone-depleting substance that is used for heat transfer purposes and provides a cooling effect.'' This definition did not include substitute substances. In addition, EPA had not yet applied the recycling and recovery requirements to non-ODS substitutes, and therefore these provisions which make clear how to qualify for the *de minimis* exemption for ODS refrigerants did not apply to substitute refrigerants.

EPA interprets section 608(c) such that the statutory *de minimis* exemption contained in section 608(c)(1) also applies to substitute refrigerants. Section 608(c)(2) states that, effective November 15, 1995, ''paragraph 1 shall also apply'' to the venting, release, or disposal of any substitute substance for class I or class II substances. As section 608(c)(2) incorporates ''paragraph 1'' it is reasonable to interpret it to also contain this *de minimis* exemption, which is included in paragraph 1 of section 608(c). However, the Act's exemption applies only to those *de minimis* releases ''associated with good faith attempts to recapture and recycle or safely dispose of refrigerants'' and the Act does not explicitly address what would be considered such ''good faith attempts to recapture and recycle or safely dispose'' of either ODS or substitute refrigerants. In fact, Title VI does not contain any further explanation or definition of those terms. Moreover, the statutory provisions that require EPA to promulgate regulations addressing recapturing and recycling requirements and safe disposal requirements in section 608(a) and 608(b) expressly mention that they apply to ODS refrigerants but are silent as to application to substitute refrigerants. This silence and the corresponding tension between these provisions creates an ambiguity in section 608 and EPA may fill that gap with a permissible interpretation. *Chevron, U.S.A., Inc.* v. *Natural Res. Def. Council, Inc.*, 467 U.S. 837, 843–44 (1984).

Consistent with the interpretation of section 608(c)(2) as incorporating the *de minimis* exemption, prior to this rulemaking EPA's regulations at § 82.154(a)(2) stated that ''[d]e minimis releases associated with good faith attempts to recycle or recover . . . non-exempt substitutes are not subject to this prohibition,'' thus applying the statutory *de minimis* exemption from the venting prohibition to good faith efforts to recycle or recover non-exempt substitute refrigerants. However, in contrast to the regulations for ODS refrigerants, the regulations did not provide any specific provisions to explain what constitutes such a ''good faith attempt'' with respect to substitute refrigerants. Thus, the prior regulations were unclear as to what requirements or practices regulated parties must follow to qualify for the *de minimis* exemption, and thereby comply with the venting prohibition, for non-exempt substitute refrigerants.

EPA has discussed this issue in previous notices. On June 11, 1998, EPA proposed to apply the *de minimis* exemption in section 608(c)(1) to substitute refrigerants and to issue regulations under section 608(c)(2) that interpret, clarify, and enforce the venting prohibition for substitutes (63 FR 32044). EPA stated in that proposed rule, ''[w]hile section 608(c) is self-effectuating, EPA regulations are necessary to define '*(d)e minimis* releases associated with good faith attempts to recapture and recycle or safely dispose' of such substances and to effectively implement and enforce the venting prohibition.'' 63 FR 32046.

In the final rule issued March 12, 2004 (69 FR 11946), EPA extended the regulations interpreting and enforcing the 608(c)(1) *de minimis* exemption to blends containing an ODS component but not to refrigerants containing only substitutes. As stated in that rule at 69 FR 11949:

> [V]enting of all substitute refrigerants, including HFC and PFC refrigerants (and

[10] As noted previously, this venting prohibition does not apply to substitutes for which the Administrator has made a determination that such venting, release, or disposal ''does not pose a threat to the environment'' under CAA 608(c)(2). As indicated elsewhere in this notice, EPA is not extending the requirements of the refrigerant management program to substitutes that have been exempted from the venting prohibition in this action. Where a substitute has been exempted only in specific uses, the requirements in this rule apply to uses in which the substitute has not been exempted.

blends thereof) is prohibited under section 608(c), with the exception of *de minimis* releases associated with good faith attempts to recapture and recycle. The *de minimis* releases exception, however, is not self-effectuating, nor is it self-explanatory.

EPA believes that regulatory clarification is necessary to define such '*[d]e minimis* releases' and 'good faith attempts to recapture and recycle or safely dispose of any such substance' and safely dispose of appliances to effectively implement and enforce the venting prohibition. Section 608(c)(1) in conjunction with 608(c)(2) of the Act allow for an exemption for *de minimis* releases associated with good faith attempts to recapture and recycle or safely dispose of substitutes for class I and class II ODSs used as refrigerants. A regulation reflecting the statutory requirement for recovery of substitute refrigerants is an essential part of a regulatory framework within which *de minimis* releases and good faith attempts to recapture and recycle or safely dispose of substitute refrigerants can be defined.

This interpretation that the statutory *de minimis* exemption applies to substitutes but is not self-explanatory is consistent with the interpretation of section 608(c)(1) and (2) that EPA articulates in this section. However, in the March 2004 Rule EPA did not finalize its proposal to extend all of the subpart F regulations to substitute refrigerants. See 69 FR 11953.

Following the March 12, 2004, rulemaking, the Administrator promulgated a direct final rule to amend the regulatory definitions of *refrigerant* and *technician,* as well as the venting prohibition, to correct and clarify the intent of those regulations (70 FR 19273, April 13, 2005). As part of that rule, EPA edited the regulatory venting prohibition to reflect the statutory *de minimis* exemption in section 608(c)(2). As explained at 70 FR 19275:

In accordance with section 608(c)(2) of Title VI of the Clean Air Act (as amended in 1990), *de minimis* releases associated with good faith attempts to recapture and recycle or safely dispose of such substitutes shall not be subject to the prohibition. EPA has not promulgated regulations mandating certification of refrigerant recycling/recovery equipment intended for use with substitutes; therefore, EPA is not including a regulatory provision for the mandatory use of certified recovery/recycling equipment as an option for determining *de minimis* releases of substitutes. However, the lack of a regulatory provision should not be interpreted as an exemption to the venting prohibition for non-exempted substitutes. The regulatory prohibition at § 82.154(a) reflects the statutory reference to *de minimis* releases of substitutes as they pertain to good faith attempts to recapture and recycle or safely dispose of such substitutes.

In order to emphasize that the knowing venting of HFC and PFC substitutes remains illegal during the maintenance, service, repair, and disposal of appliances and to make certain that the *de minimis* exemption for refrigerants remains in the regulatory prohibition, § 82.154(a) is amended to reflect the venting prohibition of section 608(c)(2) of the Act.

In that action, EPA added the phrase ''[d]e minimis releases associated with good faith attempts to recycle or recover refrigerants *or non-exempt substitutes* are not subject to this prohibition'' to § 82.154(a)(2) (emphasis added). However, because EPA has not extended the regulatory recycling and recovery requirements to substitute refrigerants, the regulations have not provided clarity or certainty how this exception applies to non-exempt substitute refrigerants that do not contain an ODS. Moreover, as for ODS, some amount of substitute refrigerant is released during the maintenance, servicing, repair, or disposal of appliances, even if precautions to avoid such releases are taken. For ODS refrigerants, the rules have provided certainty to the regulated community that if specific identified practices are followed, regulated entities would not be held liable for releases of small amounts of refrigerant incidental to these actions. These regulations have supported the recovery or recycling of ODS refrigerants and reduced the emissions of such substances. In other words, for ODS, EPA has reasonably interpreted the *de minimis* exemption to apply only to the small amount of emissions that cannot be prevented by following the regulatory requirements. This interpretation of the *de minimis* exemption is equally reasonable for non-exempt substitute refrigerants. Accordingly, to provide the same clarity and certainty to the regulated community for substitute refrigerants, it is important to clarify how this exemption applies to non-exempt substitute refrigerants that do not contain an ODS. To do so, EPA is finalizing its proposal to extend the amended regulations concerning emissions reduction and recapture and recycling of CFC and HCFC refrigerants, found at 40 CFR part 82, subpart F, to all substitute refrigerants that have not been exempted from the venting prohibition under § 82.154(a)(1).

These regulations establish standards and requirements related to the maintenance, servicing, repair, or disposal of appliances and IPR that use ODS or non-exempt substitutes as refrigerants. They are designed to minimize or avoid knowing releases or disposal, in the course of those activities, of ODS and non-exempt substitute refrigerants in a manner which allows that substance to enter the environment. For example, the regulations establish requirements to minimize emissions during appliance maintenance, servicing, or repair (*e.g.*, by requiring that technicians recover refrigerant from an appliance before servicing and by setting standards for the repair of appliances that have leaked above the applicable threshold), as well as disposal (*e.g.*, by requiring the use of certified recovery equipment to remove refrigerant from the appliance before the final disposal). Accordingly, the regulations finalized in this action fall within the scope of EPA's authority to interpret and explain the venting prohibition, and to give regulated entities greater certainty about what is required to comply.

EPA is also adopting a broader interpretation of the venting prohibition under CAA sections 608(c)(1) and (2) in this action. As discussed in more detail in the proposal for this action (80 FR 69486), in the 1993 Rule EPA stated that the venting prohibition did not ''prohibit 'topping off' systems, which leads to emissions during the use of equipment'' but explained that the ''provision on knowing releases does however, include the situation in which a technician is practically certain that his or her conduct will cause a release of refrigerant during the maintenance, service, repair, or disposal of equipment'' or fails to appropriately investigate facts that demand investigation (58 FR 28672). The proposal also explained that EPA had subsequently moved toward a broader interpretation of the venting prohibition in the proposed 2010 Leak Repair Rule (80 FR 69486, quoting 75 FR 78570). EPA concludes that its statements in the 1993 Rule presented an overly narrow interpretation of the statutory venting prohibition. Consistent with the direction articulated in the proposed 2010 Leak Repair Rule, EPA is adopting a broader interpretation. When refrigerant must be added to an existing appliance, other than when originally charging the system or for a seasonal variance, the owner or operator necessarily knows that the system has leaks. At that point the owner or operator is required to calculate the leak rate. If the leaks exceed the applicable leak rate for that particular type of appliance, the owner or operator will know that absent repairs, subsequent additions of refrigerant will be released in a manner that will permit the refrigerant to enter the environment. Therefore, EPA interprets section 608(c) such that if a person adds refrigerant to an appliance that he or she knows is leaking, he or she also violates the venting prohibition unless he or she has complied with the applicable practices referenced in § 82.154(a)(2), as revised, including the leak repair requirements, as applicable.

This action extending the regulations under subpart F to non-exempt substitutes is additionally supported by the authority in section 608(a) because regulations that minimize the release and maximize the recapture and recovery of non-exempt substitutes will also reduce the release and increase the recovery of ozone-depleting substances. Improper handling of substitute refrigerants is likely to contaminate appliances and recovery cylinders with mixtures of ODS and non-ODS substitutes, which can lead to illegal venting because such mixtures are difficult or expensive to reclaim or appropriately dispose of. Under the prior definition of *refrigerant*, any substance that consists in whole or in part of a class I or class II ODS and is used for heat transfer and provides a cooling effect, is a refrigerant and is subject to the requirements for ODS. However, when a regulated entity believes it is using a substitute refrigerant, and that substitute becomes contaminated with ODS, the contamination may not be apparent to the user, and thus, the user may not be aware that the requirements for refrigerants apply to that substance. This confusion can also lead to illegal venting of ODS. In short, the authority to promulgate regulations regarding the use of class I and II substances encompasses the authority to establish regulations regarding the proper handling of substitutes where this is needed to reduce emissions and maximize recapture and recycling of class I and II substances. Applying consistent requirements to all non-exempt refrigerants will reduce complexity and increase clarity for the regulated community and promote compliance with those requirements for ODS refrigerants, as well as their substitutes.

2. Recordkeeping Provisions

In this action, EPA is also establishing new recordkeeping requirements, as well as extending existing recordkeeping requirements to non-exempt substitutes. EPA's authority to establish and extend these requirements is supported by CAA sections 608(a), 608(c), and 114, consistent with the description of these authorities offered above. These new recordkeeping requirements are an important part of EPA's efforts to address illegal venting of refrigerants, improve accounting of refrigerants in affected appliances, and facilitate enforcement of requirements under section 608. For example, EPA is establishing a new recordkeeping requirement for the disposal of appliances containing more than five and less than 50 pounds of refrigerant. Section 608(a) gives EPA explicit authority to implement requirements that reduce ODS refrigerant emissions to the lowest achievable level. This recordkeeping requirement, along with other recordkeeping requirements in this rule, further the recovery, reclamation, and/or destruction of ODS refrigerants and discourages the illegal venting of such refrigerants from affected appliances. Because it minimizes the emission of ODS refrigerant, EPA has authority for this requirement as it relates to ODS appliances under 608(a). Additionally, providing a consistent standard for ODS and non-exempt substitute refrigerants will facilitate the recovery, reclamation, and/or destruction of both ODS and non-ODS refrigerants and, accordingly, will reduce the emission of such refrigerants. EPA will continue to evaluate how best to use the information to promote the recovery of refrigerants and compliance with these provisions.

EPA also has authority under section 114 of the CAA to require that technicians document that appliances containing an ODS refrigerant or a non-exempt substitute refrigerant have been properly evacuated prior to disposal. Section 114 of the CAA provides the primary authority to establish these recordkeeping and reporting requirements because it provides EPA authority to require recordkeeping and reporting in carrying out provisions of the CAA, including the venting prohibition under CAA sections 608(c) and the requirements under 608(a). Because these records will help EPA determine whether requirements under sections 608(c) and 608(a) are being complied with, this requirement falls within the scope of section 114.

3. Amendments Related to Practices and Requirements for ODS

In addition to extending the existing regulations in subpart F to non-exempt substitute refrigerants, EPA is also revising and augmenting the existing requirements that apply to ozone-depleting substances, including: Lowered leak rates, periodic leak inspections for equipment that has leaked above the leak threshold, leak repair verification tests, and recordkeeping requirements for the disposal of appliances containing more than five and less than 50 pounds of refrigerant. EPA is also finalizing its proposal to update and revise subpart F to improve clarity and enforceability. EPA's authority for these amendments is based primarily on section 608(a), which requires EPA to promulgate regulations regarding the use and disposal of class I and II substances to ''reduce the use and emission of such substances to the lowest achievable level'' and ''maximize the recapture and recycling of such substances.'' In addition, because EPA is further elaborating the requirements and practices that regulated parties must follow to qualify for the *de minimis* exemption from the venting prohibition for ODS, EPA is drawing on its authority under section 608(c)(1). EPA's authority for these actions is also supplemented by section 301(a) and 114, in the same way as described earlier in this notice.

4. Provisions Related to MVAC and MVAC-Like Appliances

While section 608 covers all appliances,[11] section 609 of the CAA directs EPA to establish requirements to prevent the release of refrigerants during the servicing of MVACs specifically. MVACs are defined under EPA's section 608 implementing regulations at 40 CFR part 82, subpart F as ''any appliance that is a motor vehicle air conditioner as defined in 40 CFR part 82, subpart B.'' 40 CFR 82.152. Under section 609, in 40 CFR part 82, subpart B, MVACs are defined as ''mechanical vapor compression refrigeration equipment used to cool the driver's or passenger's compartment of any motor vehicle. . . .'' 40 CFR 82.32(d).

A motor vehicle is defined under subpart B as ''any vehicle which is self-propelled and designed for transporting persons or property on a street or highway, including but not limited to passenger cars, light duty vehicles, and heavy duty vehicles. This definition does not include a vehicle where final assembly of the vehicle has not been completed by the original equipment manufacturer.'' 40 CFR 82.32(c).

Under section 609, no person repairing or servicing motor vehicles for consideration may perform any service on an MVAC that involves the refrigerant without properly using approved refrigerant recovery or recovery and recycling equipment and no such person may perform such service unless such person has been properly trained and certified. Refrigerant handling equipment must be certified by EPA or an independent organization approved by EPA. Section 609 also prohibits the sale or distribution of any class I or class II MVAC refrigerant in a container of less

[11] For EPA's discussion on the definition of *appliance*, see Section IV.A.

than 20 pounds to any person who is not certified under section 609.

Regulations issued under section 609 are in 40 CFR part 82, subpart B, and include information on prohibitions and required practices (§ 82.34), approved refrigerant handling equipment (§ 82.36), approved independent standards testing organizations (§ 82.38), requirements for technician certification and training programs (§ 82.40), and certification, recordkeeping, and public notification requirements (§ 82.42). Appendices A–F of subpart B provide standards for minimum operating requirements for MVAC servicing equipment.

Because MVACs are defined in subpart F as an ''appliance'' (§ 82.152), the section 608 regulations found in subpart F are generally applicable to MVAC systems. However, because servicing and technician training and certification are regulated under section 609, EPA's section 608 regulations in subpart F defer to those requirements in subpart B. Procedures involving MVACs that are not regulated under section 609, such as the disposal of MVACs and the purchase of refrigerant for use in MVACs besides ODS refrigerant in containers less than 20 pounds, are covered by section 608. The prohibition in section 608 against venting ODS and substitute refrigerants is also applicable to refrigerants used in MVAC systems.

EPA also regulates MVAC-like appliances under subpart B. MVAC-like appliances are used to cool the driver's or passenger's compartment of off-road vehicles, including agricultural and construction vehicles.[12] While these types of systems are outside of the scope of the definition of *motor vehicle* established in subpart B, there are similarities between MVAC-like appliances and MVAC systems. In the 1993 Rule, under the authority of section 608, EPA adopted requirements for the certification and use of recycling equipment for MVAC-like appliances in subpart B. MVAC-like appliances may only be serviced by a certified technician and this requirement is not limited to those servicing for consideration, but MVAC-like technicians have the option to be certified under section 608 or 609.

Through this rulemaking EPA is finalizing its proposal to apply the provisions of section 608 to non-exempt ODS substitutes, including those used in MVAC and MVAC-like appliances. EPA is not extending the regulations under section 609 as part of this rulemaking because the 609 regulations have been applicable to all substitute substances since 1995.[13]

5. Consideration of Economic Factors

Section 608 of the CAA does not explicitly address whether costs or benefits should be considered in developing regulations under that section. The statutory standards under section 608(a) against which the regulations concerning the use and disposal of ozone-depleting substances are to be measured are whether they ''reduce the use and emission of such substances to the lowest achievable level'' and ''maximize the recapture and recycling of such substances.'' The phrase ''lowest achievable level'' as used in section 608(a)(3) is not clear on its face as to whether economic factors should be considered in determining what is the ''lowest achievable level.'' Title VI does not further explain or define the term nor does it expressly state whether economic factors may or must be considered. Thus, EPA has discretion to adopt a reasonable interpretation. EPA has previously interpreted this phrase to allow the consideration of economic factors. *See* 58 FR 28659, 28667 (May 14, 1993). EPA did not propose to revise that interpretation and has considered economic as well as technological factors in the development of this rule.

The phrase ''de minimis releases associated with good faith attempts to recapture and recycle or safely dispose of any such substance'' as used in section 608(c)(1) and as applied to substitutes through section 608(c)(2) is similarly not clear on its face as to whether economic factors may be considered in determining what is *de minimis.* Title VI does not further address this issue. Thus, EPA has discretion to adopt a reasonable interpretation. EPA interprets this phrase to allow the consideration of economic factors. The Senate Manager's Statement for the Clean Air Act Amendments of 1990 indicates that ''the exception is included to account for the fact that in the course of properly using recapture and recycling equipment, it may not be possible to prevent some small amount of leakage'' (Cong. Rec. S 16948 (Oct. 27, 1990), *reprinted in* 1 A Legislative History of the Clean Air Act Amendments of 1990, at 929 (1993)). EPA does not read this statement as expressing an intent that the Agency consider only technological factors in setting standards for recapture and recycling equipment and the proper use of such equipment. Rather, EPA understands it as meaning that once those standards are set, only the small amount of emissions that cannot be prevented by following such standards should be exempted.

Because the statutory language does not dictate a particular means of taking economic factors into account, if at all, EPA has discretion to adopt a reasonable method for doing so. In developing this rule, EPA has not applied a strict cost-benefit test, but rather has focused primarily on the state of air conditioning and refrigeration best practices and recovery technology, while also giving consideration to costs and benefits. The fact that industry has identified and uses these best practices indicates they are affordable.

EPA considered cost for many specific aspects of this rule. For instance, as discussed in the leak repair section (Section IV.F of this notice), EPA considered what is achievable from a technical perspective, while also considering the costs of those practices and technologies and the benefits from their use, when determining whether to establish new requirements and extending existing requirements to non-exempt substitute refrigerants. See the technical support document *Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program* in the docket for sensitivity analyses conducted on various options. Generally, the leak repair requirements finalized in this action take into account that the variability of those conditions in the field is significant in each air-conditioning and refrigeration sector. For example, some appliances generally have more leaks than others. An industrial process refrigeration appliance can have thousands of pounds of refrigerant running through miles of piping, resulting in numerous opportunities for leaks to occur, whereas a household refrigerator typically has about one pound of refrigerant in a hermetically sealed refrigerant loop that rarely leaks. The

[12] We are amending the subpart F definition of ''MVAC-like appliance'' to replace the term ''off-road motor vehicle'' with the term ''off-road vehicles or equipment.'' This revision is not intended to effect a substantive change in the equipment covered by this definition but rather simply is intended to clarify the definition.

[13] The Agency has indicated plans to issue a separate proposed rule to consider adopting standards from the Society of Automotive Engineers (SAE) for servicing equipment in 40 CFR subpart B. These standards are: SAE J2843 R–1234yf Recovery/Recycling/Recharging Equipment for Flammable Refrigerants for Mobile Air-Conditioning Systems, SAE J2851 Recovery Equipment for Contaminated Refrigerant from Mobile Automotive Air Conditioning Systems, and SAE J3030 Automotive Refrigerant Recovery/Recycling Equipment Intended for Use with Multiple Refrigerants. In a future rulemaking, EPA intends to propose to incorporate by reference these standards developed by SAE International's Interior Climate Control Committee.

requirements in this rule reflect that difference.

As another example, EPA considered the costs of extending the refrigerant sales restriction to small cans of non-exempt substitutes used for MVAC servicing. EPA decided a more cost effective method of reducing emissions is requiring that manufacturers install self-sealing valves on small cans rather than limiting the sale of small cans to certified technicians only. As a final example of how EPA considered costs in this rulemaking, EPA relied heavily on the existing program and requirements already in place for ODS refrigerants rather than developing a new and separate set of requirements for non-exempt substitutes. This will allow the regulated community to in many instances use or adapt existing compliance procedures for non-exempt substitutes rather than having to develop wholly new approaches to managing compliance. This approach should help regulated entities to better predict and manage compliance costs.

B. Comments and Responses Related to EPA's Authority

This section summarizes many comments related to EPA's authority under the Clean Air Act to issue this rule and EPA's responses. Other comments related to EPA's authority for this action are addressed in the response to comments document found in the docket for this action.

1. Comment: EPA Does Not Have Authority To Regulate Substitutes That Have Limited or No Impact on Stratospheric Ozone Under Section 608

Some comments asserted that EPA does not have the authority to extend the existing refrigerant management provisions in subpart F to non-ozone depleting refrigerants. Some commenters stated that under a plain language reading of section 608(a) it is clear that regulations to reduce use and emissions apply only to class I and class II substances and not substitutes. These comments said the language of section 608 as a whole authorizes a wide range of prescriptive regulations to reduce the use and emissions of class I and class II refrigerants but mentions substitutes only twice: That their use be promoted and the general requirement that their knowing venting is prohibited.

On the contrary, other comments agreed that EPA had authority to extend these regulations to substitutes. One such comment stated: ''We believe that both the language of section 608 and the Agency's discretionary authority allow the extension of section 608's requirements to substitutes for ODS in the regulations.'' [14] These commenters noted that extending these regulations to substitutes allows for a coherent and robust regime to address venting across the full suite of appliances and applications, and that applying the regulatory regime to substitute refrigerants would more fully allow for and incentivize the recovery and reclamation of both ODS and substitutes. These comments concluded that because ODS and substitutes can be used interchangeably, the regulation of substitutes reinforces the regulation of ODS and more reliably reduces ODS emissions. Another commenter who generally believes the Agency does not have authority to apply the leak repair provisions to appliances using substitute refrigerants does concede that there may be provisions of subpart F which are directly related to emissions occurring in the course of maintenance, service, repair or disposal activities and might be reasonably extended to substitute refrigerants.

EPA disagrees that its regulatory authority under CAA section 608 extends only to class I and class II (ODS) substances and not to substitutes. EPA also disagrees with comments contending that, as a factual matter, extension of the refrigerant management regulations to substitutes would not reduce emissions of ODS and maximize the recapturing and recycling of ODS. Section 608 expressly addresses substitute refrigerants in the venting prohibition in section 608(c)(2). As explained previously in this notice, EPA's authority for extending the refrigerant management regulations to substitute refrigerants is based primarily on section 608(c)(2) (via interpretation, explanation, and enforcement of the venting prohibition for substitutes) and secondarily on section 608(a) (via the corresponding reductions in ODS emissions and increases in ODS recapture and recycling that are expected to result from requiring consistent practices for ODS and substitute refrigerants), with additional support from CAA sections 301 and 114.

More specifically with respect to section 608(a), that section states that the regulations under that section shall include requirements that reduce the use and emission of ODS to the lowest achievable level and that maximize their recapture and recycling. EPA's interpretation that section 608(a) supports the extension of the refrigerant management regulations to substitutes is based on reducing emissions of ODS and maximizing recapturing and recycling of ODS. This is because requiring practices that are consistent for both ODS and for substitutes reduces the likelihood that a person maintaining, servicing, repairing, or disposing of an appliance that uses ODS as a refrigerant mistakenly believes that it contains a substitute refrigerant and fails to apply the proper procedures for ODS, leading to increased ODS emissions or failure to recover or reclaim ODS. It is also because in the course of servicing, repairing, or maintaining appliances there is a potential for mixing ODS and substitute refrigerants, which may lead to venting or release of the mixture due to the difficulty of reclamation. EPA has explained that the venting prohibition applies to all refrigerants consisting in whole or in part of an ODS, such as a blend with an HFC component. (See 69 FR 11949). Accordingly, the commenters' statements that section 608(a) only applies to class I and class II substances fail to recognize that regulation of substitutes can help effectuate the statutory purposes mentioned in section 608(a). EPA is relying in part on section 608(a) for the extension of regulatory requirements to substitutes because it interprets this provision to support regulation of substitutes when such regulations can help achieve the purposes listed in section 608(a). The extension of regulatory requirements to substitutes in this action is supported by section 608(a) because that extension of requirements to substitutes is expected to reduce ODS emissions and further maximize the recovery and reclamation of ODS. After consideration of all the comments, EPA concludes that it has authority to extend the refrigerant management regulations to substitutes, and that section 608(a) is a relevant source of authority because applying a consistent and coherent regulatory regime to both ODS and substitute refrigerants improves the application of the requirements to ODS, promoting the recovery and reclamation of ODS and reducing ODS emissions. Such ODS-focused goals are well within EPA's authority under CAA section 608(a).[15]

Commenters also disagreed with EPA's statement that there is ambiguity in the CAA regarding the Agency's authority to create a comprehensive regulatory program akin to that

[14] Comment submitted by Natural Resources Defense Council and Institute for Governance and Sustainable Development, David Doniger, et. al., pg. 3. EPA–HQ–OAR–2015–0453–0121.

[15] Although these comments do not relate to EPA's authority to regulate ODS, we do note for completeness' sake that CAA section 608(a) also provides authority for the portions of this rulemaking that revise the refrigerant management requirements as those apply directly to ODS.

applicable to class I and class II ODS. These commenters expressed that Congress explicitly addressed substitutes in section 608(c)(2) and did not in section 608(a) and that Congress was fully aware and capable of granting EPA authority to regulate substitutes under section 608(a) and it chose not to do so. They further commented that Congress knew which provisions of Title VI it wished to extend to substitutes and which it did not, and pointed to sections 609, 612, and 615 as allowing EPA to regulate substitutes. These comments concluded that Congress demonstrated that it knew how to include substitutes in refrigerant management regulations if it wanted to.

EPA recognizes that Congress expressly mentioned substitutes in certain sections of Title VI of the CAA, such as section 608(c)(2). In EPA's interpretation of section 608, the fact that Congress expressly applied the venting prohibition to substitutes in section 608(c)(2) supports this action because this action clarifies how EPA interprets that venting prohibition and explains what actions must be taken during the maintenance, servicing, repair, or disposal of appliances and IPR to avoid violating the venting prohibition. The inclusion of substitutes in section 608(c)(2) also indicates that Congress contemplated that regulation of substitutes would play a role in implementing section 608. The ambiguity in section 608 is that Congress created an explicit prohibition on venting substitute refrigerants in the course of maintaining, servicing, repairing, or disposing of appliances or IPR, and also provided an exception to that prohibition for ''de minimis releases associated with good faith attempts to recapture and recycle or safely dispose'' of such substances. CAA section 608(c)(1); see also CAA section 608(c)(2) (applying paragraph (c)(1) to the venting, release, or disposal of substitute refrigerants). Congress, however, did not define what releases would be considered ''*de minimis*'' nor which activities would be considered ''good faith attempts to recapture and recycle or safely dispose'' of such substances. Where Congress has not directly spoken to an issue or has left ambiguity in the statute, that silence or ambiguity creates an assumption that ''Congress implicitly delegated to the agency the power to make policy choices that represent a reasonable accommodation of conflicting policies that are committed to the agency's care by the statute.'' *National Ass'n of Mfrs.* v. *United States DOI,* 134 F.3d 1095, 1106 (D.C. Cir. 1998). As the U.S. Supreme Court has explained, the ''power of an administrative agency to administer a congressionally created . . . program necessarily requires the formulation of policy and the making of rules to fill any gap left, implicitly or explicitly, by Congress.'' *Chevron,* 467 U.S. at 843–44. The Court later explained, ''[w]e accord deference to agencies under *Chevron,* . . . because of a presumption that Congress, when it left ambiguity in a statute meant for implementation by an agency, understood that the ambiguity would be resolved, first and foremost, by the agency, and desired the agency (rather than the courts) to possess whatever degree of discretion the ambiguity allows.'' *Smiley* v. *Citibank (s.D.), N.A,* 517 U.S. 735, 740–741 (1996). Accordingly, Congress's silence with regard to the venting prohibition and the exception for certain releases leaves a gap for the Agency to fill, as it is doing in this rulemaking.

In addition to the statutory interpretation and the principle of *Chevron* deference discussed above, the legislative history further supports the notion that Congress anticipated and intended for the Agency to establish regulations that would further interpret, explain, and enforce the exception to the venting prohibition. A Senate Report accompanying a version of the Senate bill for the Clean Air Act Amendments of 1990, which enacted Title VI, addressed the venting prohibition and described that it would include ''[e]xceptions . . . for de minimis releases associated with good faith attempts to recapture, recycle and safely dispose of'' the substances used as refrigerants in household appliances, commercial refrigeration and air conditioning units. *Report of the Committee on Environment and Public Works United States Senate, Report Accompanying S. 1630 (S. Rept. 101–228)* (December 20, 1989) at 396 (*reprinted in* 4 A Legislative History of the Clean Air Act Amendments of 1990, at 8736 (1993)). This report further stated that the standards and requirements that EPA was required to promulgate ''should include provisions to foster implementation of this prohibition, including guidance on what constitutes 'de minimis' and 'good faith'.'' *Id.* Thus, EPA reasonably interprets the ambiguity in section 608(c) to mean that in creating the exception to the venting prohibition, Congress intended for the Agency to provide additional specificity regarding how a regulated entity would qualify for this exception. This rulemaking provides such additional specificity and further articulates the policy of how this exception is interpreted, explained, and enforced.

While EPA acknowledges that section 608(a) does not explicitly mention substitutes, we disagree with the conclusion that the comment draws from that. The fact that Congress required EPA to address ODS in a certain manner under section 608(a) is not the same as prohibiting EPA from addressing other refrigerants in the same manner. EPA has explained in the preceding response to comments how it interprets section 608(a) to support this rulemaking.

Some commenters contend that Congress specifically listed class I and class II substances for coverage under the regulations and under the principle of *expressio unius est exclusio alterius,* regulations cannot be applied to refrigerants that are neither class I or class II substances. This rule of statutory interpretation, which has limited force in an administrative law setting, means that the inclusion of one thing implies the exclusion of another thing. However, the fact that Congress mandated certain measures for ODS but was silent regarding appropriate measures for substitutes does not mean that Congress prohibited EPA from adopting similar measures for substitutes. *See Cheney R.R. Co.* v. *ICC,* 902 F.2d 66, 69 (D.C. Cir. 1990) (''The contrast between Congress's mandate in one context with its silence in another suggests not a prohibition but simply a decision *not to mandate* any solution in the second context, *i.e.,* to leave the question to agency discretion.'')

Commenters stated that section 608(c) is self-implementing and no promulgation of regulations by EPA is required or contemplated to implement such prohibition. In contrast, 608(a) and (b) require EPA to promulgate regulations to establish ''standards and requirements.'' These standards and requirements are different in kind and broader than the 608(c) statutory prohibition. EPA cannot merge the distinct requirements of 608(a) and (b) with the statutory prohibition of 608(c). Another commenter stated that in trying to apply section 608(b) to any substitute substance, EPA is inferring authority that is not there.

EPA agrees that the prohibition under 608(c) as it applies to the knowing venting or releasing of ODS and substitutes is itself self-implementing. However, that fact does not preclude EPA from establishing regulations to include the prohibition in the overall context of the regulatory scheme and to promulgate rules to further interpret, explain, and enforce it, including by providing certainty to enhance compliance. Indeed, EPA's prior regulations at 40 CFR 82.154 included the venting prohibition. More specifically, these regulations provided that ''no person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the environment any refrigerant or substitute from such appliances'' and then provided for exceptions from this prohibition for specified substitutes in specified end-uses. These exceptions implemented the discretion Congress left EPA under 608(c)(2) to exempt certain releases from the venting prohibition, if the Administrator has determined that ''venting, releasing, or disposing of such substance does not pose a threat to the environment.'' CAA section 608(c)(2). Contrary to the comment, the inclusion of this discretion in section 608(c)(2) indicates that Congress intended for the EPA to have authority to implement aspects of the prohibition and in fact left gaps in this section that it expected EPA would fill as appropriate.

Similarly, as discussed in the preceding response, the legislative history indicates that in establishing the venting prohibition, Congress expected EPA to promulgate regulatory ''provisions to foster implementation of this prohibition, including guidance on what constitutes 'de minimis' and 'good faith'.'' *Report of the Committee on Environment and Public Works United States Senate, Report Accompanying S. 1630 (S. Rept. 101–228)* (December 20, 1989) at 396 (*reprinted in* 4 A Legislative History of the Clean Air Act Amendments of 1990, at 8736 (1993)). Consistent with that Congressional intent, the prior regulations at 40 CFR 82.154 included provisions clarifying that ''[ODS] releases shall be considered de minimis only if they occur when'' certain regulatory requirements are observed. 40 CFR 82.154(a)(2). However, those regulations did not provide the same clarity regarding releases of non-exempt substitute refrigerants or what practices would be considered to fall within the ambit of ''good faith attempts to recycle or recover'' non-exempt substitute refrigerants. 40 CFR 82.154(a)(2). Because Congress provided this exception to the venting prohibition for substitutes under section 608(c)(2) but did not specify what practices or actions should be taken to qualify for this exception, it is reasonable to interpret this provision as indicating that Congress contemplated that EPA would resolve this ambiguity.

While Congress did not establish specific rulemaking authority under section 608(c)(2), Congress did provide a general grant of authority in CAA section 301(a)(1) to ''prescribe such regulations as are necessary to carry out [the Administrator's] functions under'' the CAA. This rulemaking authority supplements EPA's authority under section 608 by authorizing EPA to promulgate regulations necessary to carry out its functions under section 608, including regulations necessary to interpret the venting prohibition and exceptions to it.

EPA disagrees with the commenter that it is impermissibly merging the distinct requirements of CAA sections 608(a) and (b) with section 608(c). While EPA's regulations under section 608(b) are simply one part of the regulations required under section 608(a), EPA is not relying on section 608(b) to justify its extension of the section 608 regulations to substitutes in this rulemaking. The role of EPA's section 608(a) authority in this rulemaking has been discussed above, in a prior response to comment. Moreover, as noted above, the fact that Congress required EPA to address ODS refrigerants in specific way under section 608(a), or section 608(b) for that matter, is not the same as precluding EPA from addressing other refrigerants in a similar fashion. Likewise, where EPA has authority to establish regulations for non-exempt substitute refrigerants, the fact that it has exercised its authority to establish similar regulations for other refrigerants does not prevent it from exercising its authority to regulate non-exempt substitute refrigerants in a similar manner.

One commenter stated that using section 608(c) to establish the same requirements as authorized under section 608(a) renders section 608(a) null and stated that statutory language should not be read in a manner that renders other provisions of the statute inconsistent, meaningless or superfluous.

EPA disagrees with this comment. Unlike section 608(c), section 608(a) is not limited to refrigerants. EPA has applied its authority under section 608(a) to establish or consider regulations for ODS in non-refrigerant applications. As an example, in 1998, EPA issued a rule on halon management under the authority of section 608(a)(2) (63 FR 11084, March 5, 1998). In that action, EPA noted that section 608(a)(2) ''directs EPA to establish standards and requirements regarding the use and disposal of class I and II substances other than refrigerants.'' 63 FR 11085. Similarly, EPA considered whether to establish a requirement to use gas impermeable tarps to reduce emissions of methyl bromide under section 608(a)(2), ultimately determining not to do so for technological and economic reasons. 63 FR 6008 (February 5, 1998). In that action, EPA noted: ''[s]ection 608(a)(1) of the Act provides for a national recycling and emission reduction program with respect to the use and disposal of Class I substances used as refrigerants. Section 608(a)(2) provides for such a program with respect to Class I and Class II substances not covered by section 608(a)(1).'' 63 FR 6008. Accordingly, this interpretation of section 608(c)(2) to allow EPA to establish requirements for non-exempt substitute refrigerants similar to those established under section 608(a) for ODS refrigerants does not render section 608(a) null or superfluous. Although EPA interprets its substantive authority under both sections 608(a) and 608(c) to support application of the refrigerant management requirements to both ODS and non-exempt substitute refrigerants, that is different from asserting that its section 608(c) authority would extend to any requirement that could be imposed under section 608(a). EPA was required to establish certain regulations for ODS refrigerants under section 608(a) and then decided to use those provisions to interpret and explain the venting prohibition for ODS under section 608(c). The fact that EPA is now electing to use the same requirements under section 608(c) for substitutes does not render 608(a) a nullity. EPA could have established different requirements to interpret and explain the venting prohibition, but for the reasons discussed above, decided to make the requirements consistent for both ODS and substitutes.

2. Comment: Congress Did Not Regulate Substitutes Because It Wanted To Create Incentives To Use Substitute Refrigerants

One commenter asserted that applying detailed refrigerant management requirements to substitutes discourages the development of substitutes as it eliminates the incentive to operate with fewer regulatory requirements. Another commenter stated that the current regulations provide an opt-out incentive to owners that voluntarily retrofit to a non-ozone depleting substitute and suggested that EPA should seek to revise the proposed rule so that it continues to provide similar incentives.

EPA disagrees that applying the refrigerant management requirements to non-exempt substitute refrigerants will discourage the development of substitutes. At this point in time, there are other incentives to either retrofit or replace existing equipment that relies on ODS. Most ODS have been completely phased out and the HCFC phaseout is well underway. Allowances for domestic consumption of the most common HCFC refrigerant, HCFC–22, are set at 5.6 percent of baseline for 2016 and will decline to zero in 2020 (40 CFR 82.16, 82.15(e)). In addition, use restrictions issued pursuant to section 605(a) prohibit use of newly produced HCFC–22 in equipment manufactured on or after January 1, 2010 (40 CFR 82.15(g)(2)). The section 605(a) use restrictions further prohibit use of newly produced HCFC–123 in equipment manufactured on or after January 1, 2020 (40 CFR 82.15(g)(4)). While used HCFCs are not subject to these restrictions, the HCFC phaseout and the restrictions on use of newly produced HCFCs provide clear market signals regarding future availability of HCFC refrigerants.

In addition, while some provisions of the statute indicate Congressional intent to encourage companies to use safer alternatives, other provisions indicate that Congress was also concerned about the potential impacts of unregulated releases of these substitute refrigerants. Section 608(c)(2) is in the latter category, as it extends the venting prohibition to substitute refrigerants, unless EPA determines that such releases do not pose a threat to the environment. Accordingly, the application of these regulatory requirements to non-exempt substitute refrigerants provides clarity and certainty to owners, operators, and people servicing, maintaining, repairing, or disposing of air conditioning and refrigeration equipment of how they can avoid violating the venting prohibition. Such clarity and certainty is consistent with EPA's efforts through other regulatory programs to facilitate and encourage the use of substitute refrigerants.

Other commenters stated that Congress did not extend the refrigerant management requirements to substitutes, likely because it wanted to create incentives for companies to switch to safer alternatives.

EPA responds that Congress did extend the venting prohibition to substitute refrigerants and left to EPA's discretion how to interpret and enforce that prohibition. While Congress did not require EPA to interpret and enforce the venting prohibition by regulating substitute refrigerants in the same manner as ODS, neither did it prevent EPA from doing so.

Commenters also stated that 608(a)(3) encourages EPA to use the regulations under that provision to promote the use of safe alternatives. EPA responds that while section 608(a)(3) provides that the regulations that are required under section 608(a) ''may include requirements . . . to promote the use of safe alternatives pursuant to section [612],'' whether to include such provisions is discretionary, not mandatory. While Congress left such regulations to EPA's discretion, Congress directly applied the venting prohibition to substitute refrigerants under section 608. Moreover, the legislative history for section 608 recognizes the distinctions between sections 612 and 608, stating: ''The fact that a particular substance has been identified by the Administrator as a 'safe substitute' for purposes of section 612, does not affect the requirement for a separate determination under [section 608]. The purposes of section 612 and of this section are different and substances approved under section 612 will not automatically qualify for exclusion from the prohibition on venting that is included in this section.'' Statement of Senate Managers, S. 1630, The Clean Air Act Amendments of 1990, *reprinted in* 1 A Legislative History of the Clean Air Act Amendments of 1990, at 928 (1993). Accordingly, EPA does not interpret the discretion provided by section 608(a)(3) to diminish its ability to interpret, explain, and enforce section 608(c) as it is doing in this rule.

3. Comment: Section 608 Does Not Authorize EPA To Regulate the Normal Operation of Refrigerant Equipment

Commenters stated that EPA's authority under section 608 is limited to regulating actions taken during servicing, repair, or disposal of refrigeration equipment, or class I and II refrigerants evacuated during such servicing and repair. These comments further stated that EPA's authority extends only to technicians and that nothing in section 608 would enable EPA to impose liability on the equipment owner or operator.

With regard to the actions that are within the scope of section 608(c), as explained earlier in this notice, EPA interprets section 608(c) to convey authority to interpret, explain, and enforce the venting prohibition for both ODS and substitute refrigerants, and that prohibition applies to the maintenance, service, repair, or disposal of appliances and IPR. As explained elsewhere in this rulemaking, this action applies regulations to non-exempt substitute refrigerants that are related to the maintenance, service, repair, or disposal of such appliances or to providing persons engaged in such activities with additional clarity and certainty on how to ensure that their actions comport with the venting prohibition and the *de minimis* exemption to it. For example, the technician certification provisions relate to who can maintain, service, or repair an appliance and the evacuation and recovery equipment provisions relate to how to maintain, service, repair or dispose of an appliance. Furthermore, the comment omits the concept of maintenance, which is included in section 608(c). EPA notes that the definition of the term ''maintain'' includes ''to keep in an existing state; preserve or retain'' and to ''keep in a condition of good repair or efficiency.'' The American Heritage College Dictionary, 4th ed. (Houghton Mifflin, 2002), at 834; see also *http://www.merriam-webster.com/dictionary/maintain* (including in the definition of maintain ''to keep in an existing state (as of repair, efficiency, or validity): Preserve from failure or decline <maintain machinery>'') (last accessed May 31, 2016). Thus, ''maintenance'' and ''maintaining'' include a broad range of activities involved in preserving equipment in normal working order.

EPA noted in a prior response that section 608(c) is limited to refrigerants while section 608(a) is not. However, the comment is incorrect that section 608(c) is limited to the activities of a technician. Section 608(c)(2) refers to ''any person,'' and ''person'' is defined broadly in CAA section 302, as well as in subpart F to 40 CFR part 82. More specifically, section 302(e) defines ''person'' to ''include[ ] an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent or employee thereof.'' Thus, the definition clearly is not limited to technicians. Furthermore, the current statement of purpose and scope in subpart F, § 82.150, lists appliance owners and operators as one of the persons to which the subpart applies.

When EPA initially promulgated the subpart F regulations, it explained that these rules applied to owners. For example, in the preamble to the 1993 Rule, EPA explained that it had made ''additions to the scope section to clarify that the rule covers refrigerant reclaimers, *appliance owners,* and manufacturers of appliances and recycling and recovery equipment in addition to persons servicing, repairing, maintaining, and disposing of appliances.'' 58 FR 28707 (emphasis added); *see also* 58 FR 28681 (explaining that the rule required the owner of the equipment to either authorize the repair of substantial leaks or develop the equipment retirement/retrofit plan within 30 days of discovering leak above the standard and that the owner has the legal obligation to ensure that repairs are made to equipment where the leak rate exceeds the standard).

Some comments on the proposed rule stated that section 608(c) cannot be used to require that an equipment owner undertake repairs. EPA disagrees with this comment. As explained above, owners are within the scope of ''person'' as defined in CAA section 302(e) and subpart F. An owner's failure to undertake repairs of leaky appliances or IPR could lead directly to a violation of the venting prohibition. As one example, if in the course of a normal maintenance check, a technician discovers that the appliance is releasing refrigerant above the threshold leak rate but the owner does not authorize the repairs as required by the rules, and instead decides to add refrigerant and continue operating the equipment, the owner would be participating in a knowing release.

Many commenters also disagreed with EPA's interpretation of the venting prohibition, as articulated in the proposed rule that ''when a person adds refrigerant to an appliance that he or she knows is leaking, without repairing the appliance consistent with the leak repair requirements, he or she also violates the venting prohibition.'' One commenter stated that this could prohibit technicians from filling any leaking appliance. Another commenter noted that that it appears to cover failed repairs and verification tests during the repair period allowed by § 82.156(i)(9) and § 82.157(e). Commenters requested that EPA clarify that leaks that occur within an applicable repair window or retrofit/retirement schedule, even though the facility may be aware of the leak, do not violate the venting prohibition, where the leak repair procedures prescribed in subpart F are followed. To clarify EPA's statement in the proposed rule and to respond to these comments, EPA's position is that while the addition of refrigerant to an appliance known to be leaking above the threshold rate is a knowing release, that release does not violate the venting prohibition so long as the applicable practices referenced in § 82.154(a)(2), as revised, are complied with, including the leak repair requirements, as applicable.

4. Addressing Concerns About Global Warming Is Not Lawful Under Title VI of the CAA

Multiple commenters stated that EPA cannot use Title VI to control substances based on their GWPs. These commenters referred to section 602(e), which states that EPA's required publication of the GWP of a class I or class II substance ''shall not be construed to be the basis of any additional regulation under this chapter.'' EPA responds that section 602(e) relates to the GWPs of ODS, and says nothing regarding the GWPs of substitutes. In any event, EPA is not relying on section 602 as authority for the action being taken in this rulemaking. Rather, EPA is relying on section 608 for the substantive requirements contained in this rule. Section 608(c) prohibits the knowing venting or release of a substitute refrigerant unless the Administrator determines that such venting, release, or disposal does not pose a threat to the environment. While it is true that EPA anticipates a significant GHG emissions reduction as a result of this rule, EPA is extending the subpart F regulations to all substitute refrigerants that are not exempt from the venting prohibition irrespective of their GWPs. The GWPs of the non-exempt substitutes addressed in this rulemaking range from 4 to over 14,000.

One commenter stated that the legislative history demonstrates that Congress considered and rejected regulating GHGs under Title VI of the CAA. Congress does not intend *sub silento* to enact statutory language that it has earlier discarded. The commenter also noted that Congress rejected the Senate version known as ''The Stratospheric Ozone and Climate Protection Act.'' That version of the act sought to reduce methane emissions in the U.S. and other countries. The removal of those provisions signifies, in the commenter's opinion, that Congress did not intend for Title VI to address substances that were not ozone depleting, even if they have high GWPs.

EPA responds that while Congress chose not to include certain potential measures regarding regulation of GHGs unrelated to ODS, Congress nonetheless included multiple provisions regarding ODS substitutes. The legislative history of section 608(c) indicates that Congress specifically recognized that substitutes could pose a threat to the environment because they could include greenhouse gases. In discussing the venting prohibition, as it applies to substitute refrigerants, the statement of the Senate Managers included the following:

Effective 5 years after enactment, the prohibition on venting or release shall also apply to all substances that are used as refrigerants as substitutes for class I or class II refrigerants. By its terms, this provision applies to substances that are not listed as class I or class II substances. This is an important provision because many of the substitutes being developed do not have ozone depleting properties but they are 'greenhouse gases' and have radiative properties that are expected to exacerbate the problem of global climate change. The prohibition shall apply to all such substitute substances except where the Administrator determines that the venting, release or disposal of a particular substitute substance does not pose a threat to the environment.

The Administrator shall consider long term threats, such as global warming, as well as acute threats. The fact that a particular substance has been identified by the Administrator as a 'safe substitute' for purposes of section 612 does not affect the requirement for a separate determination under this section. The purposes of section 612 and of this section are different and substances approved under section 612 will not automatically qualify for exclusion from the prohibition on venting that is included in this section.[16]

It is therefore clear that Congress understood that substitute refrigerants could be greenhouse gases, specifically sought to apply the venting prohibition to such gases, and specifically contemplated that climate risks would be considered in carrying out the venting prohibition. The removal of a provision related to methane within Title VI does not indicate that Congress did not intend to address greenhouse gases in the venting prohibition.

One commenter stated that EPA has not undertaken an endangerment finding to support regulation of HFCs from IPR as a greenhouse gas which can be regulated under the CAA. EPA responds that under section 608(c), the venting prohibition applies to substitutes unless EPA exempts them. EPA is not required to take any affirmative action, let alone an endangerment finding, for the venting prohibition to apply.

One commenter stated that the purpose of Title VI is to implement the Montreal Protocol, whose sole goal is to protect the stratospheric ozone layer from ODS. EPA responds that while certain sections of Title VI do in fact implement the Montreal Protocol, several sections of Title VI call on EPA to take measures that are not required by the Montreal Protocol but are complementary to the ODS phaseout. These sections include, in addition to

[16] Statement of Senate Managers, S. 1630, The Clean Air Act Amendments of 1990, *reprinted in* 1 A Legislative History of the Clean Air Act Amendments of 1990, at 929 (1993).

section 608, sections 609 (servicing of motor vehicle air conditioners), 610 (nonessential products), 611 (labeling), and 612 (safe alternatives policy). Section 608 clearly provides EPA authority to regulate the venting, release, and disposal of substitute refrigerants.

5. EPA's Proposal Would Increase Risks to Human Health and Violate Section 612

One commenter stated that the proposed rule would drive owners and operators of IPR from HFCs to exempt substitutes in order to remove themselves from the regulatory requirements of subpart F. The commenter stated that some of these exempt substitutes are not safer for human health. HFCs are non-ozone depleting, non-flammable, and non-toxic whereas ammonia, chlorine, and hydrocarbons are either toxic or flammable. By encouraging the use of these non-exempt but riskier substitutes, the commenter states that EPA is violating section 612(a) of the CAA.

EPA responds that the commenter is quoting the policy statement that appears in section 612(a). The Agency is not acting under section 612. Rather, EPA is acting under section 608. This action under section 608 is consistent with decisions made under section 612 and does not alter those decisions. Specifically, it does not preclude use of any substitute listed as acceptable or acceptable subject to use restrictions under section 612(c) for the specified end-use. Under section 612(c), EPA compares substitutes not only to ODS but also to other available substitutes. When reviewing substitute refrigerants, EPA considers a variety of risks, including toxicity and flammability. In some instances, EPA lists substitutes as acceptable subject to use conditions that mitigate such risk. EPA does not dictate that a particular user choose a specific substitute from among those listed as acceptable for that end-use. Whether an owner or operator of an IPR facility chooses to transition to an exempt substitute is a decision that must be made weighing the advantages and disadvantages of the specific refrigerant.

6. Section 301 and 114 Do Not Grant EPA Authority To Regulate Substitutes

Two commenters stated that section 301 grants EPA general rulemaking authority but does not authorize the Agency to act where a specific statutory provision already has addressed an issue. They further stated that section 608(a) does address the issue of whether the refrigerant management regulations apply to substitutes and therefore EPA cannot use section 301 to create that authority.

As discussed above, nothing in Title VI says what refrigerant management requirements should apply to substitutes: Therefore, this is not a situation where a specific statutory provision has already addressed the issue. EPA is issuing regulations to interpret, explain, and enforce the venting prohibition in section 608(c)(2) with regard to non-exempt substitutes. EPA is not deriving substantive authority from section 301. Rather, EPA is relying on section 608 for its substantive authority and is looking to section 301 as supplemental authority to issue regulations to carry out its functions under section 608. Similarly, EPA is looking to section 114 not for the substantive refrigerant management requirements being finalized today but rather as authority to require recordkeeping and reporting in carrying out the venting prohibition for non-exempt substitutes.

IV. The Revisions Finalized in This Rule

A. Revisions to the Definitions in § 82.152

EPA proposed to update and clarify many of the definitions in subpart F. EPA also proposed to add new definitions and remove definitions that solely restated the required practice. In general, these revisions are to improve readability, increase consistency with how the term is used in the regulatory text, and specifically incorporate substitute refrigerants as appropriate.

EPA received comment on the proposed revisions to definitions of *refrigerant* and *appliance,* as well as terms specifically applicable to the leak repair portion of the regulations. EPA also received requests to define additional terms. Those comments, and changes from the proposed definitions that are being made in this final rule, are discussed later in this section with those terms. EPA is finalizing as proposed the other revisions to definitions in this section that were addressed in the notice of proposed rulemaking and where we did not receive comments. Other revisions elicited only supporting comments, which are briefly noted in the descriptions of the revisions.

Appliance

EPA proposed to define *appliance* as any device which contains and uses a class I or class II substance or substitute as a refrigerant and which is used for household or commercial purposes, including any air conditioner, motor vehicle air conditioner, refrigerator, chiller, or freezer. EPA is finalizing three revisions to the definition of *appliance.* First, EPA is extending the subpart F regulatory definition to apply to substitute refrigerants. Second, EPA is adding ''motor vehicle air conditioner'' to the list of example appliances. Third, EPA is adding a sentence stating that each independent circuit on a system with multiple circuits is considered a separate appliance.

The prior definitions in subpart F are written to separate ozone-depleting substances from non-ozone depleting substitutes. EPA's prior regulations defined an *appliance* as a device which contains and uses a *refrigerant.* As relevant here, section 601 of the CAA defines an *appliance* as a ''device which contains and uses a class I or class II substance as a refrigerant.'' Class I and class II substances are defined as substances listed under sections 602(a) or (b), respectively. Section 601 of the CAA does not define *refrigerant* but EPA's regulations at § 82.152 as they existed before this rulemaking defined *refrigerant* as solely class I or class II ozone-depleting substances, or mixtures containing a class I or class II ODS.

Defining these terms in this manner was appropriate before section 608(c)(2) took effect on November 15, 1995. Under section 608(c)(2), the venting prohibition applies to substitutes for ODS refrigerants and, accordingly, it states that ''[f]or purposes of this paragraph'' *appliance* includes any ''device which contains and uses as a refrigerant a substitute substance and which is used for household or commercial purposes.'' However, EPA had not updated the definition of *appliance* in subpart F to reflect section 608(c)(2). Because EPA regulations, as they existed before this rulemaking, had defined an *appliance* as a device that contains and uses a refrigerant, and *refrigerant* in a way that does not include substitutes, substitutes were excluded from the regulatory definition of *appliance.*

In this action, EPA is revising the definition of *appliance* so that it encompasses the definition of the term in both sections 601 and 608 of the CAA. EPA is defining *appliance* as any device which contains and uses a class I or class II substance or substitute as a refrigerant and which is used for household or commercial purposes. This revision makes the regulatory definition consistent with both sections 601 and 608 of the CAA, improves internal consistency of the regulations, and increases clarity for the regulated community.

One commenter stated that EPA should not add ''substitutes'' to the definition of *appliance* because CAA section 601(1) already defines appliance and ''substitutes'' is not included. EPA responds that while the definition of *appliance* in section 601(1) does not contain ''substitutes,'' section 608(c)(2) does extend the term *appliance* to systems containing substitutes for purposes of that paragraph. It is reasonable to update the regulatory definition so that there is a consistent definition of *appliance* throughout subpart F. Further, because the regulations in subpart F address the venting prohibition under section 608(c)(2) for substitute refrigerants and requirements to interpret, explain, and enforce the *de minimis* exemption to that prohibition, it is reasonable to include ''substitutes'' in the regulatory definition of appliance. In addition, this rulemaking only changes the definition of appliance as it appears in subpart F, but the definition of the term in other regulations under Title VI, such as in 40 CFR 82.3, remains unchanged.

EPA also proposed and is finalizing the addition of ''motor vehicle air conditioner'' to the list of example appliances. Two commenters objected to this proposal, stating that neither definition of *appliance* in section 601 or 608 of the CAA specifically includes motor vehicle air conditioners. One commenter states that Congress specifically considered but ultimately decided against explicitly including ''motor vehicles'' within the definition of *appliance* in section 601 of the CAA.

A plain reading of the Clean Air Act would include motor vehicle air conditioning under *appliance.* Section 601 of the CAA defines an appliance as ''*any* device . . . which is used for household or commercial purposes including *any* air conditioner . . .'' (emphasis added). In the 1993 Rule establishing regulations under section 608 for the first time, the Agency stated the following:

> The Act defines 'appliance' as 'any device which contains and uses a class I or class II substance as a refrigerant and which is used for household or commercial purposes, including any air conditioner, refrigerator, chiller, or freezer.' EPA interprets this definition to include all air-conditioning and refrigeration equipment except that designed and used exclusively for military applications. Thus, the term includes all the sectors of air-conditioning and refrigeration equipment described under Section III.A above, including household refrigerators and freezers (which may be used outside the home), other refrigerated appliances, residential and light commercial air-conditioning, transport refrigeration, retail food refrigeration, cold storage warehouses, commercial comfort air-conditioning, *motor vehicle air conditioners,* comfort cooling in vehicles not covered under section 609, and industrial process refrigeration.'' (58 FR 28669; May 14, 1993, emphasis added)

In that same final rule, EPA established the definition of MVAC in subpart F as ''*any appliance* that is a motor vehicle air conditioner as defined in 40 CFR part 82, subpart B'' (emphasis added), and that definition has not since been changed. The commenters themselves state that procedures that are not regulated under section 609, such as the disposal of MVACs and the purchase of refrigerant in some sized containers, are covered by section 608. Furthermore, they agree that the prohibition against venting ODS and substitute refrigerants in section 608 is also already applicable to refrigerants used in MVAC and MVAC-like appliances. This necessarily implies that *appliance* as used in section 608 includes ''motor vehicle air conditioners.'' The inclusion of ''motor vehicle air conditioners'' as an example within *appliance* is a clarification, and it reflects the way the term appliance has been used throughout the history of the program. Specific provisions in subpart F that relate to activities that are regulated for MVACs under section 609 refer, as appropriate, to the subpart B regulations issued under section 609 of the CAA.

Comments from the auto industry also expressed concern that adding motor vehicle air conditioners to the list of examples in the definition of *appliance* would affect EPA's exemption from servicing requirements for MVACs in vehicles that have not yet left the manufacturing facility. In the 1992 rule establishing regulations under section 609, EPA stated that:

> a motor vehicle air conditioner is not subject to these regulations prior to the completion of final assembly of the vehicle by the original equipment manufacturer. While repair or service work on air conditioners in unfinished vehicles may well fit the definition of 'service for consideration,' the equipment and technician certification requirements of these rules do not apply as the motor vehicle air conditioner is not subject to these rules prior to the completion of the final assembly process by the vehicle's manufacturer. (57 FR 31246; July 14, 1992)

The addition of motor vehicle air conditioners as an example within the definition of *appliance* does not affect current practices and EPA regulations as they affect vehicle manufacturing. That was not the intent of the proposed change and is not a result of this final action. As previously discussed, the definition of *motor vehicle air conditioner* in subpart F is ''any appliance that is a motor vehicle air conditioner as defined in 40 CFR part 82, subpart B'' and the definitions within subpart B, under section 609, exclude vehicles that have not completed manufacturing by the original equipment manufacturer. EPA provided the following explanation for the exclusion of vehicles that have not yet been fully manufactured from the servicing requirements under section 609 in the 1992 final rule:

> EPA believes the repair of newly manufactured units is not likely to be a common occurrence and when it does occur, the manufacturing facilities clearly use equipment to recover and recycle the refrigerant so that it may be reintroduced once the motor vehicle air conditioner is repaired. The equipment is significantly different from the kind of equipment covered by EPA's definition of approved equipment, yet serves the purpose of such equipment equally well. In addition, the technicians performing this operation are typically manufacturing employees, not service technicians. For all these reasons, the Agency believes it is not necessary at this time to extend the requirements of this servicing regulation into the assembly operation. . . EPA wants to be clear that this exclusion is limited to final assembly activities conducted by the vehicle's original manufacturer, and does not include service or repair activities conducted, for example, by a dealer. (57 FR 31245, July 14, 1992)

One commenter further stated that it is not necessary to impose new technician training and certification requirements, or other regulatory requirements, for the automobile company and component supplier employees and contractors engaged in these activities. EPA agrees and reiterates that because the venting prohibition already applied to ODS and substitutes, this final action will not have any new effect on the automotive manufacturing process or individuals employed in the automotive and/or MVAC manufacturing process prior to the vehicle leaving the manufacturing plant. EPA's regulations under both sections 608 and 609 are intended, and will continue, to apply only to MVACs that are fully manufactured.

A few commenters requested that EPA clarify that for systems containing multiple circuits, each independent circuit is considered a separate appliance for the purposes of subpart F. This is the position that EPA has taken in the *Compliance Guidance for Industrial Process Refrigeration Leak Repair Regulations under Section 608 of the Clean Air Act* from October 1995 and the commenters believe that making such a statement in the regulations will be clearer to the regulated community.

EPA agrees and is adding a sentence clarifying this point to the definition.

Many commenters from the supermarket industry believe that the Agency's interpretation of the term *appliance* is too broad. In these commenters' view, appliances are display cases or unit coolers and not the broader system of piping, compressors, and condensing units to which those are attached. One commenter suggested that EPA create a definition for the term *system* to indicate a combination of various pieces of equipment and appliances that are professionally and specifically designed and erected for a particular application. Another commenter suggested that EPA define the refrigerant circuit as separate from the appliance. These commenters are especially concerned about a definition of *appliance* that includes all coolers, display cases, components, and piping in light of EPA's proposal to require that an appliance be retired if it exceeds the proposed two-year leak limit.

EPA responds that the Agency interprets an *appliance* as a fully assembled device that can function for its intended purpose. Components, on the other hand, are all the parts of the appliance that make up the refrigerant circuit, as described later in this section. As EPA described in the final rule allocating HCFCs for 2010–2014, ''appliances are separate from components, which are the individual parts of an appliance, such as a condensing unit or line set, that by themselves cannot function to provide a cooling effect'' (74 FR 66439; December 15, 2009). EPA recognizes that some would prefer that some components be considered appliances. For example, some members in the industry consider a condensing unit in a residential split system to be an appliance. However, EPA does not believe it is practical or clear for some components to also be considered appliances in the regulatory definitions. The concepts of *full charge* or *leak rate* do not make sense in the context of only a component. Finally, EPA notes that much of these commenters' concerns about the scope of the term *appliance* was in response to EPA's proposal that chronically leaking appliances be retired. As discussed in Section IV.F.12, EPA is not finalizing the proposed requirement for automatic retirement of chronically leaking appliances.

Apprentice

As proposed, EPA is amending the definition of *apprentice* to replace the ''Bureau of Apprenticeship and Training'' with the ''Office of Apprenticeship'' to match the current name of the office and to make minor edits to improve clarity and readability.

Batch

EPA proposed a requirement that each batch of reclaimed refrigerant be tested. EPA did not propose to define ''batch'' but is doing so in this final rule based on requests by commenters to clarify the term. EPA agrees with the comment that adding a definition of *batch* will clarify this requirement, and is defining the term based on language provided by multiple commenters. Therefore, EPA is defining *batch* to mean a single bulk cylinder of refrigerant after all reclamation has been completed prior to packaging or shipping to the market.

Certified Refrigerant Recovery or Recycling Equipment

As proposed, EPA is removing the defined term *certified refrigerant recovery or recycling equipment* which was merely a reference to the sections of the Code of Federal Regulations that discuss the certification program. This term was also used inconsistently throughout subpart F as ''recovery and recycling equipment,'' ''recovery or recycling equipment,'' ''recycling and recovery equipment,'' and ''recycling or recovery equipment.'' The regulations at § 82.36 make a distinction, in the context of MVAC servicing, between equipment that only recovers refrigerant and equipment that both recovers and recycles refrigerant. The regulations in subpart F generally do not make a distinction. The standards in appendices B1 and B2 refer to recovery and/or recycling equipment while the standard in appendix C for small appliances refers to recovery equipment only. For consistency, in the revised provisions, EPA is using ''recovery and/or recycling equipment'' throughout, except for when referring only to small appliances.

Class I and Class II

EPA is finalizing as proposed regulatory definitions for *class I* and *class II* ozone-depleting substances to assist the reader. These terms are currently defined in section 601 of the CAA and in 40 CFR part 82, subpart A. EPA is finalizing the addition of a definition of class I as an ozone-depleting substance that is listed in 40 CFR part 82, subpart A, appendix A. Similarly, EPA is finalizing the addition of a definition of class II as an ozone-depleting substance that is listed in 40 CFR part 82, subpart A, appendix B. EPA also notes that the regulatory text uses class I substance, class I ODS, and class I refrigerant interchangeably (and similarly uses class II substance, class II ODS, and class II refrigerant interchangeably) and all are intended to have the same meaning for the purpose of subpart F.

Comfort Cooling

EPA is finalizing the addition of a definition for *comfort cooling.* The leak repair provisions divide refrigeration and air-conditioning equipment into four categories: Comfort cooling, commercial refrigeration, industrial process refrigeration, and other. EPA's prior regulations defined commercial refrigeration and industrial process refrigeration but not comfort cooling.

For purposes of the leak repair requirements, EPA proposed to define *comfort cooling* as the air-conditioning appliances used to provide cooling in order to control heat and/or humidity in facilities including but not limited to office buildings and light commercial buildings. EPA further proposed to include language explaining that comfort cooling appliances include building chillers and roof-top self-contained units, and may be used for the comfort of occupants or for climate control to protect equipment within a facility, such as but not limited to computer rooms. EPA sought comments on the applicability of the proposed definition of *comfort cooling* to air-conditioning equipment that is typically used to provide cooling and or humidity control in such environments.

Commenters suggested that EPA remove the reference to equipment and computer rooms as this is beyond the scope of comfort cooling. One commenter suggested that comfort cooling only include computer rooms set to above 68 degrees F to align the definition with CARB–32. That commenter also suggested that appliances used to cool computer rooms would fall under the category of ''other appliances.'' Another commenter believes that such appliances are currently considered as IPR. EPA responds that the intent was to apply the term *comfort cooling* only to spaces occupied by humans. EPA has made edits to better reflect this understanding in the final definition and is therefore not including in the final definition the last sentence from the proposed definition (which read ''[t]hey may be used for the comfort of occupants or for climate control to protect equipment within a facility, including but not limited to computer rooms.'').

EPA notes here that *comfort cooling,* with respect to the leak repair provisions in this subpart, does not include MVACs or MVAC-like appliances.

Commercial Refrigeration

As proposed, EPA is finalizing the amendment to the definition of *commercial refrigeration* that removed the sentence stating that this equipment typically contains a charge size over 75 pounds. While accurate, this sentence has caused confusion as to whether or not the leak repair requirements are applicable to such appliances with a full charge between 50 pounds, as stated in the leak repair required practices, and 75 pounds. The leak repair requirements do apply because the threshold is a refrigerant charge of 50 pounds or greater. EPA is removing this sentence to avoid this confusion. EPA received comments in support of this revision.

Critical Component/Component

As proposed, EPA is removing the defined term *critical component* and adding the term *component.* The term *critical component* was only used in the context of an extension for the repair of IPR when critical components could not be delivered within the necessary time. EPA is amending the definition so that it is not limited to IPR, but also includes comfort cooling and commercial refrigeration appliances. As discussed in Section IV.F of this notice, EPA is applying the extensions for leak repairs to all types of appliances. The unavailability of a component is not unique to IPR and EPA is granting all appliances the same flexibility to request additional time. This revision to the regulatory definitions supports that flexibility.

EPA proposed to define *component* as ''a part of the refrigerant loop within an appliance including, but not limited to, compressors, condensers, evaporators, receivers, and all of its connections and subassemblies.'' *Component* is intended to be broader than *critical component.* EPA considers components to include all the parts of the appliance that make up the refrigerant circuit such as the compressor, heat exchangers (condenser and evaporator), and valves (*e.g.,* heat recovery, expansion, charging). Other components may include receivers, manifolds, filter driers, and refrigerant piping. EPA is finalizing this definition substantially as proposed, although it is replacing the word ''loop'' with ''circuit,'' as *refrigerant circuit* is a defined term in the regulations.

Custom-Built

As proposed, EPA is amending the definition of *custom-built* to remove a citation to a section of the regulation that has moved.

Disposal

EPA proposed to amend the definition of *disposal* to clarify that the disposal process includes the destruction of an appliance that releases or would release refrigerant to the environment. This proposed revision is intended to cover activities such as vandalism or the cutting of refrigerant lines, whether to steal metal or to vent the refrigerant or both. EPA also proposed to clarify that the disassembly of an appliance for recycling, as well as reuse, is part of the disposal process.

One commenter stated that the regulatory definition of *disposal* is inconsistent with EPA's Sustainable Materials Management policy and with the RCRA definition of *disposal* at 40 CFR 260.10, which leads to regulatory confusion. The commenter seeks to clarify that the recycling of appliances or components is separate from disposal. The commenter believes there should be four definitions regarding recycling and disposal: (1) Recycle refrigerant; (2) dispose of refrigerant; (3) recycle an appliance; and (4) dispose of an appliance. The commenter finds that the proposed revision to the definition confuses the distinction between recycling and disposal. The commenter also finds that the word ''destruction'' is too broad if EPA is trying to address vandalism, line-cutting, or theft and is concerned that the term equates recycling with such unlawful activities.

EPA responds that the Agency addresses the recycling and disposal (or reclamation) of refrigerant elsewhere in subpart F. The safe disposal provisions at § 82.155 relate to the disposal of appliances. The Clean Air Act in 608(a) refers to the ''service, repair, and *disposal of appliances*'' and 608(c) refers to the ''maintaining, servicing, repairing, or *disposing of an appliance*'' (emphases added). The manner in which the appliance is disposed of, whether by recycling, landfilling, reuse of component parts, or another method is not addressed by the CAA. For the purposes of section 608, what is relevant is that an action is taken on an appliance at the end of its useful life that releases or would release refrigerant if the proper precautions are not taken. EPA agrees it is appropriate to specify what is included in *disposal* for clarity but does not agree that the term must have the same meaning in section 608 of the CAA as under RCRA or the Sustainable Materials Management policy. The commenter does not make clear how the Agency's Sustainable Materials Management policy is in conflict with the requirement in subpart F to recover, or verify the prior recovery, of refrigerant in discarded appliances. EPA is finalizing its proposal to include recycling for scrap as one of the methods by which an appliance may be disposed.

Furthermore, EPA's intent is to address the various actions taken upon an existing and operational system that will effectively end its useful life and potentially release refrigerant. Both recycling and vandalizing a fully charged appliance would have that effect, though EPA recognizes the distinctions between those two actions. This revision is also consistent with a recent court decision-which found that cutting a functioning condenser unit and releasing refrigerant into the environment constituted disposal of an appliance within the meaning of CAA section 608 and its implementing regulations, even if the underlying intent was to steal and sell the metal piping. *United States* v. *Harrold,* No. 2:15–mj–605 (S.D. Ohio, Oct. 28, 2015) (order concluding that the complaint sufficiently charged a violation of the Act and that sufficient evidence was presented to establish probable cause that defendant violated the Act).[17] *See also United States* v. *Morrissette,* 579 F. App'x 916, 919 (11th Cir. 2014) (stating that defendant who stole metal coils from commercial air conditioning units had violated the CAA regardless of the underlying intent to steal copper). EPA is finalizing the definition of *disposal* substantially as proposed. In response to the comment, EPA is replacing the word ''destruction'' with ''vandalism'' to more specifically refer to actions such as line cutting and metal theft. The vandalism would have to be of such a nature that it would release the refrigerant. EPA is also separating ''[t]he recycling of any appliance for scrap'' from ''[t]he disassembly of any appliance for reuse of its component parts.'' Both are considered disposal.

Follow-Up Verification Test

EPA is amending the definition of *follow-up verification test* to remove duplicative text that was also covered in § 82.156(i). The revised definition describes what the test is and how it is conducted, not the regulatory requirements of the test. The revised regulatory requirements are found in § 82.157(e). EPA is not specifying one test that would satisfy what constitutes a follow-up verification test, but is providing an illustrative list of tests that would qualify. EPA does not intend for this list to be all-inclusive, but rather to

[17] A copy of this opinion and other documents related to this case are available in the docket for this rulemaking.

provide examples of known methodologies of performing leak repair verification tests.

One commenter suggested that EPA modify the name of this test to *follow-up leak repair verification test.* The commenter has found that over 40 percent of technicians who do not work on IPR, where these tests were previously required, were confused about the distinction between the initial and follow-up verification tests. The technicians indicated to the commenter that such a name change would make it clearer that the tests are about the effectiveness of the repair. EPA disagrees that changing the name of the test will improve technician's abilities to conduct these tests or reduce refrigerant emissions. It is understandable that technicians that do not work on IPR equipment and are not trained in the procedures of subpart F that had previously only applied to IPR would not be aware of the requirements. EPA is concerned that changing the name of the test would confuse those who already know of the requirement. EPA is therefore finalizing the definition of *follow-up verification test* as proposed.

Full Charge and Seasonal Variance

EPA is amending the definition of *full charge* to account for seasonal variances and to make minor edits for readability. Owners or operators of commercial refrigeration appliances and IPR have previously expressed concerns that the full charge may not be accurately determined due to seasonal variances that may alter the amount of refrigerant in an appliance. Seasonal variances in ambient temperature and pressure have the effect of forcing refrigerant to different appliance components (for example, from an appliance's receiver to the condenser).

EPA is allowing owners or operators to account for seasonal variances by measuring the actual amount of refrigerant added to or evacuated from the appliance. EPA is defining *full charge* as the amount of refrigerant required for normal operating characteristics and conditions of the appliance as determined by using one or a combination of the following four methods:

(1) Use of the equipment manufacturer's determination of the full charge;

(2) Use of appropriate calculations based on component sizes, density of refrigerant, volume of piping, and other relevant considerations;

(3) Use of actual measurements of the amount of refrigerant added to or evacuated from the appliance, including for seasonal variances; and/or

(4) Use of an established range based on the best available data regarding the normal operating characteristics and conditions for the appliance, where the midpoint of the range will serve as the full charge.

To further explain the definition of *full charge,* EPA is creating a defined term for *seasonal variance.* This term means the removal of refrigerant from an appliance due to a change in ambient conditions caused by a change in season, followed by the subsequent addition of an amount that is less than or equal to the amount of refrigerant removed in the prior change in season, where both the removal and addition of refrigerant occurs within one consecutive 12-month period. A complete discussion of allowing for seasonal variances when calculating appliance leak rates is found in Section IV.F of this preamble.

EPA received several comments on the proposed definition of *seasonal variance.* Two commenters recommended that EPA use the removal of refrigerant as the first step and the addition of refrigerant as the second step. While EPA proposed the opposite framing, you can measure the amount removed to be able to determine the amount that can be added in the next season without triggering a leak rate calculation. EPA has adjusted the definition and the narrative in the preamble accordingly.

Four commenters suggested that the amount added and removed does not always have to be equal, as was proposed. EPA agrees that as long as the amount added is less than or equal to the amount removed in the prior season, the addition will be considered a seasonal variance.

One commenter requested that EPA clarify whether the added refrigerant amount is to be included in the full charge amount. The commenter is concerned that not reflecting the seasonal variance could affect what is considered normal operating characteristics and conditions, which would in turn affect when verification tests can be conducted. Another commenter proposed that the maximum charge be used at all times when calculating the leak rate, regardless of what is actually in the appliance at the time of repair.

Given the concerns raised by the commenter about including seasonal variances in the appliance's full charge to prevent problems with compliance with normal operating characteristics and conditions, the full charge must be adjusted to account for the amount of refrigerant removed or added for a seasonal variance if the full charge was calculated using any method other than method four, since that method inherently includes a range. To be clear, verification tests should be conducted regardless of whether the appliance contains extra refrigerant to account for a seasonal variance. This could result in two ''full charges,'' one for each season. EPA does not agree that it would be appropriate to use the maximum charge or the higher of the two full charge calculations because some seasonal variances are large enough that adjusting the full charge would make significant difference in the leaks that would exceed the applicable leak rate. Since this is an added flexibility, requiring slightly more recordkeeping is warranted.

One commenter indicated that refrigerant charge should never be added or removed throughout the year. While this may be true for some types of equipment, there are legitimate situations where such additions or removals are appropriate, typically in larger commercial refrigeration and industrial process refrigeration appliances. For example, one commenter cited the instance of a seafood packer who may need to add refrigerant during crab season when the refrigeration or freezing load spikes.

Finally, the Agency is allowing an owner or operator to choose a combination of methods to determine full charge. There are instances where multiple methods may be necessary to accurately determine the full charge. Further EPA is providing flexibility by not requiring that owners or operators commit to the same method for the life of the appliance. EPA is requiring in this final rule that owners or operators maintain a written record of the full charge, the method(s) used to determine the full charge, and any changes to that amount.

High-Pressure Appliance

EPA is amending the definition of *high-pressure appliance* as proposed to update the list of example refrigerants with the most commonly used refrigerants today. Because revisions to *appliance* and *refrigerant* carry over into this term as well, under the revisions finalized in this rule, high-pressure appliances include those that use ODS and non-ODS substitute refrigerants.

Industrial Process Refrigeration

EPA is amending the definition of *industrial process refrigeration* as proposed to make minor clarifications for readability and to remove a citation to a section of the regulation that has moved.

Industrial Process Shutdown

EPA is amending the definition of *industrial process shutdown* as proposed to remove a citation to a section of the regulation that has moved.

Initial Verification Test

EPA is amending the definition of *initial verification test* to remove duplicative text that is also covered in the required practices section of the regulation. The revised definition describes in general terms what the test is, not what the requirements of the test are. The purpose of this test is to verify that a leak has been repaired prior to adding refrigerant back into the system. The requirements for an initial leak repair verification test are described in Section IV.F.8 of this notice and in § 82.157(e)(1) of the revised regulation.

Leak Inspection

EPA is creating a new defined term *leak inspection.* EPA proposed to define *leak inspection* as the examination of appliances using a calibrated leak detection device, a bubble test, or visual inspection for oil residue in order to determine the presence and location of refrigerant leaks.

Some commenters recommended additional leak detection methods including: Standing pressure/vacuum decay tests, ultrasonic tests, periodic evacuations, gas-imaging cameras, sight glass checks, viewing receiver levels, pressure checks, charging charts, and the sub-cooling method (for expansion systems).

In general, leak detection methods fall into two categories: Ones that indicate that an appliance is leaking; and ones that can identify the location of a leak. EPA stated in the proposal that the proposed definition covers the techniques currently used to detect the location of leaks, not activities that would assist only in determining whether a system is leaking generally without providing information that would allow detection of the location of the leak. One commenter stated that limiting leak inspections in such a manner increases the costs of conducting leak inspections.

EPA responds that the purpose of a leak inspection is to determine the location of a leak, not to determine whether an appliance is leaking. As discussed in Section IV.F.4 of this notice, EPA is modifying the leak inspection requirement so that it is only required on appliances that have exceeded the applicable leak rate. To repair a leak, the technician must be able to locate it. Therefore, inspection methods that only indicate that the appliance is releasing refrigerant do not provide the necessary information for a technician to repair leaks. Further leak inspections on the repaired system may benefit from using a combination of methods to determine whether the system continues to leak refrigerant, and if so, where.

Commenters also recommended that EPA remove some of the proposed inspection methods. Multiple commenters recommended that EPA not include a visual inspection for oil residue, as that is not a reliable indicator of a refrigerant leak. Similarly, some commenters noted that the bubble test should be used in conjunction with another leak detection method due to its low sensitivity or potential unreliability when performed outdoors. EPA agrees that a visual inspection for oil residue is not dispositive and has removed that method from the list of leak inspection methods included in the definition as finalized. EPA is including bubble tests in that list because it may be appropriate in some circumstances. EPA is also strengthening the leak inspection by requiring under § 82.157(g)(2) that it be performed by a certified technician, while providing discretion for the technician to determine which methods are appropriate.

Some commenters also recommended that EPA remove the word ''calibrated'' because some electronic leak detectors are self-calibrating while others do not require calibration. Instead, these commenters suggested that EPA require that the devices be operated and maintained according to manufacturer guidelines. Another commenter recommended that EPA maintain the requirement that leak detection devices be calibrated. Given the variability of equipment, EPA agrees with the comments suggesting that it is preferable to follow the manufacturer guidelines. Thus, in this final definition EPA is replacing ''calibrated leak detection device'' with ''leak detection device operated and maintained according to manufacturer guidelines'' based on public comment.

In this final rule, EPA is providing a non-exhaustive list of methods for leak inspections, and clarifying that techniques that only determine whether the appliance is leaking must be used in combination with another method that can identify the location of the leak. In general, commenters encouraged EPA to allow for or require multiple methods due to the limitations of individual techniques in different circumstances. This approach is consistent with those comments.

Leak Rate

EPA proposed, and is now finalizing, one substantive change to the definition of *leak rate* to change the calculation performed under what is called Method 2 under the prior rules. The first step of that method has been to take the sum of the quantity of refrigerant added to the appliance over the previous 365-day period (or over the period that has passed since leaks in the appliance were last repaired, if that period is less than one year). Instead of the cut-off being since the last repair (if less than 365 days), EPA is amending Step 1 to cover the period of time since the last successful follow-up verification test showing that all identified leaks were successfully repaired (if less than 365 days have passed since the last refrigerant addition). The goal of this change is to improve the clarity of the requirements. Under the prior definition, it was unclear if the repair had to be successful in order to be considered in the leak rate calculation. These revisions clarify that all identified leaks must be verified as having been successfully repaired.

EPA is also renaming the two methods from Method 1 and Method 2 to ''Annualizing Method'' and ''Rolling Average Method'' to improve readability. EPA is also finalizing the proposed change to clarify that while the same leak rate calculation must be used for all appliances at the same facility, this only refers to the appliances subject to the leak repair provisions (*i.e.,* appliances normally containing 50 or more pounds of refrigerant).

EPA received three comments on this proposed definition. One commenter recommended that EPA remove the Rolling Average Method for simplicity and change the Annualizing Method such that the calculation is based on the time since the last successful follow-up verification test instead of the last refrigerant addition. The commenter further recommended changes to the Rolling Average Method, if EPA keeps it in the regulation, to better express the amount of refrigerant that would be lost if that leak continued for a full year.

EPA responds that while reducing the number of leak rate calculation methods could simplify the regulations, numerous appliance owners and operators have used the Rolling Average method for years and they continue to seek flexibility. EPA does not see an environmental benefit in reducing this flexibility. On the suggestions to change the Annualizing and Rolling Average Methods, EPA is not adopting the suggestions. Broadly speaking, EPA interprets the comment to indicate that the Rolling Average Method should be more like the Annualizing Method and vice versa such that they are effectively identical. This seems unnecessary and confusing, and limits flexibility. Both methods have strengths that would be undercut by the suggested changes.

The strength of the Annualizing Method is that it is future-oriented. It allows an owner or operator to ''close out'' each leak event so long as the requirements are followed and does not lump past leak events with the current leak event. It considers the amount of time since the last refrigerant addition and then scales that up to provide a leak rate that projects the amount lost over a whole year if not fixed. As a result, this formula will yield a higher leak rate for smaller leaks if the amount of time since the last repair was shorter. This can have significant environmental benefits by requiring more thorough leak inspections and verified repairs sooner. The commenter's suggested change would make this method too similar to the Rolling Average Method for minimal, if any, benefit and could potentially increase the amount of time included in each leak rate calculation. Stretching out the period of time covered could result in lower leak rates depending on the situation.

The Rolling Average Method also has its strengths. It accounts for all refrigerant additions over the past 365 days or since the last successful follow-up verification test showing that all identified leaks were successfully repaired (if less than 365 days). If an owner or operator verifies all identified leaks are repaired, this method would also allow an owner or operator to ''close out'' a leak event. If there is no follow-up verification test showing that all identified leaks were successfully repaired within the last year, the leak rate would be based completely on actual leaks in the past year. This retrospective approach measures actual performance and if leaks are identified and fixed quickly, an appliance may never reach the applicable leak rate.

Two other commenters questioned the rationale for the change given the need to update tracking software and provide staff training. EPA explained its rationale in the proposed rule and earlier in this notice. Specifically, the change is needed to provide clarity that repairs must be successful and verified in order to be considered in the calculation and to improve effectiveness of the rule.

In this action, EPA is requiring that owners or operators use a prospective approach (the Annualizing Method), that focuses on the current leak event rather than the size of past leaks, or a retrospective approach (the Rolling Average Method), where past performance is key. If an owner or operator repairs all identified leaks and verifies that the repairs have been successful, then the Agency considers that a sufficient clearing event in that the leak rate has been brought as close to zero as possible. We recognize that these changes may require modification to software and technician training with the new requirements. For that reason, EPA intends to develop several compliance assistance tools that will help technicians and owners/operators to better understand the requirements. EPA has also delayed the compliance date for the appliance maintenance and leak repair requirements to January 1, 2019, to allow time for the industry to prepare for these changes.

Low-Pressure Appliance

EPA is amending the definition of *low-pressure appliance* to update the list of example refrigerants with the most commonly used refrigerants today. Because revisions to *appliance* and *refrigerant* carry over into this term as well, under the revisions finalized in this action, low-pressure appliances include those that use ODS and non-ODS substitute refrigerants. EPA is finalizing this definition as proposed.

Medium-Pressure Appliance

EPA is amending the definition of *medium-pressure appliance* to update the list of example refrigerants with the most commonly used refrigerants today. Because revisions to *appliance* and *refrigerant* carry over into this term as well, under the revisions finalized in this action, medium-pressure appliances include those that use ODS and non-ODS substitute refrigerants. EPA is finalizing this definition as proposed.

Mothball

EPA proposed to revise the defined term *system mothballing* to *mothball* to reflect how it is used in the regulations, and EPA is finalizing this definition as proposed. Mothballing an appliance suspends the time needed to complete repairs, retrofit or retirement plans, or the actual retrofit or retirement of appliances that have triggered the leak repair requirements. The previous definition referred to refrigeration appliances, but the suspension is allowed for comfort cooling appliances as well as commercial refrigeration and IPR systems. EPA is therefore removing the reference to ''refrigeration'' appliances in the definition. The previous definition also required that the appliance be shut down for ''an extended period of time.'' EPA is removing this phrase because the Agency is not concerned about length of time that the system is shut down but rather that the system has been removed from service temporarily, as opposed to permanently, and that the refrigerant has been evacuated. The revised definition also notes that refrigerant can be evacuated from an isolated component of the appliance if only an isolated section or component is affected and makes minor edits to improve clarity and readability. EPA is also clarifying in § 82.157(d)(3) and § 82.157(i) that the suspension of time ends when refrigerant is added back into the appliance.

One commenter recommended that EPA allow the system to be filled with nitrogen or another inert gas to protect the system while repair is in process. EPA responds that the regulations in subpart F do not prohibit or address this action, as long as the holding charge is an inert gas and not a refrigerant as defined in this subpart. However, EPA is not making revisions to address this point specifically, as the regulations in subpart F are concerned with refrigerants and the nitrogen or other inert gas in this example is not being used as a refrigerant.

Normal Operating Characteristics and Conditions

As proposed, EPA is changing the defined term *normal operating characteristics or conditions* by replacing ''or'' with ''and'' for consistency through the regulations and to accurately describe the intended state of the appliance to which this term refers. EPA is also removing a reference to a section of the regulation that has moved and adding a reference to the appliance's full charge. Operating at full charge is a necessary element of an appliance's normal characteristics and it should be reflected in the definition. Finally, the revised definition clarifies that this term applies to all appliances, not just refrigeration appliances.

Normally Containing a Quantity of Refrigerant

As proposed, EPA is removing the defined term *normally containing a quantity of refrigerant.* Because EPA is replacing this term with the phrase ''with a full charge of'' in the regulatory text where the term occurred, this definition is no longer needed.

One-Time Expansion Device

EPA is amending the definition of *one-time expansion device* as proposed to clarify that this includes devices that can store multiple charges, which are released individually to the environment to provide a cooling effect.

Opening an Appliance

EPA proposed to amend the definition of *opening an appliance* to improve readability. EPA is finalizing this amended definition as proposed.

Reclaim

As proposed, EPA is changing the defined term *reclaim refrigerant* to *reclaim* so as to match usage in the regulatory text and to update the Air Conditioning, Refrigeration, and Heating Institute (AHRI) standard referenced in the definition. Because revisions to *refrigerant* carry over into the definition for this term, it is appropriate to use the updated AHRI standard which also includes non-ODS substitute refrigerants.

Recover

As proposed, EPA is changing the defined term *recover refrigerant* to *recover* so as to match usage elsewhere in the regulatory text.

Recycle

In the context of recycling refrigerant, EPA is finalizing revisions to the defined term *recycle refrigerant* to *recycle* so as to match usage elsewhere in the regulatory text. The revised term also clarifies that reuse of recycled refrigerant must occur in equipment of the same owner. This revision facilitates consistency with the prohibition in § 82.154(g) of the existing rules on the sale of used refrigerant unless it has either been reclaimed or is being transferred to an appliance owned by the same parent company or by the same federal agency or department. EPA is finalizing this definition substantially as proposed.

Refrigerant

EPA is amending the definition of *refrigerant,* for the purposes of subpart F, to include both ODS and substitutes that are used for heat transfer purposes and provides a cooling effect. This amended definition is closer to how the term is commonly understood, based on its functional properties. From an engineering standpoint, it is irrelevant whether or not a compound is an ODS to function as a refrigerant. Broadening the term also brings another term in subpart F that contains this term, *refrigerant circuit,* more in line with common usage.

One commenter stated that EPA does not have authority to regulate substitutes to the same extent as class I and class II ODS and thus the Agency is prohibited from redefining *refrigerant* to include substitutes. EPA is revising the definition of *refrigerant* under subpart F for purposes of interpreting, explaining, and enforcing the venting prohibition, which applies to substitute refrigerants as well as to ODS refrigerants. EPA is not revising the definition of *refrigerant* for other subparts under part 82. EPA addresses comments about its authority for this action in Section III of this notice.

Retire

EPA is creating a defined term *retire.* EPA proposed retire to mean, in reference to appliances, the disassembly of the entire appliance including its major components, such that the appliance as a whole cannot be used by any person in the future.

One commenter recommended that retire not include the phrase ''such that the retired appliance as a whole cannot be used by any person in the future.'' The commenter is concerned that this could prevent the reuse of certain equipment parts. Furthermore, the owner/operator has no means to determine the ultimate fate of the retired appliance or components. Another commenter stated that the requirement to render the appliance unfit for use by the current or future owner is unnecessary because retired appliances typically use an older refrigerant and are not economical to purchase. Requiring that the owner do something to render the unit unfit for use would impose an unnecessary burden. EPA responds that the term *retire* concerns the continued use of that appliance as a whole. All of the working components of a retired appliance could be disassembled and resold to be used in multiple other appliances because the original appliance, as a whole, is no longer operating.

Another commenter stated that appliances may be retired without being completely disassembled. This comment stated that often, especially for IPR, appliances can be abandoned in place for a considerable length of time; so long as an appliance is made inoperable and permanently shut down it should be considered retired. This commenter provided recommended language which accurately describes the necessary state of the appliance ''rendered unusable'' and notes that any remaining refrigerant would be recovered from the appliance. EPA is finalizing the definition of *retire* that largely matches the definition suggested by this commenter because it more accurately describes the intent of what the Agency proposed.

As discussed in the proposed rule, retirement differs from *mothballing,* as defined at § 82.152, because a mothballed appliance is simply evacuated and shut down until it is ready to be used once again, whereas retirement involves a permanent shutdown of an appliance. Retirement should also not be confused with a repair. *Repair* is not expressly defined in the subpart F regulations. Repair may include the removal of a faulty component, but such removal does not mean that the appliance as a whole has been removed from service and rendered unfit for further use. Throughout this rule, ''replacement'' or ''replace'' may be used when discussing a situation where an existing appliance is retired and replaced with another appliance. In some instances, however, the owner or operator may choose to only retire and not replace an appliance so the two terms are not always used together.

Retrofit

EPA is creating a defined term *retrofit.* Many appliance owners or operators have incorrectly equated *retrofit* with *repair* and EPA received one comment on the proposed rule requesting additional examples of activities and refrigerant conversions that would qualify as a retrofit.

EPA is finalizing this definition as proposed. EPA uses *retrofit* to refer to a change to the appliance in order to convert it to the use of a different refrigerant. In response to the comment requesting the addition of examples of activities or refrigerant conversions, EPA concludes that it is not necessary to include additional examples of activities in the definition. Further, EPA is not specifying the type of refrigerants that are being converted, though typically retrofits have involved the replacement of an ODS with a non-ozone depleting substitute. Retrofits often require changes to the appliance (for example, change in lubricants, filter driers, gaskets, o-rings, and in some cases, components) in order to acquire system compatibility. Sometimes very few or no changes to the appliance are necessary to convert from one refrigerant to another. That would still be a retrofit because the refrigerant has changed.

Retrofit does not apply to upgrades or repairs to existing equipment where the refrigerant is not changed. EPA generally considers a repair to include an action that addresses the leaking appliance or the affected component(s) of the leaking appliance. Repairs may include replacement of components or component subassemblies but changing the refrigerant would make the action a retrofit.

Self-Sealing Valve

EPA is finalizing its proposal to create a defined term *self-sealing valve.* Under this definition, *self-sealing valve* is a valve affixed to a container of refrigerant that automatically seals when not actively dispensing refrigerant and that meets or exceeds established performance criteria as identified in § 82.154(c)(2). The purpose of a self-sealing valve is to prevent or minimize inadvertent release of refrigerant to the environment during the use and storage of the container of refrigerant. The requirement for self-sealing valves for small cans of MVAC refrigerant is discussed in more detail in Section IV.C.

Small Appliance

EPA is finalizing proposed amendments to the definition of *small appliance* to remove the reference to class I and class II refrigerants. Because revisions to *appliance* and *refrigerant* carry over into this term as well, under the revisions finalized in this rulemaking *small appliances* include those that use ODS and non-ODS substitute refrigerants. EPA is also adding portable air conditioners to the list of example small appliances.

One commenter requested that EPA specifically exclude MVACs and MVAC-like appliances from this definition. The commenter believes that without such an exclusion those types of appliances would be included in the revised definition of *small appliance,* which it characterizes as including any appliance charged with five pounds or less of refrigerant, and be subject to regulations that apply to *small appliances.* EPA responds that MVACs and MVAC-like appliances are not *small appliances* even though the charge sizes may be similar. *Small appliances* must be hermetically sealed, which MVACs and MVAC-like appliances are not.

Another commenter noted that EPA has specifically granted an exemption for the manufacture of small appliances in subpart B and urged EPA to preserve that exclusion in subpart F for MVACs. The commenter points to the definition of *motor vehicle* in subpart B. EPA responds that the definition of *motor vehicle air conditioner* in subpart F is simply a reference to subpart B. Thus, the use of MVAC in subpart F has the meaning granted to it in subpart B and this rule does not remove the exclusion granted for the assembly of MVACs in subpart B. EPA disagrees that it is necessary to clarify this point by amending the definition of *appliance,* which is a broader category, nor is it appropriate to amend the definition of *small appliance* in the manner in which the commenter recommends. See discussion under the definition of *appliance* for additional information.

Substitute

EPA is finalizing proposed amendments to the definition of *substitute* to remove the phrases ''EPA-approved'' and ''in a given refrigeration or air-conditioning end-use.'' These phrases are references to the SNAP program, which identifies acceptable alternatives to ODS for specific end-uses. The Agency has changed the status of certain refrigerants from acceptable to unacceptable for new retail food refrigeration equipment, vending machines, and motor vehicle air conditioning (80 FR 42870; July 20, 2015). EPA has also recently proposed to make additional changes (81 FR 22810; April 18, 2016). EPA does not mean to imply that finding a refrigerant to be unacceptable in a given end-use under SNAP means that it is no longer included within *substitute,* and thus by extension *refrigerant.* Were that the case, those substances would be exempted from the safe handling requirements of subpart F, or even the venting prohibition, despite still being used as refrigerants. EPA intends for those substances to continue to be subject to those requirements where they are being used as refrigerants. Accordingly, EPA is finalizing this revision to prevent that confusion, especially since the Agency allows for the servicing of existing appliances designed to use refrigerants that the Agency recently listed as unacceptable in new (and in some cases) retrofitted appliances.

Under the revised definition, any chemical or product, whether existing or new, that is used by any person as a replacement refrigerant for a class I or II ozone-depleting substance would be considered a substitute, even if it has been recently listed as unacceptable under SNAP in some end-uses or has not been submitted to or reviewed by the SNAP program. One commenter stated that by limiting the definition of *substitut*e to replacements for ODS, EPA could be unintentionally permitting new replacements to HFCs, as opposed to ODS, to be beyond the scope of subpart F. Another commenter suggested that the term be limited to the SNAP-approved list of substitutes but provided no reasons for such a limitation.

EPA responds that in 2004, the Agency affirmed an inclusive view of the scope of substitutes under subpart F. In that rule, it stated:

> Under section 608, EPA considers a SNAP-approved refrigerant a 'substitute' for CFC or HCFC refrigerants under section 608 if any of the following is the case: (1) The substitute refrigerant immediately replaced a CFC or HCFC in a specific instance, (2) the substitute refrigerant replaced another substitute that replaced a CFC or HCFC in a specific instance (*i.e.,* it was a second-or later-generation substitute), or (3) the substitute refrigerant has always been used in a particular instance, but other users in that end-use have used it to replace a CFC or HCFC. (March 12, 2004; 69 FR 11958)

EPA continues to hold this interpretation, except that for the reasons discussed above, EPA no longer maintains the position that substitutes must be approved under SNAP in order to be considered a refrigerant under section 608 when the substance is used as a refrigerant. In addition, the phrase ''any chemical or product, whether existing or new'' makes clear that the term is to be applied broadly, even to compounds that do not yet exist or have not yet been developed.

Other commenters recommended that EPA explicitly state the types of refrigerants that are considered substitutes. The proposal stated that EPA intends to apply the requirements in subpart F to all substances that are functionally refrigerants, including but not limited to HFCs, PFCs, HFOs, hydrofluoroethers, and hydrocarbons, as long as those substances have not been exempted from the venting prohibition. To the extent these comments are suggesting that EPA should provide some examples as a non-exhaustive list in the definition, EPA agrees that this increases clarity and EPA has added a non-exhaustive list of examples of substances that would be included in this definition, as well as clarifying that blends of such substances are also included. This approach also matches other definitions in subpart F that have similar lists of examples. To the extent the commenters are suggesting that EPA establish an exhaustive list of substances that would qualify as substitutes, EPA does not agree such a list is needed or would be feasible to include. Including such a list would also be unadvisable given the continued development of new substitutes. Therefore, the definition provides an illustrative list of substances that are included.

To provide clarity, EPA is adding mention of the venting prohibition in the definition of substitute. While EPA is finalizing its interpretation that carbon dioxide, nitrogen, water, ammonia, chlorine, hydrocarbons, and R–441A are substitutes, the regulations as finalized make clear that when these substitutes are used as refrigerants in the end-uses specified in § 82.154(a)(1), they are exempt from the requirements of subpart F and can be referred to as ''exempt'' substitutes. Similarly, the term ''non-exempt substitutes'' as used in this subpart refers to all other substitutes and end-uses not specified in § 82.154(a)(1) as exempt from the venting prohibition. This clarification is only for purposes of the subpart F regulations, and should not be construed to affect any other subpart.

One commenter requested that the regulations include the phrase ''non-exempt refrigerants'' more frequently so that the reader does not have to understand that the regulatory definition of refrigerants excludes substitutes that are exempted from the venting prohibition. EPA responds that while exempt substitutes are included in the regulatory definition of refrigerant, the regulatory text has been revised to clarify that the obligations under subpart F do not apply to exempt substitutes. EPA has included in the definition of substitute a description of the terms ''exempt substitutes'' and ''non-exempt substitutes'' with reference to § 82.154(a)(1), which provides that exempt substitutes are exempt from the requirements of this subpart, so that readers of the regulation can follow EPA's intent from the definition. EPA has also added references in the regulation to class I, class II, and non-exempt substitute refrigerants, where applicable, to be clear which refrigerants are subject to the provisions.

Suitable Replacement Refrigerant

EPA is removing the defined term *suitable replacement refrigerant.* As discussed in Section IV.F.10 of this notice, EPA is removing the extension to retrofit or retire an appliance using an ODS refrigerant if a suitable replacement refrigerant with a lower ozone depletion potential is unavailable. It is therefore appropriate to remove the term from the list of definitions.

System Receiver

EPA is finalizing the creation of a defined term *system receiver* to provide clarity to the reader and improve the organization of these regulations, by providing a definition of this term in a location where the reader might expect to find it. Under the added definition, a system receiver is the isolated portion of the appliance, or a specific vessel within the appliance, that is used to hold the refrigerant charge during the servicing or repair of that appliance. This definition was previously included only in a parenthetical in the regulatory text at § 82.156(a), which describes the required practices to properly evacuate refrigerant from an appliance. The definition added in this rule does not introduce any new practices to the evacuation requirements. EPA is also removing the parenthetical in § 82.156(a), as it is no longer needed.

Technician

EPA is amending the definition of *technician* to improve clarity. As revised, the definition highlights that the determining factor for being a technician is performing actions that could reasonably be expected to violate the integrity of the refrigerant circuit. In general, only people who have completed the technician certification process should be performing actions that could violate the integrity of the refrigerant circuit and could therefore release refrigerant into the environment.

The exception to that general statement is that persons maintaining, servicing, or repairing MVACs and persons disposing of small appliances, MVACs, or MVAC-like appliances do not need to be technicians, as defined within subpart F. This exception is explicitly included in the definition finalized in this action. This revision is not intended to affect the scope of the existing requirements but rather to respond to requests from stakeholders prior to the publication of the proposed rule that the Agency clarify which activities must be conducted by technicians and which need not be. EPA received comments stating that the proposed revision would require persons maintaining, servicing, or repairing MVACs to be technicians. EPA did not intend to impose that requirement and has corrected that in the final rule. EPA also edited the regulations in the sales restriction in § 82.154(c) to ensure that *technician* applies only to technicians authorized under section 608 and not persons authorized under section 609.

The prior definition of *technician* also included a non-exclusive list of example activities that are reasonably expected to violate the integrity of the refrigerant circuit as well as examples of activities that do not. EPA proposed to edit these examples to improve clarity and to add the following two examples of activities reasonably expected to violate the integrity of the refrigerant circuit: Adding or removing components and cutting the refrigerant line. EPA is finalizing the definition substantially as proposed, including the two new example activities that are reasonably expected to violate the integrity of the refrigerant circuit, and with the modifications from the proposal described above related to MVACs and persons authorized under section 609.

Very High-Pressure Appliance

EPA is finalizing amendments to the definition of *very high-pressure appliance* to update the list of example refrigerants with the most commonly used refrigerants today. Because revisions to *appliance* and *refrigerant* carry over into this term as well, under the revised definition v*ery high-pressure appliances* include those that use ODS and non-ODS substitute refrigerants.

Voluntary Certification Program

EPA is finalizing the proposed removal of the defined term *voluntary certification program.* This term references a provision in the regulations that grandfathered in technicians who were certified prior to the establishment of the technician certification program in subpart F. As discussed in Section IV.J.4 below, EPA is removing these grandfathering provisions in this action because they are no longer needed and therefore is removing the definition as well.

B. Revisions to the Venting Prohibition in § 82.154(a)

1. Background

As explained in Section III of this notice, under the revisions finalized in this rule, § 82.154(a) prohibits the venting of ODS refrigerants and non-ODS substitute refrigerants to the environment by persons maintaining, servicing, repairing, or disposing of an appliance. This provision provides an exemption to the venting prohibition for certain substitutes in specific end-uses based on a determination that the listed substitutes in the listed end-uses do not pose a threat to the environment when released. As revised, this section also exempts from the venting prohibition *de minimis* releases of ODS refrigerants and non-exempt substitute refrigerants, and defines *de minimis* releases of ODS refrigerants and non-exempt substitute refrigerants to be those releases that occur when the other provisions of subpart F (or subpart B in the case of MVACs) are followed.

2. Applying the *de minimis* Exemption to Substitute Refrigerants

As explained in more detail earlier in this notice, the knowing venting, release, or disposal of substitutes for class I and class II refrigerants in the course of maintaining, servicing, repairing, or disposing of an appliance or IPR is expressly prohibited by section 608(c)(1) and (2) of the CAA, effective November 15, 1995, unless the Administrator determines that such venting, release, or disposal does not pose a threat to the environment. This prohibition is commonly called the venting prohibition. Section 608(c)(1) establishes the venting prohibition for class I and class II substances, and also establishes an exemption from the prohibition for *de minimis* releases associated with good faith attempts to recapture and recycle or safely dispose of ''any such substance.'' The statutory language of section 608(c)(2) extends paragraph 608(c)(1) to substitutes for class I and class II substances used as refrigerants in appliances and IPR. This extension includes both the prohibition on venting and the exemption for *de minimis* releases associated with good faith attempts to recapture and recycle or safely dispose of such substances.

Prior to this rulemaking, for class I and II substances EPA had interpreted as *de minimis* those releases that occur despite compliance with EPA's required practices under the previous regulations for recycling and recovery, use of certified recovery and/or recycling equipment, and technician certification programs. EPA interpreted compliance with those regulations to represent ''good faith attempts to recapture and recycle or safely dispose'' of refrigerant. Accordingly, the prior regulations at § 82.154(a)(2) provided that releases of ODS refrigerants are considered *de minimis* only if they occur when the other provisions of subpart F (or subpart B in the case of MVACs) are followed. Although the prior regulations at § 82.154(a) exempted *de minimis* releases of non-exempt substitutes from the venting prohibition, those regulations did not provide any express guidance for such substitutes as to what practices are considered ''good faith attempts to recapture and recycle or safely dispose'' of the substitute such that incidental releases would qualify for the *de minimis* exemption.

EPA interprets the phrase ''good faith attempts to recapture and recycle or safely dispose'' similarly when it applies to substitute refrigerants under section 608(c)(2) as when it applies to ODS refrigerants under section 608(c)(1). Thus, compliance with the provisions regarding the evacuation of equipment, use of certified equipment, and technician certification in any instance where a person is opening (or otherwise violating the refrigerant circuit) or disposing of an appliance would represent ''good faith attempts to recapture and recycle or safely dispose'' of non-exempt substitute refrigerants. EPA considers these provisions to appropriately represent good faith attempts to recapture and recycle or safely dispose of such substitute refrigerants. For example, the proper use of certified recovery equipment and the evacuation of refrigerant to prescribed standards would be considered a good faith attempt to recapture and recycle or safely dispose of non-exempt substitute refrigerants when maintaining, servicing, repairing, or disposing of an appliance.

Under this approach, releases are only considered *de minimis* if they occur when these procedures, or those under subpart B, are followed. Conversely, emissions that take place during maintenance, servicing, repair, or disposal when these provisions are not followed are not *de minimis* emissions and are subject to the venting prohibition. While these principles were clearly expressed in the prior regulations for ODS, the prior regulations did not clearly establish what practices the regulated community would need to follow in order to qualify for the *de minimis* exemption and to comply with the venting prohibition while maintaining, servicing, repairing, or disposing of equipment containing non-exempt substitute refrigerants. With the revisions finalized in this rule, EPA is clarifying how the venting prohibition and *de minimis* exemption apply to non-exempt substitute refrigerants, to increase certainty for and facilitate compliance by the regulated community, as well as further explaining its interpretation of these statutory provisions.

It is impossible to open an appliance (or otherwise violate the refrigerant circuit) or dispose of an appliance without emitting some of the refrigerant in the circuit. Even after the appliance has been evacuated, some refrigerant remains, which is released to the environment when the appliance is opened or disposed of. Other activities that fall short of opening or disposing of the appliance but that involve violation of the refrigerant circuit also release refrigerant, albeit in very small quantities, because connectors (*e.g.,* between hoses or gauges and the appliance) never join together without intervening space. Even in the best case in which a good seal is made between a hose and an appliance before the valve between them is opened, some refrigerant will remain in the space between the valve and the outer seal after the valve is closed. This refrigerant will be released when the outer seal is broken. Thus, whenever a person opens an appliance (or otherwise violates the refrigerant circuit) in the course of maintaining, servicing, repairing, or disposing that appliance, he or she could violate the venting prohibition unless the exception for *de minimis* releases applies. Because EPA is finalizing revisions that define the exception for substitute refrigerants such that it only applies when the person complies with the existing refrigerant management provisions, compliance with those provisions will ensure that any releases incidental to these practices will be considered *de minimis* and thus will not violate the venting prohibition under section 608(c)(2).

One commenter stated that it fails to see why it would be unclear to the regulated community that the same *de minimis* exemption applicable to class I and II substances applies equally to substitutes. Section 608(c)(1) provides a specific *de minimis* exemption. Paragraph 1 contains the *de minimis* language, so that language clearly applies to the intentional venting/release of substitutes under paragraph 2. In other words, the *de minimis* language in section 608(c)(1) is expressly applicable to section 608(c)(2), and there is no ambiguity that EPA needs to clarify.

EPA agrees with the comment that the statute applies the *de minimis* exemption to substitute refrigerants. This statutory interpretation supports the revisions finalized in this rule. The statutory ambiguity arises because neither section 608(c)(1) or (2) specifically define what releases would qualify for the *de minimis* exemption or what would be considered ''good faith attempts to recapture and recycle or safely dispose'' of such a substance. The Agency previously established regulations clarifying what releases would be considered exempt from the venting prohibition under the *de minimis* exemption for ODS refrigerants. For class I and II substances EPA has interpreted those releases that occur despite compliance with EPA's required practices for recycling and recovery under the previous § 82.156, use of recovery and/or recycling equipment certified under § 82.158, and technician certification programs under § 82.161 as falling within the *de minimis* exemption. Because the *de minimis* language in section 608(c)(1) is directly applicable to section 608(c)(2), it is reasonable for EPA to choose to use the same regulations to clarify which releases of non-exempt substitute refrigerants qualify for the *de minimis* exception. These regulations accordingly fill a gap in the statute and the prior regulations relating to the definition of the *de minimis* exemption and the phrase ''good faith attempts to recapture and recycle or safely dispose'' for non-exempt substitute refrigerants.

Another commenter stated that EPA must distinguish between provisions interpreting and enforcing the venting prohibition and other provisions implementing the statutory requirements to ''minimize the use and emission'' and ''maximize the recapture and recycling'' of class I and class II substances. In the commenter's view, the leak repair program is clearly related to the latter requirements. In addition, to the extent that a regulatory violation such as recordkeeping does not cause a release, EPA cannot use that as a violation of the venting prohibition. The comment concludes that all *de minimis* releases associated with good faith attempts to recover or recycle refrigerants are exempt regardless of regulatory compliance.

EPA disagrees that there is a subset of the provisions finalized in this action that does not interpret, explain, or enforce the venting prohibition and is only aimed at minimizing the use and emission or maximizing the recapture and recycling of refrigerants. Under the prior regulations with regard to ODS, the regulatory text has long used the required practices under subpart F, including the leak repair provisions under the prior § 82.156(i), to clarify which emissions will qualify for the *de minimis* exemption and thus not run afoul of the venting prohibition. The stakeholder community has appeared to accept this structure, and the interpretation of the venting prohibition it embodies, as it related to ODS. As described above in more detail, EPA is extending this regulatory structure which has long interpreted and enforced the venting prohibition for ODS to do the same for the venting prohibition as it applies to non-exempt substitute refrigerants. The fact that these requirements may also be related to minimizing the use and emission or maximizing the recapture and recycling of ODS refrigerants does not preclude EPA from using those requirements to clarify how the venting prohibition applies to non-exempt substitute refrigerants. Nor does it prevent EPA from choosing to interpret, explain, and enforce the *de minimis* exemption for ODS and non-exempt substitutes through consistent requirements. EPA is extending this regulatory structure to non-exempt substitutes to clarify its interpretation of the ambiguous statutory phrase ''*de minimis* releases associated with good faith attempts to recover or recycle refrigerants'' and to enhance certainty that emissions that occur while complying with the regulations are covered by this exemption. After the revisions finalized in this rule, releases of non-exempt substitutes will be considered *de minimis* only if they occur when the specified requirements are satisfied.

In addition, EPA does not agree with the comment's implication that the leak repair program relates only to minimizing the use and emission or maximizing the recapture and recycling of refrigerants. For example, leak repair is a type of servicing and releases of non-exempt substitutes that occur in the course of repairing leaks as required by the leak repair program could violate the venting prohibition. As such, it is reasonable to clarify in the regulations that releases of non-exempt substitutes that are incidental to repairing leaks as required by the regulations will not be considered to violate the venting prohibition. In establishing the recordkeeping requirements in this rule, EPA is not suggesting that every failure to comply with a recordkeeping requirement would necessarily result in a violation of the venting prohibition. But in any event a failure to comply with a recordkeeping requirement would certainly be a violation of section 114.

Another commenter stated that there is no basis in the text of the CAA to assert that the venting prohibition is self-effectuating but that the *de minimis* exemption is not. It may be reasonable to interpret *de minimis* to mean in compliance with a comprehensive regulatory program when such a program is already authorized, but EPA cannot create a comprehensive regulatory program from that term. The commenter believes that it would be reasonable to interpret *de minimis* as those releases that occur when following best practices that occur while maintaining, servicing, repairing, or disposing of an appliance.

While the prohibition on venting under section 608(c) is self-effectuating, meaning the prohibition itself is legally binding even without implementing regulations, the statutory terms contain ambiguity. For example, the terms ''*de minimis* releases'' and ''good faith attempts to recapture and recycle or safely dispose'' are not specifically defined in section 608(c)(1) or (c)(2). Accordingly, it is appropriate for EPA to clarify in its regulations how it interprets and will apply those terms. As described in greater detail above, EPA is finalizing revisions to the section 608 regulations to further interpret and explain the venting prohibition and increase its enforceability by giving greater clarity and certainty as to which releases it views as being covered by the *de minimis* exemption. Addressing the application of the venting prohibition and the *de minimis* exemption through rulemaking provides advance notice to regulated entities; this is in contrast to case-by-case application, which would be the approach in the absence of rulemaking.

Further, even if we agreed with the comment that the term *de minimis* does not support development of a comprehensive regulatory program, EPA is not creating such a program through this rule. Rather, it is extending a regulatory program that already exists and serves to interpret and enforce the venting prohibition and *de minimis* exemption for ODS and using those same requirements for the same purpose for non-exempt substitute refrigerants. Although EPA could have chosen a different method to interpret and enforce the venting prohibition for non-exempt substitute refrigerants, for reasons described elsewhere in this rule, EPA is electing to regulate ODS refrigerants and non-exempt substitute refrigerants consistently.

3. Exempting Certain Substitutes From the Venting Prohibition

EPA proposed to explicitly state in the regulatory text that the substitutes exempted from the venting prohibition in § 82.154(a)(1) are also exempt from the other provisions of subpart F. EPA also proposed to reorganize the list of exempt substitutes by refrigerant type for readability. EPA did not propose to revise the listed end-uses or propose to add or remove any substitutes from the list.

Multiple commenters supported EPA's proposal to extend the existing regulations to HFCs and other non-exempt substitutes for the clarity it would provide to manufacturers and technicians. Other commenters recommended that EPA treat all refrigerants (including exempt substitutes like hydrocarbons, ammonia, and carbon dioxide) equally in all aspects of the subpart F regulations, including recovery and reclamation, technician certification, leak detection, and recordkeeping. Consistent application of the regulations to all refrigerants, the commenters say, would reinforce essential refrigerant management practices for all systems, reduce leaks, improve safety, and improve the operating efficiency of equipment. The commenters say that all refrigerants, other than water and some HFOs, have either flammability properties, higher GWP properties, or properties hazardous to human health (toxicity, risk of asphyxiation, frostbite, etc). Another commenter was opposed to exempting refrigerants that may be vented from the broader subpart F requirements (with the possible exception of systems using water, nitrogen, or carbon dioxide) as it viewed such an exemption as a dramatic expansion of the exemption to the venting prohibition. The commenter states that establishing a separate class of equipment that does not require proper refrigerant management practices will only increase confusion in the field and exacerbate the problem of illegal venting.

EPA agrees with the comments that the extension of the subpart F regulations increases clarity. EPA disagrees that its clarification that exempt substitutes are not subject to the subpart F requirements is an expansion of the exemption since the service practices and requirements in subpart F had previously only applied to ODS refrigerant. There are a couple of reasons for EPA's present view that it is appropriate not to extend the provisions of subpart F to refrigerants that have been exempted from the venting prohibition. First, EPA has previously determined that the release of these substances do not pose a threat to the environment or are already controlled by other authorities. (See 69 FR 11949, 80 FR 19454, and 81 FR 22810). Given those decisions, it would generally not make sense to require all procedures for recovery or safe disposal, or to apply all other provisions of subpart F to those exempt refrigerants. This is consistent with the intent of section 608(c)(2), which states that substitutes may be exempted from the venting prohibition if the Administrator determines that not just the venting but also the ''releasing, or disposing'' of such substance does not pose a threat to the environment.

Second, the refrigerant management practices in subpart F may be inappropriate for some of the exempted refrigerants. For example, the venting of exempt hydrocarbon refrigerants in certain end-uses may be the safest option for technicians at this time, considering that such refrigerants are flammable but most existing recovery equipment were not designed and constructed, *e.g.* with spark-proof components, for use on flammable refrigerants. As long as the Administrator has determined that such venting of those substances in those end-uses does not pose a threat to the environment, such venting is legal and may be safer than following the subpart F requirements in some circumstances.

4. Releases From Containers

EPA is moving the previous regulatory provision in § 82.154(a)(2) that states that the venting prohibition applies to the release of refrigerant (both ODS and non-exempt substitute refrigerants) after its recovery from an appliance. EPA is moving this provision to a separate paragraph (§ 82.154(a)(3)) rather than its previous location in the description of a *de minimis* release. Standing alone should make the provision clearer that it is a violation of the venting prohibition to vent or otherwise release refrigerant after that refrigerant is recovered from an appliance, whether from cylinders, recovery equipment, or any other storage container or device. The venting prohibition cannot be circumvented by using a recovery device and subsequently releasing the refrigerant. This is especially important because refrigerant recovered from appliances may be contaminated or be a mixture of multiple refrigerants. Such refrigerant may be difficult to reclaim or may require a fee for proper disposal or destruction. In light of those difficulties, it is important to emphasize that venting this refrigerant, even though it is in a cylinder and not an appliance, is illegal. EPA did not receive any comments on this provision and is finalizing it as proposed.

C. Revisions to the Refrigerant and Appliance Sales Restrictions in § 82.154

1. Background

Under the prior regulations at § 82.154(m), the sale or distribution of a refrigerant containing a class I or class II substance, such as R–12 or refrigerant blends that include HCFCs, is restricted to technicians certified under sections 608 or 609 of the CAA. The sale or distribution of any class I or class II substance suitable for use in an MVAC that is in a container of less than 20 pounds may only be sold to technicians certified under section 609.

The prior regulations at § 82.154(g) also restricted the sale of used ODS refrigerant sold for reuse unless certain conditions are met, the most important of which is that the refrigerant has been reclaimed. Sections 82.154(j) and (k) prohibited the sale of appliances containing an ODS refrigerant unless the appliance has a servicing aperture or process stub to facilitate the removal of refrigerant at servicing and disposal. Section 82.154(p) prohibited the manufacture or import of one-time expansion devices that contain any refrigerant (ODS or non-ODS), other than exempted refrigerants.

2. Extension to Substitute Refrigerants

Through today's rule, EPA is extending the sales restriction to HFCs and other non-exempt substitute refrigerants. This sales restriction applies to non-exempt substitute refrigerants sold in all sizes of containers for use in all types of appliances, including MVACs. EPA is creating an exception for small cans (two pounds or less) of refrigerant intended to service MVACs, so long as the cans are equipped with a self-sealing valve. EPA is also restricting the sale of used non-exempt substitute refrigerants.

Since 1993, EPA has restricted the sale of ODS refrigerant to certified technicians as a means of ensuring that only qualified individuals—those who have sufficient knowledge of the safe handling regulations—actually handle refrigerant. EPA considers the restriction on the sale of ODS refrigerant to be important for ensuring compliance with and aiding enforcement of the regulations issued under sections 608 and 609 of the CAA. This requirement also relates to EPA's Next Generation Compliance strategy since compliance with this requirement is largely carried out by distributors who sell refrigerant to technicians. In this rulemaking, EPA is choosing to apply the same requirements for sales of ODS and non-exempt substitutes. Limiting the sale of non-exempt substitute refrigerants to technicians who have demonstrated knowledge of safe handling practices helps minimize the release of refrigerants during the maintenance, servicing, and repair of appliances containing such substitute refrigerants. A sales restriction for non-exempt substitute refrigerants also provides important support to the extension of the technician certification requirements to individuals working with non-exempt substitute refrigerants.

Generally, commenters are supportive of EPA's proposal and agree with EPA's rationale. Commenters who are generally opposed to extending EPA's regulations under section 608 to substitutes did not specifically raise the issue of whether EPA had authority to extend the sales restriction to HFCs and other non-exempt substitute refrigerants. EPA addresses the general comments about its authority for extending the refrigerant management regulations, as appropriate, to non-exempt substitute refrigerants in Section III of this notice. Some commenters stated that the sales restriction should be extended to hydrocarbons. These commenters noted that the flammability of these refrigerants poses far greater risks than that of R–22 when handling it and servicing equipment. Because the sales restriction is an element of the broader technician certification provisions of subpart F, EPA responds to comments concerning the sale and handling of flammable refrigerants in Section IV.I of this notice.

3. Sales of Small Cans

a. What is EPA finalizing concerning small cans of MVAC refrigerant?

Historically, individuals have been able to purchase small cans of non-ODS refrigerant to service their own vehicles. This do-it-yourself (DIY) servicing is unique in the air-conditioning and refrigeration sector to the MVAC end-use. As mentioned previously in this notice, EPA is finalizing the extension of the sales restriction to non-exempt substitutes. EPA is also finalizing an exemption from the sales restriction for small cans of MVAC refrigerant that are manufactured with a self-sealing valve to minimize the release of refrigerant during servicing because the Agency has concluded that restricting the sale of small cans of refrigerant for use in servicing MVAC would be unnecessarily burdensome. If EPA extended the sales restriction to substitute refrigerants without exempting small cans, the sale of both small containers of refrigerant, which are used for DIY servicing of MVAC systems, and typical size (*e.g.,* 25- or 30-pound) cylinders of refrigerant used by technicians to service MVAC and other appliances would be limited to certified technicians.

In the United States, HFC–134a has been used in all newly manufactured vehicles with air-conditioning systems since 1994 and almost all small cans of refrigerant sold for MVAC DIY use are cans of HFC–134a.[18] More recently, the SNAP program listed HFO–1234yf, HFC–152a, and carbon dioxide (CO_2 or R–744), three climate-friendly alternatives for MVAC, as acceptable subject to use conditions for use in new light-duty vehicles. Manufacturers are currently producing or are actively developing light-duty models using these three refrigerants. As finalized in this rule, the exception for small cans would apply to HFC–134a, HFO–1234yf, HFC–152a, as well as any additional MVAC refrigerants listed as acceptable subject to use conditions under SNAP that are not exempt from the venting prohibition. Because CO_2 is exempt from the venting prohibition, it is not subject to the sales restrictions and certification is not required for its purchase in any size container. EPA has not received a submission of a unique fitting for use on a small can of HFO–1234yf; therefore, at this time this refrigerant cannot be sold in small cans to individuals, regardless of the exemption finalized in this rule.

Based on the NPD Automotive Aftermarket Industry Monitor, 2008, approximately 14 million small cans are sold each year. If EPA were to extend the sales restriction to small cans without the exemption for small cans with self-sealing valves, individuals who normally service their own MVAC would be required to either seek certification under section 609 or take their car to a technician to be serviced. EPA estimates that the cost associated with those two actions could be as much as $1.5 billion per year. For more details, see *Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program* in the docket.

EPA's proposal to exempt small cans of refrigerant for use in MVAC systems that are equipped with a self-sealing valve was informed by input from the Auto Care Association and the Automotive Refrigeration Products Institute, two associations that represent the vast majority of manufacturers of small cans in the United States. EPA also reached out to CARB and other industry representatives as discussed in the NPRM. Based on California's experience, EPA proposed the exemption for small cans equipped with self-sealing valves as an effective way to reduce emissions of HFCs used to service MVACs without limiting sales to certified technicians. These valves reduce the release of refrigerant during servicing and reduce releases from the can after the servicing is complete.

Manufacturers already produce small cans with self-sealing valves to meet California's requirements. According to industry representatives and CARB, self-sealing valves are estimated to cost $0.25 per can. In light of that information, EPA does not find it to be unduly burdensome to add self-sealing valves to all small cans produced for sale in the United States, especially as compared to an extension of the sales restriction that would prohibit the sale of small cans to non-certified persons. Because they are incorporated into the product, consistent with EPA's Next Generation Compliance principles, the individual servicing her or his personal MVAC would reduce emissions without any additional effort or training, as compared to using small cans of refrigerant on the market today that do not employ a self-sealing valve. Thus, EPA has determined that self-sealing valves are an effective mechanism for controlling the release of non-exempt substitute refrigerants to the atmosphere, making it unnecessary to impose burdensome training and/or certification requirements more broadly at this time.

As described in *Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program,* EPA estimates that a nationwide requirement to use self-sealing valves on all small cans will reduce emissions by more than 0.657 $MMTCO_2$eq. per year. EPA also anticipates there could be additional emissions reductions to the extent the self-sealing valves allow individuals to store and re-use the same can of refrigerant, reducing the need to buy additional small cans. Currently, a small can is typically used in one vehicle and then discarded with some refrigerant still remaining in the can –from which it will ultimately be released to the environment. EPA estimates that the annual cost for this requirement would be approximately $3 million with the cost decreasing over time as manufacturers increase production and achieve greater economies of scale.

EPA is finalizing a new appendix E establishing a standard for self-sealing valves that is based largely on CARB's *Test Procedure for Leaks from Small Containers of Automotive Refrigerant,* TP–503, as amended January 5, 2010. To be consistent with the CARB standard and existing small cans that are already on the market, the leakage rate may not exceed 3.00 grams per year when the self-sealing valve is closed. This leakage rate applies to full containers as well as containers that have been used and are partially full.

b. How is EPA responding to comments about this topic?

EPA received comments from several manufacturers, distributors, and retailers of automotive refrigerant, and associations representing them, in support of requiring that the small cans be outfitted with self-sealing valves and not restricting the sale of small cans to certified technicians. EPA also received comments from multiple industry associations and CARB supporting these provisions.

Two environmental organizations were opposed to the proposed exemption for small cans equipped with self-sealing valves. The commenters recommend that only certified technicians be allowed to purchase MVAC refrigerant, regardless of the container size. The commenters believe that the DIY community is a large source of emissions of automotive refrigerant. Specifically, they claimed that emissions occur because DIYers are untrained in the use of the product, they

[18] ODS refrigerant for MVAC servicing that is sold in cylinders less than 20 pounds is currently restricted to technicians certified under section 609 of the CAA.

vent remaining refrigerant from the MVAC prior to recharging it because they do not own recovery and recycling equipment, and they are merely filling, rather than repairing, a leaking system. One of the commenters estimated the annual emissions of automotive refrigerant at 18 $MMTCO_2eq$.

EPA responds that DIY servicing is unique to the MVAC end-use, as discussed previously in this notice. EPA did not propose to restrict the sale of small cans of MVAC refrigerant to certified technicians, explaining its concerns that such a requirement could be unnecessarily burdensome (80 FR 69479; Nov. 9, 2015). If EPA were to prohibit DIY servicing, individuals who normally service their own MVAC would be required to either seek certification under section 609 or take their car to a technician to be serviced. EPA estimates that the cost associated with those two actions could be as much as $1.5 billion per year. In the short term, EPA has concluded that requiring small cans of refrigerant to have self-sealing valves is an effective mechanism for controlling the release of refrigerant to the atmosphere by DIYers from the can of refrigerant. In the longer term, the transition to new MVAC refrigerants will reduce emissions of high GWP refrigerants from DIY servicing at little to no cost for DIYers.

EPA has estimated that the requirement for self-sealing valves on small cans of refrigerant will reduce refrigerant emissions by 0.657 $MMTCO_2eq$. per year compared to the current status. Self-sealing valves prevent emissions of the gas remaining in the can after the system is fully filled. Currently, if a system takes 1.5 cans to fill, the DIYer will have no choice but to allow the extra 0.5 can to be released to the environment after detaching it. Furthermore, because self-sealing valves allow individuals to store and re-use the same can of refrigerant, there may be less need to buy additional small cans. CARB has claimed benefits of 0.25–0.47 MMTCO2eq for their small can program in 2020. However, because their program includes more than just self-sealing valves (*e.g.,* refundable deposits), the benefits are not directly comparable. CARB has noted a reduction in sales of small cans of 1.1 million to 1.9 million cans, which they attribute to the effectiveness in the valves and the displacement of new purchases by later use of the remaining heel.

EPA received one comment from a chemical manufacturer stating that they would support the continued sale of small cans without self-sealing valves but limit those sales to certified technicians under section 609. EPA does not see the benefit of restricting the sale of small cans to people certified under section 609 since small cans of refrigerant that do not have self-sealing valves are inherently emissive. Being certified under section 609 would not prevent the emission of the refrigerant from the heel of the can.

Commenters who oppose the sale of small cans generally do support the requirement to use self-sealing valves if there is not a total ban on sales. One commenter also strongly recommended that EPA allow the sale of small cans of HFO–1234yf and HFC–152a so that DIY consumers will not be enticed to recharge their HFO–1234yf system with HFC–134a for the lack of any alternative. EPA responds that the regulations at § 82.154(c)(1)(x) as revised in this action include any non-exempt substitute refrigerant that is intended for use in an MVAC. Therefore, small cans of HFO–1234yf and HFC–152a would be exempt from the sales restriction but also have the same requirements for unique fittings and self-sealing valves under section 608. As discussed previously in this notice, HFO–1234yf cannot currently be sold in small cans because a submission has not yet been made to SNAP for a unique fitting for small cans of HFO–1234yf. This action under section 608 does not prohibit the sale of any MVAC refrigerant alternative in a small can; however, refrigerants must be listed as acceptable or acceptable subject to use conditions for MVAC and unique fittings for small cans must be established under section 612 of the CAA prior to use[19].

Small cans of refrigerant sold for MVAC servicing are different from containers of refrigerant sold for stationary refrigeration and air-conditioning in that the small cans for MVAC are required to have unique fittings. The SNAP program requires as a use condition for MVAC refrigerants that the container and the MVAC system use unique fittings to prevent cross-contamination. If used properly, the unique fittings will not allow for the introduction of HFC–134a refrigerant into a system using any other refrigerant, including CFC–12, HFO–1234yf, or another approved substitute refrigerant. Using an adapter or deliberately modifying a fitting to use a different refrigerant is a violation of the SNAP use conditions. Unique fittings will also reduce the likelihood that a small can will be used to service appliances other than MVACs that use non-exempt substitute refrigerants, which would be in contravention of the sales restriction.

[19] ''Use'' is defined at 40 CFR 82.172 to include ''use in a manufacturing process or product, in consumption by the end-user, or in intermediate uses, such as formulation or packaging for other subsequent uses.''

Refrigerant sold for MVAC servicing is also different than other refrigerant because of the limited types of equipment that could be serviced with a small can. First, many household appliances that use refrigerants are hermetically sealed, like a refrigerator. Someone who wanted to open that appliance would need greater skill and specialized equipment to service the appliance since there would not be a servicing port to access. This makes it less likely that homeowners would attempt to use a small can to service other small household appliances. Larger appliances that use HFC–134a that are not hermetically sealed, like a reach-in cooler, would need more than one small can to fully charge the appliance. Because of the cost and the added effort to use multiple small cans to charge a larger appliance, it is not practical for someone to use a small can. This would likely lead the person to purchase a larger container of refrigerant, which would require that the person be a certified technician.

Commenters, including CARB, supported the use of CARB's standards. One commenter representing the manufacturers of small cans noted that this standard was developed in a cooperative effort between CARB and the refrigerant industry and that the procedures described in the standard have been used since 2010 to certify small cans sold in the California market. The commenter also stated that adopting the California standard would also allow for a quicker transition to cans with self-sealing valves, while development and adoption of a new standard would require a longer transition time and therefore, EPA should provide a later compliance date.

EPA agrees with the commenters and has determined that the establishment of the standard in appendix E, which is based on CARB's *Test Procedure for Leaks from Small Containers of Automotive Refrigerant,* TP–503, is appropriate. This provides for one uniform standard across the nation, thus simplifying compliance and avoiding potential burdens associated with complying with two different standards, one in California and another in the rest of the country. No commenter identified any other standard for self-sealing valves. EPA is finalizing the provisions in the newly created appendix E without any changes from the proposal.

EPA requested comment on whether the final rule should exempt the sale of

HFC–134a only or of all MVAC substitute refrigerants in small cans. One commenter responded that the exemption should apply to all refrigerants for use in MVAC and MVAC-like appliances because the rationale applies equally to other MVAC refrigerants. The minimal leakage and venting from small cans of other refrigerants is relatively the same as from small cans of HFC–l34a, and the commenters know of no technical reason why a self-sealing valve could not be created for those cans also. EPA appreciates the commenters' support for the proposal to apply the exemption to all MVAC substitute refrigerants. EPA is finalizing the exemption as proposed. It will apply to all MVAC substitute refrigerants, except those exempt from the venting prohibition. EPA also notes that refrigerants for use in MVAC-like appliances are not exempt from the sales prohibition, consistent with EPA's approach to MVAC-like appliances historically. Under section 609, technician certification is required only when a person is servicing an MVAC system for consideration whereas MVAC-like appliances must always be serviced by a certified technician.

4. Servicing Apertures and Process Stubs

EPA is finalizing revisions that require that new appliances containing a non-exempt substitute refrigerant (including a used non-exempt substitute refrigerant) have a servicing aperture or process stub to facilitate the recovery of refrigerant at servicing and disposal. Including these design features on appliances containing such substitutes facilitates compliance with the section 608(c) prohibition against the venting, release, or disposal of substitute refrigerants into the environment. These access points allow for the proper evacuation or recovery of substitute refrigerant, preventing releases to the atmosphere in the course of maintaining, servicing, repairing, or disposing of the appliance. Without these access points, it would be harder for persons maintaining, servicing, repairing, or disposing of such appliances to properly evacuate the refrigerant in accordance with § 82.156(b). For example, these access points provide the person disposing of an appliance the opportunity to properly remove the refrigerant prior to crushing or shredding and thus avoid a knowing release. EPA did not receive comments on this provision. The manufacture or import of one-time expansion devices that contain any refrigerant (ODS or non-ODS), other than exempted refrigerants, was prohibited under the prior regulations. One-time expansion devices, by design, release their refrigerant charge to the environment in order to provide a cooling effect. Examples include self-chilled beverage containers that must be disposed of or recycled after each use, as well as reusable containers. EPA is finalizing minor edits to this prohibition that reference the list of exempt refrigerants as proposed. EPA did not receive any comments on this provision.

D. Revisions to the Safe Disposal Provisions in § 82.155

1. Background

In the 1993 Rule, EPA established specific requirements for the safe disposal of small appliances, MVACs, and MVAC-like appliances containing ODS refrigerant since they typically enter the waste stream with the refrigerant charge intact. Under the prior rules at § 82.156(f), persons who took the final step in the disposal process of such appliances had to either recover any remaining refrigerant in the appliance or verify that the refrigerant has previously been recovered from the appliance or shipment of appliances. If they verified that the refrigerant has been recovered previously, they had to retain a signed statement attesting to this or a contract from the supplier of the appliances for three years. While recovery equipment used to remove the refrigerant had to be certified under § 82.158, persons recovering the refrigerant at disposal did not need to be certified technicians.

2. Extension to Substitute Refrigerants

EPA is extending the preexisting safe disposal provisions previously found at § 82.156(f) for small appliances, MVACs, and MVAC-like appliances containing ODS refrigerants to the same types of appliances that contain non-exempt substitute refrigerants. Generally, commenters support EPA's proposal and agree with EPA's rationale. Commenters who stated that EPA does not have authority to extend section 608 regulations to substitutes were silent on the specific issue of the safe disposal provisions. A fuller and more general discussion of the authority for this action is found in Section III of this notice.

Safely disposing of both ODS and substitute refrigerant in small appliances, MVACs, and MVAC-like appliances is important for the environment and public health. According to EPA's Vintaging Model,[20] EPA projects that the GWP-weighted amount of refrigerant contained within MVACs and small appliances in use in 2015 was more than 260 $MMTCO_2eq$ and 175 $MMTCO_2eq$, respectively. This constitutes 12 and 8 percent, respectively, of the total GWP-weighted amount of refrigerant contained within all appliances in the United States in 2015. On an ODP-weighted basis, EPA estimates that more than 1,400 ODP-weighted metric tons of refrigerant were contained within small appliances in 2015, representing 5 percent of the refrigerant contained within all appliances in the United States. While EPA projects that these amounts will decrease over time as zero-ODP and low-GWP substitute refrigerants penetrate the market, the need for robust safe disposal requirements remains because these appliances are used for a long time. One commenter agreed, noting that forty percent of the refrigerators sent to their recovery facility were manufactured prior to 1993 and contain CFCs.

One commenter approves of the clear signal that the rule sends for appliances containing exempt refrigerants. However, this commenter asks how a recipient of a component of such an appliance for disposal would be aware that the subpart F requirements do not apply to that component. EPA responds that the only likely exempt refrigerant in that scenario is a small appliance containing a flammable refrigerant. As required under the SNAP use conditions, the component would have markings such as red tubing or a warning label that would distinguish that component from other components. The labels must be placed on the outside of the appliance, on the inside of the appliance near the compressor, on or near any evaporators that can be contacted by the consumer, near the machine compartment, and near any and all exposed refrigerant tubing.

3. Clarifications to the Existing Program

The safe disposal regulations require actions of three separate groups of people: The final processor, the supplier of appliances for disposal, and the person who recovers the refrigerant. The final processor is the person who takes the final step in the disposal process,

[20] EPA's Vintaging Model estimates the annual chemical emissions from industry sectors that have historically used ODS, including air-conditioning and refrigeration. The model uses information on the market size and growth for each of the end-uses, as well as a history and projections of the market transition from ODS to alternatives. The model tracks emissions of annual ''vintages'' of new equipment that enter into operation by incorporating information on estimates of the quantity of equipment or products sold, serviced, and retired or converted each year, and the quantity of the compound required to manufacture, charge, and/or maintain the equipment.

typically a scrap recycler or landfill operator. Final processors may receive appliances with a charge or without a charge. The supplier is the person dropping off the appliance (or shipment of appliances) for disposal. The person who recovers the refrigerant may be the final processor, the supplier, or a separate third entity. EPA is finalizing as proposed regulatory text to help clarify the different actors.

Refrigerant may be recovered at any stage in the disposal process, even prior to the supplier taking possession. As EPA stated in the 1993 Rule, ''the supplier to the final processor does not have to remove the refrigerant but then must assure, through an accompanying certification, that refrigerant has been removed earlier in the disposal chain. Any copies of the certificate of removal provided to the supplier could be passed on to the final processor.'' (58 FR 28704–28705). EPA's intent has been to provide the flexibility needed to permit the recovery of refrigerant by the entity in the disposal chain that can accomplish that task most efficiently while at the same time establishing a mechanism to help ensure that the refrigerant has not simply been illegally vented. This flexibility is important for the disposal sector, which is highly diverse and decentralized. This signed certification serves both goals.

EPA is revising the regulations to clarify what must be in the contract stating that refrigerant will be removed prior to delivery. EPA is replacing the word ''remove'' which appears repeatedly in these provisions with ''properly recover.'' These revisions clarify the provisions' intent that the refrigerant is recovered to the required evacuation levels using the appropriate equipment. EPA is also stating explicitly that the contract should provide that the supplier of the appliances is responsible for recovering any remaining refrigerant or verifying that the refrigerant has already been evacuated. As discussed in the 1993 Rule, the supplier to the final processor does not have to remove the refrigerant but must assure, through accompanying certifications, that the refrigerant has been removed earlier in the disposal chain.

EPA notes here that a contract is appropriate for businesses to streamline transactions in cases where they maintain long-standing business relationships. A contract would be entered into prior to the transaction, such as during the set-up of a customer account, not simultaneously with the transaction. A signed statement is more appropriate for one-off transactions between the supplier and the final processor.

EPA is also clarifying the format that the records required under this section may take. In general, where the regulations in subpart F require an individual to maintain records, the Agency intends for them to do so either in an electronic or paper format, preferably in an electronic system. EPA is clarifying this point explicitly in the recordkeeping provision at § 82.155(c).

One commenter stated that the new § 82.155 will remain unclear if EPA does not review the relevant applicability determinations for potential inclusion in the regulatory text. EPA responds that applicability determinations are only applicable to the person requesting the determination from EPA. However, in response to the comment, EPA has reviewed and is incorporating information from specific applicability determinations into the regulatory text where the Agency finds it will increase clarity to the industry as a whole.

Two applicability determinations address the situation where refrigerant has leaked out of an appliance prior to arriving at the final disposer. Applicability determination number 608–8 addresses whether a verification statement is needed where all of the refrigerant has already leaked out due to a break in the refrigerant circuit. Applicability determination number 608–9 addresses whether the term *leaked out* includes instances in which the line has been cut prior to the delivery of the appliance. EPA's determination in 1993 was that if all the refrigerant has leaked out, the signed statement need not contain the name and address of the person who performed the recovery as no such person exists. The signed statement must, however, clearly state that all the refrigerant in the appliance had already leaked out. EPA also determined that ''leaked out'' means those situations in which the refrigerant has escaped because of system failures, accidents, or other unavoidable occurrences not caused by a person's deliberate acts or negligence, such as deliberately cutting refrigerant lines. Scrap processors may accept appliances whose lines have been cut as long as they obtain a signed statement from the supplier. This includes appliances that have been vandalized. EPA is incorporating information from these determinations into the regulatory text at § 82.155(b)(2)(iii).

Two applicability determinations address whether the verification statements are needed for appliances that arrive at the final processor in various conditions. Applicability determination number 608–8 pertains to the situation where the entire refrigeration circuit has been removed from the appliance prior to delivery. Applicability determination number C040001 pertains to (1) receipt of an appliance in which some components of the refrigerant circuit have been removed; (2) receipt of portions of the refrigerant circuit (*e.g.,* compressor); (3) receipt of an appliance in which the entire refrigerant circuit has been removed; and (4) receipt of an appliance which has previously been through a process in which refrigerant would have been released or recovered.

EPA's determinations in 1993 and 1996 were that the first two situations would be subject to the safe disposal regulations and the third and fourth situations would not be. Any equipment that contained refrigerant is subject to the safe disposal requirements. This includes a complete appliance with an intact refrigerant circuit, an appliance with a broken refrigerant circuit such as one with a component removed, or a single component that would contain refrigerant in an appliance. In all such instances the intent of the safe disposal program—to verify that the refrigerant was recovered properly—still applies.

Consistent with these determinations, EPA interprets its regulations such that items that have had the entire refrigerant circuit removed, such as the outer housing of an air conditioner or the structural shell of a refrigerator, are not subject to the safe disposal regulations, as these items do not meet the definition of appliance. Similarly, shredded material, baled scrap, or crushed cars are not subject to the safe disposal regulations. The person responsible for compliance with the safe disposal regulations is the entity upstream that conducted the final processing where the appliance was shredded, crushed, flattened, baled, or otherwise demolished and where the refrigerant would have been previously recovered in accordance with the regulations.

4. Hazardous Wastes

One commenter requested that EPA exclude hydrocarbon refrigerants that are vented from the definition of hazardous waste. The commenter reacted to a discussion in the proposed rule that household appliances containing a hydrocarbon refrigerant would be exempt as a household hazardous waste under the federal hazardous waste regulations at 40 CFR 261.4(b)(1) (although States may have more stringent regulations) and therefore, could generally be vented upon disposal under both RCRA and CAA regulations. The commenter notes that a household-type appliance may also originate from institutional and commercial settings and therefore would not qualify for the household waste exclusion under RCRA.

EPA responds that these refrigerants may be subject to regulation as hazardous waste, with the exception of refrigerants that are directly reused. The Agency did not propose to amend the regulations issued under RCRA in the proposal to this final action and has not undertaken the analysis to do so at this time. This comment is also outside the scope of this rulemaking, which relates to regulations under section 608 of the CAA, not to regulations under RCRA.

5. Restructuring and Edits for Readability

EPA is creating a single section, § 82.155, for all safe disposal provisions, including the recordkeeping and reporting requirements. One commenter supported moving the refrigerant recovery requirements for small appliances, MVACs, and MVAC-like appliances into a single section. The commenter suggested the section be titled ''Safe Disposal of Refrigerant'' rather than ''Safe Disposal of Appliances'' as they stated that the CAA does not contain the concept of safe disposal of appliances. While it is true that section 608(c) is concerned with the entry of refrigerants into the environment, it addresses such releases in the context of ''disposing of an appliance.'' EPA disagrees that it is necessary to change the name of the section. However, EPA has reorganized the section to put up front the general requirement that refrigerant be evacuated from appliances before describing the requirements of the final processor.

E. Revisions to the Evacuation Requirements in § 82.156

1. Background

Under EPA's existing regulations at § 82.156(a), ODS refrigerant must be transferred to a system receiver or to a certified recovery and/or recycling machine before appliances are opened for maintenance, service, or repair. The same requirement applies to appliances that are to be disposed of, except for small appliances, MVACs, and MVAC-like appliances which were subject to separate requirements under § 82.156(g) and (h). To ensure that the maximum amount of refrigerant is captured rather than released, EPA requires that air-conditioning and refrigeration appliances be evacuated to specified levels of vacuum.

2. Extension to Substitute Refrigerants

EPA is finalizing revisions in this action that extend the existing requirements at § 82.156 to appliances containing non-exempt substitute refrigerants. Therefore, before appliances containing non-exempt substitute refrigerants are opened for maintenance, service, or repair, the refrigerant in either the entire appliance or the affected part (when it can be isolated) must be transferred to a system receiver or to a certified recovery and/or recycling machine. The same requirements apply to appliances that are to be disposed of, except for small appliances, MVACs, and MVAC-like appliances, which have separate requirements.

Generally, commenters were supportive of EPA's proposal and agreed with EPA's rationale. Commenters who stated that EPA does not have authority to extend section 608 regulations to substitutes were silent on the specific issue of evacuation requirements. EPA addresses general comments about its authority for this action in Section III of this notice.

i. Evacuation Levels for Appliances Other Than Small Appliances, MVACs, and MVAC-Like Appliances

EPA is finalizing revisions to § 82.156(a) such that appliances other than small appliances, MVACs, and MVAC-like appliances containing non-exempt substitute refrigerants must be evacuated to the levels established for CFCs and HCFCs with similar saturation pressures. These levels are based on the saturation pressures of the refrigerant, which is a characteristic independent of whether or not the refrigerant is an ozone-depleting substance. As is the case for CFCs and HCFCs, the appropriate evacuation levels for HFCs and other substitutes depends upon the size of the appliance and the date of manufacture of the recovery and/or recycling equipment. EPA did not receive comment expressing any technical concerns with extending the evacuation requirements to substitute refrigerants. Some commenters stated that they currently treat ODS and HFC appliances in the same manner, including the level of evacuation.

ii. Evacuation Levels for Small Appliances

EPA is finalizing revisions to § 82.156(b) to establish the same evacuation requirements for servicing small appliances charged with non-exempt substitute refrigerants as had previously existed only for small appliances charged with ODS refrigerants. Technicians opening small appliances for service, maintenance, or repair are required to use equipment certified either under appendix B, based on AHRI 740, or under appendix C, Method for Testing Recovery Devices for Use with Small Appliances, to recover the refrigerant.

Technicians using equipment certified under appendix B have to pull a four-inch vacuum. Technicians using equipment certified under appendix C have to capture 90 percent of the refrigerant in the appliance if the compressor is operational, and 80 percent of the refrigerant if the compressor is not operational. Because the percentage of refrigerant recovered is very difficult to measure on any given job, technicians would have to adhere to the servicing procedure certified for that recovery system under appendix C to ensure that they achieve the required recovery efficiencies.

One commenter specifically expressed support for extending the evacuation requirements to small appliances charged with non-exempt substitutes but not to small appliances containing exempt refrigerants. The commenter notes that the technician would be required to use appropriately certified equipment to recover the refrigerant. EPA did not propose to require the recovery of exempt refrigerants and agrees that it would not be appropriate to finalize such a requirement in this rule, as the venting prohibition does not apply to these substances.

EPA is also revising § 82.156(b) to establish the same evacuation requirements for disposing of small appliances that are charged with non-exempt substitute refrigerants as currently exist for small appliances charged with ODS refrigerants. Small appliances must have 80 or 90 percent of the refrigerant in them recovered (depending on whether or not the compressor was operational) or be evacuated to four inches of mercury vacuum.

EPA is also finalizing revisions to the regulations to simplify the evacuation requirements for small appliances so that they are the same for both servicing and disposal. This new provision applies to both ODS and non-exempt substitute refrigerants. Prior to this rulemaking, a technician servicing a small appliance containing an ODS needed to only recover 80 percent of the refrigerant when using recovery equipment manufactured before November 15, 1993. At the same time, there was no established level of evacuation in the disposal requirements when using pre-1993 recovery equipment. EPA is allowing that 80 percent level of evacuation for disposal to simplify and unify the requirements. This revision will have minimal effect as few people continue to use recovery equipment manufactured prior to that date.

One commenter stated that there should not continue to be separate evacuation levels for recovery equipment manufactured before 1993. This commenter saw such equipment being used only rarely and only to avoid the deeper evacuation requirements. This commenter also stated that pulling a 4-inch vacuum on a small appliance is not equal to 80 percent refrigerant recovery. EPA responds that the proposal explicitly stated that EPA was not proposing to amend the required levels of evacuation in Table 1, change the circumstances that would allow for alternate evacuation levels, or to revise those alternate levels. EPA understands the concerns raised by the commenter, but removing the older evacuation levels at this time is beyond the scope of this rulemaking.

iii. Evacuation Levels for MVACs and MVAC-Like Appliances

Technicians repairing or servicing MVACs for consideration and MVAC-like appliances containing an ODS or a non-exempt substitute refrigerant are subject to the requirement to ''properly use'' (as defined at § 82.32(e)) servicing equipment approved pursuant to § 82.36(a). All persons recovering refrigerant from MVACs and MVAC-like appliances for purposes of disposal of these appliances must reduce the system pressure to or below 102 mm of mercury vacuum or use refrigerant recycling equipment dedicated for use with MVAC and MVAC-like appliances approved pursuant to § 82.36(a). The proposed rule incorrectly extended the MVAC servicing requirement to all persons, not just those servicing MVACs for consideration. EPA has revised the final rule to properly distinguish between the two.

EPA received a comment that section 608 of the CAA does not apply to MVACs. As discussed above in Section III of this notice, section 608(c) provides EPA authority to regulate the disposal of MVACs, which are a type of appliance. With respect to disposal of MVACs, this final rule, like the prior regulations, only specifies evacuation levels for such appliances when they are disposed.

3. Records for Disposal of Appliances With a Charge of More Than 5 and Less Than 50 Pounds

EPA is adding new recordkeeping requirements at § 82.156(a)(3) for the disposal of appliances with a full charge of more than five and less than 50 pounds of either ODS or non-exempt substitute refrigerant. Most appliances this size are disassembled in the field and as such must have the refrigerant recovered in the field. EPA is requiring records that document the name of the company that employs the technician, the location of the appliance being disposed of, the date of recovery, and the type of refrigerant removed from each appliance prior to disposal. The technician who evacuated the refrigerant, or the company employing that technician, must also maintain records indicating the quantity and type of refrigerant transferred for reclamation, the company that they transferred the gas to, and the date of the transfer. The technician, or the company employing the technician, would be required to maintain these records for three years. By company employing the technician, EPA means the person paying the technician's salary or wage, not the appliance owner or operator who has hired the technician for that specific service. The finalized regulations have one change compared to the proposal: EPA is not requiring records indicating the amount and type of refrigerant recovered from each separate appliance but rather the total amount and types recovered from all appliances disposed of in each calendar month. As described in more detail below, this modification from the proposed revision was made after consideration of public comments.

Comments in support of this proposed recordkeeping requirement agreed with EPA's goal of improving the enforceability of the venting prohibition. One commenter stated that EPA's rationale to improve compliance with the venting prohibition and facilitate enforcement against those who do vent is insufficient and not adequately supported in the record. Another commenter believes that venting is not as prevalent as EPA thinks it is and that to the extent that it does occur, it is done by individuals who are not certified technicians.

EPA responds that the Agency has heard from people throughout the HVAC/R industry that venting regularly happens in appliances with more than 5 and less than 50 pounds of refrigerant. One commenter to this rule who regularly addresses contractor and service technician groups hears from them that the venting prohibition is widely disregarded. At a recent meeting EPA attended with air-conditioning and refrigeration contractors, an industry speaker asked attendees what percentage of technicians recover refrigerant. The estimates individuals offered were generally between 10 to 30 percent, with the caveat that recovery is much more common in the refrigeration industry than the air-conditioning industry. EPA also receives numerous tips each year of someone cutting refrigerant lines to quickly and illegally dispose of appliances of this size. This feedback indicates a likelihood that venting regularly occurs.

At times, including in public fora such as the public meeting in November 2014, stakeholders have requested that EPA increase enforcement of the venting prohibition. At that meeting, some stakeholders indicated that technicians will knowingly and illegally vent refrigerant if they think EPA will not bring an enforcement action. Multiple commenters urged the Agency to do a better job of enforcing the venting prohibition. This request came from a broad cross section of the air conditioning and refrigeration community including refrigerant reclaimers, recycling and recovery equipment certifiers, and appliance manufacturers and distributors. Some of these comments stated that good actors who comply with the law are placed at a competitive disadvantage by entities who can operate more cheaply by skipping the required recovery practices and choose instead to illegally vent refrigerant.

The Agency has recently brought successful cases against individuals who have illegally vented refrigerant. However, the availability of the records required under this provision would enhance the Agency's ability to enforce the venting prohibition because these records could be used to demonstrate whether or not refrigerant has been recovered and sent for reclamation. If refrigerant cannot be accounted for, a company or technician may not be able to show that they complied with the venting prohibition.

Some commenters who objected to this proposal stated that EPA did not provide sufficient justification and that EPA underestimated the burden to technicians. EPA responds that it is reasonable to require technicians and the companies employing technicians to maintain records of the amount of refrigerant that they recover and send for reclamation to enhance compliance with and enforceability of the venting prohibition. There is a significant environmental benefit to ensuring that ODS and HFC refrigerant are recovered from existing appliances of this size at the time of disposal. Using EPA's Vintaging Model, EPA estimated the number of appliances in this size category that are disposed of annually, the full charge of those appliances, and the type of refrigerant they contain. EPA estimates that 7.3 million appliances of this size, with a total charge of 27,300 MT of refrigerant, are disposed of annually. This is equal to 960 ODP-weighted metric tons and 49.5 $MMTCO_2eq$. This represents 45 percent of the total amount of ODS and HFC refrigerants contained within all appliances from all size categories that are disposed of annually.

EPA's benefits assessment for the proposed rule did not calculate any additional emissions reductions because the existing regulations already require recovery when appliances are disposed. However, in practical terms, requiring a record from each disposal event may drive more technicians to comply with the venting prohibition because the recordkeeping requirement places extra emphasis on the prohibition and on the risks of violating it. Even slight improvements to compliance could produce substantial environmental benefits.

Another commenter stated that some IPR facilities may have hundreds or even a thousand of these smaller 5–50 pound appliances and that requiring additional tracking or recordkeeping would be unnecessary and overly burdensome. Furthermore, the commenter continued, because industry has the burden of proof that it is in compliance with the venting prohibition, industry has established basic recordkeeping that can meet the intent of this rule without requiring additional or duplicative information. A couple of commenters similarly noted that it is good business practice to recover refrigerant from such units prior to disposal.

EPA responds that the incentive to illegally vent may be less if the owner has hundreds of appliances or uses in-house technicians. In that situation, it may be good business practice to recover refrigerant from a system being disposed of because that refrigerant can be reused in that owner's other appliances. The desire to fit more service calls into a day is also perhaps less when using in-house personnel. However, in cases where a technician is getting paid by the job, there is an economic incentive to minimize the time spent at each job-site which could include venting refrigerant. EPA disagrees that such facilities will require burdensome new tracking and recordkeeping. While a facility may have many appliances, the records that EPA is requiring in this rule are only necessary once—upon disposal—and only a small subset of the total number of appliances is likely to be disposed of in a given year.

EPA has considered ways to minimize the burden to technicians in light of commenters' concerns. EPA is modifying the final rule so as to require records that are generated through normal operations in the field. Therefore, EPA is removing the requirement to determine the amount of refrigerant recovered from each appliance. Entities would not be required to weigh cylinders or otherwise calculate how much refrigerant they recovered at each and every site, which was the most time consuming element of the proposed recordkeeping requirements. Instead, EPA's goals can be achieved by requiring records of the amount recovered in each calendar month. This way, recovery cylinders can be weighed less frequently and at a centralized location or recovery cylinders can simply be tallied if the amount of refrigerant in them is known.

One commenter encouraged EPA to consider exempting residential systems from the recordkeeping requirements due to the nature of their servicing. EPA responds that this recordkeeping requirement does not apply to regular servicing, only disposal, which occurs much less frequently.

A couple of commenters requested clarification of who must maintain records. One commenter did not support this requirement because they believed it would require records be kept by homeowners. Another commenter suggested that third-party collection sites not have recordkeeping requirements so as to not discourage wholesalers and storefronts from serving in the collection chain.

EPA responds that the recordkeeping requirements finalized for this provision apply solely to the company employing the technician (or to the technician, if operating independently) who is disposing of the appliance in both commercial and residential settings. This could be the owner or operator of the appliances or it could be a contractor who is hired to dispose of the appliance. When that company transfers the refrigerant for reclamation they may have to receive records from other entities (such as reclaimers or third-party collection sites) but those receiving refrigerant are not obligated to maintain any records themselves. EPA is not requiring any recordkeeping by the owners of the appliance unless the owner of the appliance and the employer of the technician are the same entity.

One commenter suggested that EPA extend the proposed recordkeeping requirements to those who collect at least 100 pounds of refrigerant per year from small appliances. This commenter also suggested less detailed records be kept in such instance, specifically (1) the quantity of refrigerant recovered monthly, (2) the number of units disposed of, and (3) the name of the certified reclaimer to whom they transferred the recovered refrigerant. EPA disagrees that extending this requirement to small appliances is necessary. Certification and recordkeeping requirements currently exist for the disposal of small appliances. These records are held by the final disposer, who is best suited to maintain them. In addition, EPA does not require that small appliances be evacuated by a certified technician when being disposed of.

Two commenters suggested that EPA extend the recordkeeping requirement to appliances containing more than 50 pounds as well. One of the commenters was concerned that contractors who collect from both smaller 5–50 pound and larger 50-plus pound appliances would have to separate or otherwise distinguish between what was recovered from each when transferring their refrigerant to a reclaimer. EPA finds that it would not be necessary to distinguish between these two size categories. A single record of all refrigerant transferred for reclamation is sufficient because EPA is not requiring an accounting of all recovered refrigerant as it moves through the market.

After consideration of these comments, EPA is requiring records that are regularly generated by technicians or companies recovering refrigerant while disposing of appliances as a practical way to improve the Agency's ability to enforce the venting prohibition without imposing an undue burden on regulated entities that are already complying fully with the venting prohibition. To avoid imposing an undue burden on good actors, especially out in the field where there may already be pressure to cut corners, EPA is not finalizing the proposed requirement that records be kept of how much refrigerant is recovered from each appliance. Weighing or otherwise calculating the amount of refrigerant recovered at each job site could increase burden of these requirements by consuming additional time.

4. Clarifications and Edits for Readability

As proposed, EPA is moving the provisions that were found in § 82.156 ''Required Practices'' in the prior rules into three separate sections: § 82.155 to address the safe disposal of small appliances, MVACs, and MVAC-like appliances; § 82.157 to address appliance maintenance and leak repair for appliances containing 50 or more pounds of refrigerant; and § 82.156 to address the proper evacuation of refrigerant from appliances. These provisions tend to affect different stakeholders so separating them into different sections will make the required provisions easier to find.

F. Revisions to the Leak Repair Requirements in § 82.157

1. Background

A central component of EPA's longstanding program to properly manage ODS refrigerants is the requirement to repair leaking appliances within 30 days of determining that a certain leak rate has been exceeded. Owners and operators of appliances normally containing 50 or more pounds of ODS refrigerant must repair their appliances if they leak above a certain rate or take other actions to reduce the emissions such as retrofitting, retiring, or mothballing the appliance. Under the prior regulations, the leak rate at or above which action was required was 35 percent for commercial refrigeration appliances and IPR and 15 percent for comfort cooling and other appliances. If the attempt to repair failed to bring the appliance's leak rate below the applicable leak rate within that time frame, the owner or operator must develop a retrofit or retirement plan and implement it within one year of the plan's date. Owners or operators also had the option of developing a retrofit or retirement plan within thirty days of identifying that the leak rate has been exceeded. Owners or operators of IPR or federally owned appliances may have more than 30 days to complete repairs and more than one year to retrofit appliances where certain conditions applied (*e.g.,* equipment located in areas subject to radiological contamination, unavailability of necessary parts, and adherence to local or state laws that may hinder immediate repairs). The full suite of the prior requirements are found at § 82.156(i).

EPA recognizes that refrigeration and air-conditioning equipment often do leak. This is particularly likely for larger and more complicated appliances like those subject to the subpart F leak repair provisions. However, leaks from such appliances can be significantly reduced. Multiple factors support this conclusion. Concrete evidence that leaks can be significantly reduced include experience with the GreenChill program, an EPA partnership designed to encourage supermarkets to reduce emissions of refrigerants and transition to low-GWP and low-charge refrigeration appliances; reports from facilities regulated under California's Refrigerant Management Program; and feedback from stakeholders prior to publishing the proposed rule. The revised leak repair provisions in this action will reduce refrigerant releases of ODS and non-exempt substitute refrigerants by ensuring effective repairs and ongoing monitoring of leaking systems.

2. Restructuring and Edits for Readability

The regulatory text has been modified several times since EPA first established the program in 1993. The regulation now contains numerous cross-references to other provisions in § 82.156(i), making the requirements difficult to follow and in some places potentially leading to differing interpretations. Many important provisions are not readily apparent, such as the primary requirement that repairs must occur within 30 days, which appears explicitly only at the end of the leak repair requirements at § 82.156(i)(9). Therefore, EPA has rewritten the regulation and moved the provisions to a single new section of the Code of Federal Regulations (CFR) to make it easier for stakeholders to locate and understand the requirements.

EPA recognizes that changing the text so significantly may make stakeholders who are familiar with the existing requirements wonder how these revisions affect their current compliance monitoring systems and protocols. EPA emphasizes that the Agency did not intend to alter the substance of the requirements while restructuring except where specified. EPA discusses the intended amendments to the requirements in this section of the notice. In general, commenters were supportive of EPA's efforts to rewrite and simplify the leak repair provisions.

To avoid both ambiguity and cumbersome language throughout, EPA establishes from the outset in § 82.157(a) that the provisions of § 82.157 apply to owners and operators of all appliances containing 50 or more pounds of refrigerant, unless otherwise specified. One commenter stated that EPA should clarify throughout the rule whether the owner/operator or the technician is responsible. EPA responds that the final rule makes clearer that the owner or operator is responsible for conducting the leak inspection or repairing the appliance even when it is the technician who will be performing those actions. When a provision applies to technicians or people servicing equipment, the provision so specifies.

Multiple commenters requested that EPA define owner/operator and one commenter requested that EPA clarify who is responsible if the owner is different from the operator. EPA responds that the Agency is not defining *owner* or *operator* because these terms are widely understood in the public and regulated community. If the owner and the operator are separate entities, both are responsible for complying with the applicable leak repair provisions. EPA notes that the owner of the system chooses the operator of the system, or passes that responsibility to someone else (*e.g.,* a tenant in a building may be provided authority to operate an air conditioning system even though that tenant does not own the building or the air conditioning system). EPA does not want to hinder the ability of the owner and operator of the system to make the decision as to who would be responsible for complying with these requirements, and, therefore, the Agency has maintained the existing language that places responsibility for such compliance with requirements on both parties.

The existing regulations also inconsistently described the leak repair requirements as applying to appliances with ''50 or more pounds'' or ''more than 50 pounds'' of refrigerant. The proposed revisions consistently use ''50 or more pounds of refrigerant.'' EPA received a comment from CARB that the California regulations are based on EPA's ''more than 50 pounds,'' but CARB stated they can address any potential inconsistencies created by this revision. As such, EPA is finalizing consistent use of the phrase ''50 or more pounds of refrigerant'' in the revised regulations.

3. Extension to Substitute Refrigerants

EPA proposed to extend the leak repair provisions previously found at § 82.156(i) to appliances containing non-exempt substitute refrigerants. EPA is finalizing this extension in the revised leak repair regulations (now found at § 82.157). As such, the other provisions related to leak repair and maintenance finalized in this rule (*e.g.,* verification tests, reporting by chronic leakers, etc.) apply to appliances containing ODS and non-exempt substitute refrigerants as well. Consistent with discussions elsewhere in this notice, EPA is not extending these requirements to appliances using substitute refrigerants in a specific end-use for which the substitute refrigerant used has been exempted from the venting prohibition. These exemptions are listed in the regulations at § 82.154(a)(1). For example, these requirements would not be extended to water in any application, or to ammonia in commercial or industrial process refrigeration or in absorption units.

Extending the leak repair requirements to non-exempt substitute refrigerants will lead to significant environmental benefits because these substances pose a threat to the environment when released. Like ODS, HFCs and PFCs also have the ability to trap heat that would otherwise be radiated from the Earth back to space. This ability gives both HFCs and PFCs relatively high GWPs. The 100-year GWPs of saturated HFCs used as refrigerants range from 124 (for HFC-152a) to 14,800 (for HFC–23), and the GWPs of PFCs used as refrigerants range from 7,390 (for PFC–14) and higher. HFC–134a, the most common individual HFC used in air-conditioning and refrigeration equipment, has a GWP of 1,430. See Section II.C.2 of this notice for further discussion related to the environmental effects of greenhouse gases.

In determining whether to exempt HFC and PFC refrigerants from the venting prohibition in 2004, EPA examined the potential effects of the refrigerant from the moment of release to its breakdown in the environment, considering possible effects on workers, building occupants, and the environment. EPA concluded that the release of HFCs and PFCs poses a threat to the environment due to their high GWPs. For that reason, and because of a lack of regulation governing the release of such refrigerants, EPA did not exempt the release of HFC or PFC refrigerants from the statutory venting prohibition. Therefore, knowingly venting or otherwise releasing into the environment of HFC and PFC refrigerants during the maintenance, service, repair, or disposal of appliances remains illegal. The venting prohibition focuses on knowing venting or release during the maintenance, service, repair, or disposal of appliances and thus does not account for all HFC (and PFC) refrigerant emissions. For instance, in previous rules we have not assumed that emissions of HFCs that occur due to appliance leaks constitute knowing releases. However, as discussed elsewhere in this rulemaking, EPA is broadening its interpretation of what is considered a knowing release under section 608(c) for purposes of appliance leaks. In addition, the requirements to calculate leak rates and monitor leaking systems that EPA is finalizing in this action provide knowledge to appliance owners and operators and thereby broaden the set of refrigerant releases for which they would be liable for a knowing release.

Consideration of Costs

Based on the evidence discussed later, the reported leak rate performance of today's comfort cooling, commercial refrigeration, and IPR appliances with full charges of 50 or more pounds argues for lowering the leak rates. The evidence discussed later demonstrates that the leak rates of 35 percent for IPR and commercial refrigeration and 15 percent for comfort cooling are considerably above the ''lowest achievable level of emissions'' envisioned in CAA section 608(a)(3)(A).

While section 608(a)(3) does not require EPA to perform a cost-benefit analysis to determine what leak rate(s) would constitute the ''lowest achievable level of emissions,'' in general, EPA has balanced the benefits from reducing emissions of refrigerants with the costs of these requirements. EPA has determined that the costs are reasonable given the significant benefits that accrue (both private in the form of cost savings and public in the form of improved health and environmental protection from reduced GHG and ODS emissions). Specifically, EPA reviewed data from the lowest-emitting equipment to gauge technological feasibility and then reviewed other datasets, such as CARB data and consent decree requirements, to determine a reasonable set of requirements. EPA then assessed the costs and benefits associated with extending the existing requirements to appliances using substitute refrigerants. EPA also assessed the tighter requirements applicable to appliances containing ODS or non-exempt substitute refrigerants such as lower leak rates, the requirement to repair leaks once the applicable leak rate is exceeded, the requirement to conduct verification tests on all types of appliances, and periodic leak inspections for appliances that had exceeded the leak rates.

Based on the comments received, EPA considered ways to reduce the cost of these requirements, as compared to the proposal. These changes are discussed in full later in this section and include: Limiting periodic leak inspections to appliances that have exceeded the applicable leak rate, rather than requiring all appliances to be inspected; finalizing a leak rate for IPR of 30 percent rather than 20 percent; allowing greater flexibility for owners and operators to determine which leaks to repair rather than requiring the repair of all leaks; and modifying the proposed chronic leaker provision so that it results in reporting to EPA rather than automatic retirement of the appliance.

This rule also provides flexibility that will reduce the cost of complying with the existing regulations. For comfort cooling and commercial refrigeration appliances, EPA is allowing an extension to the 30-day repair requirement if the arrival of a part is delayed, recognizing that the short additional time needed for delivery of a part can result in a nearer-term and less costly emission reduction than a retrofit. EPA is also allowing an extension to implement a retrofit or retirement for any appliance that transitions to a non-exempt substitute refrigerant.

4. Leak Inspections

The prior regulations at § 82.156(i) focused on actions an appliance owner or operator must take after discovering an appliance has a leak. EPA proposed to require annual or quarterly leak inspections as a proactive maintenance practice depending on the type and size of the appliance. More specifically, EPA proposed to require that owners or operators of commercial refrigeration appliances or IPR normally containing 500 or more pounds of refrigerant conduct quarterly leak inspections of the appliance, including the appliance's refrigerant circuit. Inspections would be annual for commercial refrigeration appliances and IPR containing 50 pounds or more but less than 500 pounds of refrigerant, as well as comfort cooling appliances and other appliances normally containing 50 or more pounds of refrigerant.

The purpose of the proposed leak inspection requirement was to determine the location of refrigerant leaks. This proposal was designed with Next Generation Compliance objectives in mind (see Section II.D.3). The Agency anticipated that many appliance owners and operators would take action earlier if leaks were identified because it is in their financial interest to do so and would reduce emissions and refrigerant costs. Repairing leaks earlier could also prevent that appliance from being pulled into the proposed regulatory requirements at § 82.157 for exceeding the applicable leak rate. EPA also proposed to allow owners or operators to forgo periodic leak inspections if they installed and operated an automatic leak detection system that continuously monitors the appliance for leaks.

Frequency of Leak Inspections. State regulatory agencies and environmental organizations supported the proposed requirement to conduct periodic leak inspections. Two such commenters suggested that EPA require quarterly leak inspections for systems with 200 pounds or more to harmonize the leak inspection requirements with California's Refrigerant Management Program. However, many other commenters expressed strong opposition to mandatory quarterly or annual leak inspections, asserting that requiring inspections of all appliances imposes unnecessary costs, especially for systems that are not leaking. Those commenters estimated the cost of an inspection for a large supermarket could exceed $5,000. Another commenter stated that companies do not need a regulatory requirement to inspect and maintain their refrigeration equipment and that since EPA did not require repair of leaks identified in a leak inspection for appliances that do not exceed the applicable leak rate, there is not a reasonable relationship between the proposed requirement and the goal of emissions reduction. One commenter stated that leak inspections are unnecessary, at least for chemical manufacturing, because temperatures and pressures must be maintained within tight tolerances for reactions to proceed. Furthermore, any changes in temperature and pressure would trigger an alarm or shutdown the process.

Other commenters expressed qualified support for annual leak inspections, especially if it is phased in, starting with larger systems or if a company can provide evidence that they have not added refrigerant to a system in over a year. Another commenter stated that leak inspections should only be annual, unless the equipment exceeds the applicable leak rate for that system. That commenter believes that the inspections should return to being an annual requirement after the leak rate has been reduced below the threshold for two years. One commenter stated that the greatest value of a leak inspection is on a system with a known leak.

Based on these comments relating to the expense and value of conducting leak inspections on all appliances, EPA is finalizing the leak inspection requirement only for appliances that have been found to be above the applicable leak rate. EPA proposed to only require that the leaks identified from a leak inspection be repaired when the applicable leak rate is exceeded. EPA's proposal observed that the costs of repairing all leaks when the leak rate is below the applicable leak rate may be higher than the benefits, especially when the leak is a series of small pinhole leaks and the leak rate is very low, as may often be the case. As stated in the proposed rule, when the applicable leak rate is exceeded, the benefits of repairing those leaks are significant—both for the environment and for the owner/operator (in decreased refrigerant replacement costs)—and do result in significant savings, which supports repair of leaks. EPA appreciates the concern raised by commenters who question the value of conducting leak inspections on appliances that are known to not be leaking, or leaking at a low rate that would not trigger a requirement for repair under the regulations. Periodic leak inspections are a best practice within the industry to reduce emissions of refrigerants and the Agency continues to recommend periodic leak inspections for all appliances as even well-maintained appliances might leak.[21] EPA did not quantify any benefits for systems that had a leak rate below the applicable leak rate because the Agency did not propose that the leaks that were discovered in those systems needed to be repaired. While requiring proactive leak inspections would generally reduce leaks because companies would find leaks and could repair them before the applicable leak rate was exceeded, EPA is not finalizing the periodic leak inspections for all appliances, as proposed. Many of the specific comments about timing of leak inspections no longer apply because of this change. However, EPA has reconsidered the cost of conducting a leak inspection, as discussed further in Section VI of the preamble.

EPA is finalizing a requirement at § 82.157(d)(1) to conduct a leak inspection after discovering the leak rate had exceeded the applicable leak rate. Thereafter, EPA is requiring episodic leak inspections based on the full charge size and type of appliance on the same schedule as in the proposed § 82.157(b)(1)–(3), but in this final rule EPA added a provision clarifying that this requirement ends if the appliance remains below the applicable leak rate for a specific time. More specifically, following a leak rate exceedance, EPA is requiring quarterly leak inspections for IPR and commercial refrigeration appliances containing 500 or more pounds of refrigerant until there are four quarters in a row where the appliance has not exceeded the applicable leak rate. For IPR and commercial refrigeration appliances containing between 50 and 500 pounds of refrigerant, and for all comfort cooling appliances or other remaining appliances normally containing 50 or more pounds of refrigerant, EPA is requiring annual leak inspections following a leak rate exceedance until the owner or operator can demonstrate that the appliance has not exceeded the applicable leak rate for one year. More frequent monitoring is important for larger commercial refrigeration appliances and IPR because those systems tend to have more leaks than comfort cooling appliances and because the amount of refrigerant that would be lost in a leak is generally greater for those systems.

In our view, and based on our review of comments, limiting inspections to those appliances that are known to have leaked and triggered the repair requirements appropriately tailors the leak inspection requirement to those systems that are most likely to leak and provides important information about whether the leak repairs have held over the longer term. EPA is not finalizing the proposed revision allowing for annual leak inspections when refrigerant has not been added to the appliance for more than a year as EPA is not finalizing the periodic leak inspection requirement for systems that are below the applicable leak threshold. As discussed later, EPA is finalizing the proposed revision allowing the use of automatic leak detection systems in lieu of quarterly or annual leak inspections.

EPA proposed to establish a process that would allow less frequent leak inspections for federally owned appliances that are located in remote locations or are otherwise difficult to access for routine maintenance. One commenter disagreed with the proposal to allow a reduced inspection schedule for federally owned appliances. Other commenters requested that EPA provide a similar exemption to privately owned appliances.

Because EPA is not finalizing periodic leak inspections for appliances below the applicable leak threshold, EPA is also not finalizing the reduced leak inspection schedule for federally owned appliances. EPA is requiring that federally owned equipment that has leaked in excess of the applicable leak rate be subject to the same periodic leak inspection schedule as privately owned equipment. The concerns about burden raised by federal agencies during the development of the proposal are addressed by removing the proposed requirement that leak inspections be conducted on all appliances. The number of appliances leaking above the final leak thresholds is less than 20 percent of the total number of installed appliances with charges of 50 pounds or greater.

Description of leak inspections. Many commenters requested clarification

[21] See GreenChill's *Best Practices Guidelines: Commercial Refrigeration Leak Prevention & Repairs,* May 2011, available in the docket for this rulemaking.

about the types of methods that can be used to conduct a leak inspection. EPA responds to those comments in the section of this notice that addresses comments on the proposed definitions. As described there, the revised definition includes examples of methods that may be appropriate for leak inspections.

EPA proposed that periodic leak inspections would not need to be performed by certified technicians and took comment on that idea. Two commenters agreed that leak inspections should not be required to be conducted by certified technicians. Reasons stated for not requiring the inspection to be done by a certified technician are that they are more expensive than in-house personnel, they may be less familiar with the appliance, and that the person doing the inspection will not necessarily be performing activities that can only be performed by a certified technician such as adding or removing refrigerant or making any repairs to the appliance. Another commenter believes that leak inspections should be performed by someone trained to fix leaks, and thus that the persons performing leak inspections must be a certified technician.

In this final rule, EPA is requiring that the required leak inspections be performed by certified technicians. EPA is making this change from the proposal for several reasons. First, required leak inspections are now limited to appliances that are known to have been leaking. It is now very likely that a technician will have to add refrigerant or make additional repairs after the leak inspection. This is certainly the case for the inspection triggered by discovering that the leak rate exceeds the threshold. Second, because EPA is no longer requiring the repair of all identified leaks, the person inspecting the system must also be qualified to determine which leaks must be repaired to bring the leak rate below the applicable level. Third, while certified technicians may be more expensive to hire, the overall burden of the leak inspection requirement is less since many fewer appliances must be inspected than originally proposed. Under the proposal, all appliances of a certain size would require leak inspections, which EPA estimated to be approximately 1.5 million. Under the finalized provisions, that number drops to approximately 282,000 appliances. EPA has considered the comments about the cost of performing a leak inspection and has updated the technical support document accordingly. Finally, EPA is not specifying a single method but rather allowing the person conducting the inspection to determine the method(s) that are appropriate for that appliance. This technical judgment requires someone trained in the methods of leak detection, which is more likely to be the case for a certified technician.

Many commenters requested clarification on what portions of an appliance are subject to a leak inspection. The proposed regulatory text was silent on this issue but the notice of proposed rulemaking discussed inspecting visible components and the proposed definition of leak inspection included an examination of ''all visible components of an appliance.'' The proposal did not define ''visible'' or address the treatment of components that are only visible if intermediary steps are taken (*e.g.,* clearing ice or elevating monitoring personnel). Commenters noted that refrigerant lines may be insulated and thus the piping is not visible and that lines may run along the ceiling of a store and are not observable or are difficult to access. One commenter proposed a definition that would limit inspections to areas that are visible and accessible without the use of equipment. The commenter states that the vast majority of components in commercial refrigeration, and those most prone to refrigerant leakage, are accessible directly from floor or roof level. One commenter requested that EPA define visible components as those that are readily accessible to be viewed and accessed during normal preventative maintenance activities for the appliance. One commenter suggested that the leak inspection be ''consistent with good industry practice.'' Another commenter expressed concern that requiring the inspection of all visible components may necessitate the appliance be shut down.

Another commenter requested specific exceptions for components that are difficult to monitor, insulated, unsafe to monitor, or otherwise not accessible. Consistent with other leak detection and repair programs for New Source Performance Standards, Subparts VV and VVa, which relates to equipment leaks of VOC in synthetic organic chemicals manufacturing, the commenter suggests that the following sources be exempt from inspection: (1) Components that require monitoring personnel to be elevated more than 2 meters above a support surface; (2) components that are insulated; (3) components that are determined to be un-safe to monitor as determined by site personnel; (4) components that are under ''ice'' that forms on the outside of equipment. A couple of commenters also expressed concern about requiring leak inspections on equipment that cannot be accessed due to radiological concerns.

EPA appreciates the difficulties associated with inspecting the entirety of an appliance, which these comments illustrate. EPA proposed a definition of leak inspection that includes ''all visible components.'' EPA is modifying that proposed definition to remove the reference to ''all visible components.'' Also, in light of the points raised in the comments, EPA is clarifying in the final rule that a leak inspection must be conducted on all visible and accessible components of an appliance, with some exceptions. EPA did not propose any exceptions but did state in the notice of proposed rulemaking that the inspection should occur on all visible and accessible components of an appliance. The exceptions finalized in this rulemaking clarify what is not considered visible or accessible: 1) Where components are insulated, under ice that has formed on the outside of equipment, underground, behind walls, or are otherwise inaccessible; (2) where personnel must be elevated more than 2 meters above a support surface; or (3) where components are unsafe to inspect, as determined by site personnel. This clarification takes into consideration risks to the person conducting the inspection. The Agency does not expect that an appliance be shut down in order to fulfill the obligation of inspecting all visible components.

Automatic Leak Detection. EPA proposed to not require periodic leak inspections if owners or operators install and operate an automatic leak detection system that continuously monitors the appliance for leaks. Although EPA is removing the periodic leak inspection requirements for many appliances, EPA will continue to allow the use of automatic leak detection equipment to continuously monitor whole appliances or portions of appliances in lieu of the required periodic inspections for that appliance or that portion of the appliance. Use of such equipment can minimize releases of refrigerant because it discovers leaks sooner than a quarterly or annual leak inspection can. Using their 2014 Refrigerant Management Program (RMP) data, CARB commented that they found that leaking systems using automatic leak detection had a 25 percent lower annual leak rate than those without. This comment provides further support for including this option to use automatic leak detection equipment to continuously monitor an appliance or portion of an appliance in the final rule.

A few commenters encouraged EPA to require automatic leak detection equipment on appliances with more than 2,000 pounds of refrigerant to harmonize EPA's requirements with California's. EPA responds that while this rule does not impose requirements that are inconsistent with CARB's program, EPA has not included all of CARB's requirements in this rule. EPA is requiring that automatic leak detection systems meet the same level of detection (10 parts per million of vapor) and notification thresholds (100 parts per million of vapor, a loss of 50 pounds of refrigerant, or a loss of 10 percent of the full charge) as CARB requires. EPA knows that such equipment is already available on the market and capable of meeting those standards, which allows companies wishing to install automatic leak detection equipment to do so sooner than if EPA established different standards in this rule. It also means that installed equipment that meets California's requirements will meet EPA's requirements. EPA disagrees, as discussed later, with the comment suggesting it require the use of automatic leak detection equipment.

Some commenters were opposed to requiring automatic leak detection. One such commenter stated that it does not work well outdoors and that it may be hazardous to enclose a system to facilitate leak detection. It can also be expensive and EPA did not estimate the costs of requiring it. One nuclear power producer commented that any modifications to nuclear generating stations must undergo extensive engineering and risk review processes. This argues against requiring the installation of monitoring equipment. Another commenter stated that it has not been able to identify any reliable information confirming that such automatic leak detection devices are available, cost-effective, and capable of satisfying EPA's requirements.

EPA responds that the Agency is not requiring the use of automatic leak detection equipment in this final rule. Rather, this is an option that an owner or operator can choose to pursue in lieu of conducting periodic leak inspections. EPA agrees that automatic leak detection equipment may not be appropriate for all systems, and the Agency is not suggesting that components be enclosed in order to allow for automatic leak detection equipment where it would be hazardous to do so. The decision to install such equipment is up to the owner/operator. With regard to availability, EPA responds that California's existing requirements for use of such systems have been in place since 2011 and include the same standards as those EPA is finalizing in this rule, so equipment meeting these requirements is already available and in use. EPA encourages anyone interested in using automatic leak detection to consult entities in California regarding the availability and performance of such equipment. Another commenter notes that electronic leak detection equipment is currently installed in thousands of supermarkets, further supporting the idea that such equipment is available and in use.

Many commenters supported automatic leak detection equipment in lieu of periodic leak inspections but were concerned that the systems they currently have installed do not meet the requirements of the proposed rule because the entire refrigeration system is not within the building envelope. EPA proposed that automatic leak detection equipment systems that directly detect the presence of a refrigerant in air could only be used where the entire appliance or the compressor, evaporator, condenser, or other component with a high potential to leak is located inside an enclosed building or structure. Multiple commenters requested that EPA still allow the option of using automatic leak detection for those components that are not outdoors. The outside components would then be the only portion of the system that would be subject to periodic inspections. EPA agrees that automatic leak detection equipment should be allowed for enclosed components even if only portions of an appliance are enclosed and the proposed rule was intended to cover that situation. EPA has revised the final rule to more clearly allow for this and to clarify that in such situations, the automatic leak detection equipment would only be used to monitor components located in an enclosed building or structure but the other components would continue to be subject to any applicable leak inspection requirements.

One commenter encouraged EPA to require that the leak detection system be certified. There are third party systems on the market that claim to check charges, but the commenter believes some may be inaccurate. The commenter recommends referencing ASHRAE 207P, which will allow for verification of the charge checking systems. EPA responds that the referenced ASHRAE standard is still under development and we are unaware of any certification programs that exist or that are planned to reference that standard once finalized. Requiring certifications for leak detection systems is therefore not appropriate at this time. EPA is finalizing the proposal to require that the owner or operator calibrate the automatic leak detection system annually and keep records documenting the calibration.

5. Lowering Leak Rates

The leak rate is the rate at which an appliance is losing refrigerant, measured between refrigerant charges. If the leak rate for an appliance is above a specified threshold, the regulatory revisions finalized in this rule require certain actions, such as leak repair, from the owner/operator.

EPA is lowering the leak rates for IPR, commercial refrigeration, and comfort cooling and other appliances containing ODS refrigerants and is establishing those same leak rates for appliances using non-exempt substitute refrigerants. EPA is lowering the leak rates to 30 percent (from 35 percent) for IPR, 20 percent (from 35 percent) for commercial refrigeration appliances and 10 percent (from 15 percent) for comfort cooling and all other appliances with a full charge of 50 pounds or more of ODS or non-exempt substitute refrigerant. For the reasons discussed below, EPA is finalizing a higher leak rate for IPR than proposed while finalizing the same rates as proposed for commercial refrigeration and comfort cooling. In making this decision, EPA has assessed the compliance costs, cost savings, and environmental benefits and has found that the aggregated costs are reasonable, and that lowering leak rates will result in fewer emissions of both ODS and non-exempt substitute refrigerants.

EPA reviewed data submitted under California's RMP, the South Coast Air Quality Management District (SCAQMD), GreenChill partners, consent decrees for both commercial refrigeration and IPR for companies found to be in violation of subpart F regulations, EPA's Vintaging Model, conversations with potentially affected stakeholders, and comments on this and past proposed rules. See the technical support document *Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program* for a complete discussion. EPA presents here background on two data sources (CARB and SCAQMD) that EPA relied on for multiple types of appliances and then discusses appliance-specific data separately.

California's RMP requires that owners or operators of any appliance with more than 50 pounds of ODS or HFC refrigerant repair leaks, conduct leak inspections or install automatic leak detection equipment, and report their refrigerant usage and repairs.[22] In addition, any facility with a refrigeration appliance containing more than 50 pounds of refrigerant must report all service records annually to California. CARB has categorized facilities based on the facility's largest appliance. Facilities that have at least one appliance with a full charge of 2,000 pounds or more (classified as ''large'' facilities under the RMP) began reporting in 2012 (for 2011 service records). These large facilities must submit service records for any appliance that has a full charge greater than 50 pounds. ''Medium'' facilities have at least one appliance with a full charge of 200 or more pounds but less than 2,000 pounds and they started reporting in 2014. ''Small'' facilities have at least one appliance between 50 and 200 pounds and will have begun reporting in 2016. California's reporting program provides insight into the use and emissions of ODS and substitute refrigerants from refrigeration appliances in the state, across a broad range of sectors that use refrigeration appliances. For the proposed rule, EPA reviewed the 2013 data, the most recent dataset available at that time, which contained information from 11,166 appliances at large and medium facilities. EPA has subsequently reviewed the 2014 data, containing data on 12,605 appliances, and found it to be substantially similar. A series of charts showing the aggregated California data has been included in the technical support document. EPA has analyzed these data in developing the revised leak rates for IPR, commercial refrigeration, and comfort cooling appliances.

California's South Coast Air Quality Management District is an air pollution control agency that services the areas of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties, which contained approximately half of the population of California at that time. SCAQMD had issued Rule 1415 to reduce emissions of ozone-depleting refrigerants from stationary refrigeration and air-conditioning systems. The rule required any person within SCAQMD's jurisdiction who owns or operates a refrigeration system to minimize refrigerant leakage. A refrigeration system is defined for the purposes of that rule as ''any non-vehicular equipment used for cooling or freezing, which holds more than 50 pounds of any combination of class I and/or class II refrigerant, including, but not limited to, refrigerators, freezers, or air-conditioning equipment or systems.''

Under Rule 1415, SCAQMD collected the following information every two years from owners or operators of such refrigeration systems: Number of refrigeration systems in operation; type of refrigerant in each refrigeration system; amount of refrigerant in each refrigeration system; date of the last annual audit or maintenance performed for each refrigeration system; and the amount of additional refrigerant charged every year. For the purposes of Rule 1415, additional refrigerant charge is defined as the quantity of refrigerant charged to a refrigeration system in order to bring the system to a full capacity charge and replace refrigerant that has leaked. This reporting requirement has now been replaced by the statewide RMP reporting.

EPA analyzed the SCAQMD data on ODS-containing appliances for the proposed 2010 Leak Repair Rule. The analysis prepared for that rule can also be found in the docket for today's rulemaking. The dataset contains information on over 4,750 appliances from 2004 and 2005 with ODS refrigerant charges greater than 50 pounds. The data included refrigeration and air-conditioning appliances that meet EPA's definitions of IPR (*e.g.,* food processing industry, pharmaceutical manufacturing), commercial refrigeration (*e.g.,* refrigerated warehouses, supermarkets, retail box stores), and comfort cooling (*e.g.,* office buildings, universities, hospitals) from businesses of all sizes. EPA has considered the previous analysis of those data in developing the revised leak rates for IPR, commercial refrigeration, and comfort cooling appliances in this final rule.

i. Industrial Process Refrigeration

In the proposed rule, EPA discussed reducing the leak rate for IPR and commercial refrigeration from 35 percent to 20 percent. EPA specifically sought comments on whether a 20 percent leak rate was appropriate, or whether a leak rate higher than 35 percent or as low as 10 or 15 percent would be appropriate. After considering the comments received and upon further analysis of the CARB data, EPA is finalizing a leak rate of 30 percent.

Some commenters supported the lower leak rates noting that real-world experience shows that the lower leak thresholds are technically and practically achievable. Some industry members encouraged EPA to explore the feasibility of further lowering rates for IPR in the future, consistent with improved and available industry best practices. Other commenters stated that data from GreenChill and consent decrees are not representative of IPR facilities. One commenter also stated that CARB data do not support that a 20 percent threshold is achievable because one third of the reporting facilities are not achieving such performance. As a result, the commenter stated that EPA has not shown that lowering the leak rate for IPR from 35 to 20 percent is necessary nor economically or practically feasible.

Some commenters suggested EPA distinguish between old and new equipment. One commenter noted that existing IPR equipment can meet the 35 percent leak rate but not all could achieve the 20 percent leak rate. Thus, the proposed leak rate would strand significant investment in custom-designed refrigeration process equipment. Another commenter stated that older IPR facilities were designed when refrigerant tightness was not a critical design element. Facilities have been upgraded and maintained to achieve 35 percent leak rates but further upgrades and repairs to bring them to a lower rate would be costly if not impossible. The commenter also stated that it would not be cost effective since many are near the end of their useful lives. A few commenters suggested that EPA follow the 1998 proposal and allow for the 35 percent rate if the appliance meets all of the following criteria: (1) The refrigeration system is custom-built; (2) the refrigeration system has an open-drive compressor; (3) the refrigeration system was built in 1992 or before; and (4) the system is direct-expansion (contains a single, primary refrigerant loop). Another commenter recommended keeping the leak rate at 35 percent for systems using substitute refrigerants, stating that companies that retrofitted from ODS to HFC refrigerants should be recognized for that prior environmental advancement.

In response to the comment that some of the data are not representative of IPR facilities, EPA responds that the Technical Support Document for the proposal did distinguish between IPR and commercial refrigeration. EPA did not use GreenChill's commercial refrigeration data or consent decrees for commercial refrigeration as a basis for the proposal on IPR. In the final Technical Support Document, as well as the discussion that immediately follows, EPA has further separated out the analysis for IPR.

[22] Among other requirements, the RMP establishes leak repair requirements for appliances with more than 50 pounds of refrigerant. More detail on the RMP is provided in the technical support document in the docket titled *Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program* and online at *www.arb.ca.gov/stoprefrigerantleaks*.

After considering these comments and further reviewing the CARB data, EPA is finalizing a leak rate of 30 percent for IPR, rather than 20 percent as proposed. The potential benefits of lowering the leak rate to 20 percent are small in relation to the potential costs incurred by those small number of facilities that could be affected.

EPA's model, informed by the 2013 CARB data, indicates that 92 percent of IPR appliances have leak rates below 30 percent. Almost 10 percent of ODS-containing appliances would trigger the leak repair requirements if the leak rate were lowered from 35 to 20 percent, as proposed. However, if the leak rate is lowered from 35 to 30 percent only 0.6 percent more ODS-containing IPR appliances would trigger the leak repair requirements.

Viewed another way, using the California data as a proxy for the entire United States' IPR systems, the proposed 20 percent leak rate could affect up to 9 percent of all IPR appliances (though only a small subset of IPR systems above 20 percent using ODS refrigerant would be newly affected because they were already subject to the 35 percent leak rate). Appliances that leaked more than 20 percent are responsible for 86 percent of emissions in the CARB data. Changing the leak rate threshold to 30 percent, as EPA is finalizing in this rule, would affect 7 percent of all IPR appliances and an even smaller subset of ODS-containing equipment (only 0.6 percent). In the CARB records, appliances leaking more than 30 percent are responsible for 75 percent of emissions.

EPA's review of the 2004 and 2005 data submitted to the SCAQMD from 349 IPR facilities also indicate that 81 percent of ODS-containing IPR appliances had leak rates below 30 percent. Slightly less than 5 percent of ODS-containing appliances would trigger the leak repair requirements if the leak rate was lowered from 35 to 20 percent, as proposed. In this final rule, only 1.5 percent of ODS-containing appliances would trigger the leak repair requirements if the leak rate was lowered from 35 to 30 percent. However, by extending the leak repair requirements to IPR appliances containing non-exempt substitute refrigerants, a 30 percent leak rate would also trigger all IPR facilities using non-exempt substitute refrigerants above that threshold, not just the incremental difference of facilities operating between 30 and 35 percent.

EPA calculates leak inspection and repair costs of a 20 percent leak rate for IPR to be $7.0 million, with annual emissions reductions equal to 0.63 $MMTCO_2eq$ and 8.0 ODP tons. EPA calculates the leak inspection and repair compliance costs of a 30 percent leak rate for IPR to be $5.5 million, with annual emissions reductions equal to 0.44 $MMTCO_2eq$ and 5.4 ODP tons. Finally, EPA analyzed retaining the current 35 percent leak rate for IPR, as applied to IPR using substitute refrigerants. In that scenario, the leak inspection and repair costs would be $5.1 million, with annual emissions reductions equal to 0.26 $MMTCO_2eq$ and 0 ODP tons. Lowering the leak rate from 35 to 30 percent provides significantly more environmental benefits, including reductions in emissions of ozone-depleting substances, for the costs. Lowering the leak rate further provides diminishing returns.

EPA recognizes that some IPR transitioned to HFCs from ODS refrigerants. This may have been an environmental decision for some, but other commenters stated that this was done to avoid being covered by the subpart F regulations. For whatever reasons, these facilities transitioned to a substitute refrigerant and therefore were no longer required to maintain a leak rate below 35 percent. EPA's analysis described above indicate that that a majority of the new IPR equipment affected by the rule will be those using substitute refrigerants. At a 30 percent leak rate, EPA estimates that there will be 492 newly affected systems containing ODS refrigerant but 5,938 systems containing HFC refrigerants.

While the number of affected IPR facilities may be small (EPA estimates there are 1.5 million appliances with a charge size of at least 50 pounds of an ODS or non-exempt substitute refrigerant), the challenges faced by IPR facilities to upgrade or improve their system are more substantial that those faced by other appliance types. In general, leak rates are highest for IPR systems for a number of factors. First, such appliances are generally custom-built and assembled at the site where they are used rather than in a factory where standard manufacturing practices can be put in place to reduce leaks. Appliances used in IPR are custom-designed for a wide spectrum of processes and facilities, including applications such as flash freezers aboard commercial fishing vessels to cooling processes used in the manufacture of pharmaceuticals. This results in the sector having an extraordinarily broad range of equipment configurations and designs. Custom designed equipment may also present more challenges to original equipment manufacturers who wish to systematically implement leak reduction technologies. Second, these appliances generally use a long, single refrigerant loop for cooling that is not enclosed within a piece of equipment. This tends to raise average leak rates, particularly when the refrigerant loop flows through inaccessible spaces, such as underneath floors, or when used in challenging climates and operating conditions. Third, these appliances are often integrated into production plants or other applications and typically operate continuously. This need for continuous operation can make repairing certain leaks more difficult and costly, possibly requiring manufacturing processes to be shut down and long lead times. Multiple commenters agreed with and provided comments supporting EPA's assessment that IPR facilities can be leakier and more challenging to repair than commercial refrigeration and comfort cooling appliances.

In response to comments requesting different leak rates for old and new appliances, EPA is not distinguishing between old and new appliances in the regulations for the following reasons. First, CARB data indicate that older IPR equipment is not necessarily leakier than newer IPR equipment. While newer systems can generally be designed with leak tightness in mind, EPA has also found that the quality of the construction and the operation and maintenance of the appliance plays a larger role in whether the appliance leaks than the age of the equipment *per se.* Leakage can be reduced even on older equipment by taking appropriate measures. Second, in EPA's experience with the HCFC phaseout, it has been challenging in some circumstances for owners and operators to determine whether an appliance is existing or new.

For clarity and to facilitate compliance, and consistent with the proposal, EPA is not finalizing a distinction between old and new IPR appliances in the leak thresholds finalized in this rulemaking. In response to the commenters encouraging EPA to explore the feasibility of further lowering IPR rates in the future, EPA will take this under advisement for future analyses and such a future analysis may include the age of the facility and refrigeration technology used. Further gradation of the IPR category is not necessary at this time.

ii. Commercial Refrigeration Appliances

EPA proposed to lower the leak rate for commercial refrigeration appliances from 35 percent to 20 percent. Based on the data analysis discussed in this section and comments, EPA is finalizing that rate as proposed.

First, EPA reviewed data from GreenChill, an EPA partnership with food retailers to reduce refrigerant emissions and decrease their impact on the ozone layer and climate change. Established in 2007, this partnership has 27 member companies comprising almost 30 percent of all supermarkets in the United States. GreenChill works to help food retailers voluntarily (1) transition to environmentally friendlier refrigerants; (2) lower refrigerant charge sizes; (3) eliminate leaks; and (4) adopt green refrigeration technologies and best environmental practices. One of the GreenChill partnership's programs that helps food retailers reduce their refrigerant emissions is the Food Retailer Corporate Emissions Reduction Program. Under this program, partners report their corporate-wide average leak rate for all refrigerants. A corporate-wide average leak rate is the sum of all refrigerant additions in a given time period for all of the commercial refrigeration appliances owned by a corporate entity, divided by the full charge for all of the commercial refrigeration appliances owned by that same corporate entity during that time period.

Between 2007 and 2014, the corporate-wide average leak rate for all reporting GreenChill partners remained within a relatively narrow range of between 12.6 percent and 13.8 percent. Remarkably, when new partners joined, the reported corporate-wide average leak rate across all partners remained level. Several supermarket chains in the GreenChill program, including some having hundreds of stores, have consistently reported a corporate-wide leak rate below 10 percent. These data support the conclusion that leak rates in commercial refrigeration appliances can be considerably lower than 35 percent and that a 20 percent leak rate is reasonable.

Some commenters found GreenChill data unpersuasive because they are self-reported and unverified and because they represent the average performance of multiple appliances rather than the performance of individual systems. Another commenter stated that GreenChill data are not representative of the supermarket industry as a whole and do not consider the capabilities of independent operators or small businesses.

EPA disagrees with the comments regarding the use of GreenChill data. It is appropriate to use the GreenChill data to inform EPA's consideration of achievable leak rates for commercial refrigeration. The average performance of multiple appliances is relevant to understanding how well individual appliances, on average, perform. This dataset represents almost a third of the supermarket industry, including a few smaller independent operators, over multiple years and locations across the United States. Even if the data were biased towards larger chains and organizations that have proactively sought to reduce their emissions below the prior regulatory rate of 35 percent, these data give an indication of what is achievable when companies seek to reduce leak rates. Further, these data demonstrate that leak rates well below 20 percent are not just achievable but may be consistently maintained. A leak rate is not inherent to a particular piece of equipment but rather includes factors such as how that appliance is operated and maintained.

One commenter representing the supermarket industry supported lowering the leak rate threshold but stated that 20 percent may be burdensome for small businesses and independent retailers. Other commenters in the supermarket industry supported the proposed 20 percent leak rate and one stated that they currently meet that rate for both ODS and HFC equipment. CARB submitted comments suggesting that EPA lower the leak rate to 10 percent for commercial refrigeration, or totally eliminate the threshold. Based on their 2014 RMP data, lowering the threshold to 10 percent would raise the number of affected systems in California from 5,500 to 6,342 (out of more than approximately 20,000 systems) while reducing greenhouse gas emissions by 0.11 $MMTCO_2e$. Another commenter urged EPA to establish a leak rate of 10 percent for new commercial refrigeration to incentivize improved design, installation, and maintenance. The commenter refers to the GreenChill program at least 125 stores currently certified as Silver or above, and with Platinum certified stores achieving leak rates below 5 percent and to a supermarket chain in the UK that has a corporate-wide leak rate of 7.1 percent in 2013.

EPA responds that the average leak rate across all GreenChill commercial refrigeration appliances does not rise appreciably when new companies joined the partnership, which indicates that companies operating outside of the GreenChill partnership are operating with leak rates well below 35 percent.[23] EPA's standard presumption, based on CARB data, is that the average leak rate for all commercial refrigeration is 25 percent. That some commenters say they operate their commercial refrigeration with leak rates below 20 percent for both ODS and HFC equipment is further support that private incentives drive lower leak rates and that a 20 percent rate is clearly achievable.

Based on data in the record, EPA does not agree that a 10 percent leak rate would be appropriate for commercial refrigeration. GreenChill partners have lower leak rates than the industry average, yet the average rate among all commercial refrigeration appliances in GreenChill is around 13 percent. There are only nine supermarkets that have achieved the Platinum level certification. EPA therefore does not believe that 10 percent is currently regularly achievable industry-wide. EPA also appreciates the concept raised by the commenter that establishing lower leak rates for future appliances could be a way to encourage innovation. EPA did request comment on whether there are other regulatory incentives that could provide a basis to go with a leak rate lower than 20 percent and establishing a target rate to achieve in the future is an intriguing concept. EPA will take this comment under advisement. However, in today's final rule EPA is basing the revised leak rates on what appliances are currently able to regularly achieve.

The data submitted to the SCAQMD from 1,722 commercial refrigeration appliances indicate that 77 percent of ODS-containing comfort cooling appliances had leak rates below 20 percent. Only 8 percent of ODS-containing appliances would trigger the leak repair requirements if the leak rate was lowered from 35 to 20 percent. In 2010, when EPA analyzed the data, EPA found that the SCAQMD leak repair data for commercial refrigeration appliances was consistent with EPA's analysis of the commercial refrigeration sector.

EPA has also reviewed how companies agreed to manage refrigerants through recent consent decrees with the Agency. In consent decrees with Safeway and Costco, the two companies agreed to bring their corporate-wide leak rates from about 25 percent to 18 and 19 percent, respectively. In a recent consent decree with Trader Joe's, the company agreed to achieve and maintain an annual corporate-wide average leak rate of 12.1 percent through 2019. One commenter was unpersuaded by the use of consent decrees because they are aspirational and do not reflect actual operation. EPA agrees that the corporate-wide leak rates to be obtained under these consent decrees are not data

[23] See the document *GreenChill Partnership's 2014 Data: Benchmarks, Results, and Trends* in the docket.

of actual operations, per se, but they are more than merely aspirational. Consent decrees are legally binding and the companies would not have committed to them if they thought they were unachievable. These consent decrees provide additional support for the proposition that a 20 percent leak rate for commercial refrigeration is reasonably achievable. These consent decrees are available in the docket.

iii. Comfort Cooling and Other Appliances

EPA proposed to lower the leak rate for comfort cooling appliances and all other refrigeration appliances normally containing 50 pounds or more of refrigerant that do not fit into the commercial refrigeration or IPR categories from 15 percent to 10 percent. Based on the data analysis discussed in this section and comments, EPA is finalizing that rate as proposed.

Some commenters recommended keeping the leak rate at 15 percent because some older systems may not be able to achieve a lower leak rate. These commenters stated that large chillers from the 1990s have a leak rate of 8 to 10 percent due to the seal lubrication design and that as chillers age, the leak rate increases. They asserted EPA should therefore consider the equipment's date of manufacture, the compressor configuration, and whether the equipment is custom built. Another commenter recommended a 5 percent leak rate for comfort cooling and cited multiple data sources. This commenter pointed to sources of data showing a 0.5 percent leak rate for HCFC–123 chillers, as well as a 2009 CARB analysis showing a leak rate of 1 percent and the 2005 IPCC/TEAP Special Report which shows average annual leak rates for best practice in large commercial air-conditioning to be 0.5 percent. Another commenter indicated support for the 10 percent leak rate and noted that the threshold could be lowered further without creating undue burden, but did not provide any technical data concerning average leak rates.

EPA responds that the Agency does consider factors such as the date of manufacture and the compressor configuration for establishing a leak rate applicable to all comfort cooling appliances. Since as far back as 1998, EPA found that comfort cooling appliances leaked less than five percent per year, with many new comfort cooling appliances leaking around two or even one percent per year. The highest leak rates reported from new equipment back in 1998 was high pressure chillers with open-drive compressors with leak rates ranging from four to seven percent. (63 FR 32066). This assessment continues to be valid based on industry feedback on EPA's Vintaging Model. On the other side of the spectrum, the ultralow leak rates (*e.g.,* 1 percent or lower) cited by the other commenter are generally best-practice leak rates or average leaks rates across new or low-pressure chillers and do not necessarily represent the full range of chillers, by type and age, that are subject to these regulations. The HCFC–123 chillers cited by the commenter operate at a lower pressure than the other systems and thus might not be representative of achievable leak rates for HFC and other HCFC equipment which operate under higher pressures.

A few commenters stated that EPA lacks definitive data on typical and economically achievable leak rates for comfort cooling appliances. These commenters asserted that the CARB and GreenChill data presented in the proposed rule are primarily related to commercial refrigeration and IPR, and that SCAQMD's data is not nationally representative because those appliances have been subject to leak regulations since 1991.

EPA responds that the Agency has analyzed average leak rates specifically of comfort cooling appliances as reported to SCAQMD and CARB, and as estimated in the Vintaging Model. As reflected in this analysis, these three sources indicate that most comfort cooling appliances can regularly achieve an annual leak rate of 10 percent. This memo also cites other industry estimates of leak rates in comfort cooling appliances. The majority of these estimates range between 2 and 5 percent with three of the fourteen estimates estimating leak rates above 10 percent.

The data submitted to the SCAQMD from 2,700 comfort cooling appliances indicate that 87 percent of ODS-containing comfort cooling appliances had leak rates below 10 percent. Only 1.5 percent of ODS-containing appliances would trigger the leak repair requirements if the leak rate was lowered from 15 to 10 percent.

EPA agrees that appliances in California or in the SCAQMD may have lower leak rates than appliances nationally, given the refrigerant management regulations that have existed in the state for many years. EPA therefore compared California data with the national assumptions in the Vintaging Model and found that the two correlate closely. The Vintaging Model is updated frequently with data supplied by refrigerant industry stakeholders. Therefore, any difference is not likely to be significant. This comparison is found in the final technical support document in the docket.

Commenters also stated that previous actions are leading the recovery of the ozone layer. These commenters stated that reducing the leak rate as proposed will not contribute to the recovery of the ozone layer and thus EPA cannot justify the burden on owners and operators of such equipment. EPA anticipates that this action will contribute to the recovery of the ozone layer and has calculated a reduction in ODP-weighted emissions of 114 ODP tons. However, section 608 does not require EPA to quantify the impact of this action on the ozone layer. To the contrary, section 608(a) directs EPA to establish regulations that reduce the use and emissions of ODS to the lowest achievable level, without requiring separate evaluation of how each such reduction would affect the recovery of the stratospheric ozone layer. Individual actions such as reducing emissions from comfort cooling appliances fit into the broader approach to ozone layer protection reflected in Title VI of the Clean Air Act. As such, any action that reduces the use and emissions of ODS can help the recovery of the ozone layer.

EPA also received two comments regarding what is included under the term *other appliances.* One commenter recommended that the Agency create a defined term that includes refrigerated air dryers, non-food cold storage, wind tunnels, electrical equipment room cooling, non-occupied digital control rooms, computer server rooms with set point below 68 °F, environmental chambers, growth chambers, turbine inlet air cooling, test cells and chambers, and aquariums. That commenter stated that thousands of regulated entities have identified systems that potentially fall into that category. Another commenter noted that humidity control in paint booths and air compressors could be *other appliances* but are currently treated as IPR. This commenter encouraged EPA to remove the other category and instead treat appliances that do not fall under comfort cooling or commercial refrigeration as IPR.

At this time, EPA is not finalizing a definition of ''other appliance.'' The owners or operators of some of the appliances included in a definition may currently treat such appliances as IPR or commercial refrigeration. While not all ''other appliances'' fall under IPR, for those that do, moving them into an ''other appliances'' category would reduce their leak rate from 35 to 10 percent without prior notice. More fundamentally, EPA's current view is that it is appropriate for other appliances to be regulated according to their function, such that those that fit within the definition of IPR would be regulated as IPR and those that fit within the definition of commercial refrigeration would be regulated accordingly. That view is reflected in the regulatory text finalized in this rule, which provides that the 10 percent leak rate applies to ''other appliances'' with a full charge of 50 or more pounds of refrigerant that are not covered by subparagraphs addressing IPR or commercial refrigeration equipment.

6. Leak Rate Calculation and Seasonal Variances

The first step in reducing refrigerant leaks is knowing whether the appliance is leaking refrigerant and, if so, to what extent. The prior regulations at § 82.156(i) did not explicitly require technicians or owners and operators to calculate the leak rate each time refrigerant is added to an appliance. Recognizing that knowing the leak rate is necessary for compliance with the leak repair provisions of subpart F, EPA's *Compliance Guidance for Industrial Process Refrigeration Leak Repair Regulations under Section 608 of the Clean Air Act* from October 1995 states that ''*[e]ach* time you add refrigerant to a system normally containing 50 pounds or more of refrigerant, you should promptly calculate the leak rate.'' (emphasis in original). Generally, the only time one can calculate the leak rate is when refrigerant is added to the appliance.

To reinforce this practice, EPA is clarifying in the revisions to the regulatory text finalized in this rule that owners or operators of appliances with 50 or more pounds of refrigerant must calculate the leak rate every time refrigerant is added to those appliances. EPA is also clarifying that the leak rate would not need to be calculated when refrigerant is added immediately following a retrofit or the installation of a new appliance or for a seasonal variance.

Two commenters suggested that the leak rate calculation should not be required on non-leaking appliances where all identified leaks are repaired within 30 days of discovery. While EPA commends appliance owners and operators who regularly repair all identified leaks within 30 days, calculating the leak rate each time refrigerant is added is still necessary. Comments indicate that in some instances, appliance owners and operators are unable to find significant leaks that may be driving the high leak rate. Given this feedback, EPA concludes that calculating the leak rate is needed to alert the appliance owner or operator to the fact that, in the case of a continually high leak rate, the typical repair and inspection attempts are not sufficiently addressing the problem with the appliance. Moreover, because the revisions to the leak repair rules as finalized in this action require owners or operators to repair leaks to lower the leak rate below the applicable threshold, calculating the leak rate on an ongoing basis provides important information to help evaluate whether this requirement has been satisfied. Not calculating the leak rate each time refrigerant is added could also lead to confusion for technicians that service more than one customer if each has different equipment subject to different regulatory compliance requirements.

EPA is also clarifying in this final rule how to handle seasonal variances. In regions of the country that experience large temperature swings during the year, refrigerant in some appliances can migrate from the condenser to the receiver. This migration results in a need to add refrigerant to an appliance to ''flood the condenser'' in the season of lower temperature ambient conditions (fall or winter). In this case, the added refrigerant would have to be removed when the weather returns to design ambient conditions to prevent high head pressures. This technique is often referred to as a winter-summer charge procedure or a seasonal adjustment. Seasonal adjustments are not necessary for appliances with properly sized system receivers because they can hold the appliances' full charge, including the additional charge needed to flood the condenser.

Under this final rule, owners or operators can exclude from the leak rate calculation the amount added that is less than or equal to the amount removed during the prior season. In a properly charged, non-leaking system, adding refrigerant during months with lower ambient conditions (fall or winter) would require an equivalent amount of refrigerant to be removed in the months with higher ambient conditions (spring or summer). If more refrigerant is added in the fall/winter than was removed in the prior spring/summer, the difference between the two would be considered a leak and not a seasonal variance. Without requiring that the amount added be equal to or less than the amount removed to qualify for the exemption, there is no way to distinguish legitimate seasonal variances from refrigerant leaks. For example, an appliance owner removes 150 pounds of refrigerant during the spring. Later that year, he adds 180 pounds to that same system to address a seasonal variance. The owner would be able to consider 150 of the 180 pounds as a seasonal variance and the remaining 30 pounds as a leak.

EPA expects only one removal and one addition of refrigerant to account for seasonal variance. If the amount added is equal to or less than the amount removed in the previous season, but an additional amount is added in close proximity (typically within a few days to a few weeks) to the addition being counted as a seasonal variance, and the two additions together are less than or equal to the amount removed in the previous season, the second addition would be considered part of the same refrigerant addition unless the owner or operator could document a leak.

As discussed previously in this notice, EPA is defining a seasonal variance as the removal of refrigerant from an appliance due to a change in ambient conditions caused by a change in season, followed by the subsequent addition of an amount that is less than or equal to the amount of refrigerant removed in the prior change in season, where both the removal and addition of refrigerant occurs within one consecutive 12-month period.

EPA is finalizing in the revised regulations at § 82.157(b) that the leak rate does not need to be calculated when adding refrigerant that qualifies as a seasonal variance. Both the addition and prior removal of refrigerant due to seasonal variances must be documented. Such additions and removals would already be accounted for in service records provided by the technician to the owner/operator. The recordkeeping requirements for this flexibility in calculating the leak rate are located in § 82.157(l)(2), and those for maintaining records associated with the seasonal variance if it is excluded from the leak rate calculation are at § 82.157(l)(10).

Commenters were generally supportive of this new flexibility, but had some concerns, many of which are discussed in the definitions section of this notice. Several commenters requested clarification on whether the owner or operator would be responsible for this requirement. Owners or operators must keep records of refrigerant added and removed from an appliance. If they wish to claim a seasonal variance, they must note in their records the amount of refrigerant that was removed at the end of the last season for a seasonal variance. This is likely to be one of the only reasons to remove refrigerant without immediately adding additional refrigerant or without mothballing, retiring or retrofitting an appliance.

7. Appliance Repair

The prior regulations at § 82.156(i) generally require owners or operators to repair leaks within 30 days of the leak rate being exceeded (*i.e.,* the date of the refrigerant addition) to bring the leak rate to below the applicable leak rate. In the proposed rule, EPA discussed that owners or operators may not know that they have performed sufficient repairs to bring the system below the leak rate, or they may have completed the repairs but may find themselves out of compliance if a separate leak occurs. To reduce emissions of refrigerants to the lowest achievable level, and remove ambiguity concerning compliance, EPA proposed to require a leak inspection of the appliance and then repair all identified leaks. Recognizing that a small amount of refrigerant can be released from an appliance even if the refrigerant circuit is unbroken, EPA sought comments on not requiring the repair of certain minor leaks. Specifically, EPA asked whether it should exempt situations where sound professional judgment indicates an individual identified leak is not the result of a faulty component or connection and that refrigerant releases would not be reduced from repair or adjustment.

Many commenters requested that EPA differentiate between major fixable leaks and minor unfixable leaks. They stated that it is impossible to repair ''all leaks'' as many systems have minuscule leaks that are not fixable. A couple of commenters suggested that EPA not require the repair of leaks that meet the ASHRAE 147 standard, which are those that are less than 0.1oz/year/joint. Another commenter recommends a threshold of 10,000 ppm if using leak detection equipment, or detection visible to the naked eye if using qualitative tests like a soap bubble test. Other commenters supported EPA's proposed exception that allows a technician to use best professional judgment to decide that a leak is not caused by a faulty component or connection and that the leak would not be reduced from repair or adjustment.

Some commenters were concerned about the diminishing returns of repairing all identified leaks. In some cases, small leaks may actually require extensive repair activities and even component replacement. Repairing all identified leaks will extend repair times, which for IPR systems may increase the costs of the repair or, in the case of nuclear generating facilities, increase the risk of conducting those repairs. For those reasons, these commenters said owners and operators should be provided flexibility to select which leaks to repair or make a good-faith effort to repair leaks.

In this final rule, after consideration of the comments, EPA is not finalizing the proposed change to require repair of all identified leaks. In the proposal, EPA acknowledged that a small amount of refrigerant can migrate from an appliance even if the refrigerant circuit is unbroken, and requested comment on whether there should be a limited exception from the requirement. Instead, the regulations finalized today contain the same requirement as in the original rule by requiring that leaks be repaired such that the leak rate will be below the applicable leak rate. Accordingly, EPA is not at this time setting a final standard for what is, or is not, an actionable leak beyond the applicable leak rate. In not finalizing this proposed change, EPA considers that an owner or operator may have good reason to choose not to repair a small leak. EPA also considers the original intent of the leak repair provisions, as explained in the 1993 Rule. At that time the Agency considered requiring the repair of all leaks ''which has the benefit of simplicity and clarity'' but explained that without ''any type of lower bound, however, this standard could result in huge amounts of money being spent to repair even pinhole leaks in equipment that may soon be obsolete . . . The intent of the leak repair requirement in this rule is to assure that substantial leaks are repaired.'' (58 FR 28680). Not finalizing this proposed requirement reduces the number of leaks that are to be repaired and accordingly will reduce the burden of the final rule compared with the proposed rule for two reasons. First, the repair effort itself may take less time. Second, fewer verification tests on the repairs, and recordkeeping associated with such tests, will be needed.

The final regulations include other provisions to help ensure that leaks are repaired consistent with the Rule's provisions, and to address compliance and enforceability of the leak repair provisions. For example, the final regulations provide for initial and follow-up verification tests, as discussed below. They also specify that the leak rate must be confirmed upon the next refrigerant addition. EPA recognizes that this will result in some uncertainty because the owner or operator will not know whether the repair is successful until the leak rate is measured at a future date. There are two instances in which EPA will consider a repair to be successful beyond calculating the leak rate upon the next refrigerant addition. The first instance is if a subsequent leak inspection does not find any leaks at all.[24] EPA therefore strongly encourages the owner or operator to repair all identified leaks, and this provision provides an incentive to repair all identified leaks, although EPA is not finalizing this proposed requirement. The second instance is if there has not been a refrigerant addition in 12 months after the date of repair. If there is not a need for another refrigerant addition for at least a year after the date of repair (and thus the leak rate cannot be calculated for at least a year) EPA will consider the repairs to have been successful.

If upon the next refrigerant addition the appliance is still exceeding the threshold leak rate, EPA's presumption is that the repair failed. The burden is on the owner or operator of the appliance to show that leaks were repaired to bring the leak rate below the applicable threshold and that those repairs held.

One commenter stated that the greatest value of a leak inspection is on a system with a known leak. A comprehensive leak inspection on an appliance that has exceeded the applicable leak rate will ensure that the technician does not stop an inspection when the first leak is found. Another commenter encouraged EPA to be specific that the leak inspection be conducted on the whole system not just where the original leak was found. Another commenter stated that if a particular circuit in a rack house is found to be leaking and is subsequently repaired and passes the verification test, it would be nonsensical to require the inspection of other circuits on that particular appliance.

EPA agrees with these three commenters. The leak inspection must encompass all visible and accessible components of an appliance, with certain exceptions specified in the revised rule. The leak inspection is not complete simply because a single suspected leak is identified. Only through an inspection of the whole of the appliance can an owner or operator know that the repairs that are to be made will be sufficient to bring the appliance below the applicable leak rate. However, a leak inspection need

[24] As discussed previously in this notice, EPA is finalizing the proposed requirement that the owner or operator conduct a leak inspection of the appliance before considering the repair to be complete. Conducting a comprehensive leak inspection is the only way to ensure that the owner or operator can identify the repairs necessary to bring the leak rate below the applicable level.

not be performed on other appliances at that site. As discussed previously in this notice, EPA is clarifying the definition of appliance such that each separate circuit is a separate appliance. While there could be a benefit to proactively searching for leaks on all other circuits, there is no obligation to inspect the other circuits if only one circuit is leaking and it has been repaired and the repair verified.

8. Verification Tests

The prior regulations at § 82.156(i)(3) required verification tests for repairs to IPR and federally owned commercial and comfort cooling appliances containing an ODS refrigerant. Verification tests are performed on appliances, or portions thereof, shortly after they are repaired to confirm that leaks have been fixed. Without verification tests, it may take additional time for the owner and operator to realize that a repair has been unsuccessful and during that time refrigerant could continue to leak from the appliance. EPA is extending this requirement to all required repairs because ensuring that the repairs are done correctly the first time is vital to reducing refrigerant emissions, regardless of whether the appliance is used for IPR, commercial refrigeration, comfort cooling, or is in the category of ''other appliances.''

EPA is finalizing the requirement at § 82.157(e) that owners or operators of all types of appliances that are subject to the leak repair requirements (including those using an ODS or non-exempt substitute refrigerant) perform both an initial and follow-up verification of repairs every time the applicable leak rate is exceeded (unless a retrofit or retirement plan is being developed). Most commenters on this issue supported the requirement for a follow-up verification test. Commenters agreed that the combination of an initial and a follow-up verification test provides effective confirmation of successful repair. One commenter stated that requiring the verification of all repairs would be excessively burdensome. The commenter discusses this burden in the context of the proposal to repair ''all identified leaks.'' The commenter continues that if amendments to the rule for inspections and repairs are adopted in any form, EPA should adopt verification provisions that are limited to significant leaks or adopt an 80/20 rule to assure that the majority of leak repairs are verified by a certified technician or qualified plant personnel.

EPA disagrees with the comment about limiting verification provisions to significant leaks or adopting an 80/20 rule. Because EPA is not requiring the repair of all identified leaks in the final rule, the number of verification tests should be reduced. However, as explained above, it is important that all repairs be verified both for purposes of compliance and enforceability and for purposes of avoiding emissions from leaking appliances. Since owners or operators have flexibility to determine which leaks to repair as long as they can meet the obligation to bring the leak rate below the applicable threshold, they may generally consider what are significant leaks in their repair effort. The verification tests would only apply to the leaks that were repaired.

One commenter stated that a follow-up verification test is unnecessary if there are periodic leak inspections and thus they should be eliminated. EPA disagrees with this comment because a follow-up verification test and a leak inspection serve two separate purposes. The verification test is conducted shortly after the repairs to confirm the success of those repairs. The leak inspections are to identify over the next year or longer whether new leaks have developed or whether minor leaks have become more significant and to determine the location of such leaks.

EPA requested comments on whether to require a minimum time between initial and follow up verification tests, such as one to three hours, to allow an appliance to return to normal operating characteristics and conditions. Many commenters recommended that EPA not establish a minimum time. Commenters suggested that the follow-up verification test be allowed as soon as the appliance returns to normal operating characteristics and conditions. Requiring a waiting period would increase costs by requiring an additional service call. Furthermore, high pressure systems will reveal whether a leak was properly repaired almost immediately.

EPA has considered the burden of conducting verification tests on all appliances. The Agency understands that most technicians pressure check appliances immediately following repairs. Such pressure checks would satisfy the initial verification requirements. EPA is concerned that follow-up verifications may not be a part of normal operating procedures for all repairs. This final rule would allow both initial and follow-up verification tests to be conducted during the same service appointment. Accordingly, EPA does not expect the requirement for verification tests to result in a longer servicing event and thus we do not expect this requirement to result in incremental labor costs. However, the final rule provides, and EPA reiterates, that the technician must wait until the appliance returns to normal operating characteristics and conditions, which includes operating temperatures, pressures, fluid flows, speeds, and other characteristics, including full charge of the appliance, that would be expected for a given process load and ambient condition during normal operation.

Some commenters requested that EPA add a reporting requirement for technicians to provide owners or operators with the results of the verification tests. These commenters expressed that it is difficult to get all of the documentation that they are required to maintain from the technicians who generate those records. EPA agrees with the need to harmonize the recordkeeping provisions between technicians and owners and operators and understands that in order for owners and operators to maintain the required records of the verification tests, they would need to obtain relevant information from the person conducting those tests. For these reasons, EPA is adding a requirement for technicians to provide documentation at the conclusion of each service visit to § 82.157(l)(5).

Two commenters suggested that EPA provide an exception for situations where a follow-up verification test is impossible, for example, when it would be unsafe to be present when the system is at normal operating characteristics and conditions. One of the commenters recommended that EPA allow a standing deep vacuum test in lieu of a follow-up verification test. EPA responds that the Agency attempted to address similar concerns from commenters in 1995. Examples included leaks inside a heat exchanger, compressor internals, locations that must be insulated prior to start-up, and locations in close proximity to dangerous hot equipment or moving parts where access is not possible after reassembly (See 60 FR 40429). At that time, the Agency amended the regulation at § 82.156(i)(3) to state that ''[i]n all cases, the follow-up verification test shall be conducted at normal operating characteristics and conditions, unless sound professional judgment indicates that tests performed at normal operating characteristics and conditions will produce less reliable results, in which case the follow-up verification test shall be conducted at or near the normal operating pressure where practicable, and at or near the normal operating temperature where practicable.'' EPA had proposed to remove that provision to make the regulation clearer and less ambiguous.

Instead, EPA is modifying that provision in the revised regulations at § 82.157(e)(2) to more clearly address the concern about safety raised by the commenters as well as the original intent of that provision.

EPA is also finalizing the proposed change to clarify that owners or operators may conduct as many repair attempts as needed within the initial 30 days (or longer if an extension is available) to repair the appliance. Consequently, the Agency is explicitly allowing unlimited verification tests within the required repair window. Commenters were supportive of this clarification.

9. Extensions to the 30-Day (or 120-Day) Repair Requirement

The prior regulations contained extensions to the repair or retrofit/retirement deadlines under four conditions:

- The appliance was mothballed (available for all appliances) (§ 82.156(i)(10));
- The appliance was located in an area subject to radiological contamination or where shutting down the appliance would directly lead to radiological contamination (available for federally owned appliances) (§ 82.156(i)(1)(ii) and (i)(5)(ii));
- Applicable federal, state, or local regulations made a repair within 30 or 120 days impossible (available for IPR) (§ 82.156(i)(2)(i)); or
- Parts were unavailable (available for IPR) (§ 82.156(i)(2)(i)).

While not an extension, IPR facilities were also allowed an initial repair period of 120 days rather than 30 days if an industrial process shutdown is required to complete the repair. In addition, an exemption to the repair requirement was allowed for all types of appliances if a dated retrofit or retirement plan is developed within 30 days and is then implemented within one year of the date developed.

EPA proposed to provide these extensions to all appliance categories, not just IPR and federally owned equipment. EPA is finalizing these proposed extensions, with some changes from the proposal. Based on comments received, EPA is finalizing a modified version for the extension for when necessary parts are unavailable. More specifically, EPA is clarifying that the extension is allowed when components that must be replaced as part of the repair are not available within the initial 30 day (or 120 day) repair time frame. Also based on comments, EPA is modifying the proposed changes to allow these extensions upon notification to EPA, unless EPA notifies the source otherwise, rather than requiring owners or operators to request an extension and wait for EPA approval. Taken together, these changes significantly reduce the burden of the leak repair regulations on owners of comfort cooling and commercial refrigeration appliances and to a lesser extent IPR.

Based on comments received, EPA is modifying the extension for when necessary parts are unavailable. Many commenters supported EPA's proposal to allow additional time to acquire and install a replacement for a leaking component. While EPA views installing a component as a type of repair, the comments indicate that some owners or operators consider the replacement of a component as different than the repair of an appliance. Replacing a component is more costly, requires more time to order, and requires more system downtime to install. Owners or operators may attempt to repair a leak but upon a failed follow-up verification test may ultimately decide that the whole component where the leak is located needs to be replaced. By the time a decision is made to replace the whole component, there is little time remaining within the initial 30 day repair window to procure and install that component.

Based on these comments, EPA is modifying the extension for when necessary parts are unavailable by clarifying that the extension is allowed when components that must be replaced as part of the required repair are not available within the initial 30 day time frame (or 120 days if an industrial process shutdown is required). This extension encourages the proper repair of an appliance, which in EPA's view, includes the replacement of major components if necessary, rather than simply patching those components, an approach which may not be successful in the longer term. Furthermore, some owners or operators would prefer to replace a faulty component before they are required to retrofit or retire an entire appliance and believe this could, in many instances, be an equally effective means to address needed repairs. This extension should also reduce the potentially large burden upon owners or operators of requiring a large-scale retrofit or retirement when replacing the leaking component might satisfactorily repair the appliance.

The extensions for repair in the prior regulations are open-ended. While those regulations provided only the additional time needed to receive delivery of the necessary parts, it did not set an outer limit for delivery nor did it clearly provide time to install the components once they are received. EPA is finalizing its proposal to set a limit on the extension for the installation of a necessary component. The owner or operator must complete the repair within 30 days after receiving delivery of the component and the total extension may not exceed 180 days (or 270 days if an IPR shutdown is required).

To qualify for any of the extensions in this section, owners or operators must perform all repairs that can be completed within the initial 30 or 120 day period. Initial verification tests must be performed on all completed repairs. A final verification test may not be appropriate for the completed repairs depending on the nature of the remaining repairs and state of the appliance. The owner or operator must also document all such repair efforts and the reason for the inability to make the repair. This would include a written statement from the appliance or component manufacturer or distributor stating the unavailability of the necessary component and the expected delivery date.

Some commenters stated that any changes to nuclear generating stations must undergo extensive engineering and risk review processes, which recommends against the requirement to retrofit if they cannot repair the system. The commenter noted that extended downtime of safety systems in such facilities will increase risk to workers and may conflict with federal regulations. EPA responds that the Agency is providing extensions for any appliance type subject to radiological contamination. Previously, this extension was available only for federally owned appliances. EPA is also not changing the open-ended nature of the extensions due to radiological contamination or compliance with applicable federal, state, or local regulations. Together, this should allow repairs in accordance with the commenter's schedule.

In some instances, encouraging repair may be a preferable environmental outcome to requiring the retrofit or retirement of a leaking system. Appliances that are to be retired are not required to be repaired. Thus, an appliance may continue to leak for up to a year (in addition to extension opportunities). Under this final rule, leaks must be repaired to bring the leak rate below the applicable threshold within 30 days and any component replacement must occur within 6 months. The extension could accelerate the time by which the appliance will stop releasing refrigerants by making leak repair seem more attractive or feasible for some owners or operators compared with retrofit or retirement of a leaking system.

Based on the comments received, EPA is allowing these extensions to be automatic, so long as EPA is notified. Previously, owners or operators would have to request these extensions from EPA and wait for them to be approved. One commenter requested that EPA automatically grant the extension where there are limiting federal, state, or local laws so long as the owner or operator maintains the proper documentation that demonstrates they satisfy the condition. Another commenter requested that EPA harmonize the timing of the request with the 30 day time frame to repair. Previously, a request had to be made within 30 days of exceeding the leak rate but EPA had an additional 30 days to approve or deny the request. There was no clear tolling of the 30 day repair clock which meant a system could be denied an extension after the repair deadline expired. EPA is resolving these conflicting schedules by considering repair requests approved unless EPA notifies the owner or operator that it is not approved.

Owners or operators must provide the same information to EPA as was contained in a request for an extension under the prior regulations. The request must include: Identification and address of the facility; the name of the owner or operator of the appliance; the leak rate; the method used to determine the leak rate and full charge; the date a leak rate above the applicable leak rate was discovered; the location of leak(s) to the extent determined to date; any repair work performed thus far, including the date that work was completed; the reasons why more than 30 days are needed to complete the repair; and an estimate of when the work will be completed.

If an extension to the earlier submitted completion date is necessary, the owner or operator must still submit a request to EPA with a new estimated date of completion and documentation of the reason for that change. The request must be within 30 days of identifying that further time is needed. The owner or operator must keep a dated copy of this submission and proof that it was submitted.

10. Retrofit or Retirement Plans

The previous regulations at § 82.156(i)(6) required an owner or operator of an appliance that exceeds the applicable leak rate to develop a retrofit or retirement plan generally within 30 days if they were unable to repair the leak or simply choose not to repair the leak and instead retire the appliance. EPA proposed four revisions to the retrofit/retirement provision. First, EPA proposed to remove the requirement to retrofit or retire an appliance after a failed follow-up verification test. Second, EPA proposed to remove the requirement to use a substitute with a lower or equivalent ODP. Third, EPA proposed to establish explicit elements of a retrofit/retirement plan. Fourth, EPA proposed to require that all identified leaks be repaired as part of implementing any retrofit plan. EPA is finalizing these four proposals, with some modifications based on comments.

Failed Verification Tests. The prior regulations required owners or operators of IPR using an ODS refrigerant that have failed a follow-up verification test to develop a retrofit or retirement plan within 30 days of the failed verification test and implement the plan within one year. Owners or operators of comfort cooling and commercial refrigeration appliances were not required to perform verification tests on their repairs and therefore were not subject to this trigger to develop a retrofit or retirement plan. As discussed in Section IV.F.8 of this notice, EPA is extending the requirement to conduct verification tests on repairs made to commercial refrigeration and comfort cooling appliances, increasing the potential universe of appliances affected.

Both prior to initiating this rulemaking and through comments received on the proposed rule, appliance owners/operators have expressed their concern to EPA that the requirement to retrofit or retire an entire appliance because it has failed a verification test is not always practical or necessary. In their view, a failed verification test should indicate to a technician that further repair work needs to be performed to properly fix the leak, not a regulatory requirement to begin retrofitting or retiring the appliance. As EPA discusses in the section on follow-up verification tests, in the revisions finalized in this rule EPA is allowing as many repairs and follow-up verification tests as are necessary to fix the appliance within the required time frame. Accordingly, consistent with these comments, the revised regulations no longer require an owner or operator to retrofit or retire an entire appliance simply because it has failed a verification test.

EPA proposed that failing to comply with ''paragraphs (e) and (f) of this section,'' which included the proposed requirement to repair all identified leaks and verify all repairs, would trigger a requirement to develop a retrofit or retirement plan within 30 days, rather than a failed verification test. As discussed above, EPA is not finalizing the proposal to repair all identified leaks; therefore, EPA is modifying the trigger to develop a retrofit or retirement plan accordingly. In this final rule, a plan must be developed within 30 days of discovering that an appliance continues to leak above the applicable leak rate after having conducted the necessary repairs and verification tests. This provision as finalized is also narrower and clearer than a ''failure to comply with paragraphs (e) and (f) of this section,'' which EPA proposed, because the proposed language could have been interpreted to also include failure to maintain records rather than failure to repair the appliance. EPA has added a provision to clarify that owners or operators are still required to develop a retrofit or retirement plan even if they do not affirmatively choose to retrofit, retire, or repair their leaking appliance.

Retrofit/Retirement ODP. EPA's prior regulations required that appliances containing an ODS refrigerant, when being retrofitted or retired/replaced, use a refrigerant with an equivalent or lower ODP. EPA created this provision to foster the transition from refrigerants with high ODPs to ones with a lower or zero ODP.

EPA proposed to remove this requirement and allow for retrofits or retired/replaced appliances to use any refrigerant (other than the one currently used in that appliance in the case of retrofits), so long as it is acceptable for use under SNAP. This proposed revision would not relax the prior requirements with respect to HCFCs since the regulations implementing sections 605 and 606 of the CAA already prohibit the use of virgin HCFCs in appliance manufacture (as of January 1, 2010, for HCFC–142b and HCFC–22; and as of January 1, 2020, for other HCFCs) and thus installation and retrofit of such appliances would not occur. As explained in the proposal, requiring the use of a refrigerant with a lower or equivalent ODP could be problematic if the requirement were read strictly because some non-exempt substitutes like HFOs that are not classified as an ODS have a negligible, but non-zero, ODP. For example, *trans*-1-chloro-3,3,3-trifluoroprop-1-ene (also known as 1233zd(E)) has an ODP between 0.00024 to 0.00034 and a GWP between 4.7 to 7 (see 77 FR 47768). Under a strict interpretation, an owner/operator would not be able to replace an R–134a chiller with a 1233zd(E) chiller in the future because R–134a has an ODP of zero and the olefinic refrigerant has an ODP greater than zero. This could prevent transition to low-GWP alternatives.

Some commenters suggested that EPA should require a retrofit to an acceptable substitute under SNAP, with one commenter suggesting that it be a lower GWP alternative than the refrigerant currently being used. Another commenter suggested that if the SNAP-approved refrigerant with the lowest available GWP is being used, EPA should allow for documented repairs and quarterly leak inspection in place of forced system retirement.

Other commenters questioned the value of retrofitting a system that already uses substitute refrigerants and suggest that retrofit plans should not be required for non-ODS equipment. One commenter viewed the existing rules as providing an opt-out incentive to owners that voluntarily retrofit to a non-ODS. The commenter requested that EPA retain this feature so that owners that switch from a high-GWP refrigerant to a low-GWP refrigerant similarly benefit. Similarly, a commenter questioned how retrofitting helps the owner/operator if the rules for HFCs are the same as for ODS.

EPA responds that the Agency is finalizing provisions that encourage the repair of leaking systems instead of requiring the retrofitting or retirement of those systems. Most significantly, EPA is finalizing the proposal to allow all comfort cooling, commercial refrigeration, and IPR appliances the opportunity to extend the deadline to repair leaking appliances beyond 30 days (or 120 days if an industrial process shutdown is required). It is not the Agency's intention to use the retrofit or retirement requirements in the subpart F regulations to dictate specific refrigerant choices. The revisions to these regulations are intended to provide as much flexibility to the owner or operator to decide what is appropriate for their system.

Elements of a Retrofit or Retirement Plan. EPA has not previously specified what elements should be included in a retrofit or retirement plan. Due to the complex nature of refrigeration appliances, an exhaustive list may not fit all types of appliances considering the wide array of configurations and refrigerant choices. Based on requests from stakeholders, EPA proposed a minimum set of information that is likely to be needed during any type of retrofit or retirement to be included in a plan, including:

- Identification and location of the appliance;
- Type (*i.e.,* ASHRAE number) and full charge of the refrigerant currently used in the appliance;
- Type (*i.e.,* ASHRAE number) and full charge of the refrigerant to which the appliance will be converted, if retrofitted;
- Itemized procedure for converting the appliance to the new refrigerant, including changes required for compatibility (for example, procedure for flushing old refrigerant and lubricant; and changes in lubricants, filters, gaskets, o-rings, and valves), if retrofitted;
- Plan for the disposition of recovered refrigerant;
- Plan for the disposition of the appliance, if retired; and
- Schedule for completion within one year of the appliance retrofit or retirement.

Some commenters stated that this is excessively detailed and includes information that is unlikely to be known immediately upon deciding to retrofit or retire an appliance. One commenter noted that it will take time to perform the necessary engineering evaluations and investigate the costs and timing associated with the available options. The commenter provided revised regulatory text to remove reference to the type of refrigerant and full charge for the retrofitted system, the procedure for converting the appliance to a new refrigerant, and the schedule for conducting the retrofit or retirement.

EPA responds that the shortest time frame in which a retrofit or retirement plan would have to be developed is when, upon discovering a leak, the owner or operator immediately chooses to retrofit or retire the appliance upon discovering that leak. In that circumstance the plan would be developed within 30 days. In all other circumstances, the owner will have 30 days from when repair attempts have failed, including repairs attempted under various extensions, to develop the plan.

While some information may not be available in that time frame, the owner or operator can develop an initial plan within 30 days and then modify it as additional information is determined. For example, owners or operators may not know within the allotted time frame what the itemized procedure will be until they finalize plans for the retrofit or retirement. The plan could indicate what steps must be taken in order to have enough information to make the necessary determinations. The information required in the plan is not excessively detailed because the owner or operator will need to know this information in order to properly dispose of the old appliance and install the replacement.

One commenter also stated that the plan does not need to be kept onsite with the appliance, so long as it can be made available to EPA and that it is also unnecessary for a plan to be signed because staff, including the person who initially signed the plan, could change. The commenter believes it is sufficient for EPA to be told who is responsible for the plan when it is provided to the Agency. EPA responds that it is appropriate for the plan to be accessible at the site of the appliance. The previous rules required that the original plan or a legible copy be kept at the site of the appliance. This could imply maintaining a printed version of the plan with the appliance. EPA is finalizing the proposal to allow for the plan to be ''accessible'' at the site of the appliance, which includes an option to have the plan be ''accessible'' in electronic format. This provides sufficient flexibility for the plan's storage while still allowing for the plan to be quickly available upon request. It is also important that the plan be signed so that the authorized representative has taken responsibility for the plan and so that EPA can identify who that person is and the date the plan was created.

Requirement to Repair Appliances Undergoing Retrofit. Under the prior regulations at § 82.156(i)(6), owners or operators were not required to repair leaks if they developed a retrofit or retirement plan. EPA proposed to require that all identified leaks be repaired as part of any retrofit under such a plan. EPA is finalizing the requirement that a system being retrofitted must be simultaneously repaired as part of the retrofit. EPA is also finalizing the proposed requirement that the owner or operator repair ''all identified leaks'' as part of the retrofit, rather than allowing selective repairs that would bring the appliance below the applicable leak rate. Although this differs from the requirements for leak repair discussed in Section IV.F.7, a retrofit is a more extensive change to a system, during which time components may be replaced and more comprehensive leak repair can be performed.

11. Extensions To Retrofit or Retire Appliances

Under the prior regulations at § 82.156(i)(6), an owner or operator generally was required to complete the retrofit or retirement of a leaking appliance containing an ODS within one year of creating a retrofit or retirement plan. Extensions were available in the following circumstances:

- If delays were caused by requirements of other applicable federal, state, or local laws or regulations (available for IPR);
- If a suitable replacement refrigerant with a lower ODP was unavailable (available for IPR);
- If the supplier of the appliance or a critical component quoted a delivery time of more than 30 weeks from when the order was placed (available for IPR);
- If complications presented by the appropriations and/or procurement process resulted in a delivery time of more than 30 weeks (available for federally owned appliances); or
- If the appliance was located in an area subject to radiological contamination and creating a safe working environment will require more than 30 weeks (available for federally owned appliances).

EPA proposed at § 82.157(i) four substantive revisions to these extensions. First, as with all other leak repair provisions, EPA proposed to apply these extensions to appliances containing non-exempt substitute refrigerants. EPA is finalizing this revision, as proposed.

Second, EPA proposed to remove the extension for when a suitable replacement refrigerant with a lower ODP is not available. EPA established this extension when certain applications using CFCs did not have a suitable HCFC substitute. Today, there are many more substitutes for ODS refrigerants. In fact, few appliances can be newly installed or retrofitted with virgin ODS because of the HCFC use restrictions implementing section 605 of the CAA. As discussed previously in this notice, EPA is removing the requirement that a retrofit use a refrigerant with a similar or lower ODP. Therefore, the rationale for this extension no longer exists and EPA is removing it as proposed. EPA is accordingly also removing the term *suitable replacement refrigerant* from the definitions in § 82.154, as proposed.

Third, EPA proposed a new extension at § 82.157(i)(1) if the appliance is to be retrofitted to or replaced with a refrigerant that is exempt from the venting prohibition as listed in § 82.154(a). In that situation, EPA proposed to allow an extension up to 18 months. Whereas the prior extensions were only available to IPR and federally owned appliances, EPA proposed to make this extension available to comfort cooling and commercial refrigeration appliances as well.

Some commenters were supportive of this proposal as a way to encourage transition to zero-ODP and low-GWP refrigerants. Other commenters were opposed to the proposal because it encourages the use of refrigerants that are more toxic, hazardous, or flammable than HFCs.

EPA responds that the first comment is correct that the refrigerants that are exempt from the venting prohibition, such as carbon dioxide (R–744), and the hydrocarbon refrigerants ethane (R–170), propane (R–290), isobutane (R–600a), and R–441A in certain uses, have an ODP of zero and low GWPs ranging from one to eight. EPA further notes that subject to 40 CFR subpart G, many of the refrigerants exempt from the venting prohibition are not acceptable when retrofitting certain types of equipment; hence, in most cases these exempt refrigerants would be used in new equipment replacing the leaking system. One reason to provide more time for retrofitting or replacements for exempt substitutes is to allow time to purchase and install new equipment. With respect to the points made by the second comment, the refrigerant must be approved under SNAP for the end-use in order to be used. A company choosing to move to one of these alternatives would reasonably be expected to consider safety characteristics of the refrigerant. Moreover, for refrigerants that are exempt from the venting prohibition, the Agency has already determined that the release of these substances do not pose a threat to the environment as part of the decision to exempt them from the venting prohibition. Accordingly, EPA is finalizing this extension as proposed.

Fourth, the prior regulations at § 82.156(i)(3)(v) relieved owners and operators of IPR appliances of the requirement to retrofit or retire their appliances if they established that the appliance's leak rate is below the applicable rate within 180 days of an initial failed follow-up verification test and they notified EPA within 30 days of that determination. EPA proposed to remove this provision because it was infrequently used and because other extensions, in particular the extension to receive a replacement component, should provide sufficient flexibility for IPR and other appliances.

Multiple commenters recommended that EPA retain this exemption because there may be situations where the root cause of a leak is not identified until after a retrofit/retirement plan is developed. The commenters stated that an appliance need not be retrofitted or retired if it can be demonstrated that it is repaired.

Based on these comments, EPA is not finalizing its proposal to remove that provision. Just because it is not frequently used does not mean that it may not be used in the future, especially since EPA is expanding the universe of appliances subject to the retrofit/retirement plan requirements to include those that use non-exempt substitute refrigerants. EPA agrees that an appliance need not be retrofitted or retired if it can be demonstrated that the repairs bring the leak rate of the appliance below the threshold leak rates. In the instance of a retrofit, because EPA is requiring that all identified leaks be repaired, it is possible that the appliance could be repaired to such an extent as to not need to complete the retrofit.

EPA is concerned, however, about whether this provision could provide a mechanism to delay repairs. To discourage this, EPA is requiring that all identified leaks be repaired consistent with the retrofit requirements, rather than merely fixing leaks sufficient to bring the appliance below the applicable leak rate, which is what EPA is finalizing for repairs required under § 82.157(d). EPA is also revising the reporting elements that were found in the prior regulations related to this provision. Rather than allowing the owner or operator to merely provide notice to EPA, the Agency is requiring that the owner or operator request that EPA relieve them of the obligation to retrofit or retire the appliance. Like other requests in the leak repair provisions, the request will be considered approved unless EPA notifies the owners or operators otherwise within 60 days of receipt. The request must also provide other information about the equipment and the repair, such as an explanation of why the repair was not conducted within the time frames required under § 82.157(d) and (f). This approach provides flexibility for owners and operators while avoiding it becoming simply an extension of the duty to repair because of the increased level of repair and the information requirements associated with its use. EPA anticipates this will be most useful in situations where the root cause of the leak is not identified until after a retrofit/retirement plan is developed.

Finally, EPA proposed to revise the extension for IPR to implement a retrofit plan where a supplier of the appliance or a critical component has quoted a delivery time of more than 30 weeks from when the order is placed. EPA proposed to modify this to mirror the extension allowed for the repair of an appliance in this situation, such that the appliance or appliance components would have to be installed on the retrofitted appliance within 120 days after receiving delivery of the necessary parts. Previously, this extension allowed for one additional year beyond the one-year retrofit period. EPA inadvertently removed a provision, found previously at § 82.156(i)(7)(iii), that further extended this extension for the delivery and installation of critical components without discussion in the notice of proposed rulemaking. EPA is restoring that provision at § 82.157(i)(2)(iii). EPA notes that the Agency correctly proposed a similar extension for federally owned appliances in § 82.157(i)(3)(iii).

12. Chronically Leaking Appliances

EPA proposed to add a total leak limit to the repair requirement to address chronically leaking systems. Under that proposal, an appliance containing 50 or more pounds of refrigerant may not leak more than 75 percent of its full charge in two consecutive twelve-month periods and remain in use. If an appliance exceeded the two year leak limit, the owner or operator would be out of compliance until the appliance was retired or mothballed and later retired.

For the proposed rule, EPA reviewed data reported to CARB to determine whether such a total leak limit would be necessary and, if so, what the limit should be. In 2013, approximately 8 percent of reporting appliances had leaked more than 75 percent of their full charge over the calendar year and were responsible for 38 percent of total reported emissions. Due to the high chronic leaks of such appliances, the environmental benefit of establishing a cumulative leak limit could be large. Nonetheless, the number of appliances affected by this proposed limit should be low.

Environmental NGOs and state pollution control agencies were supportive of the proposed two year leak limit, with one NGO suggesting a leak limit of 55 percent instead of 75 percent. A chemical manufacturer was also supportive if the proposal allowed an exemption for unavoidable catastrophic leaks. Many other commenters expressed strong opposition to the proposed two year leak limit, describing it as redundant, unnecessary, or punitive. Commenters state that there are many reasons why an appliance may leak in excess of 75 percent for two consecutive years even though the appliance is in good condition. For example, commenters expressed that it is possible for two large volume leaks to occur from unrelated components. Multiple commenters stated that owners should not have to mothball an appliance where the cause of the leak can be remedied by the replacement of a component. Commenters that operate supermarkets were especially concerned about the requirement to retire the appliance given that EPA's definition of appliance includes all of the display cases and coolers attached to the refrigerant circuit. This requirement would result in the scrapping and replacement of perfectly good components. Another commenter for similar reasons suggested that IPR be exempt from the retirement responsibility due to their unique nature, although the commenter believed comfort cooling and commercial refrigeration could remain subject to the 2 year leak limit. If EPA chose to finalize this leak limit, many commenters requested an off-ramp provision from the automatic retirement for catastrophic leaks resulting from accidents, vandalism, acts of nature, non-mechanical failures, or on a case-by-case decision upon notifying EPA.

In response to the significant concerns raised by commenters, EPA is not finalizing this proposed two year leak limit. EPA is aware of the many situations in which a system can leak large quantities of refrigerant in consecutive years. For instance, it is possible, though rare, for two catastrophic leaks to occur on the system through no fault of the operator. Although EPA requested comments on a possible exemption for catastrophic leaks, it is clear from the comments that there is a wide range of opinions about what a catastrophic leak is, and what can cause such a leak. Because EPA is not finalizing this provision, it is not defining the term *catastrophic leak* at this time.

EPA also assumed that, absent catastrophic leaks, it was unlikely for a system to be in compliance with other parts of subpart F while still leaking at this rate. EPA generally anticipates that a leaking appliance will be repaired within 30 days to six months. However, the leak repair regulations contemplate situations in which an owner or operator is unable to repair or subsequently retrofit a system in a timely fashion (*e.g.,* federally owned equipment located in areas subject to radiological contamination, unavailability of necessary parts for IPR, or adherence to local, State, or federal laws hinder repairs for IPR). Based on feedback from stakeholders from meetings docketed in this rule, EPA is aware of instances where appliances leak refrigerant in excess of 75 percent but are still in compliance with the other leak repair regulations.

While EPA wishes to reduce chronically leaking systems, EPA believes other practices required under this final rule will help address chronic leakers. For example, strengthening the leak repair regulations by lowering the rate at which the initial repairs must be performed, requiring leak inspections prior to those repairs, verification tests of those repairs, and subsequent leak inspections after the repair, will reduce the number of chronically leaking systems.

Data received from CARB and other sources indicate that there are systems that may not be adhering to the leak repair requirements of subpart F. Some commenters, even those opposed to the specific proposal offered by EPA, agree that the worst chronic leaking systems may warrant special consideration. However, they found the proposed provision both overly broad and overly harsh in its outcome. Some commenters proposed alternate methods of addressing chronically leaking systems. One commenter stated that a requirement to properly document causes for large leaks and to establish corrective actions would likely be more effective at reducing large leaks than simply imposing a two year leak limit that would result in a unit being retired. CARB recommended that if both (a) the annualized leak rate exceeds 100 percent more than 4 times in the previous 365 days and (b) more than 120 percent of the total charge has been added in the previous 365 days, the system or faulty component should be retired. EPA considered CARB's approach and finds it attractive for a couple of reasons. This alternative has the benefit of considering the number of refrigerant additions in addition to the total amount of refrigerant released, thereby removing appliances affected by catastrophic leaks. It also would take effect after one year, which will cut in half the time in which refrigerant is being released into the environment. However, this approach would still require the automatic retirement of these systems, which some commenters found to be too strict a penalty.

The chronically leaking appliance provision, as proposed, would apply to appliances containing 50 pounds or more of refrigerant that leak more than 75 percent of the full charge in each of two consecutive twelve-month periods. Based on the comments, EPA is revising the chronically leaking appliance provision. EPA is requiring that owners or operators of appliances that leak 125 percent of their full charge in a calendar year submit a report to EPA detailing their repair efforts. The reports must be submitted no later than March 1 of the year following the 125 percent or greater leak. Through that report, the owner or operator must demonstrate that they are in compliance with the repair provisions or the retrofit or retirement provisions in this section. In some cases, owners or operators may have already provided information to EPA as part of a repair or retrofit extension request.

By raising the threshold, EPA intends to avoid capturing appliances affected by unavoidable losses of full charge. Systems would have to lose their full charge and then a significant quantity more. Using CARB data and scaling up to the whole U.S., EPA estimates that 1,425 appliances (or 0.1 percent of all appliances with 50 or more pounds of refrigerant) would be affected at 125 percent of full charge.

Like CARB's approach, this would apply after one year rather than waiting for a second year of high leaks. As such, it will catch chronic leakers sooner than the provision EPA proposed. Several commenters contended the opportunity for a case-by-case determination is necessary to account for the variety of situations that might trigger the chronically leaking appliance provisions. They contended that without the opportunity for a case-by-case determination, the provision will force the retirement of working equipment. EPA's revised approach is similar to what many commenters suggested in that it allows for a case-by-case discussion after notifying EPA. Adding this reporting requirement also furthers EPA's goal of revising these regulations to improve enforcement and compliance of the regulations in subpart F. This will incentivize many owners and operators to improve their systems to ensure that they do not trigger this reporting requirement.

Comments were mixed as to whether the chronically leaking appliance provisions should be calculated based on calendar year, 12-month consecutive periods, or whether regulated entities should be given the discretion to choose one or the other. These concerns are partially moot, given that EPA has changed this requirement to allow for reporting to EPA in lieu of a retrofit or retirement. EPA is finalizing provisions stating that the 125 percent is based on calendar year so that entities do not need to calculate refrigerant additions on a rolling basis.

13. Recordkeeping

The prior regulations contained recordkeeping and reporting provisions for all of subpart F at § 82.166. As proposed, EPA is finalizing a recordkeeping paragraph at § 82.157(l) and a reporting paragraph at § 82.157(m) within the leak repair section to make these requirements easier to locate.

The prior regulations also required that certain records be kept in hard copy at the site of the appliance. Under the revisions finalized in this rule, EPA is explicitly allowing, though not requiring, electronic records in this final rule. EPA recognizes that many companies employ electronic databases to store and track records. An electronic recordkeeping system has advantages to paper records, and EPA encourages owners and operators of appliances to use one of these systems to track refrigerant additions and other required records. Electronic systems allow for more comprehensive refrigerant management and can help identify leaky appliances earlier. These records must still be accessible onsite if an EPA inspector visits a facility, but that access can occur through downloading or printing the records from an online system.

Owners and operators. The previous rules required owners and operators to maintain service records documenting the date and type of service, as well as the quantity of ODS refrigerant added. EPA proposed to add specific recordkeeping requirements to ensure that the owner or operator is aware of the leak rate. EPA also proposed to require that the owner or operator maintain records of all calculations, measurements, and assumptions used to determine the full charge and any revisions made to the full charge over time. EPA also proposed records for the leak inspections or automatic leak detection equipment, verification tests, and seasonal variances.

Some commenters stated that the recordkeeping for the newly proposed requirements will be a significant burden. One commenter stated that the recordkeeping from all of the leak inspections would be a large burden and urged EPA to minimize that burden in the final rule. Another stated that requiring detailed information on the location of all repaired leaks with the type of verification test would be a substantial burden and would require enhanced service records tailored to individual equipment. The commenter suggested EPA require instead only the date and results of initial and follow-up verification tests.

EPA responds that the Agency recognizes the concerns about the extent of the proposed recordkeeping burden. EPA is finalizing the recordkeeping requirements as proposed but is modifying the final rule to reduce the number of such records. First, EPA is only requiring leak inspections on systems that have exceeded the applicable leak rate, rather than on all appliances. EPA estimates that the universe of affected appliances will decrease by 81 percent relative to the proposal (from 1.5 million to 282,000 appliances). Though there are fewer leak inspections, EPA estimates a higher total burden because the Agency has increased the estimates for the costs of each inspection based on public comments. Second, EPA is only requiring repairs sufficient to bring the leak rate below the threshold leak rate, rather than requiring the repair of all identified leaks (unless the owner or operator chooses to calculate their leak rate using the Rolling Average method). There should be fewer verification tests and thus less to record.

EPA is finalizing the leak inspection records as proposed. Specifically, owners or operators must keep records of leak inspections that include the date of inspection, the method(s) used to conduct the leak inspection, a list of the location of each leak that was identified, and a certification that all visible and accessible parts of the appliance were inspected. The specificity of the leak inspection documentation is appropriate because this information will help demonstrate that the repair has brought the appliance's leak rate below the threshold leak rate. This information would allow the owner or operator to demonstrate, if needed, that a further exceedance of the leak rate threshold after repairing leaks is due to a new leak rather than a leak that was previously identified but not repaired.

EPA is also finalizing the verification test records as proposed. Specifically, owners or operators must maintain records that include the location of the appliance, the date of the verification tests, the location of all repaired leaks that were tested, the type of verification test used, and the results of those tests. It is important to document that each specific repair was verified so as to determine whether a repair was successful and whether the leak has been addressed. EPA is not requiring such specificity as a schematic of that individual appliance showing the locations of all repairs and verification tests. However, information should allow a technician to generally know which components of the appliance were repaired.

In this final rule, EPA is establishing the recordkeeping requirements described generally in this section for owners and operators of appliances normally containing 50 or more pounds of class I, class II, or non-exempt substitute refrigerant. All records required in § 82.157(l) must be maintained for at least three years.

- Maintain records documenting the full charge of appliances;

• Maintain records, such as invoices or other documentation showing when refrigerant is added or removed from an appliance, when a leak inspection is performed, when a verification test is conducted, and when service or maintenance is performed;

• If using an automatic leak detection system, maintain documentation that the system is installed and audited or calibrated annually and records of when the monitoring system identifies a leak and the location of the leak;

• Maintain retrofit and/or retirement plans;

• Maintain retrofit and/or extension requests submitted to EPA;

• If a system is mothballed to suspend a deadline, maintain records documenting when the system was mothballed and when it was brought back on-line (*i.e.,* when refrigerant was added back into the appliance);

• Maintain records of purged and destroyed refrigerant if excluding such refrigerant from the leak rate;

• Maintain records to demonstrate a seasonal variance; and

• Maintain copies of any reports submitted to EPA under § 82.157(m).

Technicians. The prior rules required technicians to provide an invoice or other documentation that includes the amount of ODS refrigerant added to the owner or operator. This would likely already include information on the system serviced, the date, and the company/person servicing the appliance. It would likely also include some description of the service provided. However, the information that the technician was required to provide did not match the information that the owner or operator was required to maintain. The limited records that the prior regulations required from service technicians also did not provide information needed by the owner or operator to make decisions on the fate of the appliance. EPA proposed to align the records that the technician must provide to the owner or operator with the ones that the owner or operator are required to maintain.

Multiple commenters noted that owners or operators must expend a tremendous amount of effort to obtain good records from outside service providers. Often facility owners are provided incorrect or incomplete paperwork or are unable to obtain paperwork at all. The commenters were generally supportive of EPA's proposal that would make it a requirement for technicians to provide the necessary information to the owner or operator of the appliance. However, one commenter stated that the record for the proposed rule does not justify the extent of records that technicians must provide to owners/operators and suggested that EPA maintain only the current recordkeeping requirements for technicians.

Multiple commenters requested that EPA remove the proposed requirement that technicians provide the owner or operator with the full charge of the appliance or the leak rate calculations because technicians often do not have sufficient information, such as the date of last service, to make those calculations. Other commenters requested that the Agency require the technician provide the owner or operator with information about the initial and follow-up leak repair verification tests that matches what EPA proposed to require the owner or operator to maintain.

After considering the comments, EPA is finalizing its proposal to align the records that the technician must provide to the owner or operator with the records that the owner or operator are required to maintain, with a few exceptions described below. In response to the comment that EPA maintain only the current recordkeeping requirements for technicians, the service technician is generally in the better position to generate those records as they are performing the service activities and usually are the expert that the appliance owner or operator is relying on to make informed decisions about their appliances. Finalizing these requirements for technicians should help ensure that the appropriate records are created so that they can be maintained.

Specifically, EPA is requiring that whenever an appliance with 50 or more pounds of refrigerant is maintained, serviced, repaired, or disposed of, the technician must provide the owner or operator with an invoice or other documentation that indicates (1) the identity and location of the appliance; (2) the date and type of maintenance, service, repair, or disposal performed, including the location of repairs and the results of any verification tests or leak inspections (if applicable); (3) the name and contact information of the person performing the maintenance, service, repair, or disposal; and (4) the amount and type of refrigerant added to and/or removed from the appliance (if applicable).

Based on the comments, EPA is not finalizing a requirement that the technician calculate the leak rate or provide the owner or operator with a record indicating the full charge of the appliance. The rules as finalized require the technician to provide information that they are best positioned to gather and that is relevant to calculating the leak rate and full charge, but the owner or operator is well positioned to determine those numbers because they should have the historical information that informs that calculation. Accordingly, it is not necessary for the technician to calculate the leak rate and EPA has modified the requirement at § 82.157(b) to explicitly state that it is the owner or operator's responsibility to calculate the leak rate. Because the owner and operator is also required to calculate the full charge it is no longer a relevant record for the technician to provide.

The final rule also explicitly requires that persons conducting the initial or follow-up leak repair verification test must, upon conclusion of that service, provide the documentation needed to meet the owner or operator's recordkeeping requirements. This furthers the goal of aligning the technician and owner or operator's recordkeeping requirements.

14. Reporting

The existing regulations require that owners or operators report to EPA in certain circumstances. EPA is not making changes to those reporting requirements in this final rule:

• If the owner or operator is requesting an extension to the 30-day (or 120-day) requirement to complete repairs pursuant to § 82.157(f);

• If the owner or operator is requesting an extension to complete a retrofit or retirement of an appliance pursuant to § 82.157(i); or

• If the owner or operator is excluding purged refrigerants that are destroyed from annual leak rate calculations pursuant to § 82.157(k).

EPA is also finalizing two reporting requirements that were not contained in the proposed rule. First, EPA is requiring at § 82.157(j) that owners or operators submit a report if their appliance leaks 125 percent or more of the full charge in a calendar year and thereby triggers the chronically leaking appliances provision. EPA is adding this report to provide added flexibility, so that appliances that have leaked 125 percent of their full charge or greater do not necessarily need to be retired or retrofitted provided there is an explanation for the leak. This report must explain the reason for the leak rate of 125 percent or greater and could potentially include, among other things, the documentation prepared to extend the repair requirement or a description of catastrophic events. As discussed earlier in this notice, this reporting requirement is based on comments received to remove the two-year leak limit and allow for case-by-case evaluations.

Second, this final rule contains a provision allowing owners or operators who are retrofitting or retiring an appliance to request that EPA relieve them of that obligation if they can establish within 180 days of the plan's date that the appliance no longer exceeds the applicable leak rate. This provision is contained in the prior regulations. EPA had proposed to remove it, but based on comments requesting that it be left in place, EPA is not finalizing the proposal to remove it. EPA is requiring information be included in the report that is similar to the previously existing requirement except EPA is additionally requiring a description of why the repair was not conducted within the time frames required under paragraphs (d) and (f) of this section. In addition, it must include a signed statement that all identified leaks will be repaired and an estimate of when those repairs will be completed (not to exceed one year from date of the plan). These additional elements are necessary to ensure that this provision is not used as a way to circumvent the required time frames for repair.

EPA is not finalizing the proposed requirement for the report that would have accompanied an extension request from federal agencies to conduct less frequent leak inspections in the proposed rule. EPA is not finalizing this proposed extension and thus the reporting element is no longer necessary.

EPA is also finalizing the requirement that all reports be submitted to EPA via email at *608reports@epa.gov*, as proposed. If the submission contains confidential business information, reports can be mailed to the address in § 82.160. This should reduce costs and streamline the reporting process for both EPA and those reporting. It is also consistent with EPA's Next Generation Compliance initiative. Commenters generally supported the move towards electronic reporting and recordkeeping.

Two commenters requested that the Agency require that owners and operators keep a record of the amount of refrigerant leaked annually to the atmosphere by refrigerant type and that this information be reported to EPA. Additionally, the commenters requested that EPA make the data related to the emissions of refrigerants publicly available. In accordance with the transparency element of the Next Generation Compliance initiative, the general public could then point out violations and owners and operators would have an incentive to correct excessively leaking appliances.

EPA responds that in general, EPA is not requiring that owners or operators calculate the sum total of refrigerant leaked annually or submit those data to EPA. The volume of reporting would be substantial and for a majority of appliances would be of limited value to EPA or the general public. However, owners or operators of equipment that leaks 125 percent of the total charge in a calendar year will have to calculate their total refrigerant additions to determine whether they have met that threshold. EPA finds that there is merit for those chronically leaking systems to perform this calculation and report to EPA because that will encourage those owners or operators to take steps to ensure they do not meet or exceed that threshold.

G. Revisions to the Standards for Recovery and/or Recycling Equipment in § 82.158

1. Background

Under the prior regulations, all refrigerant recovery and/or recycling equipment manufactured or imported on or after November 15, 1993, and used during the maintenance, service, repair, or disposal of appliances containing an ODS refrigerant must be certified by an approved equipment testing organization to ensure that it meets certain performance standards. These standards may vary for certain equipment intended for use with the disposal of small appliances. These performance standards were contained in tables 2 and 3 of § 82.158, as well as appendices B1, B2, and C of subpart F. EPA based these standards in large part on ARI (now AHRI) Standard 740–1993 and ARI Standard 740–1995. Recovery and/or recycling equipment intended for use during the maintenance, service, repair, or disposal of MVAC and MVAC-like appliances must meet the standards in subpart B. The regulations pertaining to MVACs refer to subpart B and state that such recovery and/or recycling equipment must meet the standards of § 82.36(a).

2. Extension to Substitute Refrigerants

In the revisions finalized in this rule, EPA is requiring that all recovery and/or recycling equipment manufactured or imported for use during the maintenance, service, repair, or disposal of appliances (except small appliances, MVACs, and MVAC-like appliances) that contain non-exempt substitute refrigerants be certified by an approved equipment testing organization as being capable of meeting certain performance standards. EPA is requiring that after January 1, 2017, all newly manufactured or imported recovery and/or recycling equipment used during the disposal of all appliances, including MVACs and MVAC-like appliances, also be certified. One commenter agreed that recovery and/or recycling equipment for use with non-exempt substitute refrigerants should be certified. This comment supports EPA's approach.

EPA proposed that all existing recovery and/or recycling equipment that met certification requirements for ODS prior to this rulemaking would be considered as certified for non-exempt substitute refrigerants. EPA is further clarifying that if a person who recovers refrigerant has recovery equipment that was certified as meeting the requirements for an ODS refrigerant, it can be used to recover other non-flammable refrigerants in that pressure category. For example, recovery equipment manufactured in 2015 that was certified to recover HCFC–22 can be used to recover other non-ODS refrigerants like R–407A, R–407C, or R–410A. However, proper care should be taken to prevent refrigerant mixing if using the same recovery device with multiple refrigerants.

One commenter noted that additional equipment testing would be required if the equipment manufacturers want older equipment to handle newer non-exempt substitute refrigerants. EPA responds that all equipment manufactured or imported on or after January 1, 2017, must be tested under the new standards. This is true of older equipment designs previously certified for ODS which have not been tested for substitute refrigerants. However, any equipment manufactured or imported prior to the effective date is grandfathered and does not have to be recertified. Technicians can continue to use previously certified recovery equipment that they already own. As has been the case when EPA has previously changed equipment standards, EPA does not require technicians to recertify or replace their existing equipment.

EPA is adding appendices B3 and B4, based on the AHRI Standard 740–2016, *Performance Rating of Refrigerant Recovery Equipment and Recovery/Recycling Equipment.* The recovery standard is the same in both appendices; the difference between the two, as discussed later in this notice, is that appendix B4 contains additional safety standards for flammable refrigerants. EPA proposed to base appendices B3 and B4 on AHRI Standard 740–2015 but is using the most recent version of that standard for the final rule. All new equipment manufactured or imported on or after

January 1, 2017, must meet the standards in appendices B3 or B4 and table 2. The evacuation level would depend upon the saturation pressure of the refrigerant. EPA is also updating appendix C ''Method for Testing Recovery Devices for Use with Small Appliances'' to reference all refrigerants, instead of the previously referenced CFC–12.

Certifying refrigerant recovery and/or recycling equipment for use with non-exempt substitutes serves multiple purposes. First, certification provides reliable information on the ability of equipment to minimize emissions of these substitute refrigerants, by measuring and/or establishing standards for recovery efficiency (vacuum level) and maximum emissions from air purging, oil draining, equipment clearing, and hose permeation. The fact that the equipment minimizes emissions is part of our consideration of whether emissions associated with using recovery equipment are considered *de minimis* releases. Second, certification provides reliable information on the equipment's ability to clear itself when switching between refrigerants. Without sufficient clearing capability, equipment may retain residual refrigerant in its condenser, which would then be mixed with the next batch of refrigerant recovered by the equipment. Because mixed refrigerant can be difficult if not impossible to reclaim (depending on how cross-contaminated the mixed refrigerant is) and expensive to destroy, it is much more likely than unmixed refrigerant to be vented to the atmosphere. Third, certification provides reliable information on the equipment's recovery speed. Without such information, technicians may purchase equipment that recovers too slowly, tempting them to interrupt recovery before it is complete. As discussed in the 1993 Rule, where EPA established the equipment certification requirements, the information on equipment performance provided by an independent third-party testing organization is more reliable than that provided by other sources, such as equipment manufacturers (58 FR 28686–28687).

Finally, certification embraces Next Generation Compliance principles. Users of certified equipment, when following the manufacturer's instructions, will be in compliance with the regulatory standards for the evacuation of refrigerant.

Flammable Refrigerants. Different treatment is warranted for non-exempt flammable refrigerants. As proposed, EPA is adding standards for the recovery of flammable non-exempt refrigerants to appendix B4. Currently, six flammable non-exempt substitute refrigerants are approved for use in stationary refrigeration and air-conditioning equipment: HFC–32, HFC–152a, R–406A, R–411A, R–411B, and HFO–1234ze(E).

EPA is using AHRI Standard 740–2016 as the basis for the recycling and/or recovery equipment requirements in appendix B3. This standard does not address the safety of recovering flammable refrigerants. EPA is therefore creating appendix B4, which requires the recovery/recycling performance of appendix B3 and the safety performance of Underwriters Laboratories (UL) Standard 1963–2011, Supplement SB—*Requirements for Refrigerant Recovery/Recycling Equipment Intended for Use with a Flammable Refrigerant.* All recycling and/or recovery equipment manufactured or imported after January 1, 2017, that are to be used with flammable non-exempt substitute refrigerants must meet this new standard. EPA is incorporating UL 1963 by reference and modifying the testing protocol in appendix B3 to account for flammability concerns during testing.

Two testing organizations supported using UL 1963 to address flammable refrigerants. One commenter preferred that EPA reference UL 1963 directly within appendix B4 rather than establishing separate requirements in appendix B4 that are based on that standard. Separate requirements published outside of that standard would make it more difficult to apply the standard. EPA responds that appendix B4 refers to UL 1963, Supplement SB, and does not reproduce the standard in the appendix due to copyright concerns.

Another commenter strongly recommended that a label be required on all products certified to handle flammable refrigerants. EPA responds that UL 1963, Supplement SB has requirements for markings that must be placed on recovery and/or recycling equipment certified to handle flammable refrigerants. Because EPA is incorporating those standards in appendix B4 by reference, EPA is requiring those markings.

3. Removing the Certification by Owners of Recovery and/or Recycling Equipment

As proposed, EPA is removing the requirement under § 82.162 that anyone who maintains, services, repairs, or disposes of appliances containing an ODS submit a signed statement to the appropriate EPA Regional office stating that they own recovery and/or recycling equipment and are complying with the applicable requirements of subpart F. EPA received one comment in support of taking this action.

EPA created this provision in 1993 when the Agency first required that recovery and/or recycling equipment be certified and that technicians use certified equipment. At the time, the use and availability of recovery and/or recycling equipment was not as commonplace as it is today. Equipment certification by owners demonstrated to EPA that equipment was available for use by certified technicians. In particular, EPA was interested in the capabilities of grandfathered, or pre-1993, equipment. Since certified recovery and/or recycling equipment is now commonly available, EPA no longer needs the information contained in the certification statement such as the number of service trucks and personally identifiable information of equipment owners.

4. Clarifications and Edits for Readability

EPA is reorganizing § 82.158 by appliance type. EPA is also combining tables 2 and 3, which contain the levels of evacuation that must be achieved by recovery and/or recycling equipment, to remove inconsistencies in terminology and formatting.

EPA also revised how the requirements for recovery equipment used on small appliances are written. In general, the requirement is that the equipment is capable of recovering 90 percent of the refrigerant in the test stand when the compressor of the test stand is operational and 80 percent of the refrigerant when the compressor of the test stand is not operational. In addition, there are secondary considerations that could allow for the certification of recovery equipment based on when that equipment was manufactured or imported.

H. Revisions to the Standards for Equipment Testing Organizations in § 82.160

EPA relies on independent third party organizations approved by the EPA Administrator to certify that refrigerant recovery and/or recycling equipment meets the standards in subpart F. Any equipment testing organization may apply for approval so long as they can verify that they have the expertise and technical capability to verify the performance of the recovery and/or recycling equipment, have no conflict of interest (*e.g.,* with equipment manufacturers), and receive no direct or indirect financial benefit from the outcome of certification testing.

Any new certifying organization must have expertise to certify equipment that is used to recover or recycle refrigerants that are subject to this subpart. This means that they must be able to evaluate and certify HFCs and other non-exempt substitute refrigerants, including flammable refrigerants. Because the same expertise is needed to test equipment used for ODS and substitute refrigerants, equipment certifying organizations that have already been approved by EPA may continue to certify equipment designed for substitute refrigerants without needing to re-apply. In comments on the proposed rule, two certifying organizations agreed that currently approved organizations should not have to reapply to certify equipment used to recycle and/or recover substitute refrigerants and that the same expertise is needed to test equipment used for ODS and substitutes.

EPA is removing the requirement that organizations provide a list of all certified equipment to EPA within 30 days of the organization's approval by EPA and annually at the end of each calendar year thereafter. Instead, EPA is requiring that the certified equipment testing organizations publish online a list of equipment that meets EPA requirements. This list must include the manufacturer and the name and/or serial number of a newly certified model line, which is the information that the certifying organizations had to provide to EPA. This list must be updated no less than once per year, but an organization can choose to update the list more frequently. Online lists must contain certified equipment until three years after that equipment is no longer offered for sale. Making the information available online will be no more burdensome for the testing organization than submitting the list to EPA. Online publication is also a better method of communicating these findings to the public and the service/repair industry than sending the information to EPA. Two certifying organizations commented that they support these revisions because they already make the information publicly available through their Web sites.

EPA is also adding to the regulatory text the timing for records retention that had previously only been found in guidance documents. The regulation now specifies that all records must be maintained for three years after the equipment is no longer offered for sale. EPA is adopting a similar timeframe for the online lists of certified equipment.

EPA also encourages the use of electronic reporting and has established the email address *608reports@epa.gov* to receive applications from organizations seeking to be approved under this section and the required notification if a previously certified model line fails to meet the standards upon retesting.

I. Revisions to the Technician Certification Requirements in § 82.161

1. Background

The prior regulations at § 82.161 required the certification of all individuals who maintain, service, or repair air-conditioning and refrigeration equipment containing an ODS, other than MVACs which are addressed in a separate subpart of the regulations. This group includes installers, contractor employees, in-house service personnel, and anyone else who performs installation, service, maintenance, or repair that might reasonably have the opportunity to release ODS refrigerants to the environment. In addition, individuals disposing of air-conditioning and refrigeration equipment other than small appliances, MVACs, and MVAC-like appliances must be certified. Individuals disposing of small appliances, MVACs, and MVAC-like appliances do not need to be certified.

Under those rules, technicians become certified by passing a test containing questions drawn from a bank developed by EPA with input from industry educational organizations with a certification program approved by EPA. The test includes questions on the role of CFCs and HCFCs in stratospheric ozone depletion, the requirements of the subpart F, and proper techniques for recycling and conserving refrigerant. EPA makes the question bank available to certifying organizations that demonstrate that they can properly generate, track, administer, and grade tests; issue certificates; and keep records.

2. Extension to Substitute Refrigerants

In this final rule, EPA is finalizing its proposal to extend the certification requirements to technicians who work with non-exempt substitute refrigerants.

Persons who are not certified technicians are more likely to intentionally or inadvertently release refrigerant in the course of servicing, maintaining, repairing, or disposing of refrigeration and air conditioning equipment. One commenter stated that they believe most of the intentional venting of refrigerant is done by individuals who are not certified technicians. Another commenter noted that they have observed a lack of competence within the equipment servicing sectors leading in many instances to the improper handling of refrigerants or servicing of mechanical equipment.

EPA responds that these comments support the importance of extending the technician certification requirement, as well as other provisions of the refrigerant management rules, to non-exempt substitute refrigerants. Certified technicians are more likely to understand how and why to recover and recycle refrigerants and to have the proper equipment to do so. Technician certification helps ensure that technicians know refrigerant recovery requirements and techniques. The prior regulations did not specifically prohibit an uncertified individual from opening an air conditioner that contains a substitute refrigerant in order to add a substitute refrigerant or replace components. Similarly, the regulations did not specifically prohibit an uncertified individual from opening an air conditioner that contains an ODS refrigerant to add ODS refrigerant (assuming a certified technician purchased the ODS refrigerant). While the venting prohibition generally applies to these actions, without training or certification the individual performing such servicing activities may not even be aware of the prohibition against knowingly venting or otherwise releasing refrigerant.

Tips reported to the Agency indicate that servicing by uncertified individuals occurs. One commenter asserted that a substantial number of technicians, possibly up to 25 percent, are operating without certification. EPA responds that this information, if true, would further support the extension of the technician certification requirement to non-exempt substitute refrigerants. Requiring that anyone opening an appliance (except those containing only exempt substitute refrigerants) be a certified technician will reduce emissions caused by uninformed service personnel and will facilitate enforcement of the venting prohibition, especially when coupled with the recordkeeping requirement for appliances containing more than five and less than 50 pounds of refrigerant.

Many companies require certification of their technicians regardless of the type of refrigerant being used. The principles of proper handling, recovery, and disposal of non-exempt substitute refrigerants are similar if not identical to those for ODS refrigerants, except that additional safeguards are advisable for flammable refrigerants. The fact that some individuals may be working on non-ODS appliances without certification and without following safe handling practices places them at a disadvantage with respect to compliance. Because there is a reasonable expectation that an ODS or non-exempt substitute refrigerant could be released into the environment in the course of that work if appropriate precautions and practices are not followed, requiring technician certification for individuals performing such work ensures that they have the information necessary to comply with the regulatory requirements and with the venting prohibition, as well as to minimize emissions. Accordingly, to promote proper practices or at least remove barriers for compliance and for environmental protection, EPA is requiring certification for anyone working on an appliance that contains a non-exempt refrigerant.

Many commenters supported extending the technician certification requirement for the handling of substitute refrigerants. While some commenters stated that EPA does not have authority to extend section 608 regulations to substitutes, those commenters did not raise the specific issue of technician certification. EPA addresses those general comments about its authority for this action in Section III of this notice. Two commenters recommended extending the technician certification requirement to flammable refrigerants. Three commenters urged EPA to extend the technician certification requirement for the handling of all refrigerants, even if they are exempt from the venting prohibition. These commenters stated that treating all refrigerants equally will provide consistency and clarity in the industry. Other commenters stated that many of the exempt refrigerants have special considerations such as flammability or toxicity that require care during handling and servicing. As noted previously, some commenters stated that the sales restriction should be extended to hydrocarbons. These commenters noted that the flammability of these refrigerants poses far greater risks than that of R–22 when handling it and servicing equipment. One commenter recommended that if the sales restriction was extended to flammable refrigerants then it should be extended to all exempt refrigerants.

As stated in the proposed rule, EPA is not extending the technician certification requirement (and thus the sales restriction) to individuals maintaining, servicing, repairing, or disposing of appliances containing substitute refrigerants that are exempt from the venting prohibition. EPA has exempted substitutes, at least in the specified end-uses, from the venting prohibition because the Agency has determined for purposes of section 608(c) that they do not pose a threat to the environment when released. For water or nitrogen, technician certification would provide no environmental benefit nor would it increase technician safety. For ammonia or chlorine, other regulations address the risks related to those specific compounds (for example, OSHA regulations that address risk to technician safety). The types of refrigeration equipment that use these exempt substitute refrigerants are also significantly different from an engineering standpoint from the equipment that uses ODS or HFC refrigerants. Therefore, there is little potential for ODS and these exempt substitute refrigerants to be mixed and intentionally released to the environment.

Hydrocarbon refrigerants may be different than the other substitute refrigerants. EPA notes that all end-uses for hydrocarbons currently authorized under SNAP are also exempted under the venting prohibition. The Agency did not propose and is not establishing a technician certification requirement or sales restriction for those exempt substitute refrigerants. The Agency may consider in future whether there are any regulatory or other measures that would be appropriate to address the handling of exempt flammable refrigerants.

As a result of today's action, flammable substitutes that have not been exempted from the venting prohibition in a particular end-use are subject to the requirements of subpart F, including the sales restriction and the technician certification requirements. Unlike the other exempt substitutes, hydrocarbons are being sold to service existing ODS and HFC equipment for which this refrigerant is not listed as acceptable under SNAP. Specifically, R–22a, which is propane, in some cases mixed with isobutane and an odorant, has been marketed as a ''drop-in'' (or more appropriately termed a ''retrofit'') replacement for existing equipment designed for use with HCFCs and/or HFCs. Often these are MVACs or residential split systems.

R–22a has not been submitted to SNAP for review for these uses, and EPA has not listed propane as acceptable for these end-uses under the SNAP program. Accordingly, EPA considers its introduction into interstate commerce for this use a violation of the SNAP regulations. In addition, EPA has not exempted R–22a or propane used as a retrofit in existing HCFC–22 appliances from the venting prohibition. As a result, R–22a and propane are subject to the requirements of subpart F in such non-exempt end-uses, including the sales restriction and the technician certification requirements.

The Agency has learned through its recent enforcement actions against Enviro-Safe and Northcutt, two distributors of R–22a, and through other investigations that R–22a is being sold to both consumers and technicians. Often the buyers are not aware there is a difference between R–22 and R–22a, or even that R–22a is flammable. As a result, appliances have exploded and technicians have been injured. Technicians need to be aware of the safety concerns of using such refrigerant for themselves or subsequent technicians who service ODS or HFC equipment that inappropriately contains hydrocarbons. Consumers must also not have easy access to this refrigerant for their own safety. Applying the sales restriction to unapproved uses of hydrocarbon refrigerants and educating technicians through the certification program will reduce safety risks and prevent the mixing (and subsequent venting) of ODS and HFC refrigerants with these unapproved alternatives.

One commenter, while supportive of extending the technician certification requirements to those working with non-exempt substitute refrigerants, disagreed with the premise that failing to require certification will result in the release and mixture of ODS and non-ODS refrigerants.

EPA responds that information about the illegal use of R–22a as a replacement for R–22 indicates to EPA that people are purchasing their own refrigerant and mixing it with HCFCs. The consequences of inappropriately mixing refrigerants include significant losses in performance and energy efficiency, damage to equipment, the lost value of the mixed refrigerant (which is at best difficult, and often impossible, to separate into the component refrigerants), and costs for destroying mixed refrigerants. Refrigerant mixture also leads both directly and indirectly to refrigerant release. Mixture leads directly to release because mixtures of certain refrigerants, such as R–22 and R–134a, have higher pressures than either component alone. Thus, pressure-sensitive components such as air purge devices on recycling machines and relief devices on appliances may be activated by these mixtures, venting the refrigerant to the atmosphere. Purge devices in particular are often set to open when the pressure of the recovery cylinder's contents rises more than 5–10 psi above the expected saturation pressure for the refrigerant; this margin is exceeded by R–22/R–134a mixtures containing more than ten percent of the contaminating refrigerant.

Refrigerant mixture also reduces recycling and leads indirectly to release. First, mixed refrigerants lose their value for reclamation because it is difficult to separate the component refrigerants. Typically, reclaimers will pay refrigerant distributors for recovered refrigerant. Reclaimers may actually charge money to accept highly mixed refrigerant or not take it at all. Mixed refrigerants cost money to reclaim or destroy and this cost could provide a financial incentive for illegal venting. Second, the direct releases and equipment breakdowns caused by contamination lead to increased equipment servicing, which itself leads to unavoidable releases of refrigerant. Thus, failure to require certification for people working with substitute refrigerants would increase the probability of both substitute and ozone-depleting refrigerants being emitted to the atmosphere.

As noted previously in this notice, certified technicians are more likely to understand how and why to recover and recycle refrigerants and to have the proper equipment to do so. The skills and knowledge that certified technicians have reduces the likelihood that they would mix or release ODS and non-ODS refrigerants. For these reasons, EPA is requiring technician certification for persons working with non-exempt substitutes.

3. Updated Test Bank

EPA is currently updating the technician certification test bank through a process separate from this rulemaking. While this is not a regulatory change—the Agency can update the test bank when appropriate without promulgating a new regulation—it aligns with EPA's efforts to extend the refrigerant management regulations to substitute refrigerants. Currently, the questions focus on CFCs and HCFCs, even though CFCs have been phased out for nearly twenty years and the predominant HCFC, HCFC–22, will be phased out by 2020.

As part of the public participation process for this rule, stakeholders provided input regarding updating the test bank questions. Many commenters supported updating the test bank, especially given the new refrigerants and technologies that have become available since the test was initially developed. Commenters provided suggestions for numerous topics that should be covered by the exam. These include placing greater focus on the venting prohibition, recovery best practices, safe handling of flammable refrigerants, use of new refrigerants, financial benefits of refrigerant recycling, and the costs of non-compliance related to equipment efficiency, equipment life, and environmental harm. One commenter observed that the core, Type II, and Type III tests should now include questions on verification testing since this will be a new requirement of technicians servicing comfort cooling and commercial refrigeration appliances under the leak repair provisions.

EPA responds that all of these suggested topics fit into the testing topics listed in appendix D. EPA intends to consider these potential topics when updating the test bank questions. EPA has begun reviewing the test bank and consulting with certification and training organizations to identify questions that should be updated, replaced, or removed. EPA also intends to incorporate new and revised elements of the National Recycling and Emission Reduction Program that are being finalized in this action in the updated test bank. As such, the test bank will not be completed until after publication of the final rule. Testing organizations have requested time to update their training and testing materials before the new questions go into effect. EPA anticipates the new questions will be added to all exams by mid- to late 2017.

J. Revisions to the Technician Certification Program Requirements in § 82.161

1. Background

The regulations at § 82.161 require that organizations operating technician certification programs apply to EPA to have their programs approved. The application process ensures that technician certification programs meet minimum standards for generating, tracking, and grading tests, as well as keeping records. Approved technician certification programs must keep records of the names of technicians they have certified and the unique numbers assigned to each technician certified through their programs. These records allow both the Agency and the certification program to verify certification claims and to monitor the certification process. Approved technician certification programs also must submit reports to EPA every six months containing information on the number of students certified and the pass/fail rate. Such reports allow the Agency to monitor program compliance.

2. Extension to Substitute Refrigerants

As discussed previously, EPA is requiring in this final rule that technicians who work with non-exempt substitute refrigerants be certified. By extension, EPA is also requiring that technician certification programs offer tests to certify those technicians. This should not require significant changes to current practices other than using the updated test bank once available and the revisions discussed in this section. EPA is not requiring that current certification programs recertify based on any of the revisions in this final rule. EPA did not receive comment specifically on these proposed revisions.

3. Posting Lists of Certified Technicians

In regulatory revisions finalized in this rule, EPA is requiring that certifying organizations publish online lists of the technicians certified by that organization. However, EPA is not establishing a single ''database'' nor requiring certified organizations to create their own databases as was contemplated in the proposed rule. The primary intent of these published lists is to assist technicians who have lost their certification cards and reduce the burden currently facing the Agency and technician certification programs in assisting technicians who have lost their certification cards as described in the proposed rule. These goals can be accomplished for all future technicians through the publication of limited information online. Technicians should be able to find out who certified them through a simple web search.

In the proposed rule, EPA described this as a database and discussed one of its possible uses as a tool refrigerant wholesalers could use to verify their customer is a certified technician. Many commenters supported the creation of a single technician database maintained by EPA. A few of those commenters encouraged EPA to include all certified technicians, not just newly certified technicians, because an incomplete list would have only marginal value for anyone referencing the list prior to selling refrigerant. Some refrigerant distributors wanted assurance that their refrigerant sales would not be adversely affected or that they would not be held responsible for errors or omissions in the technician database. One commenter who employs in-house technicians stated that their technicians would prefer not to be included in such a database. The commenter requested that there not be a database, or if there is one that technicians should have to affirmatively opt in, rather than being given the option of opting out.

EPA responds that the Agency did consider the possibility of a database that could be used to enforce the sales restriction. EPA agrees that in order to be used for regulatory purposes the content of the database would need to be complete and continuously updated. The only manner the Agency could ensure a complete list of technicians would be to require technicians to recertify, which EPA did not propose. EPA did not propose to require that certification programs list everyone currently in their records. While this may assist current technicians who have lost their cards, listing the hundreds of thousands of technicians certified over the last twenty-two years could be overly burdensome. This would also not provide technicians with the opportunity to opt out.

As this requirement is primarily for the benefit of the technician, EPA is requiring technician certification programs to notify individuals taking the certification exam that information will be posted online and allow them to opt out. Allowing the opt out is sufficient for those technicians who do not want to be listed; requiring an opt in to be listed, on the other hand, would reduce the utility of the lists. EPA is also exempting federal government-run programs from this requirement as proposed. The public release of government and military personnel names linking them to their federal employment could present significant privacy and security concerns.

EPA did not receive comment on the proposed information that would need to be published. EPA is therefore finalizing as proposed the following information requirements: The first name, middle initial, and last name of the certified technician, the technician's city of residence when taking the test, the type(s) of certification received, and the date each certification was received. EPA is not requiring any specific format for providing this information. EPA is aware that some certifying organizations already provide this information online to their technicians and the Agency does not intend to require that they change how they offer the information so long as the required data elements are included. Rather than continuous updating, as would have been required of a database, EPA is requiring that the lists be updated annually, although individual organizations may choose to update their lists more frequently.

4. Grandfathering Provisions

In this rulemaking, EPA is finalizing its proposal to remove provisions related to voluntary certification programs at § 82.161(g). This program was created to allow technicians who were trained prior to the establishment of approved technician certification programs to be recognized as certified technicians. This program expired in 1994 and is no longer necessary. EPA did not receive any comments on this proposal.

5. Certification Cards

As proposed, EPA is finalizing revisions to the requirements for the required text that is printed on certification cards. Some organizations told EPA prior to publication of the proposed rule that the language used on the certification card implies that a technician as defined in subpart F may be trained in other aspects of equipment installation. The primary purpose of the 608 certification card is for a technician to prove to a vendor that they understand the environmental impacts of mishandling refrigerants and are legally permitted to perform the necessary maintenance, servicing, repair, or disposal work under CAA section 608. While this certification qualifies an individual to maintain, service, repair, or dispose of appliances containing certain refrigerants for purposes of CAA section 608, the 608 exam is less focused on the operational and engineering aspects of refrigeration and air-conditioning equipment. Accordingly, the 608 certification is not intended to serve as a general license for individuals who work on such equipment.

To more accurately reflect the knowledge needed to obtain the certification, EPA is updating the card to read: ''[Name of person] has successfully passed a [Type I, Type II, Type III, and/or Universal, as appropriate] exam on how to responsibly handle refrigerants as required by EPA's National Recycling and Emission Reduction Program.''

EPA stated in the 1993 Rule establishing the technician certification requirements that standardized language will decrease administrative costs and aid in enforcement. In addition, it was intended to ease burden on refrigerant wholesalers who must inspect the cards to verify the certification of technicians. Those principles also apply to this rulemaking, and updating the information required on the certification card should improve clarity and should not result in any new administrative costs. EPA notes that the Agency is not requiring that currently certified technicians obtain new cards with the updated language. The new language applies only to cards issued to newly certified technicians. In the event where a technician is requesting a replacement for a lost card, EPA encourages that the certifying organization use the updated language whenever feasible.

6. Updates to Appendix D

In this rulemaking, EPA is also finalizing minor edits to appendix D ''Standards for Becoming a Certifying Program for Technicians.'' EPA did not receive any comments on this element of the proposal and is finalizing the revisions as proposed. More specifically, EPA is updating the description of test content to include the environmental impact of not just ODS but also substitute refrigerants. EPA is removing paragraphs (i) through (k) on approval process, grandfathering, and sample application as they are outdated, redundant, or self-explanatory. EPA is removing the reference that EPA will periodically publish information on the fees charged by the programs as the Agency no longer collects this information. To protect the private information of technicians and minimize the potential for fraud, EPA is removing social security numbers as an acceptable form of identification for Type I technicians using the mail-in format and stating that social security numbers cannot be used in the unique certification number assigned to newly certified technicians. EPA also is requiring that certifying organizations provide a hand-out or electronic communication to technicians after they have taken the certification test explaining who provided the training, who to contact with questions regarding the certification process, and when they should expect to receive their score, and if they passed, their certification cards.

K. Revisions to the Reclamation Requirements in § 82.164

1. Background

The regulations at § 82.164 required that anyone reclaiming used ODS refrigerant for sale to a new owner, except for people properly certified under subpart F prior to May 11, 2004, is required to reprocess refrigerant to standards laid out in appendix A (based on ARI Standard 700–1995, *Specification for Fluorocarbons and Other Refrigerants*), release no more than 1.5 percent of the refrigerant during the reclamation process, dispose of wastes from the reclamation process in accordance with all applicable laws and regulations, and adhere to specific recordkeeping and reporting requirements.

2. Extension to Additional Substitute Refrigerants

In this final rule, EPA is extending the reclamation standards for refrigerants in appendix A to additional non-ozone depleting substitute refrigerants. Most of the refrigerants in appendix A were single component ODS refrigerants or blends containing an ODS component. However, appendix A had previously contained a few commonly used substitute refrigerants that have been used for a long time, such as R–407C and R–410A. EPA is updating appendix A to include newer HFCs, PFCs, HFOs, and other refrigerants based on the standards contained in the latest AHRI Standard 700, *Specifications for Refrigerants.* EPA proposed to base appendix A on AHRI Standard 740–2015, with the exception that the Agency would maintain the current unsaturates limit of 0.5 percent by weight. Recently AHRI released Standard 740–2016 which includes additional refrigerants and an impurity standard for R–40. EPA is finalizing appendix A based on the recent AHRI Standard 740–2016 by adding the new refrigerants, but not the unsaturates limit or R–40 impurity standard.

The standard in the previously existing rules was adopted in 1995. It is appropriate to update this standard to ensure that refrigerants developed in the last twenty years are reclaimed properly. While industry has established standards for these new refrigerants, EPA's regulations have not kept pace. Therefore, reclaimers have not had a legal obligation to achieve such standards. Instilling confidence in the market that reclaimed refrigerant is as good as virgin refrigerant is crucial to its widespread use. Ensuring a healthy market for reclaimed refrigerant is also crucial to support the value of used refrigerant and provide incentives through market forces to recover used gas from appliances during their maintenance, servicing, repair, or disposal.

Many refrigerant reclaimers and distributors commented that the current 0.5 percent unsaturates limit is appropriate. One commenter specifies that the reclamation industry as a whole has delivered more than 200 million pounds of reclaimed refrigerant at that unsaturates level without any known issues. Another commenter expressed concern that lowering the unsaturates limit will make successful reclamation impossible. Other commenters encouraged EPA to incorporate the AHRI Standard 700–2015, *Specifications for Refrigerants,* by reference and establish a process to automatically adopt the latest version of the AHRI–700 standard. These commenters explained that typically, the standard is updated to establish purity specifications for each new substitute refrigerant as it is developed and approved. The commenters state that this will prevent reclaimers from having to comply with regulations requiring that they reclaim new refrigerants without any EPA required standard for those refrigerants.

EPA responds that it is not incorporating either the AHRI Standard 700–2015, *Specifications for Refrigerants,* or the current AHRI Standard 700–2016, *Specifications for Refrigerants* by reference. This is because ASHRAE and AHRI are still conducting further studies on whether and how to amend the unsaturates limit. It is important to maintain the 0.5 percent unsaturates limit while the standard is still being debated. Accordingly, rather than incorporating the AHRI Standard 700–2016 by reference, EPA is updating appendix A to include HFCs, PFCs, HFOs, and other refrigerants based on the standards contained in AHRI Standard 700–2016. In response to the comment about establishing a process to automatically update the standards, it is important to understand that EPA cannot automatically incorporate future standards by reference. EPA appreciates the commenters' concerns that the Agency has not updated the standard in twenty-one years. However, any updated standard must undergo notice and comment review prior to being adopted into the regulations.

This final rule will extend the prior reporting requirements that are applicable to ODS to HFCs and other non-exempt substitutes. Reclaimers must report annually the aggregate quantity of material sent to them for reclamation (the combined mass of refrigerant and contaminants) by refrigerant type, the mass of each refrigerant reclaimed by type, and the mass of waste products. EPA has been publishing the aggregate total of each ODS refrigerant reclaimed each year on its Web site. After these revised reporting requirements take effect, EPA will begin collecting and making available reclamation data for non-exempt substitute refrigerants as well as ODS, which should provide EPA and the general public a greater understanding of the extent of HFC recovery and reclamation. One commenter encouraged EPA to publish data on the amount of refrigerant being sent to a reclaimer in addition to the amount reclaimed. The commenter does not believe that aggregated data is CBI and believes that sharing the data publicly will provide further justification for the actions taken in this rule. EPA responds that the Agency has aggregated and released the reported quantity of refrigerant received for reclamation, as well as the aggregate quantity of refrigerant reclaimed since 2010. This includes an aggregate of all of the different types of refrigerant reported to EPA as received and/or reclaimed. Because reporting on substitutes was previously not a requirement, the data on HFCs are incomplete and based only on reports from companies that chose to provide such data.

3. Revisions to Recordkeeping and Reporting

Under the prior regulations at § 82.164(b), reclaimers must certify that the refrigerant reclaimed meets the specifications in AHRI Standard 700–1995 using the analytical methodology prescribed in appendix A. In addition to updating the standard to AHRI Standard 700–2016, EPA is finalizing revisions to the regulations to clarify that the analysis must be conducted on each batch of refrigerant being reclaimed and that reclaimers must maintain records of each analysis. Requiring reclaimers to maintain records helps to ensure that refrigerant is being reclaimed to the appropriate specifications. The standard practice for reclaimers currently is to analyze by batch, and to generate records when doing so, so these revisions update the regulations to reflect current practices and do not add additional burden. EPA is also requiring that all recordkeeping and reporting requirements for reclaimers be maintained and reported by refrigerant type (*i.e.,* ASHRAE number). Information kept in this format will provide more clarity on the types and quantities of refrigerants being reclaimed when aggregated information is reported.

EPA is also clarifying what aggregate information must be reported annually to the Agency, and removing a redundant recordkeeping provision related to that report. Currently, reclaimers provide data on ODS reclamation to EPA in multiple formats. EPA intends to develop an electronic form to standardize the reporting across all reclaimers. This should reduce burden on the Agency and on reclaimers as EPA must currently engage in a back and forth process to ensure that all required data have been reported properly. This will also allow the Agency to publish reclamation data in a more timely manner.

Previously reclaimers were required to certify that the refrigerant reclaimed meets the specifications in AHRI Standard 700–1995 using the analytical methodology prescribed in appendix A. EPA proposed to specify that reclaimers must, ''[v]erify that each batch of refrigerant reclaimed meets these specifications using the analytical methodology prescribed in appendix A,'' but did not propose a definition of the term *batch*. Multiple reclaimers supported testing each batch of refrigerant but suggested that EPA define the term batch. These commenters proposed identical or similar definitional language requesting that EPA define a batch of refrigerant as a single bulk cylinder containing the reclaimed refrigerant after all processing has been completed but prior to packaging or shipping to the market. EPA agrees that specifying what a batch is will assist reclaimers in complying with this requirement and is therefore adding *batch* to the defined terms in § 82.152. This added definition is materially similar to what commenters suggested.

One commenter suggested that a testing ID or batch number be placed on each cylinder packaged from the bulk cylinder to allow for traceability back to the analysis. EPA recognizes that some companies may want to do this for their own internal quality control. However, EPA is not presently convinced of the environmental benefit of making this change at this time.

Multiple reclaimers requested that the reclaimed refrigerant be independently analyzed by an accredited laboratory. They stated that independently verifying that reclaimed refrigerant meets the required specifications reaffirms the appropriate industry standard already being followed by most reclaimers. One commenter found that it would not be necessary to require independent analysis since all reputable reclaimers already do this. EPA responds that it did not propose to require independent third-party testing of reclaimed refrigerant and does not presently have sufficient information to finalize such a requirement. Before requiring third-party testing, EPA would want to better understand the frequency with which such testing is done, the costs involved, whether such testing would improve the quality of the reclaimed refrigerant on the market, and which and how many companies conduct such testing. Therefore, at this time EPA is not requiring independent third-party testing. However, as discussed previously in this notice, ensuring the quality of reclaimed refrigerant is very important to its use and to further the goals of the section 608 program and EPA may consider establishing such requirements in a future rulemaking.

EPA requested comment on possible future proposed revisions to the reclamation requirements including establishing more stringent certification requirements for reclaimers; establishing a third-party certification or audit program for reclaimers; and requiring labeling of reclaimed refrigerant. Many reclaimers and other commenters provided input on these questions. Because EPA was merely seeking comment for potential future actions and did not propose any specific action for this rulemaking, EPA is not responding to those comments at this time and is not taking final action with respect to any of those comments. EPA will consider the information received for a potential future rulemaking.

4. Hazardous Wastes

EPA received comments related to hazardous waste in the context of the safe disposal requirements, recovery equipment, and reclamation. Multiple commenters requested that EPA create new Resource Conservation and Recovery Act (RCRA) exclusions from the definition of hazardous waste for all recovered refrigerants, perhaps with the exception of ammonia. The commenters stated that classifying used refrigerant as a hazardous waste would prevent technicians from recovering and transporting used refrigerant and prevent reclaimers from accepting, processing, or reclaiming such refrigerant. As a result, commenters foresee less recovery and increased emissions because handling compounds classified as hazardous waste would be cost prohibitive. The commenters point to the exclusion EPA created for used CFCs at 40 CFR 261.4(b)(12) as a model.

EPA responds that to be a hazardous waste, a compound must either be specifically listed as a hazardous waste per 40 CFR 261 Subpart D or exhibit one of the following characteristics: Ignitability, reactivity, toxicity, or corrosivity per 40 CFR 261 Subpart C. In 1990, EPA revised the toxicity characteristic and as a result, became aware that certain CFCs may exhibit the toxicity characteristic. On February 13, 1991, the Agency issued an exclusion from the RCRA hazardous waste regulations for CFCs used as refrigerants, provided the refrigerant is reclaimed for further use. Most non-exempt substitute refrigerants are not listed nor do they exhibit any characteristics of a hazardous waste and therefore, are not considered hazardous wastes when they are recovered and reclaimed. However, some refrigerants are flammable (*e.g.,* HFC–32), which are likely to exhibit the hazardous waste characteristic of ignitability.

5. Clarifications and Edits for Readability

EPA is also finalizing revisions in this rule that consolidate provisions related to refrigerant reclaimers into a single section at § 82.164. This rule also clarifies what is required of the reclaimer. The prior regulations required a reclaimer to certify that he or she will meet a certain set of standards and engage in certain behaviors. The revised regulations require first, that a reclaimer meet those standards and behaviors and second, that they certify to having done so. EPA is making this revision to improve the clarity and enforceability of these provisions. EPA did not receive any comments on this proposal.

L. Revisions to the Recordkeeping and Reporting Requirements in § 82.166

1. Background

The prior regulations included all recordkeeping and reporting provisions in one section of subpart F (§ 82.166). While having all the provisions in one place can be useful, they are separated from the required practices specific to that regulated entity. This can create difficulty for the regulated community in finding what records they must keep and what reports they must make to remain in compliance with the section 608 requirements. To improve the readability of the recordkeeping and reporting provisions, EPA is moving the requirements that were in § 82.166 to the relevant section describing the required practices. The recordkeeping and reporting provisions that remain in § 82.166 relate to the leak repair provisions in § 82.156(i) that are effective until January 1, 2019.

EPA summarizes some of the key amended recordkeeping and reporting provisions for this rulemaking below and intends to prepare a guidance document for this rule that includes all of the recordkeeping and reporting requirements. Additional discussion of these provisions may be found in the section of this notice discussing the corresponding required practice. This summary is not exhaustive, so to determine all of recordkeeping requirements that apply to a particular requirement, you must consult the appropriate text in the revised regulations.

2. Summary of Recordkeeping Provisions

A summary of some key, revised recordkeeping requirements for subpart F is included here. Unless otherwise noted, all records must be maintained for at least three years.

• *Disposal of Small Appliances, MVACs, and MVAC-like Appliances:* Persons who take the final step in the disposal process of such appliances must keep a copy of all the signed statements indicating refrigerant was recovered properly. This statement must include the name and address of the person who recovered the refrigerant and the date the refrigerant was recovered. Alternatively, the statement may be a signed contract stating either that the supplier will recover any remaining refrigerant from the appliance in accordance with § 82.155 prior to delivery or will verify that the refrigerant has been properly recovered before receipt by the supplier.

- *Disposal of Appliances Containing More than 5 and Less than 50 Pounds of Refrigerant:* Persons evacuating refrigerant from appliances with a full charge of more than 5 and less than 50 pounds of refrigerant for purposes of disposal of that appliance must maintain records documenting their company name, location of the appliance, date of recovery, and type of refrigerant recovered for each appliance. They must also keep records of the quantity of refrigerant, by type, recovered from such appliances in each calendar month and the quantity and type of refrigerant transferred for reclamation, the person to whom it was transferred, and the date of transfer.
- *Leak Inspection:* Owners or operators of appliances with a full charge of 50 or more pounds of refrigerant must maintain documentation from quarterly or annual leak inspections that includes the date of inspection, method used for the inspection, a list of locations where leaks were discovered, and a certification that all visible and accessible parts of the appliance were inspected. Technicians conducting leak inspections must provide such documentation to the owner or operator. Alternatively, owners or operators may install an automatic leak detection system and maintain records for that system, including records showing that the system is audited or calibrated annually and records related to the leaks that the system identifies.
- *Full Charge:* Owners or operators of appliances with a full charge of 50 or more pounds of refrigerant must maintain records relating to the full charge of the appliance, including records documenting what the full charge amount is for such appliances, how it was determined, the range and its midpoint for the full charge, and any revisions to the full charge. The record for the current full charge must be maintained until three years after the appliance is retired.
- *Service Records Provided by Technicians:* Persons adding or removing refrigerant from an appliance with a full charge of 50 or more pounds of refrigerant must provide the owner or operator with documentation containing the identity and location of the appliance; the date and type of maintenance, service, repair, or disposal performed; the parts of the appliance serviced, maintained, repaired, or disposed of; the name of the person performing the maintenance, service, repair or disposal; and the amount and type of refrigerant added to or removed from the appliance. The appliance owner or operator must maintain service records provided by technicians.
- *Verification Tests:* Owners or operators of any appliance with a full charge of 50 or more pounds of refrigerant must maintain records relating to any verification tests, including records of the dates, types, and results of all initial and follow-up verification tests. Technicians conducting verification tests must provide documentation of such activities to the owner or operator.
- *Retrofit/Retirement Plans:* Owners or operators of appliances with a full charge of 50 or more pounds of refrigerant that are subject to retrofit/retirement requirements must maintain retrofit or retirement plans. The plan must contain the following information: Identification and location of the appliance; type and full charge of the refrigerant used; type and full charge of the refrigerant to which the appliance will be converted, if retrofitted; itemized procedure for converting the appliance to a different refrigerant, including changes required for compatibility with the new substitute, if retrofitted; plan for the disposition of recovered refrigerant; plan for the disposition of the appliance, if retired; and a schedule, not to exceed one year, for completion of the appliance retrofit or retirement.
- *Requests to Extend the Deadline to Repair or Retrofit/Retire Appliances:* Owners or operators of appliances with a full charge of 50 or more pounds of refrigerant must maintain copies of extension requests.
- *Chronically Leaking Systems:* Owners or operators of appliances with a full charge of 50 or more pounds of refrigerant that leak 125 percent or more of the full charge in a calendar year period must maintain copies of reports submitted to EPA.
- *Mothballing:* Owners or operators of appliances with a full charge of 50 or more pounds of refrigerant that mothball an appliance must keep records documenting when the system was mothballed and when they add refrigerant back into the appliance.
- *Purged Refrigerant:* Owners or operators of appliances with a full charge of 50 or more pounds of refrigerant who exclude from their leak rate calculation purged refrigerant that is destroyed must maintain records related to the destruction of that purged refrigerant, including records that demonstrate that a 98 percent or greater destruction efficiency is met and that include flow rate, quantity or concentration of the refrigerant in the vent stream, and periods of purge flow.
- *Seasonal Variances:* Owners or operators of appliances with a full charge of 50 or more pounds of refrigerant who exclude additions of refrigerant due to seasonal variance from their leak rate calculation must maintain records stating that they are using the seasonal variance flexibility and documenting the amount added and removed.
- *Lists of Certified Recovery Equipment and Testing Results:* Organizations that are approved to certify refrigerant recovery and/or recycling equipment must maintain records of equipment testing and performance and a list of equipment that meets EPA requirements. These records must be maintained for three years after the equipment is no longer offered for sale.
- *Proof of Certification for Technicians:* Technicians who have passed the section 608 Type I, II, III or Universal test, must keep a copy of their certification at their place of business. These records must be maintained for three years after a certified individual no longer operates as a technician.
- *Sales Restriction:* Anyone selling ODS or a non-exempt substitute refrigerant must document the name of the purchaser, the date of sale, and the quantity of refrigerant purchased. In instances where the buyer employs a certified technician, the seller must keep the information provided by the buyer to demonstrate that at least one technician is properly certified. Copies of technician certifications must be maintained for three years after each purchase. These records would not apply to the sale of small cans of substitute refrigerant for servicing MVACs.
- *Small Cans of Substitute Refrigerant for MVAC Servicing:* Anyone manufacturing small cans of substitute refrigerant with a self-sealing valve for use in an MVAC must maintain records verifying that the self-sealing valves do not leak more than 3.00 grams per year when the self-sealing valve is closed, consistent with appendix E to subpart F, as revised.
- *Technician Certification Programs:* Organizations that certify technicians must maintain records of who they

certify, the scores of all certification tests administered, and the dates and locations of all tests administered. These records must be maintained as long as they are in operation, not just for three years. If a previously approved technician certifying organization stops certifying technicians for any reason, they must ensure those records are transferred to another certifying program or EPA. The recordkeeping requirements can be found in section (g) of appendix D of this subpart.

- *Reclaimers:* Reclaimers must maintain records, by batch, of the analyses conducted to verify that reclaimed refrigerant meets the necessary specifications. On a transactional basis, reclaimers must maintain records of the names and addresses of persons sending them material for reclamation and the quantity of the material (the combined mass of refrigerant and contaminants) by refrigerant type sent to them for reclamation.

4. Summary of Reporting and Notification Provisions

Reporting and notification are important components of the National Recycling and Emission Reduction Program and allow EPA to track compliance with the requirements. A summary of some key requirements is included here, and additional discussion may be found in other sections of this notice. Please consult the appropriate regulatory provision for a complete list of reporting and notification requirements. All of these reporting requirements are new for equipment containing non-exempt substitutes. Unless the information is claimed as confidential business information or as otherwise noted, all notifications must be submitted electronically to *608reports@epa.gov*. Electronic submission of reports should decrease burden on both EPA and the regulated community.

- *Extensions to the 30-day or 120-day Leak Repair Requirement:* Owners or operators of appliances with a full charge of 50 or more pounds of refrigerant must request an extension from EPA when seeking additional time to complete repairs.
- *Extensions to Retrofit or Retire Appliances:* Owners or operators of appliances with a full charge of 50 or more pounds of refrigerant must request an extension from EPA when seeking additional time to complete a retrofit or retirement.
- *Relief from the Obligation to Retrofit or Retire an Appliance:* Owners or operators who are retrofitting or retiring an appliance with a full charge of 50 or more pounds of refrigerant may request that EPA relieve them of that obligation if they can establish within 180 days of the plan's date that the appliance no longer exceeds the applicable leak rate. The owner or operator must provide the retrofit or retirement plan; the date that the requirement to develop a retrofit or retirement plan was triggered; the leak rate; the method used to determine the leak rate and full charge; the location of the leak(s) identified in the leak inspection; a description of repair work that has been completed; a description of repair work that has not been completed; and a description of why the repair was not conducted within the required time frames.
- *Chronically Leaking Systems:* Owners or operators must submit a report to EPA for any appliance with a full charge of 50 or more pounds of refrigerant that leaks 125 percent or more of the full charge in a calendar year. This report must describe efforts to identify leaks and repair the appliance.
- *Purged Refrigerant:* The first time that owners or operators of appliances with a full charge of 50 or more pounds of refrigerant exclude purged refrigerant that has been destroyed from their leak rate calculation, they must provide a one-time report to EPA that includes the identification of the facility and a contact person; a description of the appliance; a description of the methods used to determine the quantity of refrigerant sent for destruction and type of records that are being kept; the frequency of monitoring and data-recording; and a description of the control device, and its destruction efficiency.
- *Previously Certified Recovery/Recycling Equipment:* Organizations that are approved to certify refrigerant recovery and/or recycling equipment must inform EPA if subsequent tests indicate a previously certified model line for recovery and/or recycling devices does not meet EPA requirements.
- *Technician Certification Programs:* Organizations that certify technicians must publish online lists/databases of the people that they certify. Organizations must report to EPA twice a year the pass/fail rate and testing schedules. Organizations that receive records from a program that no longer offers the certification test must inform EPA within 30 days of receiving these records. The notification must include the name and address of the program to which the records have been transferred. The reporting requirements can be found in section (g) of appendix D of this subpart.
- *Reclaimer Change of Business Information, Location or Contact Information:* If a reclaimer changes address or management, they must notify EPA within 30 days. Since reclaimer certification is not transferable, if ownership changes, the new owner must certify to EPA that they will meet the reclaimer certification requirements.
- *Amounts Reclaimed:* Reclaimers must report annually the total aggregate quantity of material sent to them for reclamation (the combined mass of refrigerant and contaminants) by refrigerant type, the total mass of each refrigerant reclaimed, and the total mass of waste products.

M. Effective and Compliance Dates

EPA proposed that the final rule become effective on January 1, 2017, with later compliance dates for specific provisions that stakeholders may need additional time to implement. The ''effective date'' is the date that the regulatory text in the Code of Federal Regulations at 40 CFR part 82, subpart F will change. Unless otherwise specified, it is also the date by which the regulated community must comply with the revised regulation. Additional ''compliance dates'' are the dates by which the regulated community must comply with specific provisions of the revised regulation.

One commenter stated that January 1, 2017, is too aggressive a compliance date, given the length of time needed to issue the final rule and the rule's size and complexity. EPA responds that while the Agency is finalizing an effective date of January 1, 2017, as proposed, it is also establishing later compliance dates for some new provisions as well as for the application of some existing provisions to non-exempt substitutes. Where a later compliance date applies, the revised regulations explicitly specify that later compliance date.

The existing provisions related to ODS that were not substantively modified by the rule continue to apply with respect to ODS. For minor changes to existing ODS provisions, the compliance date is the same as the effective date of the rule. Provisions in this final rule for which there is no delayed compliance date with respect to ODS include the sales restriction, technician certification requirements, safe disposal requirements, evacuation requirements, restriction on the sale of used refrigerant, requirement that appliances include a process stub or servicing aperture, and the recordkeeping associated with those provisions. While in most instances this rule establishes a later compliance date for application of these provisions to non-exempt substitutes, the restriction on the sale of used substitute refrigerant and the requirement that appliances containing non-exempt substitutes include a process stub or servicing aperture apply for non-exempt substitutes as of January 1, 2017. In addition, the revised standards for the sale or import of recovery and/or recycling equipment apply for both ODS and non-exempt substitutes as of January 1, 2017.

This rule establishes a compliance date of January 1, 2018, for many provisions that are newly applicable to substitute refrigerants. These include the sales restriction, technician certification requirements, safe disposal requirements, evacuation requirements, and the recordkeeping associated with those provisions. The new requirement that small cans of substitute MVAC refrigerant be equipped with self-sealing valves will also apply as of January 1, 2018. In addition, this rule establishes a compliance date of January 1, 2018, for the new recordkeeping requirement associated with the disposal of appliances containing more than five and less than 50 pounds of either ODS or non-exempt substitute refrigerant.

Lastly, this rule establishes a compliance date of January 1, 2019, for the revised leak repair provisions, regardless of whether the appliance contains an ODS or a non-exempt substitute refrigerant.

The following sections discuss EPA's rationale for these staggered compliance dates.

1. Section 82.154(c)—Refrigerant Sales Restriction

EPA proposed January 1, 2017, as the compliance date for the sales restriction of all refrigerant (non-exempt substitutes or ODS). EPA also proposed to require that small cans of MVAC refrigerant be manufactured with self-sealing valves by one year from the publication of the final rule and that the sale of small cans without self-sealing valves cease by two years from publication of the final rule.

EPA is finalizing a compliance date of January 1, 2018, for the sales restriction as applied to non-exempt substitute refrigerants. Changes related to the sales restriction, as applied to ODS, apply January 1, 2017, as proposed. EPA is also finalizing a compliance date of January 1, 2018, to equip small cans with a self-sealing valve. EPA is not finalizing a sell-through requirement in this rule.

EPA is delaying the compliance date for the sales restriction so that it matches the compliance dates for other aspects of the rule related to sales of non-exempt substitute refrigerants. Specifically, EPA proposed one year from the date of publication of the final rule as the date by which technicians working with appliances containing non-exempt substitutes must be certified and the date by which small cans of MVAC refrigerant must be equipped with a self-sealing valve. As discussed below, EPA is finalizing January 1, 2018, as the compliance date for both of those provisions. To minimize potential conflicts by having different compliance dates, EPA is extending the compliance date for the sales restriction of substitute refrigerants to January 1, 2018.

With regards to small cans of MVAC refrigerant, manufacturers, distributors and retailers of automotive refrigerant supported the proposed ''manufacture-by'' date of one year from publication of the final rule, but commented that they oppose a sell-through date for small cans that do not have self-sealing valves. They commented that such a requirement would be inefficient, burdensome, costly, and environmentally problematic. It would require all retailers to know of the requirement and establish processes for returning unsold cans back to the manufacturer for destruction. More likely, the cans may be improperly disposed of, which would negate the environmental benefit of the new provisions. One commenter stated that a ''manufacture-by'' date would shift EPA's burden in ensuring compliance from a few manufacturers to thousands of retailers. Furthermore, commenters cited EPA's July 2015 SNAP rule (80 FR 42901; July 20, 2015) which listed HFC–134a as unacceptable for use as an aerosol as of a ''manufacture-by'' date, rather than a ''sell-by'' date. CARB commented on EPA's proposal for a two-year sell-through period that a one-year sell-through period has been found to be acceptable in their experience.

EPA responds that to allow all entities in the distribution chain time to plan for and communicate changes to the sales restriction on non-exempt substitute refrigerants, as well as the requirement for self-sealing valves on small cans, EPA is finalizing a sales restriction date and ''manufacture-by'' or ''import-by'' date of January 1, 2018. This will provides slightly more time than one year from publication of the final rule, which EPA proposed for the self-sealing valve requirement. Generally speaking, EPA has attempted to simplify the compliance dates so they do not fall in the middle of a month or during the middle of the cooling season.

In response to the comments received on EPA's proposal to allow small cans manufactured and placed into initial inventory or imported before that date to be sold for one additional year, EPA is not finalizing the sell-through requirement and is finalizing only a date by which small cans must be manufactured or imported with a self-sealing valve. EPA agrees that this is the least-burdensome option and that it avoids the potential for any unintended consequences of a ''sell-by'' date.

2. Section 82.155—Safe Disposal of Small Appliances, MVAC, and MVAC-Like Appliances

EPA proposed that the extension of the requirements for the recovery of non-exempt substitute refrigerant prior to disposal/recycling of small appliances, MVACs, and MVAC-like appliances take effect one year from publication of the final rule. EPA proposed that changes related to ODS equipment be effective January 1, 2017.

One commenter supported the proposed one-year extension to the compliance date for substitute refrigerants. EPA is finalizing a compliance date of January 1, 2018, for the extension to non-exempt substitute refrigerants. This will provide sufficient time for final disposers such as scrap recyclers to learn about the extension to non-exempt substitutes and make any adjustments needed to start maintaining records associated with disposal of appliances containing non-exempt substitutes. Using January 1, 2018, rather than one year from publication will also make communicating the compliance date for the rule easier.

Because EPA is not making substantive changes to the existing requirements for appliances containing ODS, EPA does not expect that final disposers will need extra time to adjust to the updates in this rule for those appliances. Accordingly, EPA is finalizing a compliance date for ODS appliances of January 1, 2017.

3. Section 82.156—Proper Evacuation of Refrigerant From Appliances

EPA proposed that the extension of the requirements related to the evacuation of non-exempt substitute refrigerants before the maintenance, servicing, repair, or disposal of appliances apply one year from publication of the final rule. EPA proposed that changes related to ODS equipment apply January 1, 2017.

Two commenters supported the proposed one year extension to the compliance date for non-exempt substitutes. Another commenter requested two years on the ground that recovery and reclamation equipment may need to be modified to meet the requirements of the final rule. EPA responds that the Agency is not requiring that existing recovery and/or recycling equipment be modified or replaced with new equipment.

EPA is finalizing a compliance date of January 1, 2018, for the extension of the requirements to appliances containing non-exempt refrigerants. This will provide affected entities time to learn about the extension and make any adjustments needed to apply the required practices to the evacuation of appliances containing non-exempt substitutes. Because EPA is not making substantive changes to the existing requirements for appliances containing ODS, EPA does not expect that affected entities will need extra time to adjust to the updates in this rule for those appliances. Accordingly, EPA is finalizing a compliance date for ODS appliances of January 1, 2017.

EPA is establishing a delayed compliance date of January 1, 2018, for the new requirement to keep records upon disposal of appliances containing either a class I, class II, or non-exempt substitute refrigerant. This is slightly more than one year from publication of the final rule, which was what EPA proposed. The delayed compliance date will allow affected entities to establish a recordkeeping program to track the amount of refrigerant recovered from appliances that are disposed of in the field. EPA expects that the same amount of time will be needed for ODS and non-ODS appliances because this is a new requirement, not an update to an existing requirement.

4. Section 82.157—Appliance Maintenance and Leak Repair

This rule makes significant revisions to the leak repair provisions, including lowering the leak rates, requiring leak repair verification tests on new types of equipment, and modifying the recordkeeping and reporting requirements. In addition, owners and operators of appliances using non-exempt substitute refrigerants that were previously not covered by any subpart F required practices will have to familiarize themselves with the requirements. EPA is therefore establishing a later compliance date for the appliance maintenance and leak repair requirements than for most other provisions.

EPA proposed a compliance date 18 months from publication of the final rule. One commenter suggested that EPA shorten the compliance date to 12 months and two commenters agreed that it should be at minimum 18 months. Five commenters recommended more than 18 months, with the longest extensions ranging from 24 to 36 months after the publication of the final rule. These commenters stated that later dates would decrease the costs of compliance and give companies adequate time to train employees and update current systems to meet the requirements of the rule. Extending the compliance dates would also allow more time for owners or operators to bring equipment up to the new standards, and avoid having to potentially conduct numerous repairs or replacements at once. Commenters who supported a 36-month extension noted constraints with the federal budget cycle and acquisition requirements or referred to Maximum Achievable Control Technology rules that typically provide three years to comply.

Because the leak repair provisions already provide the opportunity for extensions for delays caused by the federal agency appropriations and/or procurement process, EPA disagrees with federal agencies requesting a 36 month extension to the compliance date. EPA agrees with commenters that additional time may be needed to understand the regulations and to make repairs on systems that have not previously been subject to the subpart F required practices. Therefore, EPA is establishing a compliance date of January 1, 2019. This date is two years from the effective date, and more than 24 months from publication of the final rule. This is sufficient time for owners and operators of appliances with 50 or more pounds of refrigerant to learn about the updated requirements; update systems, standard operating procedures, and training materials to best administer the requirements; and fix leakier systems.

Until January 1, 2019, the leak repair provisions at § 82.156(i) and the associated recordkeeping requirements at § 82.166 continue to apply as specified to appliances containing ODS refrigerant. Those leak repair provisions use terminology contained in the definitions as they existed prior to this rulemaking. EPA has added those unmodified definitions to § 82.156(j) for the purposes of implementing § 82.156(i) until the new provisions take effect January 1, 2019.

5. Section 82.158—Recovery and Recycling Equipment

EPA proposed that the standards for recovery and recycling equipment apply to the manufacture and import of equipment for non-exempt substitutes as of January 1, 2017. One commenter requested additional time on the ground that recovery and recycling equipment may need to be modified to meet the requirements of the final rule. EPA responds that the Agency is not requiring that existing recovery and/or recycling equipment be modified or replaced with new equipment certified for use with non-exempt substitute refrigerants. Rather, EPA is requiring only that *newly manufactured or imported* recovery and/or recycling equipment meet the new standards upon the compliance date.

6. Section 82.161—Technician Certification Requirements

EPA proposed that technicians be certified to handle non-exempt substitute refrigerants by one year from publication of the final rule. EPA proposed that changes related to ODS apply January 1, 2017.

One commenter supported the one year extension to the compliance date for non-exempt substitute refrigerants. Another commenter requested two years so as to allow time for certifying organizations to write and review the certification test questions as well as train, or re-train, technicians on that new material.

EPA is establishing a compliance date of January 1, 2018, for technicians to be certified to handle non-exempt substitute refrigerants. This is slightly more than the proposal of one year from publication of the final rule. This will provide time for EPA to update the test bank with questions related to non-exempt substitute refrigerants and for certifying organizations to update their testing materials to use the new questions. EPA does not anticipate that a two year extension would be necessary because HVACR contractors are generally working on both ODS refrigerants and non-exempt substitute refrigerants, and there is not likely to be a rush of contractors needing to be certified.

EPA is also finalizing the compliance dates for the publication of lists of certified technicians as proposed. As such, any technician certified on or after January 1, 2017, must be included in a publicly accessible list of certified technicians or provided the ability to opt out. Technician certification programs must make these lists available starting January 1, 2018.

V. Possible Future Revisions to Subpart F

EPA requested input on other aspects of the National Recycling and Emission Reduction Program that might be addressed in a future rulemaking. Specifically EPA requested feedback on (1) establishing a voluntary program for supermarkets based on their corporate-wide average leak rate; (2) establishing more stringent certification requirements for reclaimers; (3) establishing a third-party certification or audit program for reclaimers; (4) requiring labeling of reclaimed refrigerant; (5) moving further upstream the responsibility to recapture refrigerant from appliances being disposed of; (6) requiring recertification of currently certified technicians; and (7) establishing a technician certification requirement or sales restriction for flammable refrigerants. EPA is not taking any final action on these topics in this rule but does greatly value the information provided by commenters. EPA has prepared a summary of these comments that is available in the docket for this rule.

VI. Economic Analysis

For the reasons explained in Section III of this preamble, EPA considered economic factors in the development of this rule. EPA considered the costs of different actions that would achieve the goals of this rule to individual entities and the United States economy as a whole. While selecting regulatory actions that would achieve the goals of this rule, EPA elected to consider the costs of different actions to individual entities and the United States economy as a whole. Many commenters claimed that the benefits of the proposed regulatory provisions do not justify the costs, while four comments supported the cost effectiveness of the proposed rule. EPA has taken these comments into consideration and is finalizing several provisions that will be less burdensome than proposed. This section provides a brief overview of how the Agency calculated costs and then discusses major revisions to the final rule that affect EPA's economic analysis. A full description of the cost analyses is included in the technical support document *Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program,* which can be found in the docket.

To estimate the incremental costs of the regulatory revisions, the Agency developed a set of model entities with a distribution of different model facilities, each of which could contain a set of model appliances. This set of model entities was used to represent the potentially affected entities in a variety of economic sectors in the United States, and they were developed based on EPA's Vintaging Model and cross-checked with the 2013 dataset of repair records developed under California's RMP. Each model entity reflects information about the typical number of facilities in a given sector and size category and the number of pieces of equipment in each equipment category that are likely to be owned and/or operated by each facility. By combining the model entities with economic data on potentially affected industries from the United States Census, EPA obtained a model for the potentially affected population. By applying the costs of leak inspections, repairs, recordkeeping and reporting, self-sealing cans for MVAC servicing, and other regulatory revisions to this population, EPA estimated the costs to individual entities and the total cost to the economy.

Some regulatory revisions in this action, such as providing extensions to owners or operators of comfort cooling and commercial refrigeration before having to replace leaking appliances reduce the cost of compliance to owners of ODS-containing equipment. These reductions were included in the incremental cost of the action.

As detailed more fully in the technical support document, the rulemaking includes new compliance costs of approximately $75.5 million split into approximately $32.5 million for owners and operators of equipment containing ODS and $43 million in non-ODS systems. Offsetting the new compliance costs are reductions in cost due to the removal of some regulatory requirements and increasing flexibility for repairs. These offsetting costs total $51 million, all related to equipment containing ODS. Taken together (the new compliance costs less the offsetting costs), EPA estimates that the net total cost to comply with the requirements of this final rule is $24.5 million per year (Table 3 shows these net costs at both the rule component level and for the total rule).

TABLE 3—INCREMENTAL ANNUAL COMPLIANCE COSTS BY RULE COMPONENT (2014$) WITH 7% AND 3% DISCOUNT RATES

Rule component	Total incremental compliance costs (7% discount rate)			Total incremental compliance costs (3% discount rate)		
	HFC	ODS	Total	HFC	ODS	Total
Leak Repair:						
Comfort Cooling	$5,046,000	−$38,191,000	−$33,145,000	$2,437,000	−$18,705,000	−$16,268,000
Commercial Refrigeration	1,709,000	−10,137,000	−8,428,000	823,000	−4,963,000	−4,139,000
IPR	385,000	31,000	417,000	186,000	13,000	200,000
Leak Inspection	21,703,000	27,460,000	49,163,000	21,703,000	27,460,000	49,163,000
Reporting & Recordkeeping	11,101,000	2,350,000	13,451,000	11,101,000	2,350,000	13,451,000
Self-sealing Valves on Small Cans	3,070,000		3,070,000	3,070,000		3,070,000
Total	43,014,000	−$18,487,000	24,528,000	39,320,000	6,155,000	45,477,000

Totals may not sum due to independent rounding.

Some regulatory revisions, by reducing the amount of refrigerant lost to leaks, also result in savings for equipment owners or operators of the cost of purchasing replacement refrigerant. EPA estimates that affected entities would avoid spending over $44 million in refrigerant purchases alone due to the regulatory revisions. The compliance costs and refrigerant savings combined are estimated to be savings of $19.6 million per year. Furthermore, costs could additionally be lower because appliances running with the correct amount of refrigerant are generally more energy efficient to operate and last longer.

TABLE 4—TOTAL ANNUAL REFRIGERANT SAVINGS (2014$) AND COMBINED ANNUAL COST AND ANNUAL SAVINGS 2ITH 7% AND 3% DISCOUNT RATE

Rule component	Annual refrigerant savings			7% Discount rate		3% Discount rate	
	HFC	ODS	Total	Incremental compliance costs	Combined annual savings and compliance costs	Incremental compliance costs	Combined annual savings and compliance costs
Leak Repair:							
Comfort Cooling	−$9,853,000	−$20,221,000	−$30,073,000	−$33,145,000	−$63,218,000	−$16,268,000	−$46,341,000
Commercial Refrigeration	−3,439,000	−7,514,000	−10,953,000	−8,428,000	−19,381,000	−4,139,000	−15,092,000
IPR	−1,582,000	−1,533,000	−3,115,000	417,000	−2,698,000	200,000	−2,915,000
Leak Inspection				49,163,000	49,163,000	49,163,000	49,163,000
Reporting & Recordkeeping				13,451,000	13,451,000	13,451,000	13,451,000
Self-sealing Valves on Small Cans				3,070,000	3,070,000	3,070,000	3,070,000
Total	−14,874,000	−29,268,000	−44,141,000	24,528,000	−19,613,000	45,477,000	1,336,000

Totals may not sum due to independent rounding.

Several commenters questioned the validity of EPA's cost estimates and some provided examples of costs from their own business/organizations. One commenter said that, given the amount of paperwork and added compliance requirements in the proposed rule, the cost estimates are implausibly low and call into question the fundamental integrity of the Agency's economic analysis. Another said that they would estimate the cost to implement the new requirements to be well in excess of $100 million just to repair and potentially replace IPR systems, noting that the replacement of a single complex IPR system can be as high as $10 million.

EPA responds that the aggregate costs and savings for the economy as a whole would not be expected to be distributed evenly across affected entities. For example, owners of ODS-containing equipment with low leak rates might only incur costs for recordkeeping. On the other hand, owners of HFC-containing equipment with high leak rates might incur costs of repairing leaks, though they would also realize savings due to reduced refrigerant purchases. Owners of ODS-containing comfort cooling or commercial refrigeration appliance with high leak rates may also incur costs of repairing leaks but also substantial cost savings by not having to retrofit or retire the appliance if unable to repair within 30 days, given the extensions provided in the final rule.

Several commenters claimed that requiring all systems to have annual or quarterly leak inspections would impose significant costs on owners of all systems including those systems that do not leak or leak very little. One commenter, using their estimate for the cost of each leak inspection of a particular facility's appliances, when taken quarterly across some 5,200 retail stores and supporting business units, stated that the impact on their company would exceed $10 million. Another commenter called quarterly leak inspections redundant if it is already required that leaks be fixed in a timely manner. Two commenters supported leak inspections and trade group supported periodic leak inspections as a proactive means to detect leaks, reduce refrigerant emissions, and maintain energy efficiency of equipment.

The Agency responds that a proactive plan of maintenance leads to reduced emissions of refrigerant and is part of the best practices for operation of these systems. Discussions with members of industry and reports from the GreenChill program support the effectiveness of a program of regular inspections to lower average leak rates. However, to allow for flexibility in how system owners and operators implement their refrigeration management programs, especially for the least leaky equipment, EPA is not finalizing a requirement that all systems undergo periodic leak inspections. Only systems that show a history of excessive emissions by exceeding the leak rate threshold will require periodic inspections, and then only for a limited time if the leak rate of the system is addressed effectively. This will reduce the burden on owners of systems that are not responsible for emissions, while focusing attention on systems that require it. EPA estimates that this will affect 282,000 appliances, compared to approximately 1.5 million under the proposed rule.

EPA's analysis of the costs of leak inspection used the median hourly rate for heating, air-conditioning, and refrigeration mechanics and installers provided by the Bureau of Labor Statistics, along with an additional 110% for overhead. EPA assumed that leak inspections could be carried out quickly because the proposal allowed employees and not certified technicians to conduct the inspections. However, as discussed previously, a number of stakeholders claimed that inspections by employees not specialized in refrigeration would be far less effective and pointed out that the standard practice for many entities is to hire technicians for inspections. EPA is requiring in this final rule that leak inspections be conducted by certified technicians. EPA's final analysis continues to use the average rate provided by the Bureau of Labor Statistics but has increased the number of hours for each inspection.

Several commenters said that the costs of completely replacing a system if it leaked more than 75 percent of its full charge in two consecutive years were very high, and that these costs would not necessarily fall on those whose poor maintenance practices allowed for excessive emissions. They also commented that the provision was inefficient because all of the system components would need to be replaced, even those that were known not to be leaking, imposing additional costs with no additional benefit.

In response to the potential significant costs that commenters said the proposed ''chronic leaker'' provision would incur, EPA is finalizing a modification of this provision that would instead require reporting to EPA rather than retirement of an appliance. This will greatly reduce the costs on owners of systems with very high emissions. While EPA had not estimated the costs or benefits of the proposed chronic leaker provision, EPA has calculated the total annual reporting burden associated with the final provision to be $126,000.

Two commenters said that requiring all leaks be fixed after a system exceeds the threshold leak rate would lead to high costs with diminishing returns as smaller and smaller leaks were repaired.

EPA maintains that once a system has been evacuated for repair it is a best practice to repair any significant leaks. Doing so makes financial sense because allowing leaks to continue leads to the purchase of more refrigerant, reduced energy efficiency, possible increased service costs if the system must be shut down and repaired again, and increased risk of loss of cooling. However, EPA agrees that some leaks may allow very small amounts of refrigerant to escape and that some leaks are difficult to access or repair. Therefore, taking into account the comments, EPA is not finalizing the requirement that all identified leaks be repaired.

Two commenters claimed that lowering the maximum leak rate for IPR systems to 20 percent would lead to significant economic burden for some businesses, and one of whom said that EPA has not provided adequate benefits to justify this requirement.

EPA has estimated that lowering the maximum rate at which systems may be allowed to leak perpetually without being repaired protects the environment by reducing emissions of pollutants. EPA recognizes that maintenance of IPR systems presents particular challenges. These systems are often very large and complex, making finding leaks more difficult. They can also be extremely costly to shut down to allow for repairs. Therefore, in consideration of comments and other feedback from stakeholders, the Agency is finalizing a leak rate of 30 percent for IPR systems. While this will reduce benefits, we hope to strike a balance between the costs and benefits of this provision that will allow greater flexibility in the management of these systems. Under the proposed leak rate of 20 percent, the EPA estimates benefits of 0.63 $MMTCO_2eq$ with costs of $7 million for leak inspections and repair. With the final leak rate of 30 percent, estimated benefits are 0.44 $MMTCO_2eq$ with costs of $5.5 million.

One commenter stated that there is substantial uncertainty in the transition pathway away from HFCs due to EPA's SNAP rule that changed the listing status for certain substitute refrigerants (80 FR 42870) (''SNAP Program Status Change Rule''). The commenter encouraged EPA to consider a wider range of possible baseline futures when calculating the 2020 and 2025 benefits of the rule.

EPA responds that the Agency has considered that many end users will change the ODS substitutes being used because of the SNAP rule and EPA considered such change when estimating the benefits of this final action. EPA assumed transitions away from substitutes that are no longer acceptable in some end-uses, most notably in commercial refrigeration based on the most likely scenario detailed in *Climate Benefits of the SNAP Program Status Change Rule* found in docket number EPA–HQ–OAR–2014–0198–0239. However, many of the differences between the scenarios in that analysis have little or no effect on the estimated benefits of the present action. For example, the analysis of the SNAP rule looked only at transitions of MVAC units for exports, as it is assumed that the domestic market will already have transitioned away from HFC–134a by 2020 due to EPA's earlier Light Duty Vehicle rule. Therefore the SNAP rule would not be expected to introduce uncertainty in the benefits in 2020 or 2025 in MVAC servicing. As another example, the different SNAP scenarios assumed that low-temperature commercial refrigeration appliances would begin to transition from HFC–134a to R–450A or R–513A in different years, but all three scenarios assume that transition will reach a maximum of 50 percent by 2020. Given the small differences in the expected equipment stock related to uncertainty in the effects of the SNAP Program Status Change Rule, we believe that assuming the effects of the ''most likely'' scenario from the SNAP analysis provides a model universe of appliances that is realistic and that avoids any possibility of double counting benefits between the two rules.

Under the Small Business Regulatory Enforcement Fairness Act (SBREFA), federal agencies must consider the effects regulations may have on small entities. If a rule may have a significant economic impact on a substantial number of small entities (SISNOSE), the Agency would be required to take certain steps to ensure that the interests of small entities were represented in the rulemaking process. To determine if this was necessary, EPA used the model entity analysis to ascertain the likelihood that the revisions would have a SISNOSE. EPA estimates that approximately 740 of the approximately 854,580 affected small businesses could incur costs in excess of 1 percent of annual sales and that fewer than 80 small businesses could incur costs in excess of 3 percent of annual sales. These levels are below the thresholds used in other Title VI rulemakings under which it can be presumed that an action will have no SISNOSE. Nevertheless, EPA consulted numerous stakeholders, including small businesses, in the development of this rule.

The full description of the cost analyses, including sensitivity analyses of key assumptions and alternate options, is included in the technical support document *Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program,* which can be found in the docket for this action.

VII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is a significant regulatory action that was submitted to OMB for review. This action was deemed to raise novel legal or policy issues. Any changes made in response to OMB recommendations have been documented in the docket. EPA prepared an economic analysis of the potential costs and benefits associated with this action. This analysis is summarized in Section VI of the notice and is available in the docket.

B. Paperwork Reduction Act

The information collection activities in this rule have been submitted for approval to the Office of Management and Budget (OMB) under the PRA. The Information Collection Request (ICR) document that EPA prepared has been assigned EPA ICR number 1626.15. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them.

All recordkeeping and reporting requirements under this program are specifically described in Section IV.L of this notice. In order to facilitate compliance with and enforce the refrigerant management requirements of section 608 of the CAA, EPA requires reporting and recordkeeping by technicians, technician certification programs, refrigerant recovery/recycling equipment testing organizations, refrigerant wholesalers and purchasers, refrigerant reclaimers, refrigeration and air-conditioning equipment owners, and other establishments that perform refrigerant removal, service, or disposal. EPA has used and will continue to use these records and reports to ensure that refrigerant releases are minimized during the recovery, recycling, and reclamation processes. The handling and confidentiality of the reporting requirements follow EPA's confidentiality regulations at 40 CFR 2.201 *et seq.* for assuring computer data security, preventing disclosure, proper storage, and proper disposal.

Respondents/affected entities: Entities required to comply with reporting and recordkeeping requirements include technicians; technician certification programs; refrigerant wholesalers; refrigerant reclaimers; refrigeration and air-conditioning equipment owners and/or operators; and other establishments that perform refrigerant removal, service, or disposal.

Respondent's obligation to respond: Mandatory (40 CFR part 82, subpart F).

Estimated number of respondents: The total number of respondents is estimated to be approximately 861,374.

Frequency of response: The frequency of responses vary from once a year to daily. Public reporting burden for this collection of information is estimated to vary from one minute to 9.4 hours per response, including time for reviewing instructions and gathering, maintaining, and submitting information.

Total estimated burden: The total estimated burden is 580,473 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: The total estimated cost is $34,627,299 (per year). There are no estimated annualized capital or operation & maintenance costs associated with the reporting or recordkeeping requirements.

Much of this burden is already covered by the existing requirements in 40 CFR part 82, subpart F, and the existing ICR, which was last approved by OMB in December 2014. The OMB control number for this information collection is 2060–0256.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the **Federal Register** and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities contained in this final rule.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. The small entities subject to the requirements of this action are businesses and small governmental jurisdictions that own or service comfort cooling, commercial refrigeration, or IPR equipment. EPA estimates that approximately 740 of the approximately 854,580 affected small businesses could incur costs in excess of 1 percent of annual sales and that fewer than 80 small businesses could incur costs in excess of 3 percent of annual sales. These levels are below the thresholds under which it can be presumed that an action will have no SISNOSE, as used in other Title VI rulemakings. Details of this analysis are presented in the *Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program* available in the docket.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. This rule supplements the statutory self-effectuating prohibition against venting refrigerants by ensuring that certain service practices are conducted that reduce the emissions of ozone-depleting refrigerants and their substitutes. For example, this rule strengthens the leak repair requirements, establishes recordkeeping requirements for the disposal of appliances containing more than five and less than 50 pounds of refrigerant, and modifies the technician certification program.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. This rule does not significantly or uniquely affect the communities of Indian tribal governments. This rule supplements the statutory self-effectuating prohibition against venting refrigerants by ensuring that certain service practices are conducted that reduce the emissions of ozone-depleting refrigerants and their substitutes. For example, this rule strengthens the leak repair requirements, establishes recordkeeping requirements for the disposal of appliances containing more than five and less than 50 pounds of refrigerant, and modifies the technician certification program. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

This action is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it is not economically significant as defined in Executive Order 12866. Nonetheless, the environmental health or safety risk addressed by this action may have a disproportionate effect on children. Depletion of stratospheric ozone results in greater transmission of the sun's ultraviolet (UV) radiation to the earth's surface. The following studies describe the effects of excessive exposure to UV radiation on children: (1) Westerdahl J, Olsson H, Ingvar C. ''At what age do sunburn episodes play a crucial role for the development of malignant melanoma,'' Eur J Cancer 1994: 30A: 1647–54; (2) Elwood JM Japson J. ''Melanoma and sun exposure: an overview of published studies,'' Int J Cancer 1997; 73:198–203; (3) Armstrong BK, ''Melanoma: childhood or lifelong sun exposure,'' In: Grobb JJ, Stern RS Mackie RM, Weinstock WA, eds. ''Epidemiology, causes and prevention of skin diseases,'' 1st ed. London, England: Blackwell Science, 1997: 63–6; (4) Whiteman D., Green A. ''Melanoma and Sunburn,'' Cancer Causes Control, 1994: 5:564–72; (5) Heenan, PJ. ''Does intermittent sun exposure cause basal cell carcinoma? A case control study in Western Australia,'' Int J Cancer 1995; 60: 489–94; (6) Gallagher, RP, Hill, GB, Bajdik, CD, et al. ''Sunlight exposure, pigmentary factors, and risk of nonmelanocytic skin cancer I, Basal cell carcinoma,'' Arch Dermatol 1995; 131: 157–63; (7) Armstrong, DK. ''How sun exposure causes skin cancer: an epidemiological perspective,'' Prevention of Skin Cancer. 2004. 89–116.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This action is not a ''significant energy action'' because it is not likely to have a significant adverse effect on the supply, distribution or use of energy.

I. National Technology Transfer and Advancement Act

This action involves technical standards. In some instances, EPA is deciding to use a modified version of an industry standard for purposes of this rule; in others, EPA is deciding to use an industry standard by reference exactly as written.

EPA is incorporating by reference UL 1963, Supplement SB, *Requirements for Refrigerant Recovery/Recycling Equipment Intended for Use with a Flammable Refrigerant,* Fourth Edition, June 1, 2011. This establishes standards for refrigerant recovery and refrigerant recovery/recycling equipment to ensure the equipment can be used safely with flammable refrigerants. The standard is available at *www.comm-2000.com* or by writing to Comm 2000, 151 Eastern Avenue, Bensenville, IL 60106. The cost is $798 for an electronic copy and $998 for hardcopy. UL also offers a subscription service to the Standards Certification Customer Library (SCCL) that allows unlimited access to their standards and related documents. The cost of obtaining this standard is not a significant financial burden for equipment manufacturers. Therefore, EPA concludes that the UL standard being incorporated by reference is reasonably available.

EPA is incorporating by reference standards referenced in AHRI Standard 700–2016. Specifically, these standards are:

—*2008 Appendix C for Analytical Procedures for AHRI Standard 700–2014-Normative,* 2008. This document establishes definitive test procedures for determining the quality of new, reclaimed and/or repackaged refrigerants in support of the standards established in AHRI–700. An electronic copy of the appendix is available at *www.ahrinet.org.* It is also available by mail at Air-Conditioning, Heating, and Refrigeration Institute (AHRI), 2111 Wilson Boulevard, Suite 500, Arlington, VA 22201. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

—*2012 Appendix D for Gas Chromatograms for AHRI Standard 700–2014- Informative,* 2012, Air-Conditioning, Heating, and Refrigeration Institute. This appendix provides figures for the gas chromatograms used with Appendix C to AHRI Standard 700–2015: Analytical Procedures for AHRI Standard 700–2015, Normative, Specification for Fluorocarbon Refrigerants. An electronic copy of the appendix is available at *www.ahrinet.org.* It is also available by mail at Air-Conditioning, Heating, and Refrigeration Institute (AHRI), 2111 Wilson Boulevard, Suite 500, Arlington, VA 22201. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

—Federal Specification for ''Fluorocarbon Refrigerants,'' BB–F–1421 B, dated March 5, 1982. This section of this standard establishes a method to determine the boiling point and boiling point range of a refrigerant. The standard is available in the docket for this rulemaking. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

—GPA STD–2177, *Analysis of Natural Gas Liquid Mixtures Containing Nitrogen and Carbon Dioxide by Gas Chromatography,* 2013, Gas Processors Association. This standard establishes methods for analyzing demethanized liquid hydrocarbon streams containing nitrogen/air and carbon dioxide, and purity products such as ethane/propane mix that fall within compositional ranges indicated in the standard. The standard is available at *www.techstreet.com* or by writing to Techstreet, 6300 Interfirst Drive, Ann Arbor, MI 48108. The cost of this standard is $55 for an electronic copy or $65 for a printed edition. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

—ASTM Standard D1296–01–2012, *Standard Test Method for Odor of Volatile Solvents and Diluents,* July 1, 2012, ASTM International. This test method covers a comparative procedure for observing the characteristic and residual odors of volatile organic solvents and diluents to determine their odor acceptability in a solvent system. The standard is available at *www.astm.org* or by writing to ASTM, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959. The cost of this standard is $39. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

EPA is incorporating by reference standards referenced in AHRI Standard 740–2016.

Specifically, these standards are:

—ANSI/ASHRAE Standard 63.2–1996 (RA 2010) Method of Testing Liquid-Line Filter Drier Filtration Capability, 2010, American National Standards Institute/American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. The purpose of this standard is to prescribe a laboratory test method for evaluating the filtration capability of filters and filter driers used in liquid lines of refrigeration systems. The standard is available at *www.ashrae.org* or by mail at AHSRAE, 1791 Tullie Circle NE., Atlanta, GA 30329. The cost is $39 for an electronic copy or printed edition. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

—UL Standard 1963–2011, *Refrigerant Recovery/Recycling Equipment,* Fourth Edition, 2011, American National Standards Institute/ Underwriters Laboratories, Inc. This standard establishes safety requirements for and methods to evaluate refrigerant recovery and refrigerant recovery/recycling equipment. The standard is available at *http://www.comm-2000.com* or by writing to Comm 2000, 151 Eastern Avenue, Bensenville, IL 60106. The cost is $798 for an electronic copy and $998 for hardcopy. UL also offers a subscription service to the Standards Certification Customer Library (SCCL) that allows unlimited access to their standards and related documents. The cost of obtaining this standard is not a significant financial burden for equipment manufacturers. Therefore, EPA concludes that the UL standard being incorporated by reference is reasonably available.

—AHRI Standard 110–2016, *Air-Conditioning, Heating and Refrigerating Equipment Nameplate Voltages,* 2016, Air-Conditioning, Heating, and Refrigeration Institute. This standard establishes voltage rating requirements, equipment performance requirements, and conformance conditions for air-conditioning, heating, and refrigerating equipment. A free electronic copy of this standard is available at *www.ahrinet.org.* It is also available by mail at Air-Conditioning, Heating, and Refrigeration Institute (AHRI), 2111 Wilson Boulevard, Suite 500, Arlington, VA 22201. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

—International Standard IEC 60038, *IEC Standard Voltages,* Edition 7.0, 2009–06, International Electrotechnical Commission. This standard specifies standard voltage values which are intended to serve as preferential values for the nominal voltage of electrical supply systems, and as reference values for equipment and system design. The standard is available at *http://www.iec.ch* or by writing to Techstreet, 6300 Interfirst Drive, Ann Arbor, MI 48108. The cost of this standard is $50. The cost of obtaining this standard is not a significant financial burden. Therefore, EPA concludes that the standard being incorporated by reference is reasonably available.

EPA is not incorporating by reference California Air Resources Board, *Test Procedure for Leaks from Small Containers of Automotive Refrigerant,* TP–503, as amended January 5, 2010. Rather EPA is basing the content found in appendix E on this standard. This standard establishes methods for assessing the leak rate from small containers of refrigerant. A copy of this standard is available in the docket and *www.arb.ca.gov/regact/2009/hfc09/hfc09.htm.www.arb.ca.gov/regact/2009/hfc09/hfc09.htm.*

At this time EPA is not finalizing an incorporation by reference for the ASHRAE terminology found at *https://www.ashrae.org/resources—publications/free-resources/ashrae-terminology.*

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

EPA believes this action will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it affects the level of environmental protection equally for all affected populations. This rule amends the leak repair requirements for appliances using ozone-depleting substances, thereby protecting human health and the environment from increased amounts of UV radiation and increased incidence of skin cancer. The effects of exposure to UV radiation and the estimated reduction in emissions of ozone-depleting substances from this rule is contained in Section II.D.1 of this notice.

K. Congressional Review Act (CRA)

This action is subject to the CRA, and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 82

Environmental protection, Air pollution control, Chemicals, Incorporation by reference, Reporting and recordkeeping requirements.

Dated: September 26, 2016.

Gina McCarthy,

Administrator.

For the reasons set forth in the preamble, the Environmental Protection Agency amends 40 CFR part 82 as follows:

PART 82—PROTECTION OF STRATOSPHERIC OZONE

■ 1. The authority citation for part 82 continues to read as follows:

Authority: 42 U.S.C. 7414, 7601, 7671–7671q.

■ 2. Revise § 82.150 to read as follows:

§ 82.150 Purpose and scope.

(a) The purpose of this subpart is to reduce emissions of class I and class II refrigerants and their non-exempt substitutes to the lowest achievable level by maximizing the recapture and recycling of such refrigerants during the maintenance, service, repair, and disposal of appliances and restricting the sale of refrigerants consisting in whole or in part of a class I or class II ozone-depleting substance or their non-exempt substitutes in accordance with Title VI of the Clean Air Act.

(b) This subpart applies to any person maintaining, servicing, or repairing appliances containing class I, class II or non-exempt substitute refrigerants. This subpart also applies to persons disposing of such appliances (including small appliances and motor vehicle air conditioners), refrigerant reclaimers, technician certifying programs, appliance owners and operators, manufacturers of appliances, manufacturers of recovery and/or recycling equipment, approved recovery and/or recycling equipment testing organizations, and persons buying, selling, or offering to sell class I, class II, or non-exempt substitute refrigerants.

■ 3. Amend § 82.152 by:

■ a. Adding definitions for ''Batch,'' ''Class I,'' ''Class II,'' ''Comfort cooling,'' ''Component,'' ''Leak inspection,'' ''Mothball,'' ''Normal operating characteristics and conditions,'' ''Reclaim,'' ''Recover,'' ''Recycle,'' ''Retire,'' ''Retrofit,'' ''Seasonal variance,'' ''Self-sealing valve,'' and ''System receiver.''

■ b. Revising the definitions for ''Appliance,'' ''Apprentice,'' ''Commercial refrigeration,'' ''Custom-built,'' ''Disposal,'' ''Follow-up verification test,'' ''Full charge,'' ''High-pressure appliance,'' ''Industrial process refrigeration,'' ''Industrial process shutdown,'' ''Initial verification test,'' ''Leak rate,'' ''Low-loss fitting,'' ''Low-pressure appliance,'' ''Medium-pressure appliance,'' ''MVAC-like appliance,'' ''One-time expansion device,'' ''Opening an appliance,'' ''Recovery efficiency,'' ''Refrigerant,'' ''Self-contained recovery equipment,'' ''Small appliance,'' ''Substitute,'' ''Technician,'' and ''Very high-pressure appliance.''

■ c. Removing the definitions for ''Critical Component,'' ''Normal operating characteristics or conditions,'' ''Normally containing a quantity of refrigerant,'' ''Reclaim refrigerant,'' ''Recover refrigerant,'' ''Recycle refrigerant,'' ''Suitable replacement refrigerant,'' ''System mothballing,'' and ''Voluntary certification program.''

The revisions and additions to read as follows:

§ 82.152 Definitions.

As used in this subpart, the term:

Appliance means any device which contains and uses a class I or class II substance or substitute as a refrigerant and which is used for household or commercial purposes, including any air conditioner, motor vehicle air conditioner, refrigerator, chiller, or freezer. For a system with multiple circuits, each independent circuit is considered a separate appliance.

Apprentice means any person who is currently registered as an apprentice in maintenance, service, repair, or disposal of appliances with the U.S. Department of Labor's Office of Apprenticeship (or a State Apprenticeship Council recognized by the Office of Apprenticeship). A person may only be an apprentice for two years from the date of first registering with that office.

* * * * *

Batch means a single bulk cylinder of refrigerant after all reclamation has been completed prior to packaging or shipping to the market.

Class I refers to an ozone-depleting substance that is listed in 40 CFR part 82 subpart A, appendix A.

Class II refers to an ozone-depleting substance that is listed in 40 CFR part 82 subpart A, appendix B.

Comfort cooling means the air-conditioning appliances used to provide cooling in order to control heat and/or humidity in occupied facilities including but not limited to residential, office, and commercial buildings. Comfort cooling appliances include but are not limited to chillers, commercial split systems, and packaged roof-top units.

Commercial refrigeration means the refrigeration appliances used in the retail food and cold storage warehouse sectors. Retail food appliances include the refrigeration equipment found in supermarkets, convenience stores, restaurants and other food service establishments. Cold storage includes the refrigeration equipment used to store meat, produce, dairy products, and other perishable goods.

Component means a part of the refrigerant circuit within an appliance including, but not limited to, compressors, condensers, evaporators, receivers, and all of its connections and subassemblies.

Custom-built means that the industrial process equipment or any of its components cannot be purchased and/or installed without being uniquely designed, fabricated and/or assembled to satisfy a specific set of industrial process conditions.

Disposal means the process leading to and including:

(1) The discharge, deposit, dumping or placing of any discarded appliance into or on any land or water;

(2) The disassembly of any appliance for discharge, deposit, dumping or placing of its discarded component parts into or on any land or water;

(3) The vandalism of any appliance such that the refrigerant is released into the environment or would be released into the environment if it had not been recovered prior to the destructive activity;

(4) The disassembly of any appliance for reuse of its component parts; or

(5) The recycling of any appliance for scrap.

Follow-up verification test means those tests that involve checking the repairs to an appliance after a successful initial verification test and after the appliance has returned to normal operating characteristics and conditions to verify that the repairs were successful. Potential methods for follow-up verification tests include, but are not limited to, the use of soap bubbles as appropriate, electronic or ultrasonic leak detectors, pressure or vacuum tests, fluorescent dye and black light, infrared or near infrared tests, and handheld gas detection devices.

Full charge means the amount of refrigerant required for normal operating characteristics and conditions of the appliance as determined by using one or a combination of the following four methods:

(1) Use of the equipment manufacturer's determination of the full charge;

(2) Use of appropriate calculations based on component sizes, density of refrigerant, volume of piping, and other relevant considerations;

(3) Use of actual measurements of the amount of refrigerant added to or evacuated from the appliance, including for seasonal variances; and/or

(4) Use of an established range based on the best available data regarding the normal operating characteristics and conditions for the appliance, where the midpoint of the range will serve as the full charge.

High-pressure appliance means an appliance that uses a refrigerant with a liquid phase saturation pressure between 170 psia and 355 psia at 104 °F. Examples include but are not limited to appliances using R–22, R–407A, R–407C, R–410A, and R–502.

Industrial process refrigeration means complex customized appliances that are directly linked to the processes used in, for example, the chemical, pharmaceutical, petrochemical, and manufacturing industries. This sector also includes industrial ice machines, appliances used directly in the generation of electricity, and ice rinks. Where one appliance is used for both industrial process refrigeration and other applications, it will be considered industrial process refrigeration equipment if 50 percent or more of its operating capacity is used for industrial process refrigeration.

Industrial process shutdown means when an industrial process or facility temporarily ceases to operate or manufacture whatever is being produced at that facility.

Initial verification test means those leak tests that are conducted after the repair is finished to verify that a leak or leaks have been repaired before refrigerant is added back to the appliance.

Leak inspection means the examination of an appliance to determine the location of refrigerant leaks. Potential methods include, but are not limited to, ultrasonic tests, gas-imaging cameras, bubble tests as appropriate, or the use of a leak detection device operated and maintained according to manufacturer guidelines. Methods that determine whether the appliance is leaking refrigerant but not the location of a leak, such as standing pressure/vacuum decay tests, sight glass checks, viewing receiver levels, pressure checks, and charging charts, must be used in conjunction with methods that can determine the location of a leak.

Leak rate means the rate at which an appliance is losing refrigerant, measured between refrigerant charges. The leak rate is expressed in terms of the percentage of the appliance's full charge that would be lost over a 12-month period if the current rate of loss were to continue over that period. The rate must be calculated using one of the following methods. The same method must be used for all appliances subject to the leak repair requirements located at an operating facility.

(1) Annualizing Method. (i) Step 1. Take the number of pounds of refrigerant added to the appliance to return it to a full charge, whether in one addition or if multiple additions related to same leak, and divide it by the number of pounds of refrigerant the appliance normally contains at full charge;

(ii) Step 2. Take the shorter of the number of days that have passed since the last day refrigerant was added or 365 days and divide that number by 365 days;

(iii) Step 3. Take the number calculated in Step 1 and divide it by the number calculated in Step 2; and

(iv) Step 4. Multiply the number calculated in Step 3 by 100 to calculate a percentage. This method is summarized in the following formula:

$$\begin{array}{c}\text{Leak rate}\\ \text{(\% per year)}\end{array} = \frac{\text{pounds of refrigerant added}}{\text{pounds of refrigerant in full charge}} \times \frac{365\ \textit{days/year}}{\textit{shorter}\text{ of: \# days since refrigerant last added or 365 days}} \times 100\%$$

(2) Rolling Average Method. (i) Step 1. Take the sum of the pounds of refrigerant added to the appliance over the previous 365-day period (or over the period that has passed since the last successful follow-up verification test

showing all identified leaks in the appliance were repaired, if that period is less than one year);

(ii) Step 2. Divide the result of Step 1 by the pounds of refrigerant the appliance normally contains at full charge; and

(iii) Step 3. Multiply the result of Step 2 by 100 to obtain a percentage. This method is summarized in the following formula:

$$\underset{\text{(\% per year)}}{\text{Leak rate}} = \frac{\text{pounds of refrigerant added over past 365 days (or since the last successful follow-up verification test showing all identified leaks in the appliance were repaired, if that period is less than one year)}}{\text{pounds of refrigerant in full charge}} \times 100\%$$

Low-loss fitting means any device that is intended to establish a connection between hoses, appliances, or recovery and/or recycling machines and that is designed to close automatically or to be closed manually when disconnected, minimizing the release of refrigerant from hoses, appliances, and recovery and/or recycling machines.

Low-pressure appliance means an appliance that uses a refrigerant with a liquid phase saturation pressure below 45 psia at 104 °F. Examples include but are not limited to appliances using R–11, R–123, R–113, and R–245fa.

* * * * *

Medium-pressure appliance means an appliance that uses a refrigerant with a liquid phase saturation pressure between 45 psia and 170 psia at 104 °F. Examples include but are not limited to appliances using R–114, R–124, R–12, R–134a, and R–500.

Mothball means to evacuate refrigerant from an appliance, or the affected isolated section or component of an appliance, to at least atmospheric pressure, and to temporarily shut down that appliance.

* * * * *

MVAC-like appliance means a mechanical vapor compression, open-drive compressor appliance with a full charge of 20 pounds or less of refrigerant used to cool the driver's or passenger's compartment of off-road vehicles or equipment. This includes, but is not limited to, the air-conditioning equipment found on agricultural or construction vehicles. This definition is not intended to cover appliances using R–22 refrigerant.

Normal operating characteristics and conditions means appliance operating temperatures, pressures, fluid flows, speeds, and other characteristics, including full charge of the appliance, that would be expected for a given process load and ambient condition during normal operation. Normal operating characteristics and conditions are marked by the absence of atypical conditions affecting the operation of the appliance.

One-time expansion device means an appliance that relies on the release of its refrigerant charge to the environment in order to provide a cooling effect. These are typically single releases but could also include products that are designed to release refrigerant to the environment through multiple individual charges.

Opening an appliance means any maintenance, service, repair, or disposal of an appliance that would release any refrigerant in the appliance to the atmosphere. Connecting and disconnecting hoses and gauges to measure pressures, add refrigerant, or recover refrigerant from the appliance are not considered ''opening an appliance.''

* * * * *

Reclaim means to reprocess recovered refrigerant to all of the specifications in appendix A of this subpart (based on AHRI Standard 700–2016, *Specifications for Refrigerants*) that are applicable to that refrigerant and to verify that the refrigerant meets these specifications using the analytical methodology prescribed in section 5 of appendix A of this subpart.

Recover means to remove refrigerant in any condition from an appliance and to store it in an external container without necessarily testing or processing it in any way.

Recovery efficiency means the percentage of refrigerant in an appliance that is recovered by a piece of recovery and/or recycling equipment.

Recycle, when referring to refrigerant, means to extract refrigerant from an appliance (except MVACs) and clean it for reuse in equipment of the same owner without meeting all of the requirements for reclamation. In general, recycled refrigerant is cleaned using oil separation and single or multiple passes through devices, such as replaceable core filter-driers, which reduce moisture, acidity, and particulate matter.

Refrigerant means, for purposes of this subpart, any substance, including blends and mixtures, consisting in part or whole of a class I or class II ozone-depleting substance or substitute that is used for heat transfer purposes and provides a cooling effect.

Refrigerant circuit means the parts of an appliance that are normally connected to each other (or are separated only by internal valves) and are designed to contain refrigerant.

Retire, when referring to an appliance, means the removal of the refrigerant and the disassembly or impairment of the refrigerant circuit such that the appliance as a whole is rendered unusable by any person in the future.

Retrofit means to convert an appliance from one refrigerant to another refrigerant. Retrofitting includes the conversion of the appliance to achieve system compatibility with the new refrigerant and may include, but is not limited to, changes in lubricants, gaskets, filters, driers, valves, o-rings or appliance components.

Seasonal variance means the removal of refrigerant from an appliance due to a change in ambient conditions caused by a change in season, followed by the subsequent addition of an amount that is less than or equal to the amount of refrigerant removed in the prior change in season, where both the removal and addition of refrigerant occurs within one consecutive 12-month period.

Self-contained recovery equipment means refrigerant recovery and/or recycling equipment that is capable of removing the refrigerant from an appliance without the assistance of components contained in the appliance.

Self-sealing valve means a valve affixed to a container of refrigerant that automatically seals when not dispensing refrigerant and meets or exceeds established performance criteria as identified in § 82.154(c)(2).

Small appliance means any appliance that is fully manufactured, charged, and hermetically sealed in a factory with five (5) pounds or less of refrigerant, including, but not limited to, refrigerators and freezers (designed for home, commercial, or consumer use), medical or industrial research refrigeration equipment, room air conditioners (including window air conditioners, portable air conditioners, and packaged terminal air heat pumps), dehumidifiers, under-the-counter ice makers, vending machines, and drinking water coolers.

Substitute means any chemical or product, whether existing or new, that is used as a refrigerant to replace a class I or II ozone-depleting substance. Examples include, but are not limited to hydrofluorocarbons, perfluorocarbons, hydrofluoroolefins, hydrofluoroethers, hydrocarbons, ammonia, carbon dioxide, and blends thereof. As used in this subpart, the term ''exempt substitutes'' refers to certain substitutes when used in certain end-uses that are specified in § 82.154(a)(1) as exempt from the venting prohibition and the requirements of this subpart, and the term ''non-exempt substitutes'' refers to all other substitutes and end-uses not so specified in § 82.154(a)(1).

* * * * *

System receiver means the isolated portion of the appliance, or a specific vessel within the appliance, that is used to hold the refrigerant charge during the servicing or repair of that appliance.

Technician means any person who in the course of maintenance, service, or repair of an appliance (except MVACs) could be reasonably expected to violate the integrity of the refrigerant circuit and therefore release refrigerants into the environment. Technician also means any person who in the course of disposal of an appliance (except small appliances, MVACs, and MVAC-like appliances) could be reasonably expected to violate the integrity of the refrigerant circuit and therefore release refrigerants from the appliances into the environment. Activities reasonably expected to violate the integrity of the refrigerant circuit include but are not limited to: Attaching or detaching hoses and gauges to and from the appliance; adding or removing refrigerant; adding or removing components; and cutting the refrigerant line. Activities such as painting the appliance, rewiring an external electrical circuit, replacing insulation on a length of pipe, or tightening nuts and bolts are not reasonably expected to violate the integrity of the refrigerant circuit. Activities conducted on appliances that have been properly evacuated pursuant to § 82.156 are not reasonably expected to release refrigerants unless the activity includes adding refrigerant to the appliance. Technicians could include but are not limited to installers, contractor employees, in-house service personnel, and owners and/or operators of appliances.

Very high-pressure appliance means an appliance that uses a refrigerant with a critical temperature below 104 °F or with a liquid phase saturation pressure above 355 psia at 104 °F. Examples include but are not limited to appliances using R–13, R–23, R–503, R–508A, and R–508B.

■ 4. Revise § 82.154 to read as follows:

§ 82.154 Prohibitions.

(a) *Venting Prohibition.* (1) No person maintaining, servicing, repairing, or disposing of an appliance or industrial process refrigeration may knowingly vent or otherwise release into the environment any refrigerant from such appliances. Notwithstanding any other provision of this subpart, the following substitutes in the following end-uses are exempt from this prohibition and from the requirements of this subpart:

(i) Carbon dioxide in any application;

(ii) Nitrogen in any application;

(iii) Water in any application;

(iv) Ammonia in commercial or industrial process refrigeration or in absorption units;

(v) Chlorine in industrial process refrigeration (processing of chlorine and chlorine compounds);

(vi) Hydrocarbons in industrial process refrigeration (processing of hydrocarbons);

(vii) Ethane (R–170) in very low temperature refrigeration equipment and equipment for non-mechanical heat transfer;

(viii) Propane (R–290) in retail food refrigerators and freezers (stand-alone units only); household refrigerators, freezers, and combination refrigerators and freezers; self-contained room air conditioners for residential and light commercial air-conditioning; heat pumps; and vending machines;

(ix) Isobutane (R–600a) in retail food refrigerators and freezers (stand-alone units only); household refrigerators, freezers, and combination refrigerators and freezers; and vending machines;

(x) R–441A in retail food refrigerators and freezers (stand-alone units only); household refrigerators, freezers, and combination refrigerators and freezers; self-contained room air conditioners for residential and light commercial air-conditioning; heat pumps; and vending machines.

(2) *De minimis* releases associated with good faith attempts to recycle or recover refrigerants are not subject to this prohibition. Except for exempt substitutes, refrigerant releases are *de minimis* only if they occur when:

(i) The applicable practices in § 82.155, § 82.156, and § 82.157 are observed, recovery and/or recycling machines that meet the requirements in § 82.158 are used whenever refrigerant is removed from an appliance, the technician certification provisions in § 82.161 are observed, and the reclamation requirements in § 82.164 are observed; or

(ii) The requirements in subpart B of this part are observed.

(3) The knowing release of a class I or class II refrigerant or a non-exempt substitute refrigerant after its recovery from an appliance is a violation of the venting prohibition.

(b) No person may maintain, service, repair, or dispose of an appliance containing a class I or class II refrigerant or a non-exempt substitute refrigerant without:

(1) Observing the applicable practices in § 82.155, § 82.156, and § 82.157; and

(2) Using recovery and/or recycling equipment that is certified for that type of refrigerant and appliance under § 82.158.

(c) *Sales Restriction.* (1) No person may sell or distribute, or offer for sale or distribution, any substance that consists in whole or in part of a class I or class II substance or, starting on January 1, 2018, any non-exempt substitute for use as a refrigerant unless:

(i) The buyer has been certified as a Type I, Type II, Type III, or Universal technician under § 82.161;

(ii) The buyer employs at least one technician who is certified as a Type I, Type II, Type III, or Universal technician under § 82.161 and provides proof of such to the seller;

(iii) The buyer has been certified in accordance with 40 CFR part 82, subpart B and the refrigerant is acceptable for use in MVACs under 40 CFR part 82, subpart G;

(iv) The buyer employs at least one person who is certified under 40 CFR part 82, subpart B, and provides proof of such to the seller and the refrigerant is acceptable for use in MVACs under 40 CFR part 82, subpart G. Nothing in this provision relieves persons of the requirements of § 82.34(b) or § 82.42(b);

(v) The refrigerant is sold only for eventual resale to persons certified under § 82.161 or 40 CFR part 82, subpart B or to appliance manufacturers (*e.g.,* sold by a manufacturer to a wholesaler, sold by a technician to a reclaimer);

(vi) The refrigerant is sold to an appliance manufacturer;

(vii) The refrigerant is contained in an appliance with a fully assembled refrigerant circuit or an appliance component;

(viii) The refrigerant is charged into an appliance by a certified technician or an apprentice during maintenance, service, or repair of the appliance; or

(ix) The non-exempt substitute refrigerant is intended for use in an MVAC and is sold in a container designed to hold two pounds or less of refrigerant, has a unique fitting, and has a self-sealing valve.

(2) *Self-sealing valve specifications.* This provision applies starting January 1, 2018, for all containers holding two pounds or less of non-exempt substitute refrigerant for use in an MVAC that are manufactured or imported on or after that date.

(i) Each container holding two pounds or less of non-exempt substitute refrigerant for use in an MVAC must be equipped with a single self-sealing valve that automatically closes and seals when not dispensing refrigerant.

(ii) The leakage rate from each container must not exceed 3.00 grams per year when the self-sealing valve is closed. This leakage rate applies to new, full containers as well as containers that may be partially full.

(iii) The leakage rate must be determined using the standards described in appendix E (incorporated by reference, see § 82.168).

(iv) All testing to demonstrate compliance with this paragraph must be conducted by an independent test laboratory in the United States. For purposes of this requirement, an independent test laboratory is one that is not owned, operated, or affiliated with the applicant certifying equipment and/or products.

(3) *Recordkeeping.* (i) Persons who sell or distribute, or offer to sell or distribute, any class I or class II refrigerant, or, starting on January 1, 2018, any non-exempt substitute refrigerant must keep invoices that indicate the name of the purchaser, the date of sale, and the quantity of refrigerant purchased unless they are selling exempt substitutes (those substitutes used in the end-uses specified as exempt in paragraph (a)(1) of this section) or small cans of MVAC refrigerant in accordance with paragraph (c)(1)(ix) of this section. In instances where the buyer employs a person certified under § 82.161 or 40 CFR part 82, subpart B, the seller must keep the documentation provided by the buyer to demonstrate such employment. All records must be kept for three years.

(ii) Electronic or paper copies of all records described in appendix E must be maintained by manufacturers of containers holding two pounds or less of non-exempt substitute refrigerant for use in an MVAC to verify self-sealing valves meet the requirements specified in paragraph (c)(2) of this section. All records must be kept for three years after each purchase.

(d) *Sale of Used Refrigerant.* No person may sell or distribute, or offer for sale or distribution, for use as a refrigerant any class I or class II substance or non-exempt substitute consisting wholly or in part of used refrigerant unless the refrigerant:

(1) Has been reclaimed by a person who has been certified as a reclaimer under § 82.164;

(2) was used only in an MVAC or MVAC-like appliance and is to be used only in an MVAC or MVAC-like appliance and recycled in accordance with 40 CFR part 82, subpart B;

(3) is contained in an appliance that is sold or offered for sale together with a fully assembled refrigerant circuit;

(4) is being transferred between or among a parent company and one or more of its subsidiaries, or between or among subsidiaries having the same parent company; or

(5) is being transferred between or among a Federal agency or department and a facility or facilities owned by the same Federal agency or department.

(e) *Manufacture and Sale of Appliances.* (1) No person may sell or distribute, or offer for sale or distribution, any appliance (except small appliances and appliances containing only refrigerants that have been exempted under paragraph (a)(1) of this section) unless it is equipped with a servicing aperture to facilitate the removal of refrigerant at servicing and disposal.

(2) No person may sell or distribute, or offer for sale or distribution, any small appliance (except appliances containing only refrigerants that have been exempted under paragraph (a)(1) of this section) unless it is equipped with a process stub to facilitate the removal of refrigerant at servicing and disposal.

(f) *One-time expansion devices.* No person may manufacture or import a one-time expansion device unless the only refrigerants it contains have been exempted under paragraph (a)(1) of this section.

(g) Rules stayed for consideration. Notwithstanding any other provisions of this subpart, the effectiveness of 40 CFR 82.154(c), only as it applies to refrigerant contained in appliances without fully assembled refrigerant circuits, is stayed from April 27, 1995, until EPA takes final action on its reconsideration of these provisions. EPA will publish any such final action in the **Federal Register**.

■ 5. Add § 82.155 to subpart F to read as follows:

§ 82.155 Safe disposal of appliances.

Until January 1, 2018, this section applies only to disposal of appliances containing class I and class II refrigerants. Starting on January 1, 2018, this section applies to disposal of appliances containing any class I or class II refrigerant or any non-exempt substitute refrigerant.

(a) Persons recovering refrigerant from a small appliance, MVAC, or MVAC-like appliance for purposes of disposal of these appliances must evacuate refrigerant to the levels in § 82.156(b) through (d) using recovery equipment that meets the standards in § 82.158(e) through (g), or 40 CFR part 82 subpart B, as applicable.

(b) The final processor—*i.e.,* persons who take the final step in the disposal process (including but not limited to scrap recyclers and landfill operators) of a small appliance, MVAC, or MVAC-like appliance—must either:

(1) Recover any remaining refrigerant from the appliance in accordance with paragraph (a) of this section; or

(2) Verify using a signed statement or a contract that all refrigerant that had not leaked previously has been recovered from the appliance or shipment of appliances in accordance with paragraph (a) of this section. If using a signed statement, it must include the name and address of the person who recovered the refrigerant and the date the refrigerant was recovered. If using a signed contract between the supplier and the final processor, it must either state that the supplier will recover any remaining refrigerant from the appliance or shipment of appliances in accordance with paragraph (a) of this section prior to delivery or verify that the refrigerant had been properly recovered prior to receipt by the supplier.

(i) It is a violation of this subpart to accept a signed statement or contract if the person receiving the statement or contract knew or had reason to know that the signed statement or contract is false.

(ii) The final processor must notify suppliers of appliances that refrigerant must be properly recovered in accordance with paragraph (a) of this section before delivery of the items to the facility. The form of this notification may be signs, letters to suppliers, or other equivalent means.

(iii) If all the refrigerant has leaked out of the appliance, the final processor must obtain a signed statement that all the refrigerant in the appliance had leaked out prior to delivery to the final processor and recovery is not possible. ''Leaked out'' in this context means those situations in which the refrigerant has escaped because of system failures, accidents, or other unavoidable occurrences not caused by a person's negligence or deliberate acts such as cutting refrigerant lines.

(c) *Recordkeeping.* The final processor of a small appliance, MVAC, or MVAC-like appliance must keep a copy of all the signed statements or contracts obtained under paragraph (b)(2) of this section on site, in hard copy or in electronic format, for three years.

■ 6. Amend § 82.156 by:
■ (a) Revising the section heading;
■ (b) Adding an introductory paragraph;
■ (c) Revising paragraphs (a) through (h); and
■ (d) Adding paragraph (i) introductory text; and
■ (e) Adding paragraph (j).

The revisions and additions to read as follows:

§ 82.156 Proper evacuation of refrigerant from appliances.

Until January 1, 2018, this section applies only to evacuation of refrigerant from appliances containing class I or class II refrigerants. Starting on January 1, 2018, this section applies to evacuation of refrigerant from appliances containing any class I or class II refrigerant or any non-exempt substitute refrigerant, excluding paragraph (i) of this section which applies only to appliances containing class I or class II refrigerants until January 1, 2019. Starting January 1, 2019, the provisions in § 82.157 apply in lieu of paragraph (i) of this section.

(a) *Appliances (except small appliances, MVACs, and MVAC-like appliances).* Before opening appliances (except small appliances, MVACs, and MVAC-like appliances) or disposing of such appliances, technicians must evacuate the refrigerant, including all the liquid refrigerant, to the levels in Table 1 using a recovery and/or recycling machine certified pursuant to § 82.158 unless the situations in paragraphs (a)(1) or (2) of this section apply. Technicians may evacuate either the entire appliance or the part to be serviced, if the refrigerant in the part can be isolated to a system receiver. A technician must verify that the applicable level of evacuation has been reached in the appliance or the part before it is opened.

(1) If evacuation of the appliance to the atmosphere is not to be performed after completion of the maintenance, service, or repair, and if the maintenance, service, or repair is not major as defined at § 82.152, the appliance must:

(i) Be evacuated to a pressure no higher than 0 psig before it is opened if it is a medium-, high- or very high-pressure appliance;

(ii) Be pressurized to a pressure no higher than 0 psig before it is opened if it is a low-pressure appliance. Persons must cover openings when isolation is not possible. Persons pressurizing low-pressure appliances that use refrigerants with boiling points at or below 85 degrees Fahrenheit at 29.9 inches of mercury (standard atmospheric pressure), must not use methods such as nitrogen that require subsequent purging. Persons pressurizing low-pressure appliances that use refrigerants with boiling points above 85 degrees Fahrenheit at 29.9 inches of mercury, must use heat to raise the internal pressure of the appliance as much as possible, but may use nitrogen to raise the internal pressure of the appliance from the level attainable through use of heat to atmospheric pressure; or

(iii) For the purposes of oil changes, be evacuated or pressurized to a pressure no higher than 5 psig, before it is opened; or drain the oil into a system receiver to be evacuated or pressurized to a pressure no higher than 5 psig.

(2) If leaks in the appliance make evacuation to the levels in Table 1 unattainable or would substantially contaminate the refrigerant being recovered, persons opening or disposing of the appliance must:

(i) Isolate leaking from non-leaking components wherever possible;

(ii) Evacuate non-leaking components to be opened or disposed of to the levels specified in Table 1; and

(iii) Evacuate leaking components to be opened or disposed of to the lowest level that can be attained without substantially contaminating the refrigerant. This level may not exceed 0 psig.

(3) *Recordkeeping.* As of January 1, 2018, technicians evacuating refrigerant from appliances with a full charge of more than 5 and less than 50 pounds of refrigerant for purposes of disposal of that appliance must keep records documenting the following for three years:

(i) The company name, location of the appliance, date of recovery, and type of refrigerant recovered for each appliance;

(ii) The total quantity of refrigerant, by type, recovered from all disposed appliances in each calendar month; and

(iii) The quantity of refrigerant, by type, transferred for reclamation and/or destruction, the person to whom it was transferred, and the date of transfer.

TABLE 1—REQUIRED LEVELS OF EVACUATION FOR APPLIANCES

[Except for small appliances, MVACs, and MVAC-like appliances]

Type of appliance	Inches of Hg vacuum (relative to standard atmospheric pressure of 29.9 inches Hg): Using recovery and/or recycling equipment manufactured or imported before November 15, 1993	Inches of Hg vacuum (relative to standard atmospheric pressure of 29.9 inches Hg): Using recovery and/or recycling equipment manufactured or imported on or after November 15, 1993
Very high-pressure appliance	0	0.
High-pressure appliance, or isolated component of such appliance, with a full charge of less than 200 pounds of refrigerant.	0	0.
High-pressure appliance, or isolated component of such appliance, with a full charge of 200 pounds or more of refrigerant.	4	10.
Medium-pressure appliance, or isolated component of such appliance, with a full charge of less than 200 pounds of refrigerant.	4	10.
Medium-pressure appliance, or isolated component of such appliance, with a full charge of 200 pounds or more of refrigerant.	4	15.
Low-pressure appliance	25 mm Hg absolute	25 mm Hg absolute.

(b) *Small appliances.* Before opening a small appliance or when disposing of a small appliance, persons must recover refrigerant, using a recovery and/or recycling machine certified pursuant to § 82.158, according to the following conditions:

(1) When using recovery equipment manufactured before November 15, 1993, recover 80 percent of the refrigerant in the small appliance; or

(2) When using recovery equipment manufactured on or after November 15, 1993, recover 90 percent of the refrigerant in the appliance when the compressor in the appliance is functioning, or 80 percent of the refrigerant in the appliance when the compressor in the appliance is not functioning; or

(3) Evacuate the appliance to four inches of mercury vacuum.

(c) *MVAC-like appliances.* Persons may only open MVAC-like appliances while properly using, as defined at § 82.32(e), recovery and/or recycling equipment certified pursuant to § 82.158(f) or § 82.36, as applicable. All persons recovering refrigerant from MVAC-like appliances for purposes of disposal of these appliances must evacuate the appliance in accordance with 40 CFR part 82, subpart B or reduce the system pressure to or below 102 mm of mercury vacuum.

(d) *MVACs.* All persons recovering refrigerant from MVACs for purposes of disposal of these appliances must evacuate the appliance in accordance with 40 CFR part 82, subpart B or reduce the system pressure to or below 102 mm of mercury vacuum.

(e) System-dependent equipment may not be used with appliances with a full charge of more than 15 pounds of refrigerant, unless the system-dependent equipment is permanently attached to the appliance as a pump-out unit.

(f) Persons who maintain, service, repair, or dispose of only appliances that they own and that contain pump-out units are exempt from the requirement to use certified, self-contained recovery and/or recycling equipment.

(g) All recovery and/or recycling equipment must be used in accordance with the manufacturer's directions unless such directions conflict with the requirements of this subpart.

(h) Refrigerant may be returned to the appliance from which it is recovered or to another appliance owned by the same person without being recycled or reclaimed, unless the appliance is an MVAC or MVAC-like appliance.

(i) The provisions in this paragraph (i) apply to owners and operators of appliances containing 50 or more pounds of class I and class II refrigerants only until January 1, 2019. The definitions in paragraph (j) of this section apply for purposes of this paragraph (i) in lieu of the definitions in § 82.152.

* * * * *

(j) *Definitions for the leak repair provisions in 82.156(i).* These definitions are not applicable to any other portion of subpart F other than 82.156(i). Along with paragraph (i) of this section, the definitions in this section apply only until January 1, 2019.

Appliance means, for the purposes of paragraph (i) of this section, any device which contains and uses a refrigerant and which is used for household or commercial purposes, including any air conditioner, refrigerator, chiller, or freezer.

Commercial refrigeration means, for the purposes of paragraph (i) of this section, the refrigeration appliances utilized in the retail food and cold storage warehouse sectors. Retail food includes the refrigeration equipment found in supermarkets, convenience stores, restaurants and other food service establishments. Cold storage includes the equipment used to store meat, produce, dairy products, and other perishable goods. All of the equipment contains large refrigerant charges, typically over 75 pounds.

Critical component means, for the purposes of paragraph (i) of this section, a component without which industrial process refrigeration equipment will not function, will be unsafe in its intended environment, and/or will be subject to failures that would cause the industrial process served by the refrigeration appliance to be unsafe.

Custom-built means, for the purposes of paragraph (i) of this section, that the equipment or any of its critical components cannot be purchased and/or installed without being uniquely designed, fabricated and/or assembled to satisfy a specific set of industrial process conditions.

Follow-up verification test means, for the purposes of paragraph (i) of this section, those tests that involve checking the repairs within 30 days of the appliance's returning to normal operating characteristics and conditions. Follow-up verification tests for appliances from which the refrigerant charge has been evacuated means a test conducted after the appliance or portion of the appliance has resumed operation at normal operating characteristics and conditions of temperature and pressure, except in cases where sound professional judgment dictates that these tests will be more meaningful if performed prior to the return to normal operating characteristics and conditions. A follow-up verification test with respect to repairs conducted without evacuation of the refrigerant charge means a reverification test conducted after the initial verification test and usually within 30 days of normal operating conditions. Where an appliance is not evacuated, it is only necessary to conclude any required changes in pressure, temperature or other conditions to return the appliance to normal operating characteristics and conditions.

Full charge means, for the purposes of paragraph (i) of this section, the amount of refrigerant required for normal operating characteristics and conditions of the appliance as determined by using one or a combination of the following four methods:

(i) Use the equipment manufacturer's determination of the correct full charge for the equipment;

(ii) Determine the full charge by making appropriate calculations based on component sizes, density of refrigerant, volume of piping, and other relevant considerations;

(iii) Use actual measurements of the amount of refrigerant added or evacuated from the appliance; and/or

(iv) Use an established range based on the best available data regarding the normal operating characteristics and conditions for the appliance, where the midpoint of the range will serve as the full charge, and where records are maintained in accordance with § 82.166(q).

Industrial process refrigeration means, for the purposes of paragraph (i) of this section, complex customized appliances used in the chemical, pharmaceutical, petrochemical and manufacturing industries. These appliances are directly linked to the industrial process. This sector also includes industrial ice machines, appliances used directly in the generation of electricity, and ice rinks. Where one appliance is used for both industrial process refrigeration and other applications, it will be considered industrial process refrigeration equipment if 50 percent or more of its operating capacity is used for industrial process refrigeration.

Industrial process shutdown means, for the purposes of paragraph (i) of this section, that an industrial process or facility temporarily ceases to operate or manufacture whatever is being produced at that facility.

Initial verification test means, for the purposes of paragraph (i) of this section, those leak tests that are conducted as soon as practicable after the repair is completed. An initial verification test, with regard to the leak repairs that require the evacuation of the appliance or portion of the appliance, means a test conducted prior to the replacement of the full refrigerant charge and before the appliance or portion of the appliance has reached operation at normal operating characteristics and conditions of temperature and pressure. An initial verification test with regard to repairs conducted without the evacuation of the refrigerant charge means a test conducted as soon as practicable after the conclusion of the repair work.

Leak rate means, for the purposes of paragraph (i) of this section, the rate at which an appliance is losing refrigerant, measured between refrigerant charges. The leak rate is expressed in terms of the percentage of the appliance's full charge that would be lost over a 12-month period if the current rate of loss were to continue over that period. The rate is calculated using only one of the following methods for all appliances located at an operating facility.

(i) Method 1. (A) Step 1. Take the number of pounds of refrigerant added to the appliance to return it to a full charge and divide it by the number of pounds of refrigerant the appliance normally contains at full charge;

(B) Step 2. Take the shorter of the number of days that have passed since the last day refrigerant was added or 365 days and divide that number by 365 days;

(C) Step 3. Take the number calculated in Step 1. and divide it by the number calculated in Step 2.; and

(D) Step 4. Multiply the number calculated in Step 3. by 100 to calculate a percentage. This method is summarized in the following formula:

$$\text{Leak rate (\% per year)} = \frac{\text{pounds of refrigerant added}}{\text{pounds of refrigerant in full charge}} \times \frac{365\ \textit{days/year}}{\textit{shorter}\text{ of: \# days since refrigerant last added or 365 days}} \times 100\%$$

(ii) Method 2. (A) Step 1. Take the sum of the quantity of refrigerant added to the appliance over the previous 365-day period (or over the period that has passed since leaks in the appliance were last repaired, if that period is less than one year),

(B) Step 2. Divide the result of Step 1. by the quantity (*e.g.,* pounds) of refrigerant the appliance normally contains at full charge, and

(C) Step 3. Multiply the result of Step 2. by 100 to obtain a percentage. This method is summarized in the following formula:

$$\text{Leak rate (\% per year)} = \frac{\text{pounds of refrigerant added over past 365 days (or since leaks were last repaired, if that period is less than one year)}}{\text{pounds of refrigerant in full charge}} \times 100\%$$

Normal operating characteristics or conditions means, for the purposes of paragraph (i) of this section, temperatures, pressures, fluid flows, speeds and other characteristics that would normally be expected for a given process load and ambient condition during operation. Normal operating characteristics and conditions are marked by the absence of atypical conditions affecting the operation of the refrigeration appliance.

Normally containing a quantity of refrigerant means, for the purposes of paragraph (i) of this section, containing the quantity of refrigerant within the appliance or appliance component when the appliance is operating with a full charge of refrigerant.

Refrigerant means, for the purposes of paragraph (i) of this section, any substance consisting in part or whole of a class I or class II ozone-depleting substance that is used for heat transfer purposes and provides a cooling effect.

Substitute means, for the purposes of paragraph (i) of this section, any chemical or product, whether existing or new, that is used by any person as an EPA approved replacement for a class I or II ozone-depleting substance in a given refrigeration or air-conditioning end-use.

Suitable replacement refrigerant means, for the purposes of paragraph (i) of this section, a refrigerant that is acceptable under section 612(c) of the Clean Air Act Amendments of 1990 and all regulations promulgated under that section, compatible with other materials with which it may come into contact, and able to achieve the temperatures required for the affected industrial process in a technically feasible manner.

System mothballing means, for the purposes of paragraph (i) of this section, the intentional shutting down of a refrigeration appliance undertaken for an extended period of time by the owners or operators of that facility, where the refrigerant has been evacuated from the appliance or the affected isolated section of the appliance, at least to atmospheric pressure.

■ 7. Add § 82.157 to Subpart F to read as follows:

§ 82.157 Appliance maintenance and leak repair.

(a) *Applicability.* This section applies as of January 1, 2019. This section applies only to appliances with a full charge of 50 or more pounds of any class I or class II refrigerant or any non-exempt substitute refrigerant. Unless otherwise specified, the requirements of this section apply to the owner or operator of the appliance.

(b) *Leak Rate Calculation.* Persons adding or removing refrigerant from an appliance must, upon conclusion of that service, provide the owner or operator with documentation that meets the applicable requirements of paragraph (l)(2) of this section. The owner or operator must calculate the leak rate every time refrigerant is added to an appliance unless the addition is made immediately following a retrofit, installation of a new appliance, or qualifies as a seasonal variance.

(c) *Requirement to Address Leaks through Appliance Repair, or Retrofitting or Retiring an Appliance.* (1) Owners or operators must repair appliances with a leak rate over the applicable leak rate in this paragraph in accordance with paragraphs (d) through (f) of this section unless the owner or operator elects to retrofit or retire the appliance in compliance with paragraphs (h) and (i) of this section. If the owner or operator elects to repair leaks, but fails to bring the leak rate below the applicable leak rate, the owner or operator must create and implement a retrofit or retirement plan in accordance with paragraphs (h) and (i) of this section.

(2) Leak Rates:

(i) 20 percent leak rate for commercial refrigeration equipment;

(ii) 30 percent leak rate for industrial process refrigeration equipment; and

(iii) 10 percent leak rate for comfort cooling appliances or other appliances with a full charge of 50 or more pounds of refrigerant not covered by (c)(2)(i) or (ii) of this section.

(d) *Appliance Repair.* Owners or operators must identify and repair leaks in accordance with this paragraph within 30 days (or 120 days if an industrial process shutdown is required) of when refrigerant is added to an appliance exceeding the applicable leak rate in paragraph (c) of this section.

(1) A certified technician must conduct a leak inspection, as described in paragraph (g) of this section, to identify the location of leaks.

(2) Leaks must be repaired such that the leak rate is brought below the applicable leak rate. This must be confirmed by the leak rate calculation performed upon the next refrigerant addition. The leaks will be presumed to be repaired if there is no further refrigerant addition for 12 months after the repair or if the leak inspections required under paragraph (g) do not find any leaks in the appliance. Repair of leaks must be documented by both an initial and a follow-up verification test or tests.

(3) The time frames in paragraphs (d) through(f) of this section are temporarily suspended when an appliance is mothballed. The time will resume on the day additional refrigerant is added to the appliance (or component of an appliance if the leaking component was isolated).

(e) *Verification tests.* The owner or operator must conduct both initial and follow-up verification tests on each leak that was repaired under paragraph (d) of this section.

(1) *Initial verification test.* Unless granted additional time, an initial verification test must be performed within 30 days (or 120 days if an industrial process shutdown is required) of an appliance exceeding the applicable leak rate in paragraph (c) of this section. An initial verification test must demonstrate that leaks where a repair attempt was made are repaired.

(i) For repairs that can be completed without the need to open or evacuate the appliance, the test must be performed after the conclusion of the repair work and before any additional refrigerant is added to the appliance.

(ii) For repairs that require the evacuation of the appliance or portion of the appliance, the test must be performed before adding any refrigerant to the appliance.

(iii) If the initial verification test indicates that the repairs have not been successful, the owner or operator may conduct as many additional repairs and initial verification tests as needed within the applicable time period.

(2) *Follow-up verification test.* A follow-up verification test must be performed within 10 days of the successful initial verification test or 10 days of the appliance reaching normal operating characteristics and conditions (if the appliance or isolated component was evacuated for the repair(s)). Where it is unsafe to be present or otherwise impossible to conduct a follow-up verification test when the system is operating at normal operating characteristics and conditions, the verification test must, where practicable, be conducted prior to the system returning to normal operating characteristics and conditions.

(i) A follow-up verification test must demonstrate that leaks where a repair attempt was made are repaired. If the follow-up verification test indicates that the repairs have not been successful, the owner or operator may conduct as many additional repairs and verification tests as needed to bring the appliance below the leak rate within the applicable time period and to verify the repairs.

(f) *Extensions to the appliance repair deadlines.* Owners or operators are permitted more than 30 days (or 120 days if an industrial process shutdown is required) to comply with paragraphs (d) and (e) of this section if they meet the requirements of (f)(1) through (4) of this section or the appliance is mothballed. The request will be considered approved unless EPA notifies the owners or operators otherwise.

(1) One or more of the following conditions must apply:

(i) The appliance is located in an area subject to radiological contamination or shutting down the appliance will directly lead to radiological contamination. Additional time is permitted to the extent needed to conduct and finish repairs in a safe working environment.

(ii) Requirements of other applicable Federal, state, or local regulations make a repair within 30 days (or 120 days if an industrial process shutdown is required) impossible. Additional time is permitted to the extent needed to comply with the pertinent regulations.

(iii) Components that must be replaced as part of the repair are not available within 30 days (or 120 days if an industrial process shutdown is required). Additional time is permitted up to 30 days after receiving delivery of the necessary components, not to exceed 180 days (or 270 days if an industrial process shutdown is required) from the date the appliance exceeded the applicable leak rate.

(2) Repairs to leaks that the technician has identified as significantly contributing to the exceedance of the leak rate and that do not require additional time must be completed and verified within the initial 30 day repair period (or 120 day repair period if an industrial process shutdown is required);

(3) The owner or operator must document all repair efforts and the reason for the inability to make the repair within the initial 30 day repair period (or 120 day repair period if an industrial process shutdown is required); and

(4) The owner or operator must request an extension from EPA at the address specified in paragraph (m) of this section within 30 days (or 120 days if an industrial process shutdown is required) of the appliance exceeding the applicable leak rate in paragraph (c) of this section. Extension requests must include: Identification and address of the facility; the name of the owner or operator of the appliance; the leak rate; the method used to determine the leak rate and full charge; the date the appliance exceeded the applicable leak rate; the location of leak(s) to the extent determined to date; any repair work that has been performed thus far, including the date that work was completed; the reasons why more than 30 days (or 120 days if an industrial process shutdown is required) are needed to complete the repair; and an estimate of when the work will be completed. If the estimated completion date is to be extended, a new estimated date of completion and documentation of the reason for that change must be submitted to EPA within 30 days of identifying that the completion date must be extended. The owner or operator must keep a dated copy of this submission.

(g) *Leak Inspections.* (1) The owner or operator must conduct a leak inspection in accordance with the following schedule on any appliance exceeding the applicable leak rate in paragraph (c)(2) of this section.

(i) For commercial refrigeration and industrial process refrigeration appliances with a full charge of 500 or more pounds, leak inspections must be conducted once every three months until the owner or operator can demonstrate through the leak rate calculations required under paragraph (b) of this section that the appliance has not leaked in excess of the applicable leak rate for four quarters in a row.

(ii) For commercial refrigeration and industrial process refrigeration appliances with a full charge of 50 or more pounds but less than 500 pounds, leak inspections must be conducted once per calendar year until the owner or operator can demonstrate through the leak rate calculations required under paragraph (b) of this section that the appliance has not leaked in excess of the applicable leak rate for one year.

(iii) For comfort cooling appliances and other appliances not covered by paragraphs (g)(1)(i) and (ii) of this section, leak inspections must be conducted once per calendar year until the owner or operator can demonstrate through the leak rate calculations required under paragraph (b) of this section that the appliance has not leaked in excess of the applicable leak rate for one year.

(2) Leak inspections must be conducted by a certified technician using method(s) determined by the technician to be appropriate for that appliance.

(3) All visible and accessible components of an appliance must be inspected, with the following exceptions:

(i) Where components are insulated, under ice that forms on the outside of equipment, underground, behind walls, or are otherwise inaccessible;

(ii) Where personnel must be elevated more than two meters above a support surface; or

(iii) Where components are unsafe to inspect, as determined by site personnel.

(4) Quarterly or annual leak inspections are not required on appliances, or portions of appliances, continuously monitored by an automatic leak detection system that is audited or calibrated annually. An automatic leak detection system may directly detect refrigerant in air, monitor its surrounding in a manner other than detecting refrigerant concentrations in air, or monitor conditions of the appliance.

(i) For systems that directly detect the presence of a refrigerant in air, the system must:

(A) Only be used to monitor components located inside an enclosed building or structure;

(B) Have sensors or intakes placed so that they will continuously monitor the refrigerant concentrations in air in proximity to the compressor, evaporator, condenser, and other areas with a high potential for a refrigerant leak;

(C) Accurately detect a concentration level of 10 parts per million of vapor of the specific refrigerant or refrigerants used in the refrigeration appliance(s); and

(D) Alert the owner or operator when a refrigerant concentration of 100 parts per million of vapor of the specific refrigerant or refrigerants used in the refrigeration appliance(s) is reached.

(ii) For a system that monitors its surrounding in a manner other than detecting refrigerant concentrations in air or monitor conditions of the appliance, the system must automatically alert the owner or operator when measurements indicate a loss of 50 pounds of refrigerant or 10 percent of the full charge, whichever is less.

(iii) When automatic leak detection equipment is only being used to monitor portions of an appliance, the remainder of the appliance continues to be subject to any applicable leak inspection requirements.

(h) *Retrofit or retirement plans.* (1) The owner or operator must create a retrofit or retirement plan within 30 days of:

(i) an appliance leaking above the applicable leak rate in paragraph (c) of this section if the owner or operator intends to retrofit or retire rather than repair the leak;

(ii) an appliance leaking above the applicable leak rate in paragraph (c) of this section if the owner or operator fails to take any action to identify or repair the leak; or

(iii) an appliance continues to leak above the applicable leak rate after having conducted the required repairs and verification tests under paragraphs (d) and (e) of this section.

(2) A retrofit or retirement plan must, at a minimum, contain the following information:

(i) Identification and location of the appliance;

(ii) Type and full charge of the refrigerant used in the appliance;

(iii) Type and full charge of the refrigerant to which the appliance will be converted, if retrofitted;

(iv) Itemized procedure for converting the appliance to a different refrigerant, including changes required for compatibility with the new substitute, if retrofitted;

(v) Plan for the disposition of recovered refrigerant;

(vi) Plan for the disposition of the appliance, if retired; and

(vii) A schedule, not to exceed one-year, for completion of the appliance retrofit or retirement.

(3) The retrofit or retirement plan must be signed by an authorized company official, dated, accessible at the site of the appliance in paper copy or electronic format, and available for EPA inspection upon request.

(4) All identified leaks must be repaired as part of any retrofit under such a plan.

(5)(i) Unless granted additional time, all work performed in accordance with the plan must be finished within one year of the plan's date (not to exceed 13 months from when the plan was required in paragraph (h)(1) of this section).

(ii) The owner or operator may request that EPA relieve it of the obligation to retrofit or retire an appliance if the owner or operator can establish within 180 days of the plan's date that the appliance no longer exceeds the applicable leak rate and if the owner or operator agrees in writing to repair all identified leaks within one year of the plan's date consistent with paragraph (h)(4) and (h)(5)(i) of this section. The owner or operator must submit to EPA the retrofit or retirement plan as well as the following information: The date that the requirement to develop a retrofit or retirement plan was triggered; the leak rate; the method used to determine the leak rate and full charge; the location of the leak(s) identified in the leak inspection; a description of repair work that has been completed; a description of repair work that has not been completed; a description of why the repair was not conducted within the time frames required under paragraphs (d) and (f) of this section; and a statement signed by an authorized official that all identified leaks will be repaired and an estimate of when those repairs will be completed (not to exceed one year from date of the plan). The request will be considered approved unless EPA notifies the owners or operators within 60 days of receipt of the request that it is not approved.

(i) *Extensions to the one-year retrofit or retirement schedule.* Owners or operators may request more than one year to comply with paragraph (h) of this section if they meet the requirements of this paragraph. The request will be considered approved unless EPA notifies the owners or operators within 60 days of receipt of the request that it is not approved. The request must be submitted to EPA at the address specified in § 82.157(m) within seven months of discovering the appliance exceeded the applicable leak rate. The request must include the identification of the appliance; name of the owner or operator; the leak rate; the method used to determine the leak rate and full charge; the date the appliance exceeded the applicable leak rate; the location of leaks(s) to the extent determined to date; any repair work that has been finished thus far, including the date that work was finished; a plan to finish the retrofit or retirement of the appliance; the reasons why more than one year is necessary to retrofit or retire the appliance; the date of notification to EPA; and an estimate of when retrofit or retirement work will be finished. A dated copy of the request must be available on-site in either electronic or paper copy. If the estimated completion date is to be revised, a new estimated date of completion and documentation of the reason for that change must be submitted to EPA at the address specified in § 82.157(m) within 30 days. Additionally, the time frames in paragraphs (h) and (i) of this section are temporarily suspended when an appliance is mothballed. The time will resume running on the day additional refrigerant is added to the appliance (or component of an appliance if the leaking component was isolated).

(1) *Extensions available to any appliance.* Owners or operators of commercial refrigeration, industrial process refrigeration, comfort-cooling, or other equipment are automatically allowed 18 months to retire an appliance if the replacement appliance uses a substitute refrigerant exempted under § 82.154(a).

(2) *Extensions available to industrial process refrigeration.* Owners or operators of industrial process refrigeration equipment may request additional time beyond the one-year period in paragraph (h) of this section to finish the retrofit or retirement under the following circumstances.

(i) Requirements of other applicable Federal, state, or local regulations make a retrofit or retirement within one year impossible. Additional time is permitted to the extent needed to comply with the pertinent regulations;

(ii) The new or the retrofitted equipment is custom-built as defined in this subpart and the supplier of the appliance or one of its components has quoted a delivery time of more than 30 weeks from when the order is placed. The appliance or appliance components must be installed within 120 days after receiving delivery of the necessary parts; or

(iii) After receiving an extension under paragraph (i)(2)(ii) of this section, owners or operators may request additional time if necessary to finish the retrofit or retirement of equipment. The request must be submitted to EPA before the end of the ninth month of the initial extension and must include the same information submitted for that extension, with any necessary revisions. A dated copy of the request must be available on-site in either electronic or paper copy. The request will be considered approved unless EPA notifies the owners or operators within 60 days of receipt of the request that it is not approved.

(3) *Extensions available to Federally owned equipment.* Owners or operators of federally owned commercial or comfort-cooling equipment may request an additional year beyond the one-year period in paragraph (h) of this section to finish the retrofit or retirement under the following circumstances:

(i) A delivery time of more than 30 weeks from the beginning of the official procurement process is quoted due to complications presented by the Federal agency appropriations and/or procurement process;

(ii) The appliance is located in an area subject to radiological contamination and creating a safe working environment will require more than 30 weeks; or

(iii) After receiving a one-year extension under paragraphs (i)(3)(i) or (ii) of this section, additional time may be requested if necessary to finish the retrofit or retirement of equipment. The request must be submitted to EPA before the end of the ninth month of the one-year extension and must include the same information submitted for that one-year extension, with any necessary revisions. A dated copy of the request must be available on-site in either electronic or paper copy. The request will be considered approved unless EPA notifies the owners or operators within 60 days of receipt of the request that it is not approved.

(j) *Chronically leaking appliances.* Owners or operators of appliances containing 50 pounds or more of refrigerant that leak 125 percent or more of the full charge in a calendar year must submit a report to EPA at the address in paragraph (m) of this section. This report must be submitted by March 1 of the subsequent year and describe efforts to identify leaks and repair the appliance.

(k) *Purged refrigerant.* In calculating annual leak rates, purged refrigerant that is destroyed at a verifiable destruction efficiency of 98 percent or greater will not be counted toward the leak rate.

(l) *Recordkeeping.* All records identified in this paragraph must be kept for at least three years in electronic or paper format, unless otherwise specified.

(1) Owners or operators must determine the full charge of all appliances with 50 or more pounds of refrigerant and maintain the following information for each appliance until three years after the appliance is retired:

(i) The identification of the owner or operator of the appliance;

(ii) The address where the appliance is located;

(iii) The full charge of the appliance and the method for how the full charge was determined;

(iv) If using method 4 (using an established range) for determining full charge, records must include the range for the full charge of the appliance, its midpoint, and how the range was determined;

(v) Any revisions of the full charge, how they were determined, and the dates such revisions occurred.

(2) Owners or operators must maintain a record including the following information for each time an appliance with a full charge of 50 or more pounds is maintained, serviced, repaired, or disposed of, when applicable. If the maintenance, service, repair, or disposal is done by someone other than the owner or operator, that person must provide a record containing the following information, with the exception of (l)(2)(vii) and (viii) of this section, to the owner or operator:

(i) The identity and location of the appliance;

(ii) The date of the maintenance, service, repair, or disposal performed;

(iii) The part(s) of the appliance being maintained, serviced, repaired, or disposed;

(iv) The type of maintenance, service, repair, or disposal performed for each part;

(v) The name of the person performing the maintenance, service, repair, or disposal;

(vi) The amount and type of refrigerant added to, or in the case of disposal removed from, the appliance;

(vii) The full charge of the appliance; and

(viii) The leak rate and the method used to determine the leak rate (not applicable when disposing of the appliance, following a retrofit, installing a new appliance, or if the refrigerant addition qualifies as a seasonal variance).

(3) Owners or operators must keep records of leak inspections that include

the date of inspection, the method(s) used to conduct the leak inspection, a list of the location of each leak that was identified, and a certification that all visible and accessible parts of the appliance were inspected. Technicians conducting leak inspections must, upon conclusion of that service, provide the owner or operator of the appliance with documentation that meets these requirements.

(4) If using an automatic leak detection system, the owner or operator must maintain records regarding the installation and the annual audit and calibration of the system, a record of each date the monitoring system identified a leak, and the location of the leak.

(5) Owners or operators must maintain records of the dates and results of all initial and follow-up verification tests. Records must include the location of the appliance, the date(s) of the verification tests, the location(s) of all repaired leaks that were tested, the type(s) of verification test(s) used, and the results of those tests. Technicians conducting initial or follow-up verification tests must, upon conclusion of that service, provide the owner or operator of the appliance with documentation that meets these requirements.

(6) Owners or operators must maintain retrofit or retirement plans developed in accordance with paragraph (h) of this section.

(7) Owners or operators must maintain retrofit and/or extension requests submitted to EPA in accordance with paragraph (i) of this section.

(8) Owners or operators that suspend the deadlines in this section by mothballing an appliance must keep records documenting when the appliance was mothballed and when additional refrigerant was added to the appliance (or isolated component).

(9) Owners or operators who exclude purged refrigerants that are destroyed from annual leak rate calculations must maintain records to support the amount of refrigerant claimed as sent for destruction. Records must be based on a monitoring strategy that provides reliable data to demonstrate that the amount of refrigerant claimed to have been destroyed is not greater than the amount of refrigerant actually purged and destroyed and that the 98 percent or greater destruction efficiency is met. Records must include flow rate, quantity or concentration of the refrigerant in the vent stream, and periods of purge flow. Records must include:

(i) The identification of the facility and a contact person, including the address and telephone number;

(ii) A description of the appliance, focusing on aspects relevant to the purging of refrigerant and subsequent destruction;

(iii) A description of the methods used to determine the quantity of refrigerant sent for destruction and type of records that are being kept by the owners or operators where the appliance is located;

(iv) The frequency of monitoring and data-recording; and

(v) A description of the control device, and its destruction efficiency.

(10) Owners or operators that exclude additions of refrigerant due to seasonal variance from their leak rate calculation must maintain records stating that they are using the seasonal variance flexibility and documenting the amount added and removed under § 82.157(l)(2).

(11) Owners or operators that submit reports to EPA in accordance with paragraph (m) of this section must maintain copies of the submitted reports and any responses from EPA.

(m) *Reporting.* All notifications must be submitted electronically to *608reports@epa.gov* unless the notification contains confidential business information. If the notification contains confidential business information, the information should be submitted to: Section 608 Program Manager; Stratospheric Protection Division; Mail Code: 6205T; U.S. Environmental Protection Agency; 1200 Pennsylvania Avenue NW., Washington, DC 20460.

(1) Owners or operators must notify EPA at this address in accordance with paragraph (f) of this section when seeking an extension of time to complete repairs.

(2) Owners or operators must notify EPA at this address in accordance with paragraph (h)(5)(ii) of this section when seeking relief from the obligation to retrofit or retire an appliance.

(3) Owners or operators must notify EPA at this address in accordance with paragraph (i) of this section when seeking an extension of time to complete the retrofit or retirement of an appliance.

(4) Owners or operators must notify EPA at this address in accordance with paragraph (j) of this section for any appliance that leaks 125 percent or more of the full charge in a calendar year.

(5) When excluding purged refrigerants that are destroyed from annual leak rate calculations, owners or operators must notify EPA at this address within 60 days after the first time the exclusion is used by the facility where the appliance is located. The report must include the information included in paragraph (l)(9) of this section.

■ 8. Revise § 82.158 to read as follows:

§ 82.158 Standards for recovery and/or recycling equipment.

Starting January 1, 2017, this section applies to recovery and/or recycling equipment for use during the maintenance, service, repair, or disposal of appliances containing any class I or class II refrigerant or any non-exempt substitute refrigerant.

(a) No person may manufacture or import recovery and/or recycling equipment for use during the maintenance, service, repair, or disposal of appliances unless the equipment is certified in accordance with this section.

(b) No person may alter the design of certified refrigerant recovery and/or recycling equipment in a way that would affect the equipment's ability to meet the certification standards in this section without resubmitting the altered design for certification testing. Until it is tested and shown to meet the certification standards in this section, equipment so altered will be considered uncertified.

(c) Recovery and/or recycling equipment manufactured or imported before November 15, 1993, intended for use during the maintenance, service, repair, or disposal of appliances (except small appliances, MVACs, and MVAC-like appliances) will be considered certified if it is capable of achieving the level of evacuation specified in Table 2 of this section when tested using a properly calibrated pressure gauge.

(d) Manufacturers and importers of recovery and/or recycling equipment must have such equipment certified by an approved equipment testing organization as follows:

(1) Recovery and/or recycling equipment manufactured or imported on or after November 15, 1993, and before September 22, 2003, intended for use during the maintenance, service, repair, or disposal of appliances (except small appliances, MVACs, and MVAC-like appliances) must be certified by an approved equipment testing organization as being capable of achieving the level of evacuation specified in Table 2 of this section under the conditions of appendix B1 of this subpart (based upon the ARI Standard 740–1993, *Performance of Refrigerant Recovery, Recycling and/or Reclaim Equipment*).

(2) Recovery and/or recycling equipment manufactured or imported on or after September 22, 2003, and

before January 1, 2017, intended for use during the maintenance, service, repair, or disposal of appliances (except small appliances, MVACs, and MVAC-like appliances) must be certified by an approved equipment testing organization as being capable of achieving the level of evacuation specified in Table 2 of this section under the conditions of appendix B2 of this subpart (based upon the ARI Standard 740–1995, *Performance of Refrigerant Recovery, Recycling and/or Reclaim Equipment*).

(3) Recovery and/or recycling equipment manufactured or imported on or after January 1, 2017, intended for use during the maintenance, service, repair, or disposal of appliances (except small appliances, MVACs, and MVAC-like appliances) must be certified by an approved equipment testing organization as being capable of achieving the level of evacuation specified in Table 2 of this section under the conditions of appendix B3 (for non-flammable refrigerants) based upon AHRI Standard 740–2016 or appendix B4 (for flammable refrigerants) of this subpart.

TABLE 2—LEVELS OF EVACUATION WHICH MUST BE ACHIEVED BY RECOVERY AND/OR RECYCLING EQUIPMENT

[Except for small appliances, MVACs, and MVAC-like appliances.]

Type of appliance with which recovery and/or recycling machine is intended to be used	Inches of Hg vacuum (relative to standard atmospheric pressure of 29.9 inches Hg)	
	Manufactured or imported before November 15, 1993	Manufactured or imported on or after November 15, 1993
HCFC–22 appliances, or isolated component of such appliances, with a full charge of less than 200 pounds of refrigerant.	0	0.
HCFC–22 appliances, or isolated component of such appliances, with a full charge of 200 pounds or more of refrigerant.	4	10.
Very high-pressure appliances	0	0.
Other high-pressure appliances, or isolated component of such appliances, with a full charge of less than 200 pounds of refrigerant.	4	10.
Other high-pressure appliances, or isolated component of such appliances, with a full charge of 200 pounds or more of refrigerant.	4	15.
Medium-pressure appliances, or isolated component of such appliances, with a full charge of less than 200 pounds of refrigerant.	4	10.
Medium-pressure appliances, or isolated component of such appliances, with a full charge of 200 pounds or more of refrigerant.	4	15.
Low-pressure appliances	25 mm Hg absolute	25 mm Hg absolute.

(4) Recovery and/or recycling equipment whose recovery efficiency cannot be tested according to the procedures in appendix B1, B2, B3, or B4 of this subpart as applicable may be certified if an approved third-party testing organization adopts and performs a test that demonstrates, to the satisfaction of the Administrator, that the recovery efficiency of that equipment is equal to or better than that of equipment that:

(i) Is intended for use with the same type of appliance; and

(ii) Achieves the level of evacuation in Table 2. The manufacturer's instructions must specify how to achieve the required recovery efficiency, and the equipment must be tested when used according to these instructions.

(5) The equipment must meet the minimum requirements for certification under appendix B1, B2, B3, or B4 of this subpart as applicable.

(6) If the equipment is equipped with a noncondensables purge device, the equipment must not release more than 3 percent of the quantity of refrigerant being recycled through noncondensables purging under the conditions of appendix B1, B2, B3, or B4 of this subpart as applicable.

(7) The equipment must be equipped with low-loss fittings on all hoses.

(8) The equipment must have its liquid recovery rate and its vapor recovery rate measured under the conditions of appendix B1, B2, B3, or B4 as applicable, unless the equipment has no inherent liquid or vapor recovery rate.

(e) *Small Appliances.* Equipment used during the maintenance, service, repair, or disposal of small appliances must be certified by an approved equipment testing organization to be capable of recovering 90 percent of the refrigerant in the test stand when the compressor of the test stand is operational and 80 percent of the refrigerant when the compressor of the test stand is not operational, when used in accordance with the manufacturer's instructions under the conditions of appendix C, Method for Testing Recovery Devices for Use with Small Appliances.

(1) Equipment manufactured or imported before November 15, 1993, will be considered certified if it is capable of either recovering 80 percent of the refrigerant in the system, whether or not the compressor of the test stand is operational, or achieving a four-inch vacuum when tested using a properly calibrated pressure gauge.

(2) Equipment manufactured or imported on or after November 15, 1993, may also be certified if it is capable of achieving a four-inch vacuum under the conditions of appendix B1 of this subpart, based upon ARI Standard 740–1993.

(3) Equipment manufactured or imported on or after September 22, 2003, and before January 1, 2017, may also be certified if it is capable of achieving a four-inch vacuum under the conditions of appendix B2 of this subpart, based upon ARI Standard 740–1995.

(4) Equipment manufactured or imported on or after January 1, 2017, may also be certified if it is capable of achieving a four-inch vacuum under the conditions of appendix B3 of this subpart (for non-flammable refrigerants), based upon AHRI Standard 740–2016 or appendix B4 of this subpart (for flammable refrigerants), based upon both AHRI Standard 740–2016 and UL 1963, Supplement SB, *Requirements for Refrigerant Recovery/Recycling Equipment Intended for Use with a Flammable Refrigerant,* Fourth Edition, June 1, 2011.

(5) Equipment used to evacuate any class I or class II refrigerant or any non-exempt substitute refrigerant from small

appliances before they are disposed of may also be certified if it is capable of achieving a four-inch vacuum when tested using a properly calibrated pressure gauge.

(f) *MVAC-like appliances.* (1) Manufacturers and importers of recovery and/or recycling equipment intended for use during the maintenance, service, repair, or disposal of MVAC-like appliances must certify such equipment in accordance with subpart B of this part.

(2) Equipment manufactured or imported before November 15, 1993, intended for use during the maintenance, service, or repair of MVAC-like appliances must be capable of reducing the system pressure to 102 mm of mercury vacuum under the conditions of appendix A of subpart B of this part.

(g) *MVACs.* Manufacturers and importers of recovery and/or recycling equipment intended for use during the maintenance, service, repair, or disposal of MVACs must certify such equipment in accordance with subpart B of this part.

(h) *Labeling.* (1) Manufacturers and importers of equipment certified under paragraphs (d) and (e) of this section must place a label on each piece of equipment stating the following:

THIS EQUIPMENT HAS BEEN CERTIFIED BY [APPROVED EQUIPMENT TESTING ORGANIZATION] TO MEET EPA's MINIMUM REQUIREMENTS FOR RECYCLING OR RECOVERY EQUIPMENT INTENDED FOR USE WITH [APPROPRIATE CATEGORY OF APPLIANCE].

(2) The label must also show the date of manufacture and the serial number (if applicable) of the equipment. The label must be affixed in a readily visible or accessible location, be made of a material expected to last the lifetime of the equipment, present required information in a way that it is likely to remain legible for the lifetime of the equipment, and be affixed in such a way that it cannot be removed from the equipment without damage to the label.

(i) *Retesting.* At least once every three years, manufacturers or importers of certified recovery and/or recycling equipment intended for use during the maintenance, service, or repair of appliances (except MVACs or MVAC-like appliances) or during the disposal of appliances (except small appliances, MVACs, and MVAC-like appliances) must have approved equipment testing organizations conduct either:

(1) Retests of certified recovery and/or recycling equipment in accordance with paragraphs (d) and (e) of this section; or

(2) Inspections of recovery and/or recycling equipment at manufacturing facilities to ensure that each equipment model line that has been certified under this section continues to meet the certification criteria.

(j) *Revocation.* An equipment model line that has been certified under this section may have its certification revoked if it is subsequently determined to fail to meet the certification criteria. In such cases, the Administrator must give notice to the manufacturer or importer setting forth the basis for the determination.

(k) Equipment that is advertised or marketed as ''recycling equipment'' must be capable of recycling the standard contaminated refrigerant sample of appendix B2, B3, or B4 of this subpart (as applicable) to the levels in the following table when tested under the conditions of appendix B2, B3 or B4 of this subpart:

MAXIMUM LEVELS OF CONTAMINANTS PERMISSIBLE IN REFRIGERANT PROCESSED THROUGH EQUIPMENT ADVERTISED AS ''RECYCLING'' EQUIPMENT

Contaminants	Low-pressure (R–11, R–123, R–113) systems	R–12 systems	All other systems
Acid Content (by wt.)	1.0 PPM	1.0 PPM	1.0 PPM.
Moisture (by wt.)	20 PPM	10 PPM	20 PPM.
Noncondensable Gas (by vol.)	N/A	2.0%	2.0%.
High Boiling Residues (by vol.)	1.0%	0.02%	0.02%.
Chlorides by Silver Nitrate Test	No turbidity	No turbidity	No turbidity.
Particulates	Visually clean	Visually clean	Visually clean.

■ 9. Revise § 82.160 to read as follows:

§ 82.160 Approved equipment testing organizations.

(a) Any equipment testing organization may apply for approval by the Administrator to certify equipment under the standards in § 82.158 and appendices B2, B3, B4, or C of this subpart. Applications must be sent to *608reports@epa.gov*, or if containing confidential business information, mailed to: Section 608 Program Manager, Stratospheric Protection Division, Mail Code: 6205T, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue NW., Washington, DC 20460.

(b) Applications for approval must include:

(1) A list of equipment present at the organization that will be used for equipment testing.

(2) Verification of the organization's expertise in equipment testing and the technical experience of the organization's personnel.

(3) Verification of the organization's knowledge of the standards and recordkeeping and reporting requirements of this subpart.

(4) A description of the organization's program for verifying the performance of certified recovery and/or recycling equipment manufactured over the long term, specifying whether retests of equipment or inspections of equipment at manufacturing facilities will be used.

(5) Verification that the organization has no conflict of interest and receives no direct or indirect financial benefit from the outcome of certification testing.

(6) Agreement to allow the Administrator access to records and personnel to verify the information contained in the application.

(c) Organizations may not certify equipment before receiving approval from EPA. If approval is denied under this section, the Administrator must give written notice to the organization setting forth the basis for the determination.

(d) If an approved testing organization conducts certification tests in a way not consistent with the representations made in its application or with the provisions of this subpart, the Administrator may revoke approval in accordance with § 82.169. In such cases, the Administrator must give notice to the organization setting forth the basis for the determination.

(e) *Recordkeeping and reporting.* (1) Approved equipment testing organizations must maintain records of equipment testing and performance and a list of equipment that meets EPA requirements. This list must include the name of the manufacturer and the name and/or serial number of the model line. Approved equipment testing organizations must publish online a list of all certified equipment that includes the information specified above and update the list annually.

(2) Approved equipment testing organizations must notify EPA at *608reports@epa.gov* if retests of equipment or inspections of manufacturing facilities conducted under to § 82.158(i) show that a previously certified model line fails to meet EPA requirements. Such notification must be received within thirty days of the retest or inspection.

(3) All records must be maintained for three years after the equipment is no longer offered for sale. Online lists must contain certified equipment until three years after that equipment is no longer offered for sale.

■ 10. Revise § 82.161 to read as follows:

§ 82.161 Technician certification.

Until January 1, 2018, this section applies only to technicians and organizations certifying technicians that maintain, service, or repair appliances containing class I or class II refrigerants. Starting on January 1, 2018, this section applies to technicians and organizations certifying technicians that maintain, service, or repair appliances containing any class I or class II refrigerant or any non-exempt substitute refrigerant.

(a) *Certification Requirements.* (1) Any person who could be reasonably expected to violate the integrity of the refrigerant circuit during the maintenance, service, repair, or disposal of appliances (as follows in this paragraph) containing a class I or class II refrigerant or a non-exempt substitute refrigerant must pass a certification exam offered by an approved technician certification program.

(i) Persons who maintain, service, or repair small appliances must be certified as Type I technicians.

(ii) Persons who maintain, service, repair, or dispose of medium-, high-, or very high-pressure appliances (except small appliances, MVACs, and MVAC-like appliances) must be certified as Type II technicians.

(iii) Persons who maintain, service, repair, or dispose of low-pressure appliances must be certified as Type III technicians.

(iv) Persons who maintain, service, repair, or dispose of all appliances described in paragraph (a)(1)(i) through (iii) of this section must be certified as Universal technicians.

(v) Technicians who maintain, service, or repair MVAC-like appliances must either be certified as Type II technicians or be certified in accordance with 40 CFR part 82, subpart B.

(vi) Persons who maintain, service, or repair MVAC appliances for consideration must be certified in accordance with 40 CFR part 82, subpart B.

(vii) Persons who dispose of small appliances, MVACs, and MVAC-like appliances are not required to be certified.

(2) Apprentices are exempt from the requirement in paragraph (a)(1) of this section provided the apprentice is closely and continually supervised by a certified technician while performing any maintenance, service, repair, or disposal that could reasonably be expected to release refrigerant from an appliance into the environment, except those substitute refrigerants exempted under paragraph (a)(1) of this section. The supervising certified technician and the apprentice have the responsibility to ensure that the apprentice complies with this subpart.

(3) The Administrator may require technicians to demonstrate at their place of business their ability to perform proper procedures for recovering and/or recycling refrigerant, except those substitute refrigerants exempted under paragraph (a)(1) of this section. Failure to demonstrate or failure to properly use the equipment may result in revocation or suspension of the certificate. Failure to abide by any of the provisions of this subpart may also result in revocation or suspension of the certificate. If a technician's certificate is revoked, the technician would need to recertify before maintaining, servicing, repairing, or disposing of any appliances.

(4) (i) Technicians certified under this section must keep a copy of their certificate at their place of business.

(ii) Technicians must maintain a copy of their certificate until three years after no longer operating as a technician.

(5) *Recertification.* The Administrator reserves the right to specify a requirement for technician recertification at some future date, if necessary, by placing a notice in the **Federal Register**.

(b) *Requirements for Technician Certification Programs.* (1) No technician training or testing program may issue certificates under this section unless the program complies with all the standards of this section and appendix D, and has been granted approval by the Administrator.

(2) *Program Approval.* Persons may seek approval of any technician certification program (program), in accordance with this paragraph, by submitting to the Administrator at the address in § 82.160(a) verification that the program meets all the standards listed in appendix D of this subpart. The Administrator reserves the right to consider other relevant factors to ensure the effectiveness of certification programs. If approval is denied under this section, the Administrator must give written notice to the program setting forth the basis for the determination.

(3) *Alternative Examinations.* Programs are encouraged to make provisions for non-English speaking technicians by providing tests in other languages or allowing the use of a translator when taking the test. A test may be administered orally to any person who makes this request, in writing, to the program at least 30 days before the scheduled date for the examination. The written request must explain why the request is being made.

(4) *Proof of Certification.* Programs certifying technicians must provide technicians with identification cards in accordance with section (f) of appendix D of this subpart.

(5) Programs certifying technicians must maintain records in accordance with section (g) of appendix D of this subpart.

(6) Starting January 1, 2018, programs certifying technicians, excluding Federally-run programs, must publish online a list of all technicians they have certified on or after January 1, 2017. Certifying organizations must update these lists at least annually.

(i) The list must include the first name, middle initial, and last name of the certified technician, the technician's city of residence when taking the test, the type(s) of certification received, and the date each certification was received.

(ii) Programs certifying technicians must provide notice to technicians that such information will be published online in compliance with any other Federal, state or local regulations, and allow technicians to opt out of being included in such lists.

(7) If an approved program violates any of the above requirements, the Administrator may revoke approval in accordance with § 82.169. In such cases, the Administrator must give notice to the organization setting forth the basis for the determination.

(c) *Test Subject Material.* A bank of test questions developed by the Administrator consists of groups, including a core group and technical groups. The Administrator will release this bank of questions only to approved technician certification programs. Each test for each type of certification must include at least 25 questions drawn from the core group and at least 25 questions drawn from each relevant technical group. These questions must address the subject areas in appendix D of this subpart.

§ 82.162 [Removed and Reserved]

■ 11. Remove and reserve § 82.162.

■ 12. Revise § 82.164 to read as follows:

§ 82.164 Reclaimer certification.

(a) All persons reclaiming used class I or II refrigerant or non-exempt substitute refrigerant for sale to a new owner must meet the following requirements:

(1) Reclaim such refrigerant to all the specifications in appendix A of this subpart (based on AHRI Standard 700–2016, *Specifications for Refrigerants*) that are applicable to that refrigerant;

(2) Verify that each batch of such refrigerant reclaimed meets these specifications using the analytical methodology prescribed in appendix A of this subpart, which includes the primary methodologies included in appendix A of AHRI Standard 700–2016;

(3) Release no more than 1.5 percent of the refrigerant during the reclamation process;

(4) Dispose of wastes from the reclamation process in accordance with all applicable laws and regulations; and

(5) Maintain records and submit reports in accordance with paragraph (d) of this section.

(b) The owner or a responsible officer reclaiming used refrigerant for sale to a new owner, except for persons who properly certified under this section before May 11, 2004, must certify to the Administrator at the address in § 82.160(a) that they will meet the requirements in paragraph (a) of this section. The certification must include the name and address of the reclaimer and a list of equipment used to reclaim the refrigerant to the required standard, and to analyze the refrigerant to ensure it meets these specifications.

(c) Certificates are not transferable. In the event of a change in ownership of an entity which reclaims refrigerant, the new owner of the entity must certify with the Administrator within 30 days of the change that they will meet the reclaimer certification requirements. In the event of a change in business management, location, or contact information, the owner of the entity must notify EPA within 30 days of the change at the address in § 82.160(a).

(d) *Recordkeeping and reporting.* (1) Reclaimers must maintain records, by batch, of the results of the analysis conducted to verify that reclaimed refrigerant meets the necessary specifications in paragraph (a)(2) of this section.

(2) Reclaimers must maintain records of the names and addresses of persons sending them material for reclamation and the quantity of the material (the combined mass of refrigerant and contaminants) by refrigerant type sent to them for reclamation. Such records must be maintained on a transactional basis for three years.

(3) Reclaimers must report to the Administrator annually by February 1 of the next calendar year the total annual quantity of material (the combined mass of refrigerant and contaminants) by refrigerant type sent to them for reclamation, the total annual mass of each refrigerant reclaimed, and the total annual mass of waste products.

(e) Failure to abide by any of the provisions of this subpart may result in revocation or suspension of the certification of the reclaimer in accordance with § 82.169. In such cases, the Administrator must give notice to the organization setting forth the basis for the determination.

■ 13. Amend § 82.166 by:

■ a. Revising the section heading;

■ b. Adding the introductory paragraph;

■ c. Removing and reserving paragraphs (a) through (i), and (l); and

■ d. Revising paragraph (m) and the introductory text of paragraph (q).

Revisions and addition to read as follows:

§ 82.166 Reporting and recordkeeping requirements for leak repair.

This section contains leak repair reporting and recordkeeping requirements that apply to owners and operators of appliances containing 50 or more pounds of class I or class II refrigerants until January 1, 2019. Starting January 1, 2019, the recordkeeping and reporting requirements in the leak repair provisions in § 82.157(l) and (m) apply to owners and operators of appliances containing 50 or more pounds of class I or class II refrigerants or non-exempt substitutes.

(a)–(i) [Reserved]

* * * * *

(l) [Reserved]

(m) All records required to be maintained pursuant to this section must be kept for a minimum of three years unless otherwise indicated.

* * * * *

(q) Owners or operators choosing to determine the full charge as defined in § 82.156(j) of an affected appliance by using an established range or using that methodology in combination with other methods for determining the full charge as defined in § 82.156(j) must maintain the following information:

* * * * *

■ 14. Add § 82.168 to read as follows:

§ 82.168 Incorporation by Reference.

(a) Certain material is incorporated by reference into this subpart part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. You can obtain the material from the sources listed below. You may inspect a copy of the approved material at U.S. EPA's Air and Radiation Docket; EPA West Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

(b) Air-Conditioning, Heating, and Refrigeration Institute (AHRI), 2111 Wilson Boulevard, Suite 500, Arlington, VA 22201, *www.ahrinet.org*.

(1) AHRI Standard 110–2016, *2016 Standard for Air-Conditioning, Heating and Refrigerating Equipment Nameplate Voltages*, copyright 2016, into Appendix B3 to subpart F.

(2) 2008 Appendix C to AHRI Standard 700–2014, *2008 Appendix C for Analytical Procedures for AHRI Standard 700–2014—Normative*, copyright 2008, into Appendix A to subpart F.

(3) 2008 Appendix D to AHRI Standard 700–2014, *2012 Appendix D for Gas Chromatograms for AHRI Standard 700–2014—Informative*, copyright 2012, into Appendix A to subpart F.

(c) American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., (ASHRAE), 1791 Tullie Circle NE., Atlanta, GA 30329, U.S.A.

(1) ANSI/ASHRAE Standard 63.2–1996 (RA 2010), *Method of Testing Liquid-Line Filter Drier Filtration Capability,* Reaffirmed June 26, 2010, into Appendix B3 to subpart F.

(d) ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959, *www.astm.org*.

(1) ASTM D1296–01 (Reapproved 2012), *Standard Test Method for Odor of Volatile Solvents and Diluents*, approved July 1, 2012, into Appendix A to subpart F.

(2) [Reserved]

(e) Gas Processors Association, 6526 East 60th Street, Tulsa, Oklahoma 74145.

(1) GPA Standard STD–2177–13, *Analysis of Natural Gas Liquid Mixtures Containing Nitrogen and Carbon Dioxide by Gas Chromatography*, Revised, copyright 2013, into Appendix A to subpart F.

(2) [Reserved]

(f) General Services Administration, 301 7th St. SW., Washington, DC 20410.

(1) BB–F–1421B, Federal Specification for ''Fluorocarbon Refrigerants,'' dated March 5, 1982, IBR approved for Appendix A to subpart F.

(2) [Reserved]

(g) International Electrotechnical Commission (IEC), 3, rue de Varembé, P.O. Box 131. CH–1211 Geneva 20—Switzerland, 41 22 919 02 11, *http://www.iec.ch*.

(1) IEC 60038, *IEC Standard Voltages*, Edition 7.0, 2009–06, into Appendix B3 to subpart F.

(2) [Reserved]

(h) Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, IL 60062, 847–272–8800, *http://www.ul.com*.

(1) UL 1963, *Standard for Safety Requirements for Refrigerant Recovery/Recycling Equipment*, Fourth Edition (with revisions through October 13, 2013), June 1, 2011, in appendix B3 to subpart F, appendix B4 to subpart F.

(2) [Reserved]

■ 15. Amend subpart F by revising appendix A to read as follows:

Appendix A to Subpart F of Part 82—Specifications for Refrigerants

This appendix is based on the Air-Conditioning, Heating, and Refrigeration Institute Standard 700–2016, *Specifications for Refrigerants.*

Section 1. Purpose

1.1 *Purpose.* The purpose of this standard is to evaluate and accept/reject refrigerants regardless of source (*i.e.*, new, reclaimed and/or repackaged) for use in new and existing refrigeration and air-conditioning products as required under 40 CFR part 82.

1.1.1 *Intent.* This standard is intended for the guidance of the industry including manufacturers, refrigerant reclaimers, repackagers, distributors, installers, servicemen, contractors and for consumers.

1.1.2 *Review and Amendment.* This standard is subject to review and amendment as the technology advances.

Section 2. Scope

2.1 *Scope.* This standard specifies acceptable levels of contaminants (purity requirements) for various fluorocarbon and other refrigerants regardless of source and lists acceptable test methods. These refrigerants are as referenced in the ANSI/ASHRAE Standard 34 with Addenda:

2.1.1 Single-Component Fluorocarbon Refrigerants: R–11, R–12, R–13, R–22, R–23, R–32, R–113, R–114, R–115, R–116, R–123, R–124, R–125, R–134a, R–141b, R–142b, R–143a, R–152a, R–218, R–227ea, R–236fa, R–245fa, R–1233zd(E), R–1234yf, R–1234ze(E);

2.1.2 Single Component Hydrocarbon Refrigerants: R–50, R–170, R–E170, R–290, R–600, R–600a, R–601, R–601a, R–610, R–1150, R–1270;

2.1.3 Carbon Dioxide Refrigerant: R–744;

2.1.4 Zeotropic Blend Refrigerants: R–401A, R–401B, R–402A, R–402B, R–403A, R–403B, R–404A, R–405A, R–406A, R–407A, R–407B, R–407C, R–407D, R–407E, R–407F, R–408A, R–409A, R–409B, R–410A, R–410B, R–411A, R–411B, R–412A, R–413A, R–414A, R–414B, R–415A, R–415B, R–416A, R–417A, R–417B, R–417C, R–418A, R–419A, R–419B, R–420A, R–421A, R–421B, R–422A, R–422B, R–422C, R–422D, R–422E, R–423A, R–424A, R–425A, R–426A, R–427A, R–428A, R–429A, R–430A, R–431A, R–434A, R–435A, R–437A, R–438A, R–439A, R–440A, R–442A, R–444A, R–444B, R–445A, R–446A, R–447A, R–448A, R–449A, R–450A;

2.1.5 Zeotropic Hydrocarbon Blend Refrigerants: R–432A, R–433A, R–433B, R–433C, R–436A, R–436B, R–441A, R–443A; and

2.1.6 Azeotropic Blend Refrigerants: R–500, R–502, R–503, R–507A, R–508A, R–508B, R–509A, R–510A, R–511A, and R–512A.

Section 3. Definitions

3.1 *Definitions.* All terms in this appendix will follow the definitions in § 82.152 unless otherwise defined in this appendix.

3.2 *Shall, Should, Recommended,* or *It Is Recommended* shall be interpreted as follows:

3.2.1 *Shall.* Where ''shall'' or ''shall not'' is used for a provision specified, that provision is mandatory if compliance with this appendix is claimed.

3.2.2 *Should, Recommended,* or *It is Recommended* is used to indicate provisions which are not mandatory but which are desirable as good practice.

Section 4. Characterization of Refrigerants and Contaminants

4.1 *Characterization.* Characterization of single component fluorocarbon (Table 1A) and zeotropic/azeotropic blend (Table 2A/3) refrigerants and contaminants are listed in the following general classifications:

4.1.1 Isomer content (see Table 1A)

4.1.2 Air and other non-condensables (see Tables 1A, 2A, 3)

4.1.3 Water (see Tables 1A, 2A, 3)

4.1.4 All other volatile impurities (see Tables 1A, 2A, 3)

4.1.5 High boiling residue (see Tables 1A, 2A, 3)

4.1.6 Halogenated unsaturated volatile impurities (see Table 1A)

4.1.7 Particulates/solids (see Tables 1A, 2A, 3)

4.1.8 Acidity (see Tables 1A, 2A, 3)

4.1.9 Chloride (see Tables 1A, 2A, 3)

4.2 Hydrocarbon Characterization. Characterization of hydrocarbon refrigerants (Tables 1B and 2B) and contaminants are listed in the following general classifications:

4.2.1 Nominal composition

4.2.2 Other allowable impurities

4.2.3 Air and other non-condensables

4.2.4 Sulfur odor

4.2.5 High boiling residue

4.2.6 Particulates/solids

4.2.7 Acidity

4.2.8 Water

4.2.9 All other volatile impurities

4.2.10 Total C3, C4, and C5 polyolefins

4.3 *Carbon Dioxide Characterization.* Characterization of carbon dioxide (Table 1C) and its contaminants are listed in the following general classifications:

4.3.1 Purity

4.3.2 Air and other non-condensables

4.3.3 Water

4.3.4 High boiling residue

4.3.5 Particulates/solids

Section 5. Sampling and Summary of Test Procedures

5.1 *Referee Test.* The referee test methods for the various contaminants are summarized in the following paragraphs. Detailed test procedures are included in *2008 Appendix C to AHRI Standard 700–2014* (incorporated by reference, see § 82.168). If alternative test methods are employed, the user must be able to demonstrate that they produce results at least equivalent to the specified referee test method.

5.2 *Refrigerant Sampling*

5.2.1 *Sampling Precautions.* Special precautions should be taken to ensure that representative samples are obtained for analysis. Sampling shall be done by qualified personnel following accepted sampling and safety procedures. Refrigerants with critical temperatures near or below ambient temperature cannot be reliably sampled for both liquid and vapor phase without special handling.

Note: Flammable refrigerants which are ASHRAE 34 class 2L, 2, or 3 present additional safety challenges and require additional measures for sampling safety procedures compared to nonflammable halocarbons documented in this standard.

5.2.2 *Cylinder Preparation.* Place a clean, empty sample cylinder with the valve open in an oven at 110 °C (230 °F) for one hour. Remove it from the oven while hot, immediately connect it to an evacuation system and evacuate to less than 56 kPa. Close the valve and allow it to cool. Weigh the empty cylinder.

5.2.3 *Vapor Phase Sampling.* A vapor phase sample shall be obtained for determining the non-condensables. The source temperature shall be measured and recorded at the time the sample is taken.

5.2.3.1 *Special Handling for Low Critical Temperature Refrigerant.* A vapor phase sample is required to determine non-condensables and volatile impurities, including other refrigerants. The vapor phase sample is obtained by regulating the sample container temperature to 5 K or more above the refrigerant critical temperature.

5.2.3.2 *Handling for Liquid Refrigerants with Boiling Points Near or Above Room Temperature.* Since R–11, R–113, R–123, R–141b, R–245fa, and R–1233zd(E) have normal boiling points near or above room temperature, non-condensable determination is not required for these refrigerants.

Note: Non-condensable gases, if present, will concentrate in the vapor phase of the refrigerant; care must be exercised to eliminate introduction of either air or liquid phase refrigerant during the sample transfer.

5.2.4 *Liquid Phase Sampling.* A liquid phase sample is required for all tests listed in this standard except the test for non-condensables.

5.2.4.1 *Liquid Sampling.* Accurate analysis requires that the sample cylinder, at ambient temperature, be filled to at least 60 percent by volume; however, under no circumstances should the cylinder be filled to more than 80 percent by volume. This can be accomplished by weighing the empty cylinder and then the cylinder with refrigerant. When the desired amount of refrigerant has been collected, close the valve(s) and immediately disconnect the sample cylinder.

Note: Care should be taken to ensure that all connections and transfer lines are dry and evacuated to avoid contaminating the sample.

Note: Low critical temperature refrigerants can have extremely high pressure and the sampling vessel, all connections, and transfer lines must be designed to handle high pressures.

5.2.4.2 *Special Handling for Low Critical Temperature Refrigerant.* A liquid phase sample is required for all testing except volatile impurities, including other refrigerants. The liquid phase sample is obtained by regulating the sample cylinder temperature to 2 °C below the critical temperature of the refrigerant.

Note: If free water is present in the sample, cooling to below 0 °C may result in the formation of ice. Clathrates may form at temperatures above 0 °C with some fluorocarbon refrigerants.

5.2.4.3 *Record Weight.* Check the sample cylinder for leaks and record the gross weight.

5.3 *Refrigerant Identification.* The required method shall be gas chromatography (GC) as described in *2008 Appendix C to AHRI Standard 700–2014* (incorporated by reference, see § 82.168) with the corresponding gas chromatogram figures as illustrated in *2012 Appendix D to AHRI Standard 700–2014* (incorporated by reference, see § 82.168). The chromatogram of the sample shall be compared to known standards.

5.3.2 *Alternative Method.* Determination of the boiling point and boiling point range is an acceptable alternative test method which can be used to characterize refrigerants. The test method shall be that described in section 4.4.3 of BB–F–1421B (incorporated by reference, see § 82.168).

5.3.3 *Required Values.* The required values for boiling point and boiling point range are given in Table 1A, *Physical Properties of Single Component Refrigerants*; Table 1B, *Physical Properties of Zeotropic Blends (400 Series Refrigerants)*; and Table 1C, *Physical Properties of Azeotropic Blends (500 Series Refrigerants).*

5.4 *Water Content.*

5.4.1 *Method.* The Coulometric Karl Fischer Titration shall be the primary test method for determining the water content of refrigerants. This method is described in *2008 Appendix C to AHRI Standard 700–2014* (incorporated by reference, see § 82.168). This method can be used for refrigerants that are either a liquid or a gas at room temperature. For all refrigerants, the sample for water analysis shall be taken from the liquid phase of the container to be tested.

5.4.2 *Limits.* The value for water content shall be expressed in parts per million (ppm) by weight and shall not exceed the maximum specified in Tables 1A, 1B, 1C, 2A, 2B, and 3.

5.5 *Conductivity.* (Alternative to chloride and acidity tests).

5.5.1 *Method.* A refrigerant may be tested for conductivity as an indication of the presence of acids, metal chlorides, and any compound that ionizes in water. This alternative procedure is intended for use with new or reclaimed refrigerants, however, significant amounts of oil can interfere with the test results.

5.5.2 *Limits.* The value for conductivity shall be converted to and expressed in ppm by weight calculated as HCl and shall be compared with the maximum acidity value specified (see in Tables 1A, 1B, 1C, 2A, 2B, and 3). If the conductivity is above this amount, then the chloride and acidity tests shall be conducted. If the conductivity is not greater than this amount, then the chloride and acidity tests may be omitted.

5.6 *Chloride.* The refrigerant shall be tested for chloride as an indication of the presence of hydrochloric acid and/or metal chlorides. The referee procedure is intended for use with new or reclaimed halogenated refrigerants; however, high boiling residue in excess of the amounts in Tables 1A, 1B, 1C, 2A, 2B, and 3 can interfere with the test results.

5.6.1 *Method.* The test method shall be that described in *2008 Appendix C to AHRI Standard 700–2014* (incorporated by reference, see § 82.168). The test will show noticeable turbidity at chloride levels of about 3 ppm or greater by weight.

5.5.2 *Limits.* The results of the test shall not exhibit any sign of turbidity. Report the results as ‘‘pass’’ or ‘‘fail.’’

5.7 *Acidity.*

5.7.1 *Method.* The acidity test uses the titration principle to detect any compound that is soluble in water and ionizes as an acid. The test method shall be that described in *2008 Appendix C to AHRI Standard 700–2014* (incorporated by reference, see § 82.168). This test may not be suitable for determination of high molecular weight organic acids; however these acids will be found in the high boiling residue test outlined in Section 5.8. The test requires a 50 to 60 gram sample and has a detection limit of 0.1 ppm by weight calculated as HCl.

5.7.2 *Limits.* The value for acidity shall be expressed in ppm by weight as HCl and shall not exceed the limits in Tables 1A, 1B, 2A, 2B, and 3.

5.8 *High Boiling Residue.*

5.8.1 *Method.* High boiling residue shall be determined by either volume or weight. The volume method measures the residue from a standard volume of refrigerant after evaporation. The gravimetric method is described in *2008 Appendix C to AHRI Standard 700–2014* (incorporated by reference, see § 82.168). Oils and/or organic acids will be captured by these methods.

5.8.2 *Limits.* The value for high boiling residue shall be expressed as a percentage by volume or weight and shall not exceed the maximum percent specified in Tables 1A, 1B, 1C, 2A, 2B, and 3.

5.9 *Particulates and Solids.*

5.9.1 *Method.* A measured amount of sample shall be placed in a Goetz bulb under controlled temperature conditions. The particulates/solids shall be determined by visual examination of the Goetz bulb prior to the evaporation of refrigerant. For details of this test method, refer to Part 3 of *2008 Appendix C to AHRI Standard 700–2014* (incorporated by reference, see § 82.168).

Note: R–744 will partially sublimate when measuring a known amount of liquid sample into the dry Goetz bulb and the solid R–744 will interfere with the visual examination of particulates/solids. Determining the particulates/solids shall be completed by visual examination of the Goetz bulb after the evaporation of the refrigerant.

5.9.2 *Limits.* Visual presence of dirt, rust, or other particulate contamination is reported as ‘‘fail.’’

5.10 *Non-Condensables.*

5.10.1 *Method.* A vapor phase sample shall be used for determination of non-condensables. Non-condensable gases consist primarily of air accumulated in the vapor phase of refrigerants where the solubility of air in the refrigerant liquid phase is extremely low and air is not significant as a liquid phase contaminant. The presence of non-condensable gases may reflect poor quality control in transferring refrigerants to storage tanks and cylinders.

The test method shall be gas chromatography with a thermal conductivity detector as described in *2008 Appendix C to AHRI Standard 700–2014* (incorporated by reference, see § 82.168).

5.10.2 *Limits.* The maximum level of non-condensables in the vapor phase of a test sample shall not exceed the maximum at 25 °C as shown in Tables 1A, 1B, 1C, 2A, 2B, and 3.

5.11 *All Other Volatile Impurities and/or Other Refrigerants.*

5.11.1 *Method.* The amount of volatile impurities including other refrigerants in the subject refrigerant shall be determined by gas chromatography as described in *2008 Appendix C to AHRI Standard 700–2014* (incorporated by reference, see § 82.168).

5.11.2 *Limits.* The test sample shall not contain more than 0.5 percent by weight of volatile impurities including other refrigerants as shown in Tables 1A, 1B, 1C, 2A, 2B and 3.

5.12 *Total C_3, C_4 and C_5 Polyolefins in Hydrocarbon Refrigerants.*

5.12.1 *Method.* The amount of polyolefin impurities in the hydrocarbon shall be determined by gas chromatography as described in GPA Standard 2177–13 (incorporated by reference, see § 82.168).

5.12.2 *Limits.* The test sample shall not contain more than 0.05 percent by weight in the hydrocarbon sample as shown in Tables 1B and 2B. Report the results as ‘‘pass’’ or ‘‘fail.’’

5.13 *Sulfur Odor in Hydrocarbon Refrigerants.*

5.13.1 *Method.* The amount of sulfur containing compounds or other compounds with an odor shall be determined by ASTM D1296–01 (Reapproved 2012) (incorporated by reference, see § 82.168).

5.13.2 *Limits.* The test sample paper shall not emit a residual sulfur odor as shown in Tables 1B and 2B.

Section 6. Reporting Procedure

6.1 *Reporting Procedure.* The source (manufacturer, reclaimer, or repackager) of the packaged refrigerant shall be identified. The refrigerant shall be identified by its accepted refrigerant number and/or its chemical name. Maximum allowable levels of contaminants are shown in Tables 1A, 1B, 1C, 2A, 2B, and 3. Test results shall be tabulated in a similar manner.

BILLING CODE 6560–50–P

Table 1A. Single Component Fluorocarbon Refrigerants and their Allowable Levels of Contaminants

	Reporting Units	Reference Section	**R-11**	**R-12**	**R-13**	**R-22**	**R-23**	**R-32**	**R-113**	**R-114**
CHARACTERISTICS:										
Boiling Point[1]	°C @ 101.3 kPa°	N/A	23.7	-29.8	-81.5	-40.8	-82	-51.7	47.6	3.6
Boiling Point Range[1]	K	N/A	± 0.3	± 0.3	± 0.5	± 0.3	± 0.5	± 0.3	± 0.3	± 0.3
Critical Temperature[1]	°C	N/A	198	112	28.9	96.2	26.1	78.1	214.1	145.7
Isomer Content	% by weight	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0-1 R-133a	0-30 R-144a
VAPOR PHASE CONTAMINANTS:										
Air and Other Non-condensables, Maximum	% by volume @ 25.0 °C	5.10	N/A[2]	1.5	1.5	1.5	1.5	1.5	N/A[2]	1.5
LIQUID PHASE CONTAMINANTS:										
Water, Maximum	ppm by weight	5.4	20	10	10	10	10	10	20	10
All Other Volatile Impurities, Maximum	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Maximum	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Maximum	ppm by weight (as HCl)	5.7	1	1	1	1	1	1	1	1
Chloride[3]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

Table 1A. Single Component Fluorocarbon Refrigerants and their Allowable Levels of Contaminants (continued)									
	Reporting Units	Reference Section	**R-115**	**R-116**	**R-123**	**R-124**	**R-125**	**R-134a**	**R-141b**
CHARACTERISTICS:									
Boiling Point[1]	°C @ 101.3 kPa	N/A	-38.9	-78.2	27.8	-12	-48.1	-26.1	32
Boiling Point Range[1]	K	N/A	± 0.3	± 0.3	± 0.3	± 0.3	± 0.3	± 0.3	± 0.3
Critical Temperature[1]	°C	N/A	80	19.9	183.7	122.3	66	101.1	206.8
Isomer Content	% by weight	N/A	N/A	N/A	0-8 R-123a+ R-123b	0-5 R-124a	N/A	0-0.5 R-134	0-0.1ea R-141, R-141a
VAPOR PHASE CONTAMINANTS:									
Air and Other Non-condensables, Max.	% by volume @ 25.0 °C	5.10	1.5	1.5	N/A[2]	1.5	1.5	1.5	N/A[2]
LIQUID PHASE CONTAMINANTS:									
Water, Max.	ppm by weight	5.4	10	10	20	10	10	10	100
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.9
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight (as HCl)	5.7	1	1	1	1	1	1	1
Chloride[3]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

Table 1A. Single Component Fluorocarbon Refrigerants and their Allowable Levels of Contaminants (continued)

	Reporting Units	Reference Section	**R-142b**	**R-143a**	**R-152a**	**R-218**	**R-227ea**	**R-236fa**	**R-245fa**	**R-1233zd(E)**	**R-1234yf**	**R-1234ze(E)**	**R-1336mzz(Z)**
CHARACTERISTICS:													
Boiling Point[1]	°C @ 101.3 kPa	N/A	-9.2	-47.2	-24	-36.8	-16.5	-1.4	14.9	18.3	-29.4	-19	33.4
Boiling Point Range[1]	K	N/A	--	± 0.3	± 0.3	± 0.3	--	± 0.3	± 0.3	--	N/A	N/A	N/A
Critical Temperature[1]	°C	N/A	137.1	72.7	113.3	72	101.7	124.9	154.1	165.6	94.8	109.4	171.3
Isomer Content	% by weight	N/A	0-0.1ea R-142, R-142a	0-0.01 R-143	N/A	--	--	--	0-0.1ea R-245ca, R-245cb, R-245ea, R-245eb	--	N/A	0.3 R-1234ze(Z)	0 - 0.1 R-1336mzz(E)
VAPOR PHASE CONTAMINANTS:													
Air and Other Non-condensables, Max.	% by volume @ 25.0 °C	5.10	2	1.5	1.5	1.5	1.5	1.5	N/A[2]	N/A[2]	1.5	1.5	N/A[2]
LIQUID PHASE CONTAMINANTS:													
Water, Maximum	ppm by weight	5.4	15	10	10	10	10	10	20	20	10	10	20
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight (as HCl)	5.7	3	1	1	1	1	1	1	1	1	1	1
Chloride[3]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

1. Boiling points, boiling point ranges, and critical temperatures, although not required, are provided for informational purposes. Refrigerant data compiled from Refprop 9.1.
2. Since R-11, R-113, R-123, R-141b, R-245fa, R-1233zd(E), and R-1336mzz(Z) have normal boiling points near or above room temperature, non-condensable determinations are not required for these refrigerants.
3. Recognized chloride level for pass/fail is about 3 ppm.
-- Data Not Available

Table 1B. Single Component Hydrocarbon Refrigerants and their Allowable Levels of Contaminants

	Reporting Units	R-50	R-170	R-E170	R-290	R-600	R-600a	R-601	R-601a	R-610	R-1150	R-1270
CHARACTERISTICS:												
Boiling Point[1]	°C at 101.3 kPa	-161.5	-88.6	-24.8	-42.1	-0.5	-11.8	36.1	27.8	34.6	-103.8	-47.6
Boiling Point Range[1]	K	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5
Minimum Nominal Composition	% weight	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5
Other Allowable Impurities	% weight	N/A	N/A	N/A	2 (see footnote[2])	2 (see footnote[2])	2 (see footnote[2])	0-1 R-601a	0-1 R-601	N/A	N/A	0-1 R-290
VAPOR PHASE CONTAMINANTS[3]:												
Air and Other Non-condensables, Maximum	% by volume @ 25.0 °C	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS[4]:												
Sulfur Odor	Pass or Fail	No sulfur odor	No sulfur odor	No sulfur odor	No sulfur odor	No sulfur odor	No sulfur odor	No sulfur odor	No sulfur odor	No sulfur odor	No sulfur odor	No sulfur odor
High Boiling Residue, Max.	% weight	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight (as HCl)	1	1	1	1	1	1	1	1	1	1	1
Water, Max.	$mg\ kg^{-1}$	10	10	10	10	10	10	10	10	10	10	10
All Other Volatile Impurities, Max.	% weight	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total C3, C4 and C5 Polyolefins, Max.	% weight	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05

1. Boiling points, boiling point ranges, although not required, are provided for informational purposes.
2. 2% of other C3 and C4 saturated hydrocarbons are allowed
3.Taken from vapor phase
4. Vaporized from liquid phase

Table 2A. Zeotropic Blends (400 Series Refrigerants) and their Allowable Levels of Contaminants

	Reporting Units	Reference Section	R-401A	R-401B	R-402A	R-402B	R-403A	R-403B	R-404A	R-405
CHARACTERISTICS:										
Refrigerant Components	N/A	N/A	R-22/ 152a/124	R-22/ 152a/124	R-125/ 290/22	R-125/ 290/22	R-290/ 22/218	R-290/ 22/218	R-125/ 143a/134a	R-22/152a/ 142b/C318
Nominal Composition	% by weight	N/A	53.0/13.0/ 34.0	61.0/11.0/ 28.0	60.0/2.0/ 38.0	38.0/2.0/60.0	5.0/75.0/ 20.0	5.0/56.0/ 39.0	44.0/52.0/ 4.0	45.0/7.0/5.5/42.5
Allowable Composition	% by weight	N/A	51.0-55.0/ 11.5-13.5/ 33.0-35.0	59.0-63.0/ 9.5-11.5/ 27.0-29.0	58.0-62.0/ 1.0-2.1/ 36.0-40.0	36.0-40.0/ 1.0-2.1/ 58.0-62.0	3.0-5.2/ 73.0-77.0/ 18.0-22.0	3.0-5.2/ 54.0-58.0/ 37.0-41.0	42.0-46.0/ 51.0-53.0/ 2.0-6.0	43.0-47.0/ 6.0-8.0/ 4.5-6.5/ 40.5-44.5
Bubble Point[1]	°C @ 101.3 kPa	N/A	-33.3	-34.9	-49	-47	-47.8	-49.2	-46.2	-32.9
Dew Point[1]	°C @ 101.3 kPa	N/A	-26.4	-28.8	-46.9	-44.7	-44.3	-46.8	-45.5	-24.5
Critical Temperature[1]	°C	N/A	105.3	103.5	76	83	87	79.7	72.1	106
VAPOR PHASE CONTAMINANTS:										
Air and Other Non-condensables, Max.	% by volume @ 25.0 °C	5.10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS:										
Water, Max.	ppm by weight	5.4	10	10	10	10	10	10	10	10
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight (as HC1)	5.7	1	1	1	1	1	1	1	1
Chloride[2]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

Table 2A. Zeotropic Blends (400 Series Refrigerants) and their Allowable Levels of Contaminants (continued)

	Reporting Units	Reference Section	**R-406A**	**R-407A**	**R-407B**	**R-407C**	**R-407D**	**R-407E**	**R-407F**	**R-407G**	**R-408A**
CHARACTERISTICS:											
Refrigerant Components	N/A	N/A	R-22/600a/ 142b	R-32/ 125/134a	R-32/ 125/134a	R-32/ 125/134a	R-32/ 125/134a	R-32/ 125/134a	R-32/ 125/134a	R-32/ 125/134a	R-125/ 143a/22
Nominal Composition	% by weight	N/A	55.0/4.0/41 .0	20.0/40.0/ 40.0	10.0/70.0/ 20.0	23.0/25.0/ 52.0	15.0/15.0/ 70.0	25.0/15.0/ 60.0	30.0/30.0/ 40.0	2.5/2.5/95.0	7.0/46.0/47. 0
Allowable Composition	% by weight	N/A	53.0-57.0/ 3.0-5.0/ 40.0-42.0	18.0-22.0/ 38.0-42.0/ 38.0-42.0	8.0-12.0/ 68.0-72.0/ 18.0-22.0	21.0-25.0/ 23.0-27.0/ 50.0-54.0	13.0-17.0/ 13.0-17.0/ 68.0-72.0	23.0-27.0/ 13.0-17.0/ 58.0-62.0	28.0-32.0/ 28.0-32.0/ 38.0-42.0	2.0-3.0/ 2.0-3.0/ 94.0-96.0	5.0-9.0/ 45.0-47.0/ 45.0-49.0
Bubble Point[1]	°C @ 101.3 kPa	N/A	-32.7	-45.3	-46.8	-43.6	-39.5	-42.9	-46.1	-29.2	-44.6
Dew Point[1]	°C @ 101.3 kPa	N/A	-23.5	-38.9	-42.5	-36.6	-32.9	-35.8	-39.7	-27.2	-44.1
Critical Temperature[1]	°C	N/A	116.5	82.3	75	86	91.4	88.5	83	99.5	83.1
VAPOR PHASE CONTAMINANTS:											
Air and Other Non-condensables, Max.	% by volume @ 25.0 °C	5.10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS:											
Water, Max.	ppm by weight	5.4	10	10	10	10	10	10	10	10	10
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight	5.7	1	1	1	1	1	1	1	1	1
Chloride[2]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

Table 2A. Zeotropic Blends (400 Series Refrigerants) and their Allowable Levels of Contaminants (continued)

	Reporting Units	Reference Section	R-409A	R-409B	R-410A	R-410B	R-411A	R-411B	R-412A	R-413A
CHARACTERISTICS:										
Refrigerant Components	N/A	N/A	R-22/ 124/142b	R-22/ 124/142b	R-32/125	R-32/125	R-1270/ 22/152a	R-1270/ 22/152a	R-22/218/ 142b	R-218/ 134a/600a
Nominal Composition	% by weight	N/A	60.0/25.0/ 15.0	65.0/25.0/ 10.0	50.0/50.0	45.0/55.0	1.5/87.5 /11.0	3.0/94.0/ 3.0	70.0/5.0/ 25.0	9.0/88.0/3.0
Allowable Composition	% by weight	N/A	58.0-62.0/ 23.0-27.0/ 14.0-16.0	63.0-67.0/ 23.0-27.0/ 9.0-11.0	48.5-50.5/ 49.5-51.5	44.0-46.0/ 54.0-56.0	0.5-1.5/ 87.5-89.5/ 10.0-11.0	2.0-3.0/ 94.0-96.0/ 2.0-3.0	68.0-72.0/ 3.0-7.0/ 24.0-26.0	8.0-10.0/ 86.0-90.0/ 2.0-3.0
Bubble Point[1]	°C @ 101.3 kPa	N/A	-34.7	-35.6	-51.4	-51.3	-39.5	-41.6	-38	-30.6
Dew Point[1]	°C @ 101.3 kPa	N/A	-26.4	-27.9	-51.4	-51.6	-36.6	-40	-28.7	-27.9
Critical Temperature[1]	°C	N/A	106.9	106.9	71.4	70.8	99.1	96	107.2	98.5
VAPOR PHASE CONTAMINANTS:										
Air and Other Non-condensables, Max.	% by volume @ 25.0 °C	5.10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS:										
Water, Maximum	ppm by weight	5.4	10	10	10	10	10	10	10	10
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight (as HCl)	5.7	1	1	1	1	1	1	1	1
Chloride[2]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

Table 2A. Zeotropic Blends (400 Series Refrigerants) and their Allowable Levels of Contaminants (continued)

	Reporting Units	Reference Section	**R-414A**	**R-414B**	**R-415A**	**R-415B**	**R-416A**	**R-417A**	**R-417B**
CHARACTERISTICS:									
Refrigerant Components	N/A	N/A	R-22/124/ 600a/142b	R-22/124/ 600a/142b	R-22/152a	R-22/152a	R-134a/ 124/600	R-125/ 134a/600	R-125/ 134a/600
Nominal Composition	% by weight	N/A	51.0/28.5/ 4.0/16.5	50.0/39.0/ 1.5/9.5	82.0/18.0	25.0/75.0	59.0/39.5/1.5	46.6/50.0/3.4	79.0/18.3/2.7
Allowable Composition	% by weight	N/A	49.0-53.0/ 26.5-30.5/ 3.5-4.5/ 15.5-17.0	48.0-52.0/ 37.0-41.0/ 1.0-2.0/ 8.5-10.0	81.0-83.0/ 17.0-19.0	24.0-26.0/ 74.0-76.0	58.0-59.5/ 39.0-40.5/ 1.3-1.6	45.5-47.7/ 49.0-51.0/ 3.0-3.5	78.0-80.0/ 17.3-19.3/ 2.2-2.8
Bubble Point[1]	°C @ 101.3 kPa	N/A	-34	-32.9	-37.5	-27.7	-23.4	-38	-44
Dew Point[1]	°C @ 101.3 kPa	N/A	-25.8	-24.3	-34.7	-26.2	-21.8	-32.9	-41.5
Critical Temperature[1]	°C	N/A	110.7	111	100	111.3	108.2	89.9	75.2
VAPOR PHASE CONTAMINANTS:									
Air and Other Non-condensables, Max.	% by volume @ 25.0 °C	5.10	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS:									
Water, Max.	ppm by weight	5.4	10	10	10	10	10	10	10
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight (as HC1)	5.7	1	1	1	1	1	1	1
Chloride[2]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

Table 2A. Zeotropic Blends (400 Series Refrigerants) and their Allowable Levels of Contaminants (continued)

	Reporting Units	Reference Section	**R-417C**	**R-418A**	**R-419A**	**R-419B**	**R-420A**	**R-421A**	**R-421B**	**R-422A**	**R-422B**
CHARACTERISTICS:											
Refrigerant Components	N/A	N/A	R-125/ 134a/600	R-290/ 22/152a	R-125/ 134a/ E170	R-125/ 134a/E17 0	R-134a/ 142b	R-125/ 134a	R-125/ 134a	R-125/ 134a/600a	R-125/ 134a/600a
Nominal Composition	% by weight	N/A	19.5/78.8/ 1.7	1.5/96.0/ 2.5	77.0/19.0/ 4.0	48.5/48.0/ 3.5	88.0/12.0	58.0/42.0	85.0/15.0	85.1/11.5/ 3.4	55.0/42.0/ 3.0
Allowable Composition	% by weight	N/A	18.5-20.5/ 77.8-79.8/ 1.2-1.8	1.0-2.0/ 95.0-97.0/ 2.0-3.0	76.0-78.0/ 18.0-20.0/ 3.0-5.0	47.5-49.5/ 47.0-49.0/ 3.0-4.0	88.0-89.0/ 11.0-12.0	57.0-59.0/ 41.0-43.0	84.0-86.0/ 14.0-16.0	84.1-86.1/ 10.5-12.5/ 3.0-3.5	54.0-56.0/ 41.0-43.0/ 2.5-3.1
Bubble Point[1]	°C @ 101.3 kPa	N/A	-32.7	-41.2	-42.6	-37.4	-25	-40.8	-45.7	-46.5	-40.5
Dew Point[1]	°C @ 101.3 kPa	N/A	-29.2	-40.1	-36	-31.5	-24.2	-35.5	-42.6	-44.1	-35.6
Critical Temperature[1]	°C	N/A	95.4	96.7	79.1	90.4	105.4	78.5	69	71.7	85.7
VAPOR PHASE CONTAMINANTS:											
Air and Other Non-condensables, Max.	% by volume @ 25.0 °C	5.10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS:											
Water, Max.	ppm by weight	5.4	10	10	10	10	20	10	10	10	10
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually Clean	Visually clean	Visually clean	Visually Clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight (as HC1)	5.7	1	1	1	1	1	1	1	1	1
Chloride[2]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

Table 2A. Zeotropic Blends (400 Series Refrigerants) and their Allowable Levels of Contaminants (continued)

	Reporting Units	Reference Section	**R-422C**	**R-422D**	**R-422E**	**R-423A**	**R-424A**	**R-425A**	**R-426A**	**R-427A**	**R-428A**
CHARACTERISTICS:											
Refrigerant Components	N/A	N/A	R-125/ 134a/600a	R-125/ 134a/600a	R-125/ 134a/600a	R-134a/ 227ea	R-125/ 134a/600a/ 600/601a	R-32/134a/ 227ea	R-125/134a/ 600/601a	R-32/125/ 143a/134a	R-125/143a/ 290/600a
Nominal Composition	% by weight	N/A	82.0/15.0/ 3.0	65.1/30.5/ 3.4	58.0/39.3/ 2.7	52.5/47.5	50.5/47.0/ 0.9/1.0/0.6	18.5/69.5/ 12.0	5.1/93.0/ 1.3/0.6	15.0/25.0/ 10.0/50.0	77.5/20.0/ 0.6/1.9
Allowable Composition	% by weight	N/A	81.0-83.0/ 14.0-16.0/ 2.5-3.1	64.0-66.0/ 30.5-32.5/ 3.0-3.5	57.0-59.0/ 38.0-41.0/ 2.5-3.0	51.5-53.5/ 46.5-48.5	49.5-51.5/ 46.0-48.0/ 0.7-1.0/ 0.8-1.1/ 0.4-0.7	18.0-19.0/ 69.0-70.0/ 11.5-12.5	4.1-6.1/ 92.0-94.0/ 1.1-1.4/ 0.4-0.7	13.0-17.0/ 23.0-27.0/ 8.0-12.0/ 48.0-52.0	76.5-78.5/ 19.0-21.0/ 0.4-0.7/ 1.7-2.0
Bubble Point[1]	°C @ 101.3 kPa	N/A	-45.3	-43.2	-41.8	-24.2	-39.1	-38.1	-28.5	-43	-48.3
Dew Point[1]	°C @ 101.3 kPa	N/A	-42.3	-38.4	-36.4	-23.5	-33.3	-31.3	-26.7	-36.3	-47.5
Critical Temperature[1]	°C	N/A	76.1	79.6	82.2	99	87.5	93.9	100.2	85.3	69
VAPOR PHASE CONTAMINANTS:											
Air and Other Non-condensables, Max.	% by volume @ 25.0 °C	5.10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS:											
Water, Max.	ppm by weight	5.4	10	10	20	10	10	10	10	10	10
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Chloride[2]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

Table 2A. Zeotropic Blends (400 Series Refrigerants) and their Allowable Levels of Contaminants (continued)

	Reporting Units	Reference Section	**R-429A**	**R-430A**	**R-431A**	**R-434A**	**R-435A**	**R-437A**	**R-438A**	**R-439A**	**R-440A**
CHARACTERISTICS:											
Refrigerant Components	N/A	N/A	R-E170/ 152a/600a	R-152a/ 600a	R290/152a	R-125/ 143a/134a/ 600a	R-E170/ 152a	R-125/ 134a/600 /601	R-32/125/ 134a/600 /601a	R-32/125/ 600a	R-290/ 134a/152a
Nominal Composition	% by weight	N/A	60.0/10.0/ 30.0	76.0/24.0	71.0/29.0	63.2/18.0/ 16.0/2.8	80.0/20.0	19.5/78.5/ 1.4/0.6	8.5/45.0/ 44.2/1.7/ 0.6	50/47.0/ 3.0	0.6/1.6/97.8
Allowable Composition	% by weight	N/A	59.0-61.0/ 9.0-11.0/ 29.0-31.0	75.0-77.0/ 23.0-25.0	70.0-72.0/ 28.0-30.0	62.2-64.2/ 17.0-19.0/ 15.0-17.0/ 2.6-2.9	79.0-81.0/ 19.0-21.0	17.7-20.0/ 77.8-80.0/ 1.2-1.5/ 0.4-0.7	7.0-9.0/ 43.5-46.5/ 42.7-45.7/ 1.5-1.8/ 0.4-0.7	49.0-51.0/ 46.0-48.0/ 2.5-3.5	0.5-0.7/ 1.0-2.2/ 97.3-98.3
Bubble Point[1]	°C @ 101.3 kPa	N/A	-25.5	-27.6	-43.2	-45.1	-26	-32.9	-43	-52	-25.5
Dew Point[1]	°C @ 101.3 kPa	N/A	-24.9	-27.4	-43.2	-42.4	-25.8	-29.2	-36.4	-51.7	-24.3
Critical Temperature[1]	°C	N/A	123.5	107	100.3	75.6	125.2	95.3	84.2	72	112.9
VAPOR PHASE CONTAMINANTS:											
Air and Other Non-condensables, Max.	% by volume @ 25.0 °C	5.10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS:											
Water, Maximum	ppm by weight	5.4	10	10	20	20	10	10	20	10	10
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight (as HC1)	5.7	1	1	1	1	1	1	1	1	1
Chloride[2]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

Table 2A. Zeotropic Blends (400 Series Refrigerants) and their Allowable Levels of Contaminants (continued)

	Reporting Units	Reference Section	**R-442A**	**R-444A**	**R-444B**	**R-445A**	**R-446A**	**R-447A**	**R-448A**	**R-449A**	**R-449B**
CHARACTERISTICS:											
Refrigerant Components	N/A	N/A	R-32/125/ 134a/152a/ 227ea	R-32/152a/ 1234ze(E)	R-32/152a/ 1234ze(E)	R-744/ 134a/ 1234ze(E)	R-32/ 1234ze(E)/ 600	R-32/ 125/ 1234ze (E)	R-32/125/ 1234yf/ 134a/ 1234ze(E)	R-32/125/ 1234yf/ 134a	R-32/125/ 1234yf/134a
Nominal Composition	% by weight	N/A	31.0/31.0/ 30.0/3.0/ 5.0	12.0/5.0/ 83.0	41.5/10.0/ 48.5	6.0/9.0/ 85.0	68.0/29.0/ 3.0	68.0/3.5/ 28.5	26.0/26.0/ 20.0/21.0/ 7.0	24.3/24.7/ 25.3/25.7	25.2/24.3/ 23.2/27.3
Allowable Composition	% by weight	N/A	30.0-32.0/ 30.0-32.0/ 29.0-31.0/ 2.5-3.5/ 4.0- 6.0	11.0-13.0/ 4.0-6.0/ 81.0-85.0	40.5-42.5/ 9.0-11.0/ 47.5-49.5	5.0-7.0/ 8.0-10.0/ 83.0-87.0	67.0-68.5/ 28.4-31.0/ 2.0-3.1	67.5-69.5/ 3.0-5.0/ 27.5-29.5	24.0-26.5/ 25.5-28.0/ 18.0-20.5/ 20.0-23.0/ 5.0-7.5	23.3-24.5/ 24.5-25.7/ 24.3-25.5/ 25.5-26.7	23.7-25.5/ 24.0-25.8/ 21.7-23.5/ 27.0-28.8
Bubble Point[1]	°C @ 101.3 kPa	N/A	-46.5	-34.3	-44.6	-50.3	-49.4	-49.3	-45.9	-46	-46.1
Dew Point[1]	°C @ 101.3 kPa	N/A	-39.9	-24.3	-34.9	-23.5	-42.1	-44.2	-39.8	-39.9	-40.2
Critical Temperature[1]	°C	N/A	82.4	103.2	91.5	98	84.2	82.6	81.6	81.5	84.2
VAPOR PHASE CONTAMINANTS:											
Air and Other Non-condensables, Max.	% by volume @ 25.0 °C	5.10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS:											
Water, Maximum	ppm by weight	5.4	10	10	10	10	10	10	10	10	10
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight (as HC1)	5.7	1	1	1	1	N/A	1	1	1	1
Chloride[2]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

1. Bubble points, dew points, and critical temperatures, although not required, are provided for informational purposes. Refrigerant data compiled from Refprop 9.1.
2. Recognized chloride level for pass/fail is about 3 ppm.

Table 2A. Zeotropic Blends (400 Series Refrigerants) and their Allowable Levels of Contaminants (continued)

	Reporting Units	Reference Section	**R-450A**	**R-451A**	**R-451B**	**R-452A**	**R-453A**	**R-454A**	**R-454B**	**R-455A**
CHARACTERISTICS:										
Refrigerant Components	N/A	N/A	R-134a/ 1234ze(E)	R-1234yf/ 134a	R-1234yf/ 134a	R-32/125/ 1234yf	R-32/125/ 134a/227e/600/601a	R-32/ 1234yf	R-32/ 1234yf	R-744/32/ 1234yf
Nominal Composition	% by weight	N/A	42.0/58.0	89.8/10.2	88.8/11.2	11.0/59.0/ 30.0	20.0/20.0/53.8/ 5.0/0.6/0.6	35.0/65.0	68.9/31.1	3.0/21.5/ 75.5
Allowable Composition	% by weight	N/A	40.0-44.0/ 56.0-60.0	89.6-90.0/ 10.0-10.4	88.6-89.0/ 11.0-11.4	9.3-12.7/ 57.2-60.8/ 29.0-30.1	19.0-21.0/19.0-21.0/ 52.8-54.8/4.5-5.5/ 0.4-0.7/0.4-0.7	33.0-37.0/ 63.0-67.0	67.9-69.9/ 30.1-32.1	2.0-5.0/ 19.5-22.5/ 73.5-77.5
Bubble Point[1]	°C @ 101.3 kPa	N/A	-23.4	-30.8	-31	-47.0	-42.2	-48.4	-50.9	-51.6
Dew Point[1]	°C @ 101.3 kPa	N/A	-22.8	-30.5	-30.6	-43.2	-35	-41.6	-50.0	-39.1
Critical Temperature[1]	°C	N/A	104.4	95.4	95.5	74.9	88	86.2	76.5	82.8
VAPOR PHASE CONTAMINANTS:										
Air and Other Non-condensables, Max.	% by volume @ 25.0 °C	5.10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS:										
Water, Maximum	ppm by weight	5.4	10	10	10	10	10	10	10	10
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight (as HC1)	5.7	1	1	1	1	N/A	1	1	1
Chloride[2]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

1. Bubble points, dew points, and critical temperatures, although not required, are provided for informational purposes. Refrigerant data compiled from Refprop 9.1.
2. Recognized chloride level for pass/fail is about 3 ppm.

Table 2B. Hydrocarbon Blends (400 & 500 Series Refrigerants) and their Allowable Levels of Contaminants

	Reporting Units	Reference Section	R-432A	R-433A	R-433B	R-433C	R-436A	R-436B	R-441A	R-443A
CHARACTERISTICS:										
Refrigerant Components	N/A	N/A	R-1279/E170	R-1270/290	R-1270/290	R-1270/290	R-290/600a	R-290/600a	R-170/ 290/600a/600	R-1270/ 290/600a
Nominal Composition	% by weight	N/A	80.0/20.0	30.0/70.0	5.0/95.0	25.0/75.0	56.0/44.0	52.0/48.0	3.1/54.8/6.0/36.1	55.0/40.0/5.0
Allowable Composition	% by weight	N/A	79.0-81.0/ 19.0-21.0	29.0-31.0/ 69.0-71.0	4.0-6.0/ 94.0- 96.0	24.0-26.0/ 74.0-76.0	55.0-57.0/ 43.0-45.0	51.0-53.0/ 47.0- 49.0	2.8-2.4/52.8-56.8/ 5.4-6.6/34.1-38.1	53.0-57.0/ 38.0-42.0/ 3.8-6.2
Bubble Point[1]	°C @ 101.3 kPa	N/A	-45.2	-44.4	-42.5	-44.1	-34.3	-33.3	-41.5	-45.2
Dew Point[1]	°C @ 101.3 kPa	N/A	-42.4	-44	-42.4	-43.7	-26.1	-25	-20.3	-42.1
Critical Temperature[1]	°C	N/A	97.3	94.4	96.3	94.8	115.9	117.4	117.3	95.1
VAPOR PHASE CONTAMINANTS[2]:										
Air and Other Non-condensables, Max.	% by volume @ 25.0°C	5.10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS[3]:										
Sulfur Odor[4]	No odor to pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight	5.7	1	1	1	1	1	1	1	N/A
Water, Max.	ppm by weight	5.4	20	10	10	10	10	10	10	10
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total C3, C4 and C5 Polyolefins, Max.	% by weight	5.12	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Chloride[2]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	N/A	N/A

1. Bubble points, dew points, and critical temperatures, although not required, are provided for informational purposes. Refrigerant data compiled from Refprop 9.1.
2. Taken from vapor phase
3. Vaporized from liquid phase
4. Including hydrogen sulphide and mercaptans

BILLING CODE 6560–50–C

Table 3. Azeotropic Blends (500 Series Refrigerants) and their Allowable Levels of Contaminants

	Reporting Units	Reference Section	R-500	R-502	R-503	R-507A	R-508A	R-508B	R-509A	R-510A	R-511A	R-512A	R-513A
CHARACTERISTICS:													
Refrigerant Components	N/A	N/A	R-12/152a	R-22/115	R-23/13	R-125/143a	R-23/116	R-23/116	R-22/218	R-E170/600a	R-290/E170	R-134a/152a	R-1234yf/134a
Nominal Composition	% by weight	N/A	73.8/26.2	48.8/51.2	40.1/59.9	50.0/50.0	39.0/61.0	46.0/54.0	44.0/56.0	88.0/12.0	95.0/5.0	5.0/95.0	56.0/44.0
Allowable Composition	% by weight	N/A	72.8-74.8/25.2-27.2	44.8-52.8/47.2-55.2	39.0-41.0/59.0-61.0	49.5-51.5/48.5-50.5	37.0-41.0/59.0-63.0	44.0-48.0/52.0-56.0	42.0-46.0/56.0-60.0	87.5-88.5/11.5-12.5	94.0-96.0/4.0-6.0	4.0-6.0/94.0-96.0	55.0-57.0/43.0-45.0
Bubble Point[1]	°C @ 101.3 kPa	N/A	-33.6	-45.2	-87.8	-46.7	-87.4	-87	-49.8	-24.9	-42	-24	-29.2
Dew Point[1]	°C @ 101.3 kPa	N/A	-33.6	-45	-87.8	-46.7	-87.4	-87	-48.1	-24.9	-42	-24	-29.1
Critical Temperature[1]	°C	N/A	102.1	80.2	18.4	70.6	10.8	11.8	68.6	125.7	97	112.9	96.5
VAPOR PHASE CONTAMINANTS:													
Air and Other Non-condensables, Max.	% by volume @ 25 °C	5.10	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
LIQUID PHASE CONTAMINANTS:													
Water, Maximum	ppm by weight	5.4	10	10	10	10	10	10	10	20	20	10	10
All Other Volatile Impurities, Max.	% by weight	5.11	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
High Boiling Residue, Max.	% by volume or % by weight	5.8	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Particulates/ Solids	Pass or Fail	5.9	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean	Visually clean
Acidity, Max.	ppm by weight	5.7	1	1	1	1	1	1	1	1	1	1	1
Chloride[2]	Pass or Fail	5.6	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity	No visible turbidity

1. Bubble points, dew points, and critical temperatures, although not required, are provided for informational purposes. Refrigerant data compiled from Refprop 9.1.
2. Recognized chloride level for pass/fail is about 3 ppm.

Section 7.0 References—Normative

Listed here are all standards, handbooks, and other publications essential to the formation and implementation of the standard. All references in this appendix are considered as part of this standard.

ANSI/ASHRAE Standard 34–2013, *Designation and Safety Classification of Refrigerants,* with Addenda, American National Standards Institute/American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

2008 Appendix C to AHRI Standard 700–2014, *2008 Appendix C for Analytical Procedures for AHRI Standard 700–2014—Normative,* copyright 2008 (incorporated by reference, see § 82.168).

ASTM D1296–01 (Reapproved 2012), *Standard Test Method for Odor of Volatile Solvents and Diluents,* approved July 1, 2012, (incorporated by reference, see § 82.168).

BB–F–1421B, Federal Specification for ''Fluorocarbon Refrigerants,'' dated March 5, 1982, (incorporated by reference, see § 82.168).

GPA Standard 2177–13, *Analysis of Natural Gas Liquid Mixtures Containing Nitrogen and Carbon Dioxide by Gas Chromatography, Revised,* copyright 2013, (incorporated by reference, see § 82.168).

REFPROP Reference Fluid Thermodynamic and Transport Properties *NIST Standard Reference Database 23 version 9.1,* 2013, U.S. Department of Commerce, Technology Administration, National Institute of Standards and Technology.

Section 8.0 References—Informative

Listed here are standards, handbooks, and other publications which may provide useful information and background but are not considered essential.

2012 Appendix D to AHRI Standard 700–2014, *2012 Appendix D for Gas Chromatograms for AHRI Standard 700–2014—Informative,* copyright 2012, (incorporated by reference, see § 82.168).

■ 16. Amend subpart F by adding appendix B3 to read as follows:

Appendix B3 to Subpart F of Part 82—Performance of Refrigerant Recovery, Recycling, and/or Reclaim Equipment

This appendix is based on the Air-Conditioning, Heating, and Refrigeration Institute Standard 740–2016, *Performance Rating of Refrigerant Recovery Equipment and Recovery/Recycling Equipment.*

Section 1. Purpose

1.1 The purpose of this standard is to establish methods of testing for rating and evaluating the performance of refrigerant recovery, and/or recycling equipment and general equipment requirements (herein referred to as ''equipment'') for contaminant or purity levels, capacity, speed and purge loss to minimize emission into the atmosphere of designated refrigerants.

Section 2. Scope

2.1 This standard applies to equipment for recovering and/or recycling single refrigerants, azeotropes, zeotropic blends, and their normal contaminants from refrigerant systems. This standard defines the test apparatus, test gas mixtures, sampling procedures and analytical techniques that will be used to determine the performance of refrigerant recovery and/or recycling equipment (hereinafter, ''equipment''). Appendix B4 of this subpart establishes standards for recovery/recycling equipment used with flammable refrigerants.

Section 3. Definitions

3.1 *Definitions.* All terms in this appendix will follow the definitions in § 82.152 unless otherwise defined in this appendix.

3.2 *Clearing Refrigerant.* Procedures used to remove trapped refrigerant(s) from equipment before switching from one refrigerant to another.

3.3 *High Temperature Vapor Recovery Rate.* For equipment having at least one designated refrigerant (see Section 11.2 of this appendix) with a boiling point in the range of −50 to +10 °C, the rate will be measured for R–22, or the lowest boiling point refrigerant if R–22 is not a designated refrigerant.

3.4 *Published Ratings.* A statement of the assigned values of those performance characteristics, under stated rating conditions, by which a unit may be chosen to fit its application. These values apply to all units of like nominal size and type (identification) produced by the same manufacturer. As used herein, the term ''published rating'' includes the rating of all performance characteristics shown on the unit or published in specifications, advertising, or other literature controlled by the manufacturer, at stated rating conditions.

3.5 *Push/Pull Liquid Recovery.* The push/pull refrigerant recovery method is defined as the process of transferring liquid refrigerant from a refrigeration system to a receiving vessel by lowering the pressure in the vessel and raising the pressure in the system, and by connecting a separate line between the system liquid port and the receiving vessel.

3.6 *Recycle Flow Rate.* The amount of refrigerant processed divided by the time elapsed in the recycling mode. For equipment which uses a separate recycling sequence, the recycle rate does not include the recovery rate (or elapsed time). For equipment which does not use a separate recycling sequence, the recycle rate is a rate based solely on the higher of the liquid or vapor recovery rate, by which the contaminant levels were measured.

3.7 *Residual Trapped Refrigerant.* Refrigerant remaining in equipment after clearing refrigerant.

3.8 *Shall, Should, Recommended* or *It Is Recommended* shall be interpreted as follows:

3.8.1 *Shall.* Where ''shall'' or ''shall not'' is used for a provision specified, that provision is mandatory if compliance with this appendix is claimed.

3.8.2 *Should, Recommended* or *It Is Recommended* is used to indicate provisions which are not mandatory but which are desirable as good practice.

3.9 *Standard Contaminated Refrigerant Sample.* A mixture of new or reclaimed refrigerant and specified quantities of identified contaminants which constitute the mixture to be processed by the equipment under test. These contaminant levels are expected only from severe service conditions.

3.10 *Trapped Refrigerant.* The amount of refrigerant remaining in the equipment after the recovery or recovery/recycling operation but before clearing refrigerant.

3.11 *Vapor Recovery Rate.* The average rate that refrigerant is withdrawn from the mixing chamber between two pressures as vapor recovery rate is changing depending on the pressure. The initial condition is vapor only at saturation pressure and temperature at either 24 °C or at the boiling point at 100 kPa, whichever is higher. The final pressure condition is 10 percent of the initial pressure, but not lower than the equipment final recovery vacuum and not higher than 100 kPa.

Section 4. General Equipment Requirements

4.1 *Equipment Information.* The equipment manufacturer shall provide operating instructions, necessary maintenance procedures, and source information for replacement parts and repair.

4.2 *Filter Replacement.* The equipment shall indicate when any filter/drier(s) needs replacement. This requirement can be met by use of a moisture transducer and indicator light, by use of a sight glass/moisture indicator, or by some measurement of the amount of refrigerant processed such as a flow meter or hour meter. The equipment manufacturer must provide maximum quantity recycled or filter change interval in its written instructions.

4.3 *Purge of Non-Condensable.* If non-condensables are purged, the equipment shall either automatically purge non-condensables or provide an indicating means to guide the purge process. Recycling equipment must provide purge means.

4.4 *Purge Loss.* The total refrigerant loss due to purging non-condensables, draining oil, and clearing refrigerant (see Section 9.5) shall be less than 3 percent (by weight) of total processed refrigerant.

4.5 *Permeation Rate.* High pressure hose assemblies ⅝ in. (16 mm) nominal and smaller shall not exceed a permeation rate of 3.9 g/cm^2/yr (internal surface) at a temperature of 48.8 °C. Hose assemblies that UL recognized as having passed UL 1963, 2011 requirements shall be accepted without testing. See Section 7.1.4 of this appendix.

4.6 *Clearing Trapped Refrigerant.* For equipment rated for more than one refrigerant, the manufacturer shall provide a method and instructions which will accomplish connections and clearing within 15 minutes. Special equipment, other than a vacuum pump or manifold gauge set, shall be furnished. The clearing procedure shall not rely upon the storage cylinder below saturated pressure conditions at ambient temperature.

4.7 *Temperature.* The equipment shall be evaluated at 24 °C with additional limited evaluation at 40 °C. Normal operating conditions range from 10 °C to 40 °C.

4.8 *Exemptions.* Equipment intended for recovery only shall be exempt from Sections 4.2 and 4.3.

Section 5. Contaminated Refrigerants

5.1 *Sample Characteristics.* The standard contaminated refrigerant sample shall have the characteristics specified in Table 1, except as provided in Section 5.2 of this appendix. Testing shall be conducted at an ambient temperature of 24 °C ± 1 °C except high temperature vapor recovery shall be 40 °C ± 1 °C.

5.2 *Recovery-only Testing.* Recovery equipment not rated for removal of contaminants shall be tested with new or reclaimed refrigerant.

BILLING CODE 6560–50–P

Table 1– Standard Contaminated Refrigerant Samples

	R-11	R-12	R-13	R-22	R-23	R-113	R-114	R-123	R-124	R-134a	R-500	R-502	R-503	R-401A	R-401B	R-402A
Moisture Content: ppm by Weight of Pure Refrigerant	100	80	30	200	30	100	85	200	200	200	200	200	30	200	200	200
Particulate Content: ppm by Weight of Pure Refrigerant[1]	80	80	N/A	80	N/A	80	80	80	80	80	80	80	N/A	80	80	80
Acid Content: ppm by Weight of Pure Refrigerant[2]	100	200	N/A	100	N/A	100	100	100	100	100	200	100	N/A	100	100	100
Oil (HBR) Content: % by Weight of Pure Refrigerant	20	5	N/A	5	N/A	20	20	20	5	5	5	5	N/A	5	5	5
Viscosity/Type[3]	300/MO	150/MO	N/A	300/MO	N/A	300/MO	300/MO	300/MO	150/MO	150/MO	150/MO	150/MO	N/A	150/AB	150/AB	150/AB
Non-Condensable Gases (Air Content): % by Volume	N/A	3	3	3	3	N/A	3	N/A	3	3	3	3	3	3	3	3

Table 1 (continued) – Standard Contaminated Refrigerant Samples

	R-402B	R-404A	R-406A	R-407A	R-407B	R-407C	R-407D	R-408A	R-409A	R-410A	R-410B	R-411A	R-411B	R-417C	R-419B	R-422E	R-445A	R-507	R-508A	R-508B
Moisture Content: ppm by Weight of Pure Refrigerant	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	20	20
Particulate Content: ppm by Weight of Pure Refrigerant[1]	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	NA	NA
Acid Content: ppm by Weight of Pure Refrigerant [2]	100	100	200	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	NA	NA
Oil (HBR) Content: % by Weight of Pure Refrigerant	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	NA	NA
Viscosity/Type[3]	150/AB	150/POE	150/AB	150/POE	150/POE	150/POE	150/POE	150/MO	150/MO	150/POE	150/POE	150/MO	150/MO	150/POE	150/POE	150/POE	150/POE	150/POE	NA	NA
Non-Condensable Gases (Air Content): % by Volume	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

[1] Particulate content shall consist of inert materials and shall comply with particulate requirements in Appendix B.

[2] Acid consists of 60% oleic acid and 40% hydrochloric acid on a total number basis.

[3] POE = Polyoester, AB = Alkylbenzene, MO = Mineral Oil.

[4] N/A means not applicable.

BILLING CODE 6560–50–C

Section 6. Test Apparatus

6.1 *General Recommendations.* The recommended test apparatus is described in the following paragraphs. If alternate test apparatus are employed, the user shall be able to demonstrate that they produce results equivalent to the specified reference apparatus.

6.2 *Self-Contained Equipment Test Apparatus.* The apparatus, shown in Figure 1, shall consist of:

6.2.1 *Mixing Chamber.* A mixing chamber consisting of a tank with a conical-shaped bottom, a bottom port and piping for delivering refrigerant to the equipment, various ports and valves for adding refrigerant to the chamber, and stirring means for mixing.

6.2.2 *Filling Storage Cylinder.* The storage cylinder to be filled by the refrigerant transferred shall be cleaned and at the pressure of the recovered refrigerant at the beginning of the test. It will not be filled over 80 percent, by volume.

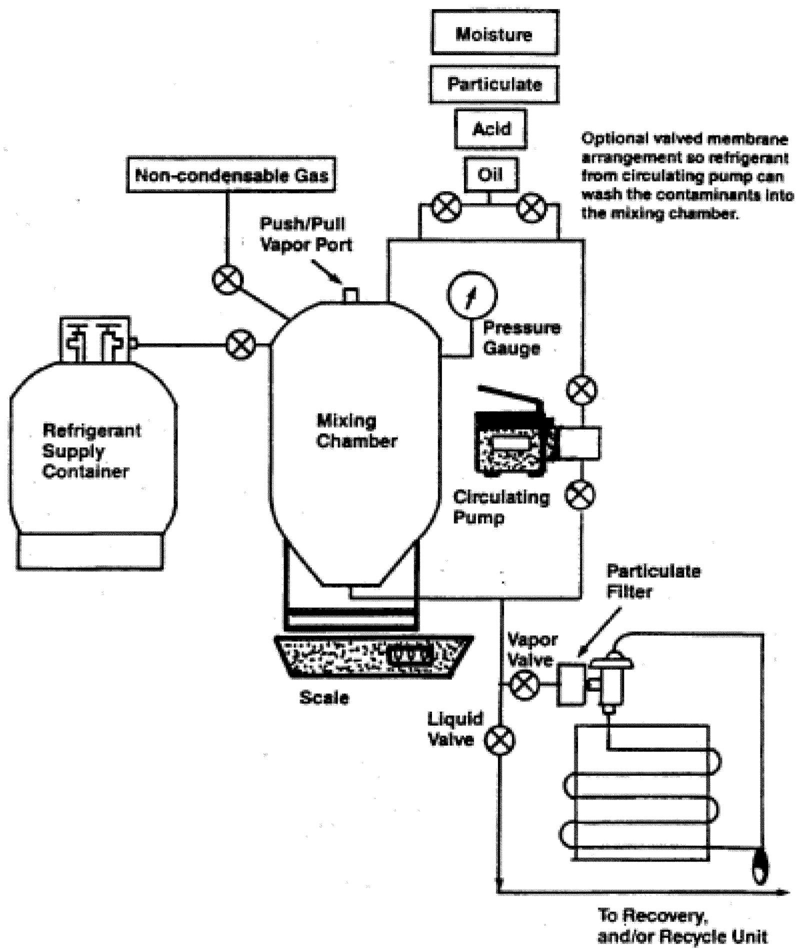
6.2.3 *Vapor Feed.* Vapor refrigerant feed consisting of evaporator, control valves and piping to create a 3.0 °C superheat condition at an evaporating temperature of 21 °C ± 2 °C.

6.2.4 *Alternative Vapor Feed.* An alternative method for vapor feed shall be to pass the refrigerant through a boiler and then through an automatic pressure regulating valve set at different saturation pressures, moving from saturated pressure at 24 °C to final pressure of recovery.

6.2.5 *Liquid Feed.* Liquid refrigerant feed consisting of control valves, sampling port, and piping.

6.2.6 *Instrumentation.* Instrumentation capable of measuring weight, temperature, pressure, and refrigerant loss, as required.

Figure 1. Test Apparatus for Self-Contained Equipment



6.3 *Size.* The size of the mixing chamber and filling storage cylinder used during testing shall correspond to the size of the equipment being tested per Section 6.3.1 or 6.3.2:

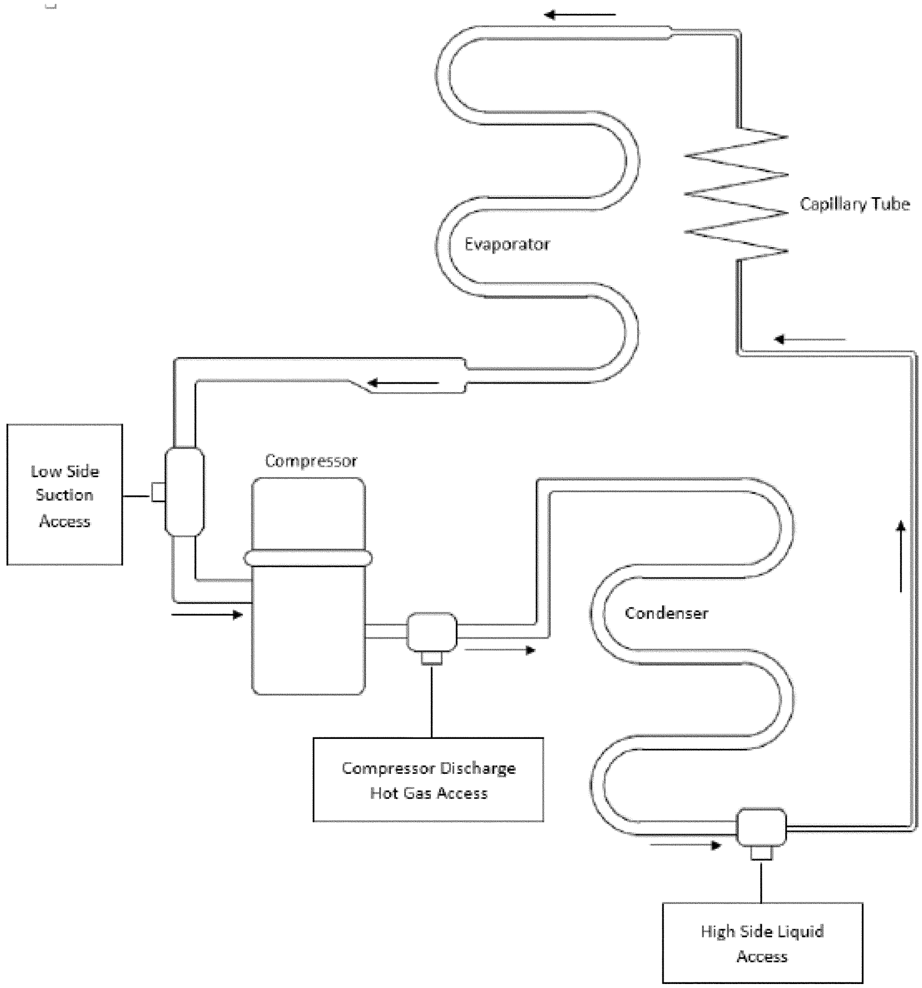
6.3.1 For equipment utilizing nominal ¼″ or ⅜″ flare ports and hoses, the mixing chamber shall be 0.09 m^3 and all ports, valves, mixing valves, and piping shall be ½″ or larger, reduced down to the port size of the equipment by fittings at the connection ports of the mixing chamber. The filling storage cylinder used during testing shall be a nominal 50-pound water capacity DOT 4Bx cylinder with ¼″ flare liquid and vapor ports.

6.3.2 For equipment utilizing ½″ or larger flare ports and hoses, the mixing chamber shall be 0.45 m^3 (or nominal 1000-pound water capacity DOT 4Bx cylinder) and all ports, valves, mixing valves, and piping shall be 1½″ or larger, reduced down to the port size of the equipment by fittings at the connection ports of the mixing chamber. The filling storage cylinder used during testing shall be a nominal 1000-pound water capacity DOT 4Bx cylinder with liquid and vapor ports, valves and piping sized ¾″ NPT and reduced or increased to the port size of the equipment by fittings at the connection ports of the filling storage cylinder.

6.4 *System Dependent Equipment Test Apparatus.* This test apparatus is to be used for final recovery vacuum rating of all system dependent equipment.

6.4.1 *Test Setup.* The test apparatus shown in Figure 2 consists of a complete refrigeration system. The manufacturer shall identify the refrigerants to be tested. The test apparatus can be modified to facilitate operation or testing of the system dependent equipment if the modifications to the apparatus are specifically described within the manufacturer's literature. A 6.3 mm balance line shall be connected across the test apparatus between the high- and low-pressure sides, with an isolation valve located at the connection to the compressor high side. A 6.3 mm access port with a valve core shall be located in the balance line for the purpose of measuring final recovery vacuum at the conclusion of the test.

Figure 2. System Dependent Equipment Test Apparatus



Section 7. Performance Testing Procedures

7.1 *General Testing.*

7.1.1 *Temperatures.* Testing shall be conducted at an ambient temperature of 24 °C ± 1 °C except high temperature vapor recovery shall be at 40 °C ± 1 °C. The evaporator conditions of Section 6.2.3 shall be maintained as long as liquid refrigerant remains in the mixing chamber.

7.1.2 *Refrigerants.* The equipment shall be tested for all designated refrigerants (see Section 11.2). All tests in Section 7 shall be completed for each refrigerant before starting tests with the next refrigerant.

7.1.3 *Selected Tests.* Tests shall be as appropriate for the equipment type and ratings parameters selected (see Sections 9.9, 11.1 and 11.2).

7.1.4 *Hose Assemblies.* For the purpose of limiting refrigerant emissions to the atmosphere, hose assemblies shall be tested for permeation according to UL Standard 1963 (incorporated by reference, see § 82.168).

7.2 *Equipment Preparation and Operation.* The equipment shall be prepared and operated per the operating instructions.

7.3 *Test Batch.* The test batch consisting of refrigerant sample (*see* Section 5) of the test refrigerant shall be prepared and thoroughly mixed. Continued mixing or stirring shall be required during the test while liquid refrigerant remains in the mixing chamber. The mixing chamber shall be filled to 80 percent level by volume.

7.3.1 *Control Test Batch.* Prior to starting the test for the first batch for each refrigerant, a liquid sample will be drawn from the mixing chamber and analyzed per Section 8 to assure that contaminant levels match Table 1 within ±10 ppm for moisture, ±20 ppm for oleic acid and ±0.5 percent for oil.

7.4 *Recovery Tests (Recovery and Recovery/Recycling Equipment)*

7.4.1 *Determining Recovery Rates.* The liquid and vapor refrigerant recovery rates shall be measured during the first test batch for each refrigerant (*see* Sections 9.1, 9.2 and 9.4). Equipment preparation and recovery cylinder changeover shall not be included in elapsed time measurements for determining vapor recovery rate and liquid refrigerant recovery rate. Operations such as subcooling the recovery cylinder shall be included. The recovery cylinder shall be the same size as per Section 6.3 or as furnished by the equipment manufacturer. Oversized tanks shall not be permitted.

7.4.1.1 *Liquid Refrigerant Recovery Rate.* If elected, the recovery rate using the liquid refrigerant feed means (*see* Section 6.2.5) shall be determined. After the equipment reaches stabilized conditions of condensing temperature and/or recovery cylinder pressure, the recovery process shall be stopped and an initial weight shall be taken of the mixing chamber (*see* Section 9.2). The recovery process shall be continued for a period of time sufficient to achieve the accuracy in Section 9.4. The recovery process shall be stopped and a final weight of the mixing chamber shall be taken.

7.4.1.2 *Vapor Refrigerant Recovery Rate.* If elected, the average vapor flow rate shall be measured to accuracy requirements in Section 9.4 under conditions with no liquid refrigerant in the mixing chamber. The liquid recovery feed means shall be used. At initial conditions of saturated vapor at the higher of 24 °C or the boiling temperature (100 kPa), the weight of the mixing chamber and the pressure shall be recorded. At final conditions representing pressure in the mixing chamber of 10 percent of the initial condition, but not less than the final recovery vacuum (*see* Section 9.6) nor more than 100 kPa, measure the weight of the mixing chamber and the elapsed time. At initial conditions, the recovery cylinder shall be at saturation pressure at ambient conditions.

7.4.1.3 *High Temperature Vapor Recovery Rate.* This is applicable for equipment having at least one designated refrigerant (*see* Section 11.2) with a boiling point between −50 °C and +10 °C. Measure the rate for R–22, or the refrigerant with the lowest boiling point if R–22 is not a designated refrigerant. Repeat the test in Section 7.4.1.2 at saturated conditions at 40 °C and continue to operate equipment to assure it will operate at this condition (see Section 7.4.3). At initial conditions, the recovery cylinder shall be at saturated pressure at 40 °C.

7.4.1.4 *Push/Pull Liquid Refrigerant Recovery Rate.* If elected, the average liquid push/pull flow rate shall be measured to accuracy requirements in Section 9.4. The mixing chamber and filling storage cylinder shall be filled with refrigerant vapor at initial conditions of saturated vapor at the higher of 24 °C or the boiling temperature at 100 kPa. An amount of liquid refrigerant shall be added to the mixing chamber equivalent to 80 percent by weight of the capacity of the filling storage cylinder. The pressure between the mixing chamber and filling storage cylinder shall be equalized and stabilized at initial conditions of saturated vapor at the higher of 24 °C or the boiling temperature at 100 kPa. The initial weight of the mixing chamber and the pressure shall be recorded. The equipment is then operated in push/pull liquid recovery mode and the weight change of the mixing chamber is recorded over time until all of the liquid has been transferred.

7.4.2 *Recovery Operation.* This test is for determining the final recovery vacuum and the ability to remove contaminants as appropriate. If equipment is rated for liquid recovery (*see* Section 7.4.1.3), liquid recovery feed means described in Section 6.2.5 shall be used. If not, vapor recovery means described in Sections 6.2.3 or 6.2.4 shall be used. Continue recovery operation until all liquid is removed from the test apparatus and vapor is removed to the point where equipment shuts down by automatic means or is manually shut off per operating instructions.

7.4.2.1 *Oil Draining.* Capture oil from the equipment at intervals as required in the instructions. Record the weight of the container. Completely remove refrigerant from oil by evacuation or other appropriate means. The weight difference shall be used in Section 7.5.2.

7.4.3 *Final Recovery Vacuum.* At the end of the first test batch for each refrigerant, the liquid valve and vapor valve of the apparatus shall be closed. After waiting 1 minute, the mixing chamber pressure shall be recorded (*see* Section 9.6).

7.4.4 *Residual Refrigerant.* This test will measure the mass of remaining refrigerant in the equipment after clearing and therefore the extent of mixing different refrigerants (*see* Section 9.6).

7.4.4.1 *Initial Conditions.* At the end of the last test for each batch for each refrigerant, the equipment shall be disconnected from the test apparatus (Figure 1). Recycle per Section 7.5, if appropriate. Perform refrigerant clearing operations as called for in the instruction manual. Capture and record the weight of any refrigerant which would have been emitted to the atmosphere during the clearing process for use in Section 9.5. If two loops are used for recycling, trapped refrigerant shall be measured for both.

7.4.4.2 *Residual Trapped Refrigerant.* Evacuate an empty test cylinder to 1.0 kPa. Record the empty weight of the test cylinder. Open all valves to the equipment so as to provide access to all trapped refrigerant. Connect the equipment to the test cylinder and operate valves to recover the residual refrigerant. Record the weight of the test cylinder using a recovery cylinder pressure no less than specified in Section 6.2.2. Place the test cylinder in liquid nitrogen for a period of 30 minutes or until a vacuum of 1000 microns is reached, whichever occurs first.

7.5 *Recycling Tests (Recovery/Recycling Equipment).*

7.5.1 *Recycling Operation.* As each recovery cylinder is filled in Section 7.4.2, recycle according to operating instructions. There will not necessarily be a separate recycling sequence. Note non-condensable purge measurement in Section 9.5.

7.5.1.1 *Recycle Flow Rate.* While recycling the first recovery cylinder for each refrigerant, determine the recycling flow rate by appropriate means (*see* Section 9.3) to achieve the accuracy required in Section 9.4.

7.5.2 *Non-Condensable Sample.* After completing Section 7.4.3, prepare a second test batch (*see* Section 7.3). Recover per Section 7.4.2 until the current recovery cylinder is filled to 80 percent level by volume. Recycle per Section 7.5.1. Mark this cylinder and set aside for taking the vapor sample. For equipment having both an internal tank of at least 3 kg refrigerant capacity and an external recovery cylinder, two recovery cylinders shall be marked and set aside. The first is the cylinder described above. The second cylinder is the final recovery cylinder after filling it to 80 percent level by volume and recycling.

7.5.2.1 *Push/Pull Liquid Refrigerant Recovery Rate.* This rate shall be measured by weight change of the mixing chamber divided by elapsed time (*see* Section 7.4.1.4). The units shall be kg/min and the accuracy shall be per Section 9.4.

7.5.3 *Liquid Sample for Analysis.* Repeat steps in Sections 7.3, 7.4.2 and 7.5.1 with further test batches until indication means in Section 4.2 show the filter/drier(s) need replacing.

7.5.3.1 *Multiple Pass.* For equipment with a separate recycling circuit (multiple pass), set aside the current cylinder and draw the liquid sample (*see* Section 7.4) from the previous cylinder.

7.5.3.2 *Single Pass.* For equipment with the single pass recycling circuit, draw the liquid sample (*see* Section 7.4) from the current cylinder.

7.6 *Measuring Refrigerant Loss.* Refrigerant loss due to non-condensables shall be determined by appropriate means (*see* Section 9.5.1). The loss could occur in Sections 7.4.1, 7.4.2 and 7.5.1.

Section 8. Sampling and Chemical Analysis Methods

8.1 *Chemical Analysis.* Chemical analysis methods shall be specified in appropriate standards such as AHRI Standard 700, *2008 Appendix C for Analytical Procedures for AHRI Standard 700–2014- Normative*, and Addendum 700–1 to Appendix C. If alternate test methods are employed, the laboratory must be able to demonstrate that they produce results equivalent to the specified referee method.

8.2 *Refrigerant Sampling.*

8.2.1 *Moisture Content.* The water content in refrigerant shall be measured by the Karl Fischer Coulometric Titration technique. Report the moisture level in parts per million by weight.

8.2.2 *Chloride Ions.* Chloride ions shall be measured by turbidity tests. At this time, quantitative results have not been defined. Report chloride content as ''pass'' or ''fail.'' In the future, when quantitative results are possible, report chloride content as parts per million by weight.

8.2.3 *Acid Content.* The acidity test uses the titration principle. Report the acidity in parts per million by weight (mg KOH/kg) of sample.

8.2.4 *High Boiling Residue.* High boiling residues shall use measurement of the volume of residue after evaporating a standard volume of refrigerant. Using weight measurement and converting to volumetric units is acceptable. Report high boiling residues as percent by volume.

8.2.5 *Particulates/Solids.* The particulates/solids measurement employs visual examination. Report results as ''pass'' or ''fail.''

8.2.6 *Non-condensables.* The level of contamination by non-condensable gases in the base refrigerant being recycled shall be determined by gas chromatography. Report results as percent by volume.

Section 9. Performance Calculations for Ratings

9.1 *Vapor Refrigerant Recovery Rate.* This rate shall be measured by weight change of the mixing chamber divided by elapsed time (*see* 7.4.1.2). The units shall be kg/min and the accuracy shall be per Section 9.4.

9.1.1 *High Temperature Vapor Recovery Rate.* This rate shall be measured by measured weight change of the mixing chamber divided by elapsed time (see Section 7.4.1.3). The units shall be kg/min and the accuracy shall be per Section 9.4.

9.2 *Liquid Refrigerant Recovery Rate.* This rate shall be measured by weight change of the mixing chamber divided by elapsed time (*see* 7.4.1.3). The units shall be kg/min and the accuracy shall be per Section 9.4.

9.3 *Recycle Flow Rate.* The recycle flow rate shall be as defined in Section 3.12, expressed in kg/min, and the accuracy shall be per Section 9.4.

9.3.1 For equipment using multi-pass recycling or a separate sequence, the recycle rate shall be determined by dividing the net weight, W, of the refrigerant to be recycled by the actual time T required to recycle. Any set-up or operator interruptions shall not be included in the time T.

9.3.2 If no separate recycling sequence is used, the recycle rate shall be the higher of the vapor refrigerant recovery rate or the liquid refrigerant recovery rate. The recycle rate shall match a process which leads to contaminant levels in Section 9.9. Specifically, a recovery rate determined from bypassing a contaminant removal device cannot be used as a recycle rate when the contaminant levels in Section 9.9 are determined by passing the refrigerant through the contaminant removal device.

9.4 *Accuracy of Flow Rates.* The accuracy of test measurements in Sections 9.1, 9.2 and 9.3 shall be ±008 kg/min for flow rates up to 0.42 kg/min and ±2.0 percent for flow rates larger than 0.42 kg/min. Ratings shall be expressed to the nearest 0.02 kg/min.

9.5 *Refrigerant Loss.* This calculation will be based upon the net loss of refrigerant which would have been eliminated in the non-condensable purge process (*see* Section 7.5.1), the oil draining process (*see* Section 7.4.2.1) and the refrigerant clearing process (*see* Section 7.4.4.1), all divided by the net refrigerant content of the test batches. The refrigerant loss shall not exceed 3 percent by weight.

9.5.1 *Non-Condensable Purge.* Evacuate an empty container to 2 kPa. Record the empty weight of the container. Place the container in a dry ice bath. Connect the equipment purge connection to the container and operate purge according to operating instructions so as to capture the non-condensables and lost refrigerant. Weigh the cylinder after the recycling is complete. Equivalent means are permissible.

For units which either recycle or publish (list) non-condensable removal, non-condensable gases are purged, operating the recycle device per the manufacturer's instructions through an evaporator pressure regulator (EPR) valve into a liquid nitrogen-chilled cylinder. This combination will simulate the atmosphere while allowing the capture of purge gases. The cylinder is weighed before and after the purge procedure.

9.5.2 *Oil Draining.* Refrigerant removed from the oil after draining shall be collected and measured in accordance with Section 7.4.2.1.

9.5.3 *Clearing Unit.* Refrigerant captured during the clearing process shall be measured in accordance with Section 7.4.4.1.

9.6 *Final Recovery Vacuum.* The final recovery vacuum shall be the mixing chamber pressure in Section 7.4.3 expressed in kPa at 24 °C. The accuracy of the measurement shall be within 0.33 kPa.

9.7 *Residual Trapped Refrigerant.* The amount of residual trapped refrigerant shall be the final weight minus the initial weight of the test cylinder in Section 7.4.4.2, expressed in kg. The accuracy shall be ±0.02 kg and reported to the nearest 0.05 kg.

9.8 *Refrigerant Processed.* The amount of refrigerant processed before changing filters (*see* Section 7.5.3) shall be expressed in kg to an accuracy of ±1 percent.

9.9 *Contaminant Levels.* The contaminant levels remaining after testing shall be published as follows:

Moisture content, ppm by weight
Chloride ions, pass/fail
Acid Content, ppm by weight
High boiling residue, percent (by volume)
Particulates/solids, pass/fail (visual examination)
Non-condensables, percent (by volume)

9.10 *Minimum Data Requirements for Published Ratings.* Published ratings shall include all of the parameters as shown in Tables 2 and 3 for each refrigerant designated by the manufacturer.

Section 10. Tolerances

10.1 *Tolerances.* Performance related parameters shall be equal to or better than the published ratings.

Section 11. Marking and Nameplate Data

11.1 *Marking and Nameplate Data.* The nameplate shall display the manufacturer's name, model designation, type of equipment (Recovery or Recovery/Recycling and Self-Contained or System Dependent), designated refrigerant(s), capacities, and electrical characteristics where applicable. The nameplate shall also conform to the labeling requirements established for certified recycling and recovery equipment established at 40 CFR 82.158(h).

Recommended nameplate voltages for 60 Hertz systems shall include one or more of the equipment nameplate voltages shown in Table 1 of AHRI 110–2016 (incorporated by reference, see § 82.168). Recommended nameplate voltages for 50 Hertz systems shall include one or more of the utilization voltages shown in Table 1 of IEC 60038 (English version) (incorporated by reference, see § 82.168).

11.2 *Data for Designated Refrigerants.* For each refrigerant designated, the manufacturer shall include all the following that are applicable per Table 2:

a. Liquid Recovery Rate, kg/min
b. Vapor Recovery Rate, kg/min
c. High Temperature Vapor Recovery Rate, kg/min
d. Push/Pull Liquid Recovery Rate, kg/min
e. Final Recovery Vacuum Level, kPa
f. Recycle Flow Rate, kg/min
g. Refrigerant Loss, kg
h. Residual Trapped Refrigerant, kg
i. Quantity of Refrigerant Processed at Rated Conditions, kg

TABLE 2—PERFORMANCE RATINGS FOR REFRIGERANT RECOVERY AND RECOVERY/RECYCLING EQUIPMENT [4] [5]

Parameter	Type of equipment			
	Recovery	Recovery/recycling	Recycling	System dependent equipment
Liquid Refrigerant Recovery Rate, kg/min	X [1] [4]	X [1]	N/A [5]	N/A
Vapor Refrigerant Recovery Rate, kg/min	X [1]	X [1]	N/A	N/A
High Temperature Vapor Recovery Rate, kg/min	X [1]	X [1]	N/A	N/A
Push/Pull Liquid Recovery Rate, kg/min	X [1]	X [1]	N/A	N/A
Final Recovery Vacuum Level, kPa	X	X	N/A	X
Recycle Flow Rate, kg/min	N/A	X	X	N/A
Refrigerant Loss, kg	X [2]	X	X	X [3]
Residual Trapped Refrigerant, kg	X [3]	X [2]	X [2]	X [2]
Quantity of Refrigerant Processed at Rated Conditions, kg	N/A	X	X	N/A

[1] For a recovery or recovery/recycle unit, one must rate either liquid refrigerant recovery rate or vapor refrigerant recovery rate or one can rate for both. If rating only one, the other shall be indicated by N/A, "not applicable."
[2] Mandatory rating if multiple refrigerants, oil separation or non-condensable purge are rated.
[3] Mandatory rating for equipment tested for multiple refrigerants.
[4] "X" denotes mandatory rating or equipment requirements.
[5] "N/A" indicates "Not Applicable" for a parameter that does not have a rating.

TABLE 3—CONTAMINANT REMOVAL RATINGS FOR REFRIGERANT RECOVERY AND RECOVERY/RECYCLING EQUIPMENT [1] [2]

Contaminant	Type of equipment			
	Recovery	Recovery/recycling	Recycling	System dependent equipment
Moisture Content, ppm by weight	N/A [2]	X [1]	X	N/A
Chloride Ions, pass/fail	N/A	X	X	N/A
Acid Content, ppm by weight	N/A	X	X	N/A
High Boiling Residue, % by volume	N/A	X	X	N/A
Particulates/solids, pass/fail	N/A	X	X	N/A
Non-condensables, % by volume	N/A	X	X	N/A

[1] "X" denotes mandatory rating.
[2] "N/A" indicates "Not Applicable" for a parameter that does not have a rating.

Section 12. References

Listed here are all standards, handbooks, and other publications essential to the formation and implementation of the standard. All references in this appendix are considered as part of this standard.

- UL 1963, *Standard for Safety Refrigerant Recovery/Recycling Equipment*, Fourth Edition (with revisions through October 13, 2013), dated June 1, 2011, (incorporated by reference, see § 82.168).
- AHRI 110–2016, *2016 Standard for Air-Conditioning, Heating and Refrigerating Equipment Nameplate Voltages*, copyright 2016 (incorporated by reference, see § 82.168).
- AHRI Standard 700–2015, *Specifications for Refrigerants*, Air-Conditioning, Heating, and Refrigeration Institute
- IEC 60038 *IEC Standard Voltages*, Edition 7.0, 2009–06 (English version) (incorporated by reference, see § 82.168).

Section 13.0. Particulate Used in Standard Contaminated Refrigerant Sample

13.1 *Particulate Specification*

13.1.1 The particulate material (pm) will be a blend of 50 percent coarse air cleaner dust as received, and 50 percent retained on a 200-mesh screen. The coarse air cleaner dust is available from: AC Spark Plug Division; General Motors Corporation; Flint, Michigan.

13.1.2 *Preparation of Particulate Materials.* To prepare the blend of contaminant per ANSI/ASHRAE Standard 63.2–1996 (RA 2010), first wet screen a quantity of coarse air cleaner dust on a 200-mesh screen (particle retention 74 µm). This is done by placing a portion of the dust on a 200-mesh screen and running water through the screen while stirring the dust with the fingers. The fine contaminant particles passing through the screen are discarded. The larger than 200-mesh particles collected on the screen are removed and dried for one hour at 110 °C. The blend of standard contaminant is prepared by mixing 50 percent by weight of coarse air cleaner dust as received (after drying for one hour at 110 °C) with 50 percent by weight of the larger than 200-mesh screened dust.

13.1.3 *Particle Size Analysis.* The coarse air cleaner dust as received and the blend used as the standard contaminant have the following approximate particle size analysis:

TABLE B1—WEIGHT PERCENTAGE IN VARIOUS µm SIZE RANGES FOR PARTICLE SIZE ANALYSIS

Size range (µm)	As received (wt %)	Blend (wt %)
0–5	12	6
5–10	12	6
10–20	14	7
20–40	23	11
40–80	30	32
80–200	9	38

■ 17. Amend subpart F by adding appendix B4 to read as follows:

Appendix B4 to Subpart F of Part 82—Performance and Safety of Flammable Refrigerant Recovery and/or Recycling Equipment

This appendix is based on the Air-Conditioning, Heating, and Refrigeration Institute Standard 740–2016, *Performance Rating of Refrigerant Recovery Equipment and Recovery/Recycling Equipment*, and Underwriters Laboratories Standard 1963–2011 (Fourth Edition), *Standard for Safety: Refrigerant Recovery/Recycling Equipment*, including Supplement SB (added October 11, 2013), *Requirements for Refrigerant Recovery/Recycling Equipment Intended for Use with a Flammable Refrigerant.*

Section 1. Purpose

1.1 The purpose of this standard is to establish methods of testing for rating and evaluating the performance and safety of refrigerant recovery and/or recycling equipment and general equipment requirements (herein referred to as "equipment") for contaminant or purity levels, capacity, speed and purge loss to minimize emission into the atmosphere of designated refrigerants, as well as safety for use with flammable refrigerants.

Section 2. Scope

2.1 This standard applies to equipment for recovering and/or recycling flammable single refrigerants, azeotropes, zeotropic blends, and their normal contaminants from refrigerant systems. This standard defines the test apparatus, test gas mixtures, sampling procedures, analytical techniques, and equipment construction that will be used to determine the performance and safety of refrigerant recovery and/or recycling equipment (hereinafter, "equipment").

Section 3. Definitions

3.1 All terms in this appendix will follow the definitions in § 82.152 and Appendix B3 to Subpart F of Part 82 unless otherwise defined in this appendix.

3.2 All definitions used in UL 1963, including the definitions in Supplement SB, as applicable, are incorporated by reference, see § 82.168.

Section 4. Evaluation of Performance

4.1 *Performance Ratings.* All recovery and/or recycling equipment to be tested under this appendix must follow the procedures and meet all requirements established in Appendix B3 to Subpart F of Part 82 to determine the performance ratings in addition to the safety evaluation conducted under the rest of this appendix.

4.2 *Safety.* All recovery and/or recycling equipment to be tested under this appendix must follow the procedures and meet all requirements in Supplement SB (added October 11, 2013), *Requirements for Refrigerant Recovery/Recycling Equipment Intended for Use with a Flammable Refrigerant* in Underwriters Laboratories Standard 1963–2011 (Fourth Edition), *Standard for Safety: Refrigerant Recovery/Recycling Equipment* (incorporated by reference, see § 82.168).

■ 18. Amend subpart F by revising appendix D to read as follows:

Appendix D to Subpart F of Part 82—Standards for Becoming a Certifying Program for Technicians

a. Test Preparation. Technicians must pass an EPA-approved test, provided by an EPA-approved certifying program to be certified as a Type I technician. Organizations providing Type I certification only may choose either an on-site format or a mail-in format similar to what is permitted under the MVACs program.

Technicians must pass a closed-book, proctored test, administered in a secure environment, by an EPA-approved certifying program to be certified as a Type II or Type III technician.

Technicians must pass a closed-book, proctored test (or series of tests), administered in a secure environment, by an

EPA-approved certifying program to be certified as a Universal technician. Mail-in format Type I tests cannot be used toward a Universal certification.

Each certifying program must assemble tests by choosing a prescribed subset from the EPA test bank. EPA will have a test bank with more questions than are needed for an individual test, which will enable the certifying program to generate multiple tests in order to discourage cheating. Each test must include 25 questions drawn from Group 1 and 25 questions drawn from each relevant technical Group. Tests for Universal technicians will include 100 questions (25 from Group 1 and 25 from each relevant technical Group). Universal tests may be taken all at once, or by combining passing scores on separate Type I, Type II, and Type III tests. Questions should be divided in order to sufficiently cover each topic within the Group.

Certifying programs must provide a paper hand-out or electronic form of communication to technicians after they have completed their certification test that contains the following information:

—Which certifying program is providing the testing;
—Contact information for the certifying program;
—The name and contact information of the proctor; and
—When they should expect to receive their score and, if they passed, their certification card.

Each certifying program must show a method of randomly choosing which questions will be on the tests. Multiple versions of the test must be used during each testing event. Test answer sheets must include the name and address of the applicant, the name and address of the certifying program, and the date and location at which the test was administered.

Training material accompanying mail-in Type I tests must not include sample test questions mimicking the language of the certification test. All mail-in material will be subject to review by EPA.

Certifying programs may charge individuals reasonable fees for the administration of the tests. EPA will publish a list of all approved certifying programs.

b. Proctoring. A certifying program for Type I (if in-person), Type II, Type III, and Universal technicians must designate at least one proctor registered for every 50 people taking tests at the same time at a given site.

The certification test for Type I (if taken as part of a Universal certification), Type II, Type III, and Universal technicians is a closed-book exam. The proctors must ensure that the applicants for certification do not use any notes or training materials during testing. Desks or work space must be placed in a way that discourages cheating. The space and physical facilities are to be conducive to continuous surveillance by the proctors and monitors during testing.

The proctor may not receive any benefit from the outcome of the testing other than a fee for proctoring. Proctors cannot know in advance which questions are on the tests they are proctoring.

Proctors are required to verify the identity of individuals taking the test by examining photo identification. Acceptable forms of identification include but are not limited to drivers' licenses, government identification cards, passports, and military identification.

Certifying programs for Type I technicians using the mail-in format, must take sufficient measures at the test site to ensure that tests are completed honestly by each technician. Each test for Type I certification must provide a means of verifying the identification of the individual taking the test. Acceptable forms of identification include but are not limited to drivers' licenses and passports.

c. Test Security. A certifying program must demonstrate the ability to ensure the confidentiality and security of the test questions and answer keys through strict accountability procedures. An organization interested in developing a technician certification program will be required to describe these test security procedures to EPA.

After the completion of a test, proctors must collect all test forms, answer sheets, scratch paper and notes. These items are to be placed in a sealed envelope.

d. Test Content. All Type I, Type II and Type III, certification tests will include 25 questions from Group I and 25 questions from Group II. Universal certification tests will include 25 questions from Group I and 75 questions from Group II (with 25 from each of the three sector-specific areas).

Group I will ask questions in the following areas:

1. Environmental impact of CFCs, HCFCs, and substitute refrigerants
2. Laws and regulations
3. Changing industry outlook

Group II will ask questions covering sector-specific (*i.e.,* Type I, Type II, Type III) issues in the following areas:

4. Leak detection
5. Recovery Techniques
6. Safety
7. Shipping
8. Disposal

e. Grading. Tests must be graded objectively. Certifying programs must inform the applicant of their test results no later than 30 days from the date of the test. Type I certifying programs using the mail-in format must notify the applicants of their test results no later than 30 days from the date the certifying programs received the completed test and any required documentation.

The passing score for the closed-book Type I, Type II, Type III and Universal certification test is 70 percent. The passing score for Type I certification tests using the mail-in format is 84 percent.

f. Proof of Certification. Certifying programs must issue a standard wallet-sized identification card no later than 30 days from the date of the test. Type I certifying programs using mail-in formats must issue cards to certified technicians no later than 30 days from the date the certifying program receives the completed test and any required documentation.

Each wallet-sized identification card must include, at a minimum, the name of the certifying program including the date the certifying program received EPA approval, the name of the person certified, the type of certification, a unique number for the certified person that does not include a technician's social security number, and the following text:

[name of person] has successfully passed a [Type I, Type II, Type III and/or Universal—as appropriate] exam on how to responsibly handle refrigerants as required by EPA's National Recycling and Emissions Reduction Program.

g. Recordkeeping and Reporting Requirements. Certifying programs must maintain records of the names and addresses of all individuals taking the tests, the scores of all certification tests administered, and the dates and locations of all tests administered. These records must be maintained indefinitely, unless transferred to another certifying program or EPA.

EPA must receive an activity report from all approved certifying programs by every January 30 and July 30, which covers the previous six months of certifications. The first report must be submitted following the first full six-month period for which the program has been approved by EPA. This report includes the pass/fail rate. If the certifying program believes a test bank question needs to be modified, information about that question should also be included.

Approved certifying programs will receive a letter of approval from EPA. Each testing center must display a copy of that letter at their place of business.

Approved technician certification programs that voluntarily plan to stop providing the certification test must forward all records required by this appendix and § 82.161 to another program currently approved by EPA in accordance with this appendix and with § 82.161. Approved technician certification programs that receive records of certified technicians from a program that no longer offers the certification test, and the program that is voluntarily withdrawing from being a technician certification program must inform EPA at the address listed in § 82.160 within 30 days of receiving or transferring these records. The notification must include the name and address of the program to which the records have been transferred. If another currently approved program willing to accept the records cannot be located, these records must be submitted to EPA at the address listed at § 82.160.

Technician certification programs that have had their certification revoked in accordance with § 82.169 must forward all records required by this appendix and § 82.161 to EPA at the address listed in § 82.160. Failure to do so is a violation of 40 CFR part 82, subpart F.

h. Additional Requirements. EPA may periodically inspect testing sites to ensure compliance with EPA regulations. If testing center discrepancies are found, they must be corrected within a specified time period. If discrepancies are not corrected, EPA may suspend or revoke the certifying program's approval. The inspections will include but are not limited to a review of the certifying program's provisions for test security, the availability of space and facilities to conduct the administrative requirements and ensure the security of the tests, the availability of adequate testing facilities and spacing of the applicants during testing, a review of the proper procedures regarding accountability, and that there is no evidence of misconduct on the part of the certifying programs, their representatives and proctors, or the applicants for certification.

If the certifying programs offer training or provide review materials to the applicants, these endeavors are to be considered completely separate from the administration of the certification test.

■ 19. Amend subpart F by adding appendix E to read as follows:

Appendix E to Subpart F of Part 82—Test Procedure for Leaks From Containers Holding Two Pounds or Less of Refrigerant for Use in an MVAC

This appendix is based on the California Air Resources Board (CARB) standard *TP–503: Test Procedure for Leaks from Small Cans of Automotive Refrigerant,* as amended on January 5, 2010; and CARB standard *BP–A1: Balance Protocol for Gravimetric Determination of Sample Weights using a Precision Balance,* as amended January 5, 2010.

Section 1. Applicability

This test procedure is used by manufacturers of containers holding two pounds or less of refrigerant for use in a motor vehicle air conditioner (MVAC) to determine the leakage rate of small containers of automotive refrigerant that are subject to the requirements of 40 CFR part 82, subpart F. Specifically, this test procedure will specify the equipment, procedures, and calculations to determine if a container holding two pounds or less of refrigerant for use in an MVAC complies with the leakage rate specified in § 82.154(c)(2)(ii). All terms in this appendix will follow the definitions in § 82.152 unless otherwise defined in this appendix.

All containers holding two pounds or less of refrigerant for use in an MVAC must comply with other applicable codes and regulations such as local, state, or Federal safety codes and regulations.

This test procedure involves the use of materials under pressure and operations and should only be used by or under the supervision of those familiar and experienced in the use of such materials and operations. Appropriate safety precautions should be observed at all times while performing this test procedure.

Section 2. Principle and Summary of Test Procedure

This procedure is used to determine the leakage rate of containers holding two pounds or less of refrigerant for use in an MVAC (small cans). Testing will involve subjecting both full and partially empty cans in both upright and inverted positions at two temperatures: 73 °F and 130 °F.

Thirty small cans are tested under each condition for a total of 240 small cans tested. Small cans are brought to temperature stability, weighed, then stored for 30 days under specified conditions of temperature, orientation, and state of fill, then re-weighed. Leakage rate (grams/year) is estimated by (weight loss in grams) x 365/(days duration). The leakage rate is then compared to a standard of 3.00 grams/year to determine if a given small can complies with the leakage rate specified in § 82.154(c)(2)(ii).

Section 3. Biases and Interferences

3.1 Contaminants on the operator's hands can affect the weight of the small can and the ability of the small can to absorb moisture. To avoid contamination of the small can, the balance operator should wear gloves while handling the small cans.

3.2 Weight determinations can be interfered with by moisture condensing on the small can and by thermal currents generated by temperature differences between the small can and the room temperature. The small cans cool during discharge and could cause condensation. For these reasons, small cans must be equilibrated to balance room temperature for at least four hours before weighing.

3.3 Variations in the temperature, pressure, and humidity of the ambient air will cause variations in the buoyancy of the small can. These variations should typically be less than 25 mg for a small can. If the small can is not leaking at all, then the uncorrected weight changes will be within the range of 0 ± 25 mg, which is about ten percent of the 247 mg loss expected after thirty days for a can leaking at 3 g/yr. In that case buoyancy corrections can be omitted. If the absolute value of the uncorrected weight change exceeds 25 mg, then all calculations must be made using weights corrected for buoyancy based on the temperature, pressure, and humidity of the weighing room.

3.4 Some electronic balances are sensitive to the effects of small static charges. The small can should be placed directly on the balance pan, ensuring metal to metal contact. If the balance pan is not grounded, the small can and balance pan should be statically discharged before weighing.

Section 4. Sensitivity and Range

The mass of a full small can could range from roughly 50 g to 1000 g depending on the container capacity. A top loading balance, capable of a maximum weight measurement of not less than 1,000 g and having a minimum readability of 0.001 g, reproducibility and linearity of ± 0.002 g, must be used to perform mass measurements.

Section 5. Equipment

5.1 A top loading balance that meets the requirements of Section 4 above.

5.2 A NIST traceable working standard mass for balance calibration. A NIST traceable working standard mass for a balance linearity check. A reference mass to serve as a ''blank'' small can.

5.3 An enclosure capable of controlling the internal air temperature from 73 °F ± 5 °F, and an enclosure capable of controlling the internal air temperature to 130 °F ± 5 °F.

5.4 A temperature instrument capable of measuring the internal temperature of the temperature conditioning enclosures and the balance room with a sensitivity of ± 2 °F.

5.5 A barometric pressure instrument capable of measuring atmospheric pressure at the location of the balance to within ± 0.02 inches of mercury.

5.6 A relative humidity measuring instrument capable of measuring the relative humidity (RH) at the location of the balance with a sensitivity of ± 2 percent RH.

5.7 A hose with appropriate fitting for dispensing refrigerant from the small can to a recovery machine.

5.8 A refrigerant recovery machine to collect the discharged refrigerant from small cans being tested.

Section 6. Calibration Procedures

6.1 Calibrations are applied to the balance and to the support equipment such as temperature, humidity, and pressure monitoring equipment. Procedures for calibration are not spelled out here. General calibration principals for the support equipment and the balance are described in Section 11, Quality Assurance/Quality Control. Detailed calibration procedures for measurements made using the balance are contained in Attachment A: ''Balance Protocol for Gravimetric Determination of Sample Weights using a Precision Balance.''

Section 7. Small Can Preparation

7.1 Receive a batch of 240 small cans of one design to be tested. These may include several SKUs from different manufacturers if the container and valve combination are the same.

7.2 Clean small cans with Alkanox solution or equivalent and dry with a lint free towel.

7.3 Confirm that the sample ID sticker on the small can matches the sample ID on the chain of custody forms.

7.4 Select a reference mass similar to the weight of a full small can. If multiple sets of similar sized small cans are being tested, only one reference mass is needed; it can be used with all sets. Store the reference mass in the balance area.

7.5 Evacuate the contents of one half of the small cans (120 cans) into the refrigerant recovery machine using normal DIY dispensing procedures until each small can is approximately half full.

7.6 Select a reference mass similar to the weight of the half-full small can. If multiple sets of similar size small cans are being tested, only one reference mass is needed; it can be used with all sets. Store the reference mass in the balance area.

Section 8. Small Can Weighing

Weighing cans on the balance is done in accordance with Attachment A to this appendix. Attachment A describes how to conduct weight determinations including appropriate calibration and QC data. This section, ''Small Can Weighing,'' describes the overall process, not the details of how to use the balance.

Initial Weights

8.1 Put on gloves. Check the small cans for contamination.

8.2 Place the 240 small cans into a location where they can equilibrate to balance room temperature. Record the small can test IDs and the equilibration start time on the Small Can Test Data Forms available on EPA's Web site in sets of thirty, one form for each of the eight test conditions.

8.3 Let cans equilibrate for at least four hours.

8.4 Weigh the set of 240 small cans and the reference weights using Attachment A and log the results to the Balance Weighing Log Form available on EPA's Web site.

8.5 Transfer data from the Balance Weighing Log Form to the Small Can Test Data Form in sets of 30, one set for each of the eight conditions to be tested.

Thirty-Day Soak

8.6 Place each set of 30 small cans into the appropriate orientation and temperature for soaking:

30 full small cans—73 °F, upright
30 full small cans—73 °F, inverted
30 full small cans—130 °F, upright
30 full small cans—130 °F, inverted
30 half-full small cans—73 °F, upright
30 half-full small cans—73 °F, inverted
30 half-full small cans—130 °F, upright
30 half-full small cans—130 °F, inverted

8.7 Soak the small cans for 30 days undisturbed.

Final Weighing

8.8 Place the 240 small cans into a location where they can equilibrate to balance room temperature.

8.9 Let the small cans equilibrate for at least four hours.

8.10 Weigh the set of 240 small cans, the reference weights, and any additional sets of small cans using Attachment A.

8.11 Transfer data from the Balance Weighing Log Form to the corresponding Small Can Test Data Forms.

Section 9. Calculations

Corrections for Buoyancy

The calculations in this section are described in terms of ''weight.'' Mass is a property of the small can, whereas weight is a force due to the effects of buoyancy and gravity. Procedures for correcting the effect of buoyancy are given in Attachment B of this appendix. Ignoring buoyancy, *i.e.,* using weight data uncorrected for buoyancy effects, is acceptable for a thirty day test if the absolute magnitude of the weight change is less than 25 mg. If the uncorrected weight change exceeds 25 mg for any small can, then correct all small can weights for buoyancy using the procedures in Attachment B before performing the calculations described below.

Calculation of Leak Rate

The emission rate in grams/day for each small can is calculated by subtracting the final weight from the initial weight and then dividing the weight difference by the time difference measured in days to the nearest hour (nearest 1/24 of a day). The emission rate in g/day is multiplied by 365 to determine emission rate in grams/yr. If the annual emission rate for any small can exceeds the entire small can contents, then the annual emission rate for that small can is adjusted to equal the entire small can contents/year (*e.g.,* about 350 g/yr for a 12 ounce small can). The annual emission rate for the purpose of the test is calculated by averaging the 240 individual adjusted annual emission rates and rounding to two decimal places. The cans fail the test if the adjusted annual emission rate averaged over 240 cans is greater than 3.00 g/yr. The calculations are described below.

Loss rate for each small can

$Ei_{daily} = (Wi_{final} - Wi_{initial})/(Di_{final} - Di_{initial})$ g/day

$Ei_{annual} = 365 \times Ei_{daily}$ g/year

$Ei_{adjusted}$ = Minimum of ($Ei_{adjusted}$, Ci/year) g/yr

Where,

Ei = emission rate
Wi_{final} = weight of can i after soaking (grams)
$Wi_{initial}$ = weight of can I before soaking (grams)
Di_{final} = date/time of final weight measurements (days)
$Di_{initial}$ = date/time of initial weight measurements (days)
Ci = original factory mass of refrigerant in can i

Note: Date/Times are measured in days. Microsoft Excel stores dates and times in days, and the calculations can be made directly in Excel. If calculations are made manually, calculate serial days to the nearest hour for each date and time as follows:

D = Julday + Hour/24

Where,

Julday = serial day of the year: Jan 1 = 1, Jan 31 = 31, Feb 1 = 32, etc.
Hour = hour of day using 24-hour clock, 0 to 23

Calculate the average loss rate for the 240 small cans as follows:

E_{mean} = [Sum ($E_{adjusted}i$), i = 1 to 240]/240

Section 10. Recordkeeping

During small can weighing, record the small can weights and date/times on the Balance Weighing Log Form. After each weighing session, transfer the measured weights and date/times from the Balance Weighing Log Form to the Small Can Test Data Form.

At the end of the test, complete the calculations described in Section 9, Calculations, and record the results on the Small Can Test Data Form.

Section 11. Quality Assurance/Quality Control

11.1 All temperature, pressure, and humidity instruments should be calibrated annually against NIST traceable laboratory standards. The main purpose of the NIST traceable calibration is to establish the absolute accuracy of the device. The instruments should also be checked periodically such as weekly, monthly, or quarterly against intermediate standards or against independent instruments. For example, a thermocouple can be checked weekly against a wall thermometer. A barometer or pressure gauge can be checked weekly by adjusting to sea level and comparing with local airport data. The main purpose of the frequent checks is to verify that the device has not failed in some way. This is especially important for electronic devices such as a digital thermometer, but even a liquid filled thermometer can develop a problem such as a bubble.

11.2 The balance should be serviced and calibrated annually by an independent balance service company or agency using NIST traceable reference masses. Servicing verifies accuracy and linearity, and the maintenance performed helps ensure that a malfunction does not develop.

11.3 The balance must also be calibrated and its linearity checked with working standards before and after each weighing session, or before and after each group of 24 small cans if more than 24 small cans are weighed in a session. Procedures for calibrating and using the balance, as well as recording balance data, are described in the accompanying balance weighing protocol. These procedures include zero checks, calibration checks, and reference mass checks. Procedures for calculating quality control data from those checks are described in Attachment A.

11.4 The small cans are cleaned then handled using gloves to prevent contamination. All equilibration and soaking must be done in a dust free area.

Section 12. Balance Protocol for Gravimetric Determination of Sample Weights Using a Precision Balance

12.1 *Scope and application*

This Protocol summarizes a set of procedures and tolerances for weighing objects in the range of 0 to 1,000 g with a resolution of 0.001 g. This protocol only addresses balance operations, it does not address project requirements for equilibration, sample hold time limits, sample collection etc.

12.2 *Summary of method*

The balance is zeroed and calibrated using procedures defined herein. Object weight determinations are conducted along with control object weight determinations, zero checks, calibration checks, sensitivity checks, and replicate weightings in a defined sequence designed to control and quantitatively characterize precision and accuracy.

12.3 *Definitions*

N/A.

12.4 *Interferences*

Object weights can be affected by temperature and relative humidity of their environment, air currents, static electricity, gain and loss of water vapor, gain or loss of and loss of volatile compounds directly from the sample or from contaminants such as finger prints, marker ink, and adhesive tape.

Contamination, transfer of material to or from the samples, is controlled by conducting operations inside a clean area dedicated to the purpose and having a filtered laminar air flow where possible; by wearing gloves while handling all samples and related balance equipment; by using forceps to handle small objects, and by keeping the balance and all related equipment inside the clean area.

Air currents are controlled by conducting weighing operations inside a closed chamber or glove box and by allowing the substrates to reach temperature and relative humidity equilibrium. The chamber is maintained at 40 percent relative humidity and 25 °C by a continuous humidity and temperature control system. The temperature and RH conditions are recorded at least once per weighing sessions. Equilibration times for samples that are particularly sensitive to humidity or to loss of semi-volatiles species are specified by project requirements.

Static electric charges on the walls of the balance and the weighed objects, including samples, controls, and calibration weights, can significantly affect balance readings. Static is avoided by the operator ground himself and test objects as described in the balance manual.

12.5 *Personnel health and safety*

N/A

12.6 *Equipment and supplies*

- Filtered, temperature and humidity controlled weighing chamber.
- Precision Balance
- Plastic forceps
- Nylon fabric gloves.
- Working calibration weights: ANSI Class 2, 1000g and 500 g
- Working sensitivity weight: 50 mg
- Reference objects: references are one or more objects that are typical of the objects to be weighed during a project, but that are stored permanently inside the balance glove box. Reference objects are labeled Test1, Test2, Test3, etc.

12.7 *Reagents and standard*

N/A

12.8 *Sample collection, preservation, and storage*

N/A. See relevant project requirements and SOPs.

12.9 *Quality control*

Data quality is controlled by specifying frequencies and tolerances for Zero, Calibration, Linearity, and Sensitivity checks. If checks do not meet tolerance criteria, then samples must be re-weighed. In addition, the procedures specify frequencies for Control Object Checks.

Data quality is quantitatively characterized using Zero Check, Calibration Check, and Control Check data. These data are summarized monthly in statistics and QC charts.

12.10 *Calibration and standardization*

The absolute accuracy of the balance is established by calibration against an ANSI Class 2, stainless steel working weight: 1000.000 g ± 0.0025 g. Linearity is established checking the midpoint against an ANSI Class 2 stainless steel working weight: 500.000 ± 0.0012 g. Sensitivity is established using and ANSI Class 2 stainless steel or aluminum working weight: 50 mg. Precision is checked by periodically checking zero, calibration, and reference object weights.

12.11 *Procedure*

12.11.1 *Overview of Weighing Sequence*

Weighing a series of substrates consists of performing the following procedures in sequence, while observing the procedures for handling and the procedures for reading the balance:

1. Initial Adjustment
2. Weigh eight samples
3. Zero Check
4. Weigh eight samples
5. Zero Check
6. Weigh eight samples
7. Calibration Check
8. Return to step 2.
9. If less than 24 cans are weighed, perform a final Calibration Check at the end of weighing.

This sequence is interrupted and samples are reweighed if QC check tolerances are not met. Each of these procedures along with procedures for handling and reading the balance are described below. The QC tolerances referred to in these procedures are listed in Table 1.

12.11.2 *Handling*

1. Never touch samples, weights, balance pans, etc. with bare hands. Wear powder free gloves to handle the weights, controls, and samples.

12.11.3 *Reading the Balance*

1. Close the door. Wait for the balance stabilization light to come on, and note the reading.

2. Watch the balance reading for 30 sec (use a clock). If the reading has not changed by more than 0.001 g from the reading noted in step 1, then record the reading observed at the end of the 30 sec period.

3. If the reading has drifted more than 0.001 g note the new balance reading and go to step 2.

4. If the balance reading is flickering back and forth between two consecutive values choose the value that is displayed more often than the other.

5. If the balance reading is flickering equally back and forth between two consecutive values choose the higher value.

12.11.4 *Initial Adjustment*

1. Empty the sample pan Close the door. Select Range 1000 g
2. Wait for a stable reading
3. Record the reading with QC code IZC (initial zero check)
4. Press the Tare button
5. Record the reading in the logbook with QC code IZA (initial zero adjust)
6. Place the 1,000 g working calibration weight on the balance pan
7. Wait for a stable reading.
8. Record the reading with QC code ICC (initial cal check)
9. Press the Calibrate button
10. Record the reading with QC code ICA (initial cal adjust)
11. Remove the calibration weight.
12. Wait for a stable reading.
13. Record the reading with QC code IZC.
14. If the zero reading exceeds ± 0.002 g, go to step 4.
15. Place the 500 g calibration weight on the balance pan
16. After a stable reading, record the reading with QC code C500. Do not adjust the balance.
17. Add the 0.050 g weight to 500 g weight on the balance pan.
18. After a stable reading, record the reading with QC code C0.05. Do not adjust the balance.
19. Weigh reference object TEST1, record reading with QC code T1.
20. Weigh the reference object TEST2, TEST3, etc. that is similar in weight to the samples that you will be weighing. Record with QC code T2, T3, etc.

12.11.5 *Zero Check*

1. Empty the sample pan. Close the door.
2. Wait for a stable reading
3. Record the reading with QC code ZC
4. If the ZC reading is less than or equal to the zero adjustment tolerance shown in Table 1, return to weighing and *do not adjust the zero.* If the ZC reading exceeded the zero adjustment tolerance, proceed with steps 5 through 7.
5. Press the Tare button
6. Record the reading in the logbook with QC code ZA.
7. If the ZC reading exceeded the zero re-weigh tolerance, change the QC code recorded in step 3 from ZC to FZC. Then enter a QC code of FZ into the QC code column of all samples weights obtained after the last valid zero check. Re- weigh all of those samples, recording new data in new rows of the logbook.

12.11.6 *Calibration Check*

1. First, follow procedures for Zero Check. If the ZC was within tolerance, tare the balance anyway (*i.e.,* follow steps 5 and 6 of the Zero Check method)
2. Place the 1,000 g working calibration weight on the sample pan, wait for a stable reading.
3. Record the reading with QC code C1000
4. If the C1000 reading is less than or equal to the calibration adjustment tolerances, skip steps 5 through 8 and proceed to step 9. *Do not adjust the calibration.*
5. If the C100 reading exceeded the calibration adjust tolerance, press the Calibrate button.
6. Record the reading in the logbook with QC code CA
7. Perform a Zero Check (follow the Zero Check method)
8. If the C1000 reading exceeded the calibration re-weigh tolerance, change the code recorded in step 3 from C1000 to FC1000. Enter FC into the QC column for all sample weights obtained after the last valid calibration check. Re-weigh all of those samples, recording new data in new rows of the logbook.

12.11.7 *Replicate Weighing Check*

1. This protocol does not include reweigh samples to obtain replicates. The projects for which this protocol is intended already include procedures multiple weightings of each sample.

TABLE 1—QC TOLERANCES AND FREQUENCIES FOR BALANCE PROTOCOL

Reading Tolerance:	
0.001 g, stable for 30 sec.	
Adjustment Tolerances:	
Zero:	−0.003 to +0.003 g.
Calibration:	999.997 to 1000.003 g.
Controls:	none.
Replicates:	none.
Re-weigh Tolerances:	
Zero:	−0.005 to +0.005 g.
Calibration:	999.995 to 1000.005 g.
Controls:	none.
Replicates:	none.

TABLE 1—QC TOLERANCES AND FREQUENCIES FOR BALANCE PROTOCOL—Continued

Reference Objects:	
Test 1—A reference object weighing about 400 g.	
Test 2—A reference object weighing about 200 g.	
Test 3—A reference object weighing about 700 g.	
QC Frequencies:	
Zero Checks:	once per 8 samples.
Calibration Checks:	once per 24 samples.
Repeat weighings:	none (test method includes replicate determinations).
Control objects:	once per weighing session.

12.12 *Data analysis and calculations*

For Zero Checks, let Z equal the recorded Zero Check value. For control checks let T1, T2, etc. equal the recorded value for control object Test 1, Test 2, etc. For Calibration Checks, let C1000 equal C1000 reading minus 1000, M = C500—500, S = .C.050—C500—.050. For Replicate Checks, let D equal the loss that occurred between the first and second measurements. In summary:

T1 = T1
T2 = T2
T3 = T3
Z = ZC—0
C = C1000—1000
M = C500—500
G = C050—C500—.050

Tabulate the mean and standard deviation for each of the following: Z, C, M, G. T1, T2, T3. Depending on the number of operators using the balance and the number of protocols in use, analyze the data by subcategories to determine the effects of balance operator and protocol. Each of these standard deviations, S_Z, S_C, etc. is an estimate of the precision of single weight measurement.

For Z, C, M, and G, check the mean value for statistical difference from 0. If the means are statistically different than zero, troubleshooting to eliminate bias may be called for. For Z, C, M, G, T1, T2, T3, check that the standard deviations are all comparable. If there are systematic differences, then troubleshooting to eliminate the problem may be called for.

Note that the precision of a weight gain, involves two weight determinations, and therefore is larger than S by a factor of sqrt(2). On the other hand replicate weighings improves the precision of the determinations by a factor of sqrt(N). If N = 2, *i.e.,* duplicates, then the factors cancel each other.

To estimate the overall uncertainty in a weight determination, a conservative estimate might be to combine the imprecision contributed by the zero with the imprecision contributed by the calibration.

$U = \mathrm{Sqrt}(S_Z^2 + S_C^2)$

The uncertainty in a weight gain from N replicates is then given by:

$U_{gain} = \mathrm{Sqrt}(2) \times \mathrm{Sqrt}(S_Z^2 + S_C^2)/\mathrm{Sqrt}(N)$

But due to the balance adjustment and reweigh tolerances, we expect S_Z to approximately equal S_C, to approximately equal S_M, etc. tolerances, so that the equation above becomes:

$U_{gain} = 2 \times S/\mathrm{Sqrt}(N)$

Where S is any individual standard deviation; or better, a pooled standard deviation.

12.13 *Method performance*

The data necessary to characterize the accuracy and precision of this method are still being collected. The method is used primarily to weigh objects before and after a period of soaking to determine weight loss by subtraction. Given the reweigh tolerances, we expect that the precision of weight gain determinations will be on the order of 0.006 g at the 1-sigma level. Bias in the weight gain determination, due to inaccuracy of the calibration weight and to fixed non-linearity of the balance response is on the order 0.005 percent of the gain.

12.14 *Pollution prevention*

When discharging half the can contents during can preparation, do not vent the contents of the small can to the atmosphere. Use an automotive recovery machine to transfer small can contest to a recovery cylinder.

12.15 *Waste management*

Dispose of the contents of the recycle cylinder through a service that consolidates waste for shipment to EPA certified facilities for reclaiming or destruction.

Section 13. Compensation of Weight Data for Buoyancy and Gravity Effects

13.1 *Gravity*

Variations in gravity are important only when weighing objects under different gravitational fields, *i.e.,* at different locations or at different heights. Since the balance procedures calibrate the balance against a known mass (the calibration ''weight'') at the same location where sample objects are weighed, there is no need to correct for location. Although both the sample and the calibration weight are used at the same location, there will be a difference in the height of the center of gravity of the sample object (small can) and the center of gravity of the reference mass (calibration weight). However, this difference in height is maintained during both the initial weights and final weights, affecting the initial and final weights by the same amount, and affecting the scale of the weight difference by only a few ppm. In any event, the magnitude of this correction is on the order of 0.3 ug per kg per mm of height difference. A difference on the order of 100 mm would thus yield a weight difference of about 0.03 mg, which is insignificant compared to our balance resolution which is 0.001 g or 1 mg.

Based on the discussion above, no corrections for gravity are necessary when determining weight changes in small cans.

13.2 *Buoyancy*

Within a weighing session, the difference in density between the sample object and the calibration weight will cause the sample object weight value to differ from its mass value due to buoyancy. For a 1-liter object in air at 20 °C and at 1 atm, the buoyant force is about 1.2 g. The volume of a 1 kg object with a density of 8 g/cm³ (*e.g.,* a calibration weight), is about 0.125 liters, and the buoyancy force is about 0.15 g. Variations in air density will affect both of these values in proportion. The net value being affected by variations in air density is thus on the order of 1.2 − 0.15 = 1.05 g. Air density can vary up or down by 2 percent or more due to variations in barometric pressure, temperature, and humidity. The buoyancy force will then vary up or down by 0.02 g, or 20 mg. This is significant compared to the weight change expected after one week for a can leaking at 3 grams per year, which is 57 mg.

Based on the discussion above, buoyancy corrections must be made.

Variables measured or calculated:

V_{can} = volume of can (cm³). Estimate to within 10 percent by measuring the can dimensions or by water displacement. Error in the can volume will cause an error in the absolute amount of the buoyancy force, but will have only a small effect on the change in buoyancy force from day to day.

W_{can} = nominal weight of a can (g), used to calculate the nominal density of the can.

ρ_{can} = nominal density of a small can (g/cm³). The nominal values can be applied to corrections for all cans. It is not necessary to calculate a more exact density for each can. Calculate once for a full can and once for a half full can as follows:

ρ_{can} = Wcan /Vcan

T = Temperature in balance chamber (degrees Celsius).

RH = Relative humidity in balance chamber (expressed a number between 0 and 100).

P_{baro} = Barometric pressure in balance chamber (millibar). Use actual pressure, NOT pressure adjusted to sea level.

ρ_{air} = density of air in the balance chamber (g/cm³). Calculate using the following approximation:

$\rho_{air} = 0.001*[0.348444*P_{baro} - (RH/100) \times (0.252 \times T - 2.0582)]/(T + 273.15)$

ρ_{ref} = the reference density of the calibration weight (g/cm³). Should be 8.0 g/cm³.

Equation to correct for buoyancy: $W_{corrected} = W_{reading} \times (1—\rho_{air}/\rho_{ref})/(1—\rho_{air}/\rho_{can})$

[FR Doc. 2016–24215 Filed 11–17–16; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL REGISTER

Vol. 81 Friday,

No. 223 November 18, 2016

Part VI

Department of Homeland Security

8 CFR Parts 204, 205, 214, et al.

Retention of EB–1, EB–2, and EB–3 Immigrant Workers and Program Improvements Affecting High-Skilled Nonimmigrant Workers; Final Rule

DEPARTMENT OF HOMELAND SECURITY

8 CFR Parts 204, 205, 214, 245 and 274a

[CIS No. 2571–15; DHS Docket No. USCIS–2015–0008]

RIN 1615–AC05

Retention of EB–1, EB–2, and EB–3 Immigrant Workers and Program Improvements Affecting High-Skilled Nonimmigrant Workers

AGENCY: U.S. Citizenship and Immigration Services, DHS.

ACTION: Final rule.

SUMMARY: The Department of Homeland Security (DHS) is amending its regulations related to certain employment-based immigrant and nonimmigrant visa programs. Specifically, the final rule provides various benefits to participants in those programs, including the following: improved processes and increased certainty for U.S. employers seeking to sponsor and retain immigrant and nonimmigrant workers; greater stability and job flexibility for those workers; and increased transparency and consistency in the application of DHS policy related to affected classifications. Many of these changes are primarily aimed at improving the ability of U.S. employers to hire and retain high-skilled workers who are beneficiaries of approved employment-based immigrant visa petitions and are waiting to become lawful permanent residents, while increasing the ability of those workers to seek promotions, accept lateral positions with current employers, change employers, or pursue other employment options.

DATES: This final rule is effective January 17, 2017.

ADDRESSES: Comments and related materials received from the public, as well as background documents mentioned in this preamble as being available in the docket, are part of docket USCIS–2015–0008. For access to the online docket, go to *http://www.regulations.gov* and enter this rulemaking's eDocket number: USCIS–2015–0008 in the ''Search'' box.

FOR FURTHER INFORMATION CONTACT: Kathleen Angustia or Nikki Lomax-Larson, Adjudications Officers (Policy), Office of Policy and Strategy, U.S. Citizenship and Immigration Services, Department of Homeland Security, 20 Massachusetts Avenue NW., Washington, DC 20529. The contact telephone number is (202) 272–8377.

SUPPLEMENTARY INFORMATION:

Table of Contents

I. Abbreviations

AC21 American Competitiveness Act of the 21st Century
ACWIA American Competitiveness and Workforce Improvement Act of 1998
APA Administrative Procedure Act
CBP U.S. Customs and Border Protection
CFR Code of Federal Regulations
DACA Deferred Action for Childhood Arrivals
DHS Department of Homeland Security
DOL Department of Labor
DOJ Department of Justice
DOS Department of State
EAD Employment Authorization Document
EB Employment-based immigrant visa category
EB–1 Employment-based first preference immigrant visa petition
EB–2 Employment-based second preference immigrant visa petition
EB–3 Employment-based third preference immigrant visa petition
EB–4 Employment-based fourth preference immigrant visa petition
EB–5 Employment-based fifth preference immigrant visa petition
FDNS Fraud Detection and National Security
FR Federal Register
FY Fiscal Year
HSA Homeland Security Act of 2002
IIRIRA Illegal Immigration Reform and Immigrant Responsibility Act of 1996
ICE U.S. Immigration and Customs Enforcement
INA Immigration and Nationality Act
LCA Labor Condition Application
LPR Lawful Permanent Resident
NOID Notice of Intent to Deny
NPRM Notice of Proposed Rulemaking
RFE Request for Evidence
RIA Regulatory Impact Analysis
SOC Standard Occupational Classification
STEM Science, Technology, Engineering, and Mathematics
TPS Temporary Protected Status
U.S.C. United States Code
USCIS U.S. Citizenship and Immigration Services

II. Executive Summary

A. Purpose and Summary of the Regulatory Action

DHS is amending its regulations related to certain employment-based immigrant and nonimmigrant visa programs. The final rule is intended to benefit U.S. employers and foreign workers participating in these programs by streamlining the processes for employer sponsorship of nonimmigrant workers for lawful permanent resident (LPR) status, increasing job portability and otherwise providing stability and flexibility for such workers, and providing additional transparency and consistency in the application of DHS policies and practices related to these programs. These changes are primarily intended to better enable U.S. employers to employ and retain high-skilled workers who are beneficiaries of employment-based immigrant visa (Form I–140) petitions, while increasing the ability of these workers to further their careers by accepting promotions, changing positions with current employers, changing employers, and pursuing other employment opportunities.

1. *Clarifications and Policy Improvements*

First, the final rule largely conforms DHS regulations to longstanding DHS policies and practices established in response to certain sections of the American Competitiveness and Workforce Improvement Act of 1998 (ACWIA), Public Law 105–277, div. C, tit. IV, 112 Stat. 2681, and the American Competitiveness in the Twenty-first Century Act of 2000 (AC21), Public Law 106–313, 114 Stat. 1251, as amended by the 21st Century Department of Justice Appropriations Authorization Act, Public Law 107–273, 116 Stat. 1758

(2002).[1] Those sections were intended, among other things, to provide greater flexibility and job portability to certain nonimmigrant workers, particularly those who have been sponsored for LPR status as employment-based immigrants, while enhancing opportunities for innovation and expansion, maintaining U.S. competitiveness, and protecting U.S. workers. The final rule further clarifies and improves DHS policies and practices in this area—policies and practices that have long been specified through a series of policy memoranda and precedent decisions of the U.S. Citizenship and Immigration Services (USCIS) Administrative Appeals Office. By clarifying such policies in regulation, DHS provides greater transparency and certainty to affected employers and workers, while increasing consistency among DHS adjudications. In addition, this final rule clarifies several interpretive questions raised by AC21 and ACWIA.

Specifically, the final rule clarifies and improves policies and practices related to:

• *H–1B extensions of stay under AC21.* The final rule addresses the ability of H–1B nonimmigrant workers who are being sponsored for LPR status (and their dependents in H–4 nonimmigrant status) to extend their nonimmigrant stay beyond the otherwise applicable 6-year limit pursuant to AC21.

• *INA 204(j) portability.* The final rule addresses the ability of certain workers who have pending applications for adjustment of status to change employers or jobs without endangering the approved Form I–140 petitions filed on their behalf.

• *H–1B portability.* The final rule addresses the ability of H–1B nonimmigrant workers to change jobs or employers, including: (1) Beginning employment with new H–1B employers upon the filing of non-frivolous petitions for new H–1B employment (''H–1B portability petition''); and (2) allowing H–1B employers to file successive H–1B portability petitions (often referred to as ''bridge petitions'') and clarifying how these petitions affect lawful status and work authorization.

• *Counting against the H–1B annual cap.* The final rule clarifies the way in which H–1B nonimmigrant workers are counted against the annual H–1B numerical cap, including: (1) The method for calculating when these workers may access so-called remainder time (*i.e.,* time when they were physically outside the United States), thus allowing them to use their full period of H–1B admission; and (2) the method for determining which H–1B nonimmigrant workers are ''cap-exempt'' as a result of previously being counted against the cap.

• *H–1B cap exemptions.* The final rule clarifies and improves the method for determining which H–1B nonimmigrant workers are exempt from the H–1B numerical cap due to their employment at an institution of higher education, a nonprofit entity related to or affiliated with such an institution, or a governmental or nonprofit research organization, including a revision to the definition of the term ''related or affiliated nonprofit entity.''

• *Protections for H–1B whistleblowers.* The final rule addresses the ability of H–1B nonimmigrant workers who are disclosing information in aid of, or otherwise participating in, investigations regarding alleged violations of Labor Condition Application (LCA) obligations in the H–1B program to provide documentary evidence to USCIS to demonstrate that their resulting failure to maintain H–1B status was due to ''extraordinary circumstances.''

• *Form I–140 petition validity.* The final rule clarifies the circumstances under which an approved Immigrant Petition for Alien Worker (Form I–140 petition) remains valid, even after the petitioner withdraws the petition or the petitioner's business terminates, including for purposes of status extension applications filed on behalf of the beneficiary, job portability of H–1B nonimmigrants, and job portability under section 204(j) of the Immigration and Nationality Act (INA), 8 U.S.C. 1154(j).

Second, this rule builds on the provisions listed above by making changes consistent with the goals of AC21 and ACWIA to further provide stability and flexibility in certain immigrant and nonimmigrant visa categories. The amended provisions improve the ability of certain foreign workers, particularly those who are successfully sponsored for LPR status by their employers, to accept new employment opportunities, pursue normal career progression, better establish their lives in the United States, and contribute more fully to the U.S. economy. These changes also provide certainty for the regulated community and improve consistency across DHS adjudications, thereby enhancing DHS's ability to fulfill its responsibilities related to U.S. employers and certain foreign workers. Specifically, the final rule provides the following:

• *Establishment of priority dates.* To enhance clarity for the regulated community, the final rule provides that a priority date is generally established based upon the filing of certain applications or petitions. The new regulatory language is consistent with existing DHS practice in establishing priority dates for other Form I–140 petitions that do not require permanent labor certifications (labor certifications)—such as petitions filed under the employment-based first preference immigrant visa (EB–1) category.[2] *See* final 8 CFR 204.5(d).[3]

• *Retention of priority dates.* To enhance job portability for workers with approved Form I–140 petitions, the final rule explains the circumstances under which workers may retain priority dates and effectively transfer those dates to new and subsequently approved Form I–140 petitions. Priority date retention will generally be available as long as the approval of the initial Form I–140 petition was not revoked for fraud, willful misrepresentation of a material fact, the invalidation or revocation of a labor certification, or material error. This provision improves the ability of certain workers to accept promotions, change employers, or pursue other employment opportunities without fear of losing their place in line for immigrant visas. *See* final 8 CFR 204.5(e).

• *Retention of employment-based immigrant visa petitions.* To enhance job portability for certain workers with approved Form I–140 petitions in the EB–1, second preference (EB–2), and third preference (EB–3) categories, but who are unable to obtain LPR status due to immigrant visa backlogs, the final rule provides that Form I–140 petitions that have been approved for 180 days or more would no longer be subject to automatic revocation based solely on withdrawal by the petitioner or the termination of the petitioner's business. *See* final 8 CFR 205.1(a)(3)(iii)(C) and (D).

[1] Except where changes to current policies and practices are noted in the preamble of this final rule, these amendments capture the longstanding policies and practices that have developed since AC21 and ACWIA were enacted. DHS also notes that policies implementing AC21 and ACWIA provisions, if not referenced, discussed, or changed through this rulemaking, remain in place.

[2] The EB–1 preference category is for individuals with extraordinary ability, outstanding professors and researchers, and multinational executives and managers.

[3] In this final rule, the word ''final'' before a reference to 8 CFR is used to refer to a provision promulgated through this final rule and the word ''proposed'' before 8 CFR is used to refer to a provision of the proposed rule. *See Retention of EB–1, EB–2, and EB–3 Immigrant Workers and Program Improvements Affecting High-Skilled Nonimmigrant Workers;* Proposed Rule, 80 FR 81899 (Dec. 31, 2015).

• *Eligibility for employment authorization in compelling circumstances.* To enhance stability and job flexibility for certain high-skilled nonimmigrant workers in the United States with approved Form I–140 petitions who cannot obtain an immigrant visa due to statutory limits on the number of immigrant visas that may be issued, the final rule allows certain beneficiaries in the United States in E–3, H–1B, H–1B1, L–1, or O–1 nonimmigrant status to apply for separate employment authorization for a limited period if there are compelling circumstances that, in the discretion of DHS, justify the issuance of employment authorization. *See* final 8 CFR 204.5(p).

• *10-day nonimmigrant grace periods.* To promote stability and flexibility for certain high-skilled nonimmigrant workers, the final rule provides two grace periods of up to 10 days, consistent with those already available to individuals in some nonimmigrant classifications, to individuals in the E–1, E–2, E–3, L–1, and TN classifications. The rule allows an initial grace period of up to 10 days prior to the start of an authorized validity period, which provides nonimmigrants in the above classifications a reasonable amount of time to enter the United States and prepare to begin employment in the country. The rule also allows a second grace period of up to 10 days after the end of an authorized validity period, which provides a reasonable amount of time for such nonimmigrants to depart the United States or take other actions to extend, change, or otherwise maintain lawful status. *See* final 8 CFR 214.1(l)(1).

• *60-day nonimmigrant grace periods.* To further enhance job portability, the final rule establishes a grace period of up to 60 consecutive days during each authorized validity period for individuals in the E–1, E–2, E–3, H–1B, H–1B1, L–1, O–1 or TN classifications. This grace period allows high-skilled workers in these classifications, including those whose employment ceases prior to the end of the petition validity period, to more readily pursue new employment should they be eligible for other employer-sponsored nonimmigrant classifications or employment in the same classification with a new employer. The grace period also allows U.S. employers to more easily facilitate changes in employment for existing or newly recruited nonimmigrant workers. *See* final 8 CFR 214.1(l)(2).

• *H–1B licensing.* To provide clarity and certainty to the regulated community, the final regulations codify current DHS policy regarding exceptions to the requirement that makes the approval of an H–1B petition contingent upon the beneficiary's licensure where licensure is required to fully perform the duties of the relevant specialty occupation. The final rule generally allows for the temporary approval of an H–1B petition for an otherwise eligible unlicensed worker, if the petitioner can demonstrate that the worker is unable for certain technical reasons to obtain the required license before obtaining H–1B status. The final rule also clarifies the types of evidence that would need to be submitted to support approval of an H–1B petition on behalf of an unlicensed worker who will work in a state that allows the individual to be employed in the relevant occupation under the supervision of licensed senior or supervisory personnel. *See* final 8 CFR 214.2(h)(4)(v)(C).

As noted above, these changes codify and improve USCIS policies concerning various employment-based immigrant and nonimmigrant visa classifications, including by making it easier to hire and retain nonimmigrant workers who have approved Form I–140 petitions and giving such workers additional career options as they wait for immigrant visas to become available. These improvements are increasingly important considering the lengthy waits and consistently growing demand for immigrant visas.

Finally, to provide additional stability and certainty to U.S. employers and individuals eligible for employment authorization in the United States, this final rule changes several DHS regulations governing the processing of applications for employment authorization. First, to minimize the risk of any gaps in employment authorization, this final rule automatically extends the validity of Employment Authorization Documents (EADs or Forms I–766) in certain circumstances based on the timely filing of EAD renewal applications. Specifically, the rule automatically extends the employment authorization and validity of existing EADs issued to certain employment-eligible individuals for up to 180 days from the date of expiration, as long as: (1) A renewal application is filed based on the same employment authorization category as the previously issued EAD (or the renewal application is for an individual approved for Temporary Protected Status (TPS) whose EAD was issued under 8 CFR 274a.12(c)(19)); (2) the renewal application is timely filed prior to the expiration of the EAD (or, in accordance with an applicable **Federal Register** notice regarding procedures for renewing TPS-related employment documentation) and remains pending; and (3) the individual's eligibility for employment authorization continues beyond the expiration of the EAD and an independent adjudication of the underlying eligibility is not a prerequisite to the extension of employment authorization. Concurrently, DHS eliminates the regulatory provisions that require adjudication of the Application for Employment Authorization (Form I–765 or EAD application) within 90 days of filing and that authorize interim EADs in cases where such adjudications are not conducted within the 90-day timeframe. These changes provide enhanced stability and certainty to employment-authorized individuals and their employers while reducing opportunities for fraud and protecting the security related processes undertaken for each EAD application. *See* final 8 CFR 247a.13(d).

2. *Summary of Changes From the Notice of Proposed Rulemaking*

Following careful consideration of public comments received, DHS has made several modifications to the regulatory text proposed in the Notice of Proposed Rulemaking (NPRM) published in the **Federal Register** on December 31, 2015. *See Retention of EB–1, EB–2, and EB–3 Immigrant Workers and Program Improvements Affecting High-Skilled Nonimmigrant Workers; Proposed Rule,* 80 FR 81899. Those changes include the following:

• *Retaining a Priority Date.* In the final rule, DHS is responding to public comment by revising proposed 8 CFR 204.5(e)(2)(iv), a provision that identifies when error related to the approval of an employment-based immigrant visa petition can lead to loss of a priority date. The term ''error'' is clarified to mean ''material error'' in final 8 CFR 204.5(e)(2)(iv), which now states that a priority date may not be retained if USCIS revokes the approval of the Form I–140 petition because it determined that there was a material error with regard to the petition's approval.

• *Eligibility for employment authorization in compelling circumstances.* In the final rule, DHS is responding to public comment by revising several aspects of proposed 8 CFR 204.5(p) governing requests for EADs in compelling circumstances.

First, DHS is revising proposed 8 CFR 204.5(p)(1)(i), which discusses the eligibility of principal beneficiaries of immigrant visa petitions to obtain EADs in compelling circumstances. In the final rule, DHS provides clarification that principal beneficiaries may be eligible to file applications for such EADs during the authorized periods of admission that immediately precede or follow the validity periods of their nonimmigrant classifications (*i.e.,* ''grace periods'').

Second, DHS also is making several revisions to proposed 8 CFR 204.5(p)(3), which addresses certain eligibility requirements for principal beneficiaries and family members seeking to renew EADs issued in compelling circumstances. DHS clarifies in final § 204.5(p)(3) that applicants seeking to extend such employment authorization must file a renewal Form I–765 before the expiration of their current employment authorization. DHS also streamlines and clarifies the regulatory text covering the two instances in which applicants may be eligible to apply for renewal. DHS clarifies that under final § 204.5(p)(3)(i)(A), applicants may apply for renewal if the principal beneficiary continues to demonstrate compelling circumstances and an immigrant visa is not authorized for issuance to the principal beneficiary based on his or her priority date. DHS also clarifies that under final § 204.5(p)(3)(i)(B), a principal beneficiary may apply for renewal if his or her priority date is one year or less either before or after the relevant date in the Department of State Visa Bulletin. In determining whether the difference between the principal beneficiary's priority date and the date upon which immigrant visas are authorized for issuance is one year or less, DHS will use the applicable Final Action Date in the Visa Bulletin that was in effect on the date the application for employment authorization is filed.

Third, DHS is removing a ground of ineligibility that was proposed in § 204.5(p)(5), as it was duplicative of requirements for renewal under § 204.5(p)(3)(i)(B), which authorizes eligibility for renewals when the difference between the principal beneficiary's priority date and the date upon which immigrant visas are authorized for issuance to the principal beneficiary is 1 year or less according to the Visa Bulletin in effect on the date the application for employment authorization is filed.

Fourth, DHS is revising proposed § 204.5(p)(3)(ii) to clarify that family members may submit applications to renew employment authorization concurrently with renewal applications filed by the principal beneficiaries, or while such applications are pending, but family renewal applications cannot be approved unless the principal beneficiaries' applications are granted under paragraph (p)(3)(i) and remain valid.

Finally, DHS is making several technical revisions for readability and clarity.

- *Automatic revocation.* In the final rule, DHS is responding to public comment by editing proposed 8 CFR 205.1(a)(3)(iii)(C) and (D), which provide the grounds for automatically revoking Form I–140 petitions. DHS is revising these provisions to clarify that a Form I–140 petition will remain approved if a request to withdraw it is received or the petitioner terminates its business 180 days or more after either the date of the petition's approval or the date of filing of an associated application for adjustment of status.[4] In addition, DHS is removing the phrase, ''provided that the revocation of a petition's approval under this clause will not, by itself, impact a beneficiary's ability to retain his or her priority date under 8 CFR 204.5(e)'' in § 205.1(a)(3)(iii)(C) and (D) because that phrase was redundant of text in 8 CFR 204.5(e), which, as proposed and retained in this final rule, already establishes the ability of the beneficiary to retain his or her priority date if his or her immigrant visa petition is revoked on any ground other than those enumerated in final 8 CFR 204.5(e)(2)(i)–(iv). The deletion of the redundant text does not change the substance of the provisions.
- *Period of stay.* In the final rule, DHS is responding to public comment by revising proposed 8 CFR 214.1(l), which concerns authorized grace periods that may immediately precede and follow periods of nonimmigrant petition validity and other authorized periods of stay. DHS is removing from proposed 8 CFR 214.1(l)(1) the phrase ''to prepare for departure from the United States or to seek an extension or change of status based on a subsequent offer of employment'' because it is unnecessarily limiting and did not fully comport with how the existing 10-day grace period may be used by individuals in the H, O and P nonimmigrant visa classifications. DHS is adding the phrase ''or otherwise provided status'' after ''an alien admissible in E–1, E–2, E–3, H–1B, L–1, or TN classification and his or her dependents may be admitted to the United States'' to clarify that the 10-day grace period may be granted to these nonimmigrants at time of admission or upon approval of an extension of stay or change of status.

Moreover, in § 214.1(l)(2), DHS is adding the O–1 classification to the list of visa classifications for which USCIS will not consider an individual to have failed to maintain nonimmigrant status for a period of up to 60 days or until the end of the authorized validity period, whichever is shorter, solely because of the cessation of the employment on which the visa classification was based. In addition, DHS is clarifying that the 60-day grace period must be used in a single period of consecutive days during the relevant authorized validity period. DHS also is changing the phrase ''for a one-time period during any authorized validity period,'' to read ''once during each authorized validity period'' to clarify that the 60-day grace period may be provided to an individual only once per authorized validity period. However, an individual may be provided other such grace periods if he or she receives a new authorized validity period in one of the eligible nonimmigrant classifications. In addition, DHS is making other technical revisions to proposed § 214.1(l)(1), (2) and (3).

- *Duties without licensure.* In the final rule, DHS is responding to public comment by modifying proposed 8 CFR 214.2(h)(4)(v)(C), which sets standards for H–1B adjudication absent the beneficiary's full licensure. First, DHS is revising proposed 8 CFR 214.2(h)(4)(v)(C)(*1*) to expand the evidence USCIS will examine in cases where a state allows an individual without licensure to fully practice the occupation under the supervision of licensed senior or supervisory personnel to include ''evidence that the petitioner is complying with state requirements.''

Second, DHS is expanding the language in § 214.2(h)(4)(v)(C)(*2*) to account for other technical requirements in state or local rules or procedures that may, like the lack of a Social Security number or employment authorization, pose obstacles to obtaining a license. Specifically, in § 214.2(h)(4)(v)(C)(*2*)(*i*), DHS is adding the phrase ''or met a technical requirement'' following the references to the Social Security number and employment authorization. DHS is making similar conforming changes in two places in § 214.2(h)(4)(v)(C)(*2*)(*ii*).

Third, in § 214.2(h)(4)(v)(C)(*2*)(*ii*), which discusses the petitioner's qualifications for a license, DHS is adding ''substantive'' in front of the word ''requirements,'' to allow flexibility to account for various state specific requirements. DHS is adding these clarifications to address other analogous obstacles of which DHS is not specifically aware, which present similar situations where the beneficiary

[4] Such petitions will remain approved unless revoked on other grounds.

is qualified for licensure, but may not obtain the licensure because of a technical requirement.

In addition, DHS is making technical edits by replacing the use of the word ''or'' with ''and'' in the first clause of 8 CFR 214.2(h)(4)(v)(C)(*2*)(*ii*) to reflect that the beneficiary must have filed an application for the license in accordance with State and local rules and procedures. This does not change the intended meaning of the proposed rule. Finally, DHS is making a technical edit in the second clause by replacing the use of ''and/or'' with ''or'' preceding ''procedures.''

• *Definitions of non-profit entities related to or affiliated with an institution of higher education and governmental research organizations.* In the final rule, DHS is responding to public comment by editing proposed 8 CFR 214.2(h)(8)(ii)(F) and (h)(19), which define which entities are (1) nonprofit entities that are related to or affiliated with institutions of higher education, and (2) governmental research organizations for purposes of the H–1B visa program. H–1B nonimmigrant workers who are employed at such entities are exempt from the annual limitations on H–1B visas. Such entities are also exempt from paying certain fees in the H–1B program.

At § 214.2(h)(8)(ii)(F)(*2*), DHS is adding the phrase ''if it satisfies any one of the following conditions,'' to clarify that a petitioner only has to meet one of the listed requirements. DHS is adding the same clarifying language to 8 CFR 214.2(h)(19)(iii)(B). In § 214.2(h)(8)(ii)(F)(*2*)(*iv*) and (h)(19)(iii)(B)(*4*), which address cap exemption and ACWIA fee exemption, respectively, for a nonprofit entity that is related to or affiliated with an institution of higher education based on a formal written affiliation agreement, DHS is replacing the term ''primary purpose'' with ''fundamental activity'' in response to public comments suggesting the term ''primary purpose'' was too restrictive. As a result, when a nonprofit entity claims exemption from the cap and ACWIA fee based on a formal written affiliation agreement with an institution of higher education, the final rule requires that ''a fundamental activity'' of the nonprofit entity is to directly contribute to the research or education mission of the institution of higher education. DHS is also removing the phrase ''absent shared ownership or control'' from § 214.2 (h)(8)(ii)(F)(*2*)(*iv*) and (h)(19)(iii)(B)(4) to clarify that an entity need not prove the absence of shared ownership or control when relying on the existence of a formal affiliation agreement to establish that a nonprofit entity is related to or affiliated with an institution of higher education.

In addition, DHS is defining the phrase ''governmental research organization'' in § 214.2(h)(19)(iii)(C) to include state and local government research entities, and not just federal government research entities, whose primary mission is the performance or promotion of basic research and/or applied research. This definition is adopted for cap exemption purposes at 8 CFR 214.2(h)(8)(ii)(F)(*3*).

• *Calculating the maximum H–1B admission period.* In the final rule, DHS is responding to public comment by revising proposed 8 CFR 214.2(h)(13)(iii)(C), which discusses how to calculate the time spent physically outside the United States during the validity of an H–1B petition that will not count against an individual's maximum authorized period of stay in H–1B status. DHS is amending the regulatory text to clarify that there is no temporal limit on recapturing time. The amendment makes clear that such time may be recaptured in a subsequent H–1B petition on behalf of the foreign worker, ''at any time before the alien uses the full period of authorized H–1B admission described in section 214(g)(4) of the Act.'' DHS also is making a technical edit to § 214.2(h)(13)(iii)(C)(*1*) to clarify which form may be used for this provision.

• *Lengthy adjudication delay exemption from section 214(g)(4) of the Act.* In the final rule, DHS is responding to public comment by revising several subsections of proposed 8 CFR 214.2(h)(13)(iii)(D), which governs when a nonimmigrant may be eligible for H–1B status in 1-year increments beyond the 6-year limitation that otherwise applies. DHS is amending the text of proposed 8 CFR 214.2(h)(13)(iii)(D)(*1*) by striking the phrase, ''prior to the 6-year limitation being reached.'' This change clarifies that a qualifying labor certification or Form I–140 petition is not required to be filed 365 days before the 6-year limitation is reached in order for the individual to be eligible for an exemption under section 106(a) of AC21; instead, the labor certification or Form I–140 petition would need to be filed at least 365 days before the day the exemption would take effect. DHS is also making several revisions to simplify and clarify § 214.2(h)(13)(iii)(D)(*5*), which concerns advance filing; § 214.2(h)(13)(iii)(D)(*6*), which defines petitioners who may seek the exemption; § 214.2(h)(13)(iii)(D)(*7*), which describes subsequent exemption approvals after the 7th year; and § 214.2(h)(13)(iii)(D)(*10*), which describes limits on future exemptions from the lengthy adjudication delay.

• *Per country and worldwide limits.* In the final rule, DHS is responding to public comment by revising proposed 8 CFR 214.2(h)(13)(iii)(E), which governs when a nonimmigrant may be eligible for H–1B status in 3-year increments beyond the 6-year limitation that otherwise applies. This provision addresses eligibility for an extension of H–1B status under section 104(c) of AC21. DHS is striking the phrase, ''the unavailability must exist at time of the petition's adjudication'' to reflect longstanding DHS policy. By striking this phrase, DHS is clarifying that if the Visa Bulletin that was in effect on the date the H–1B petition is filed shows that the individual was subject to a per country or worldwide visa limitation, DHS may grant the extension under section 104(c) of AC21, even if the immigrant visa is available when the petition is adjudicated, so long as the beneficiary is otherwise eligible.

• *Retaliatory action claims.* In the final rule, DHS is responding to public comment by amending proposed 8 CFR 214.2(h)(20), which discusses eligibility for extensions of stay in H–1B status or change of status to other nonimmigrant classifications by beneficiaries who faced retaliatory action from their employers. Additionally, DHS is making a minor technical change to this section, correcting ''labor certification application'' to ''labor condition application.''

• *Validity of petition for continued eligibility for adjustment of status.* In the final rule, DHS is responding to public comment by amending proposed 8 CFR 245.25(a), which governs the circumstances in which an individual with a pending application for adjustment of status can move to a job in the same or a similar occupational classification. In particular, revisions are being made to implement DHS's current section 204(j) portability policy and longstanding practice related to the adjudication of qualifying Form I–140 petitions that are not approved at the time the beneficiary's application for adjustment of status has been pending for 180 days or more.

First, in § 245.25(a), DHS is replacing a general reference in the NPRM to a ''USCIS designated form'' with a specific reference to ''Form I–485 Supplement J'' as the form DHS intends to be used for an individual to demonstrate continuing eligibility for adjustment of status based on an existing or new job offer under INA 204(j).

Second, DHS also is clarifying that the Supplement J may be accompanied by ''material and credible documentary evidence, in accordance with form instructions.'' This revision expands the types of evidence that can be submitted in support of Supplement J beyond ''material and credible information provided by another Federal agency, such as information from the Standard Occupational Classification (SOC) system,'' as had been proposed. As a result, DHS is deleting the evidentiary list included in proposed § 245.25(b).

Third, DHS is revising proposed § 245.25(a)(2)(ii) to reaffirm that a qualifying Form I–140 petition must be approved before DHS examines a portability request under INA 204(j). Moreover, DHS is adding § 245.25(a)(2)(ii)(B) to confirm that, unless approval of the petition would be inconsistent with a statutory requirement, a pending qualifying Form I–140 petition may be approved if (1) the petitioner established the ability to pay at the time of filing the petition and (2) all other eligibility criteria are met at the time of filing and until the beneficiary's application for adjustment of status has been pending for 180 days.

Finally, DHS is reorganizing and renumbering § 245.25(a), and making other technical and conforming edits.

- *Concurrently filed EAD applications.* In the final rule, DHS is responding to public comment by amending proposed 8 CFR 274a.13(a) to facilitate USCIS's ability to notify the public of changes in concurrent filing procedures for EAD applications. DHS is adding text indicating that USCIS may announce on its Web site circumstances in which an EAD application may be filed concurrently with a related benefit request that, if granted, would form the basis for eligibility for employment authorization. Under the proposed rule, such announcement was limited to form instructions.
- *Automatic extensions of employment authorization for renewal applicants.* In the final rule, DHS is responding to public comment by amending proposed 8 CFR 274a.13(d) to clarify timeliness and termination rules for the automatic extension of certain EAD renewal applicants. DHS is clarifying that a renewal EAD application filed on the basis of a grant of TPS is timely if filed during the period described in the applicable **Federal Register** notice regarding procedures for renewing TPS. DHS is also making clarifying edits to the termination provision at § 274a.13(d)(3).

In addition to the above changes that were made in response to public comment, DHS is making several technical changes to the regulatory text in this final rule so that DHS regulations better reflect current ACWIA fee amounts and filing procedures:

- *ACWIA fee amount and filing procedures.* DHS is making technical changes to 8 CFR 214.2(h)(19)(i), (ii), (v), (vi) and (vii) to update the amount of the ACWIA fee applicable to certain H–1B petitions in accordance with statutory amendments, as well as procedures for submitting the fee to USCIS, or claiming an exemption from the fee, to conform with current procedures.[5] The statutory fee amount in INA 214(c)(9), 8 U.S.C. 1184(c)(9), was amended by section 1 of Pub. L. 106–311 (Oct. 17, 2000) (changing the fee amount from $500 to $1,000), and the Consolidated Appropriations Act, 2005, Pub. L. 108–447, Division J, Title IV, sec. 422 (L–1 Visa and H–1B Visa Reform Act) (Dec. 8, 2004) (permanently extending the fee and changing the fee amount from $1,000 to a bifurcated amount of $1,500 for employers with more than 25 employees, and half that amount for those with up to 25 employees). DHS is updating its regulations to conform the fee amount to the figure in current INA 214(c)(9). DHS regulations at 8 CFR 103.7(b)(1)(i)(CCC) and form instructions for the Petition for a Nonimmigrant Worker, Form I–129, already reflect these updated fee amounts. The technical changes also reflect the elimination of references to the now obsolete Form I–129W, which has been replaced by the Form I–129 H–1B and H–1B1 Data Collection and Filing Fee Exemption Supplement and which is already being used to make determinations for ACWIA fee exemptions.
- *Additional entities exempt from the ACWIA fee.* DHS is making a technical change to 8 CFR 214.2(h)(19)(iii) to include other entities that are statutorily exempt from the ACWIA fee, and thus to conform the regulation to INA 214(c)(9)(A), 8 U.S.C. 1184(c)(9)(A), as amended by section 1 of Pub. L. 106–311. DHS added a new paragraph (D) to include primary or secondary educational institutions, and a new paragraph (E) to include nonprofit entities that engage in an established curriculum-related clinical training of students registered at an institution of higher education. The Form I–129 and its form instructions already list these entities as fee exempt.

[5] DHS finds that prior notice and comment for these technical changes is unnecessary, as DHS is merely conforming its regulations to the self-implementing statutory amendments. *See* 5 U.S.C. 553(b)(B).

B. Legal Authority

The authority of the Secretary of Homeland Security (Secretary) for these regulatory amendments is found in various sections of the Immigration and Nationality Act (INA), 8 U.S.C. 1101 *et seq.,* ACWIA, AC21, and the Homeland Security Act of 2002 (HSA), Public Law 107–296, 116 Stat. 2135, 6 U.S.C. 101 *et seq.* General authority for issuing the final rule is found in section 103(a) of the INA, 8 U.S.C. 1103(a), which authorizes the Secretary to administer and enforce the immigration and nationality laws, as well as section 102 of the HSA, 6 U.S.C. 112, which vests all of the functions of DHS in the Secretary and authorizes the Secretary to issue regulations. Further authority for the regulatory amendments in the final rule is found in the following sections:

- Section 205 of the INA, 8 U.S.C. 1155, which grants the Secretary broad discretion in determining whether and how to revoke the approval of any Form I–140 petition approved under section 204 of the INA, 8 U.S.C. 1154;
- Section 214 of the INA, 8 U.S.C. 1184, including section 214(a)(1), 8 U.S.C. 1184(a)(1), which authorizes the Secretary to prescribe by regulation the terms and conditions of the admission of nonimmigrants;
- Section 274A(h)(3)(B) of the INA, 8 U.S.C. 1324a(h)(3)(B), which recognizes the Secretary's authority to extend employment authorization to noncitizens in the United States;
- Section 413(a) of ACWIA, which amended section 212(n)(2)(C) of the INA, 8 U.S.C. 1182(n)(2)(C), to authorize the Secretary to provide certain whistleblower protections to H–1B nonimmigrant workers;
- Section 414 of ACWIA, which added section 214(c)(9) of the INA, 8 U.S.C. 1184(c)(9), to authorize the Secretary to impose a fee on certain H–1B petitioners to fund the training and education of U.S. workers;
- Section 103 of AC21, which amended section 214(g) of the INA, 8 U.S.C. 1184(g), to provide: (1) An exemption from the H–1B numerical cap for certain H–1B nonimmigrant workers employed at institutions of higher education, nonprofit entities related to or affiliated with such institutions, and nonprofit research organizations or governmental research organizations; (2) that an H–1B nonimmigrant who ceases to be employed by a cap-exempt employer, and who was not previously counted against the cap, will be subject to the H–1B numerical limitations; and (3) that a worker who has been counted against

the H–1B numerical cap within the 6 years prior to petition approval will not again be counted against the cap unless the individual would be eligible for a new 6-year period of authorized H–1B admission.

- Section 104(c) of AC21, which authorizes the extension of authorized H–1B admission beyond the general 6-year maximum for H–1B nonimmigrant workers who have approved EB–1, EB–2, or EB–3 Form I–140 petitions but are subject to backlogs due to application of certain per-country limitations on immigrant visas;
- Section 105 of AC21, which added what is now section 214(n) of the INA, 8 U.S.C. 1184(n),[6] to allow an H–1B nonimmigrant worker to begin concurrent or new H–1B employment upon the filing of a timely, non-frivolous H–1B petition;
- Sections 106(a) and (b) of AC21, which, as amended, authorize the extension of authorized H–1B admission beyond the general 6-year maximum for H–1B nonimmigrant workers who have been sponsored for permanent residence by their employers and who are subject to certain lengthy adjudication or processing delays;
- Section 106(c) of AC21, which added section 204(j) of the INA to authorize certain beneficiaries of approved EB–1, EB–2, and EB–3 Form I–140 petitions who have filed applications for adjustment of status to change jobs or employers without invalidating their approved petitions; and
- Section 101(b)(1)(F) of the HSA, 6 U.S.C. 111(b)(1)(F), which establishes as a primary mission of DHS the duty to ''ensure that the overall economic security of the United States is not diminished by efforts, activities, and programs aimed at securing the homeland.''

C. Costs and Benefits

Taken together, the amendments in this final rule are intended to reduce unnecessary disruption to businesses and workers caused by immigrant visa backlogs, as described in Section III.C of this preamble. The benefits from these amendments add value to the U.S. economy by retaining high-skilled workers who make important contributions to the U.S. economy, including technological advances and research and development endeavors, which are highly correlated with overall economic growth and job creation.[7] For more information, the public may consult the Regulatory Impact Analysis (RIA), which addresses the short-term and long-term effects of these regulations. The RIA is available in the docket for this rulemaking.

DHS has analyzed potential costs of these regulations and has determined that the changes have direct impacts to individual beneficiaries of employment-based nonimmigrant and immigrant visa petitions in the form of filing costs, consular processing costs, and potential for longer processing times for EAD applications during filing surges, among other costs. Because some of these petitions are filed by sponsoring employers, this rule also has indirect effects on employers in the form of employee replacement costs.

The amendments clarify and amend policies and practices in various employment-based immigrant and nonimmigrant visa programs, with the primary aim of providing additional stability and flexibility to foreign workers and U.S. employers participating in those programs. In part, the final rule clarifies and improves upon longstanding policies adopted in response to the enactment of ACWIA and AC21 to ensure greater consistency across DHS adjudications and provide greater certainty to regulated employers and workers. These changes provide various benefits to U.S. employers and certain foreign workers, including the enhanced ability of such workers to accept promotions or change positions with their employers, as well as change employers or pursue other employment opportunities. These changes also benefit the regulated community by providing instructive rules governing: (1) Extensions of stay for certain H–1B nonimmigrant workers facing long delays in the immigrant visa process; (2) the ability of workers who have been sponsored by their employers for LPR status to change jobs or employers 180 days after they file applications for adjustment of status; (3) the circumstances under which H–1B nonimmigrant workers may begin employment with a new employer; (4) the method for counting time in status as an H–1B nonimmigrant worker toward maximum periods of stay; (5) the entities that are properly considered related to or affiliated with institutions of higher education for purposes of the H–1B program; and (6) the circumstances under which H–1B nonimmigrant workers can claim whistleblower protections. The increased clarity provided by these rules enhances the ability of certain high-skilled workers to take advantage of the job portability and related provisions in AC21 and ACWIA.

The final rule also amends the current regulatory scheme governing certain immigrant and nonimmigrant visa programs to further enhance job portability for certain workers and improve the ability of U.S. businesses to retain highly valued individuals. These benefits are achieved by: (1) Revising the provisions affecting the continued validity of approved Form I–140 petitions, and retention of priority dates of those petitions, for purposes of processing immigrant visas or applications for adjustment of status; (2) establishing a means for certain nonimmigrant workers with approved Form I–140 petitions to directly request separate employment authorization for a limited time when facing compelling circumstances; (3) providing grace periods to certain nonimmigrants to enhance their ability to seek an authorized change of employment; and (4) identifying exceptions to licensing requirements applicable to certain H–1B nonimmigrant workers.

The final rule also amends current regulations governing the processing of applications for employment authorization to provide additional stability to certain employment-authorized individuals in the United States while addressing fraud, national security, and operational concerns. To prevent gaps in employment for such individuals and their employers, the final rule provides for the automatic extension of EADs (and, where necessary, employment authorization) upon the timely filing of a renewal application. To protect against fraud and other abuses, the final rule also eliminates current regulatory provisions that require adjudication of applications for employment authorization in 90 days and that authorize interim EADs when that timeframe is not met.

DHS has prepared a full costs and benefits analysis of the final rule, which can be found in the docket for this

[6] Section 8(a)(3) of the Trafficking Victims Protection Reauthorization Act of 2003, Public Law 108–193, (Dec. 19, 2003), redesignated section 214(m) of the INA, 8 U.S.C. 1184(m), as section 214(n) of the INA, 8 U.S.C. 1184(n).

[7] Hart, David, et al., ''High-tech Immigrant Entrepreneurship in the United States,'' Small Business Administration Office of Advocacy (July 2009), available at: *https://www.sba.gov/sites/default/files/rs349tot_0.pdf. See also* Fairlie, Robert., ''Open for Business: How Immigrants are Driving Small Business Creation in the United States,'' The Partnership for a New American Economy (August 2012), available at: *http://www.renewoureconomy.org/sites/all/themes/pnae/openforbusiness.pdf;* ''Immigrant Small Business Owners a Significant and Growing Part of the Economy,'' Fiscal Policy Institute (June 2012), available at: *http://www.fiscalpolicy.org/immigrant-small-business-owners-FPI-20120614.pdf;* Anderson, Stuart, ''American Made 2.0 How Immigrant Entrepreneurs Continue to Contribute to the U.S. Economy,'' National Venture Capital Association (June 2013), available at: *http://nvca.org/research/stats-studies/.*

rulemaking on *regulations.gov.* The table below provides a summary of the provisions and impacts of this rule.

TABLE 1—SUMMARY OF PROVISIONS AND IMPACTS

Provisions	Purpose	Expected impact of the final rule
Priority Date	Clarifies when a priority date is established for employment-based immigrant visa petitions that do not require a labor certification under INA 203(b).	Quantitative: • Not estimated. Qualitative: • Removes ambiguity and sets consistent priority dates for affected petitioners and beneficiaries.
Priority Date Retention	Explains that workers may retain priority dates and transfer those dates to new and subsequently approved Form I–140 petitions, except when USCIS revokes approval of the petition for: Material error, fraud or willful misrepresentation of a material fact, or revocation or invalidation of the labor certification accompanying the petition.	Quantitative: • Not estimated. Qualitative: • Results in administrative efficiency and predictability by explicitly listing when priority dates are lost as the approval of the petitions that are revoked under these specific grounds cannot be used as a basis for an immigrant visa. • Improves the ability of certain workers to accept promotions, change employers, or pursue other employment opportunities.
Employment-Based Immigrant Visa Petition Portability Under 204(j).	Incorporates statutory portability provisions into regulation.	Quantitative: Petitioners – • Opportunity costs of time to petitioners for 1-year range from $126,598 to $4,636,448. DHS/USCIS— • Neutral because the new supplementary form to the application for adjustment of status to permanent residence will formalize the process for USCIS requests for evidence of compliance with INA 204(j) porting. Qualitative: Applicants/Petitioners— • Replaces, through the Supplement J standardized form, the need for individuals to submit job offer and employment confirmation letters. • Provides stability and job flexibility to certain individuals with approved employment-based immigrant visa petitions. • Implements the clarifications regarding ''same or similar occupational classifications'' through the new Supplement J. • Allows certain foreign workers to advance and progress in their careers. • Potential increased employee replacement costs for employers. DHS/USCIS— • Administrative efficiency. • Standardized and streamlined process.
Employment Authorization for Certain Nonimmigrants Based on Compelling Circumstances.	Provisions allowing certain nonimmigrant principal beneficiaries, and their dependent spouses and children, to apply for employment authorization if the principal is a beneficiary of an approved EB–1, EB–2, or EB–3 immigrant visa petition while waiting for his or her immigrant visa to become available. Applicants must demonstrate compelling circumstances justifying an independent grant of employment authorization.	Quantitative: Total costs over 10-year period to applicants are: • $731.1 million for undiscounted costs. • $649.9 million at a 3% discounted rate. • $565.2 million at a 7% discounted rate. Qualitative: Applicants— • Provides ability for nonimmigrants who have been sponsored for LPR status to change jobs or employers when compelling circumstances arise. • Incentivizes such skilled nonimmigrant workers contributing to the economy to continue seeking LPR status. • Nonimmigrant principal workers who take advantage of the compelling circumstances EAD will lose their current nonimmigrant status and may not be able to adjust to LPR status in the United States. • Consular processing imposes potentially significant costs, risk and uncertainty for individuals and their families as well. Dependents— • Allows dependents to enter labor market earlier and contribute to household income.

TABLE 1—SUMMARY OF PROVISIONS AND IMPACTS—Continued

Provisions	Purpose	Expected impact of the final rule
90-Day Processing Time for Employment Authorization Applications.	Eliminates regulatory requirement for 90-day adjudication timeframe and issuance of interim-EADs. Adds provisions allowing for the automatic extension of EADs for up to 180 days for certain workers filing renewal requests.	Quantitative: • Not estimated. Qualitative: Applicants— • Removing a regulatory timeframe and moving to one governed by processing goals could potentially lead to longer processing times whenever USCIS is faced with higher than expected filing volumes. If such a situation were to occur, this could lead to potential delays in work employment start dates for first-time EAD applicants until approval is obtained. However, USCIS believes such scenarios will be rare and mitigated by the automatic extension provision for renewal applications which will allow the movement of resources in such situations. • Providing the automatic continuing authorization for up to 180 days for certain renewal applicants could lead to less turnover costs for U.S. employers. In addition, the automatic extension provision minimizes the applicants' risk of any gaps in employment authorization. DHS/USCIS— • Streamlines the application and card issuance processes. • Enhances the ability to ensure all national security verification checks are completed. • Reduces duplication efforts. • Reduces opportunities for fraud and better accommodates increased security measures.
Automatic Revocation With Respect to Approved Employment-Based Immigrant Visa Petitions.	Revises regulations so that a petition may remain valid despite withdrawal by the employer or termination of the employer's business after 180 days or more of approval, or 180 days or more after the associated application for adjustment of status has been filed.	Quantitative: • Not estimated. Qualitative: • Beneficiary retains priority date unless the petition is revoked for one of the reasons specified in final 8 CFR 204.5(e)(2). • Affords porting ability under INA 204(j) and extension of H–1B status pursuant to AC21 sections 104(c) and 106(a) and (b), as well as potential eligibility for the new compelling circumstances EAD.
Period of Admission for Certain Nonimmigrant Classifications.	Nonimmigrants in certain high-skilled, nonimmigrant classifications may be granted grace periods of up to 10 days before and after their validity period, and a grace period upon cessation of employment on which the foreign national's classification was based, for up to 60 days or until the end of their authorized validity period, whichever is shorter, during each authorized validity period.	Quantitative: • Not estimated. Qualitative: Nonimmigrant Visa Holders—. • Assists the beneficiary in getting sufficiently settled such that he or she is immediately able to begin working upon the start of the petition validity period. • Provides time necessary to wrap up affairs to depart the country. • Allows the beneficiary to maintain nonimmigrant status when faced with a termination of employment to wrap up affairs, find new employment, or change to a different nonimmigrant classification.
Portability of H–1B Status Calculating the H–1B Admission Period Exemptions Due to Lengthy Adjudication Delays Per Country Limitation Exemptions Employer Debarment and H–1B Whistleblower Provisions.	Updates, improves, and clarifies DHS regulations consistent with policy guidance.	Quantitative: • Not estimated. Qualitative: • Formalizes existing DHS policy in the regulations, which will give the public access to existing policy in one location. • Clarifies current DHS policy that there is no temporal limit on recapturing time.
H–1B Licensing Requirements.	Expands the evidence USCIS will examine in cases where a state allows an individual without licensure to fully practice the relevant occupation under the supervision of licensed senior or supervisory personnel in that occupation to include evidence of compliance with state requirements. Additionally, USCIS is expanding the possible situations in which it may approve an H–1B petition even though the beneficiary cannot obtain a license for certain technical reasons.	Quantitative: • Not estimated. Qualitative: • Provides additional flexibilities in obtaining necessary licensure while still permitting H–1B employment during the pendency of state or local license applications. • Helps to relieve the circular predicament an H–1B beneficiary may encounter.

TABLE 1—SUMMARY OF PROVISIONS AND IMPACTS—Continued

Provisions	Purpose	Expected impact of the final rule
		• May minimally increase time burden for the petitioner to gather information and send it to USCIS. However, DHS anticipates that the benefits to the petitioner and beneficiary exceed the opportunity costs of time. • May increase opportunity costs of time for USCIS adjudicators to evaluate additional evidence in such types of cases. However, DHS does not anticipate that the opportunity costs of time will be so substantial as to warrant additional hiring of staff or cause significant adjudication delays.
Exemptions to the H–1B Numerical Cap, Revised Definition of "Related or Affiliated Nonprofit Entity" in the ACWIA Fee Context, and Expanded Interpretation of "Governmental Research Organizations.".	Codifies definition of "institution of higher education" and adds a broader definition of "related or affiliated nonprofit entity." Also, revises the definition of "related or affiliated nonprofit entity" for purposes of the ACWIA fee to conform it to the new definition of the same term for H–1B numerical cap exemption. Expands the interpretation of "governmental research organizations" for purposes of the ACWIA fee and aligns definitions for H–1B cap and fee exemptions.	Quantitative: • Not estimated. Qualitative: • Clarifies the requirements for a nonprofit entity to establish that it is related to or affiliated with an institution of higher education. • Better reflects current operational realities for institutions of higher education and how they interact with, and sometimes rely on, nonprofit entities. • Clarifies the interpretation of governmental research organizations to include federal, state, and local governmental organizations. • May expand the numbers of petitioners that are cap exempt and thus allow certain employers greater access to H–1B workers.

III. Background

A. ACWIA and AC21

1. The American Competitiveness and Workforce Improvement Act of 1998

ACWIA was enacted on October 21, 1998. Among other things, ACWIA was intended to address shortages of workers in the U.S. high-technology sector. To increase the number of such workers in the United States, section 411 of ACWIA increased the annual numerical cap on H–1B visas from 65,000 to 115,000 in each of fiscal years (FY) 1999 and 2000, and to 107,500 in FY 2001.[8] *See* section 411 of ACWIA (amending INA 214(g)(1), codified at 8 U.S.C. 1184(g)(1)). The congressional statements accompanying ACWIA recognized that the continued competitiveness of the U.S. high-technology sector is ''crucial for [U.S.] economic well-being as a nation, and for increased economic opportunity for American workers.'' *See* 144 Cong. Rec. S12,741, S12,749 (daily ed. Oct. 21, 1998) (statement of Sen. Spencer Abraham); *see also id.* (''This issue is not only about shortages, it is about opportunities for innovation and expansion, since people with valuable skills, whatever their national origin, will always benefit our nation by creating more jobs for everyone.'') [9]

ACWIA also included several measures intended to improve protections for U.S. and H–1B nonimmigrant workers. Section 413 of the ACWIA provided enhanced penalties for employer violations of Labor Condition Application (LCA) obligations as well as willful misrepresentations by employers in LCAs. *See* ACWIA 413 (creating INA 212(n)(2)(C), codified at 8 U.S.C. 1182(n)(2)(C)). Section 413 of ACWIA also made it a violation for an H–1B employer to retaliate against an employee for providing information to the employer or other persons, or for cooperating in an investigation, related to an employer's violation of its LCA attestations and obligations. Employers are prohibited from taking retaliatory action in such situations, including any action ''to intimidate, threaten, restrain, coerce, blacklist, discharge, or in any other manner discriminate'' against an employee for ''disclos[ing] information to the employer, or to any other person, that the employee reasonably believes evidences [an LCA] violation, any rule or regulation pertaining to the statutory LCA attestation requirements, or for cooperating, or attempting to cooperate, in an investigation or proceeding pertaining to the employer's LCA compliance.'' *See* INA 212(n)(2)(C)(iv), 8 U.S.C. 1182(n)(2)(C)(iv). Section 413 further required the development of a process to enable H–1B nonimmigrant workers who file complaints with DOL regarding illegal retaliation, and are otherwise eligible to remain and work in the United States, to seek other appropriate employment in the United States. *See* INA 212(n)(2)(C)(v), 8 U.S.C. 1182(n)(2)(C)(v).

Section 414 of ACWIA imposed a temporary fee on certain H–1B employers to fund, among other things, job training of U.S. workers and scholarships in the science, technology, engineering, and mathematics (STEM) fields. *See* ACWIA 414 (creating INA 214(c)(9), codified at 8 U.S.C. 1184(c)(9)). Although initially scheduled to sunset, the ACWIA fee was eventually made permanent by the H–1B Visa Reform Act of 2004, enacted as part of the Consolidated Appropriations Act, 2005, Public Law 108–447, div. J, tit. IV. That later enactment also established the current fee amounts of $1,500 per qualifying petition, or $750 for employers with no more than 25 full-time equivalent employees employed in the United States (including employees employed by any affiliate or subsidiary of such employer). Congress in the interim had amended section 214(c)(9)(A) of the INA, 8 U.S.C. 1184(c)(9)(A), by specifying additional

[8] Section 102(a) of AC21 further amended INA 214(g)(1) by increasing the annual numerical cap on H–1B visas to 195,000 for each of the fiscal years 2001, 2002, 2003. In fiscal year 2004 the annual H–1B numerical cap reverted to 65,000.

[9] Senator Abraham drafted and sponsored the original Senate bill for ACWIA, then titled the American Competitiveness Act, S. 1723, 105th Cong. (1998), which passed the full Senate by a 78–20 margin on May 18, 1998. 144 Cong. Rec. as S12,748–49 (daily ed. Oct. 21, 1998). He negotiated with the House of Representatives on a compromise ACWIA bill and was deputized to negotiate in talks between Congress and the White House to finalize the bill.

employers that are exempt from the ACWIA fee. *See* Act of Oct. 17, 2010, Public Law 106–311. Exempt employers include primary and secondary education institutions, certain institutions of higher education and related or affiliated nonprofit entities, nonprofit entities engaged in curriculum-related clinical training, and nonprofit research organizations or governmental research organizations. *See* INA 214(c)(9)(A), 8 U.S.C. 1184(c)(9)(A).

2. The American Competitiveness in the Twenty-First Century Act of 2000

AC21 was enacted on October 17, 2000. It made numerous changes to the INA designed to improve the U.S. economy in the short and long term. First, AC21 sought to improve economic growth and job creation by immediately increasing U.S. access to high-skilled workers. *See* S. Rep. No. 260, at 10 (''[A]rtificially limiting companies' ability to hire skilled foreign professionals will stymie our country's economic growth and thereby partially atrophy its creation of new jobs . . . American workers' interests are advanced, rather than impeded, by raising the H–1B cap''). Second, AC21 sought to improve the education and training of U.S. workers in high-skilled sectors, and thereby produce a U.S. workforce better equipped to fill the need in such sectors, through the funding of scholarships and high-skilled training programs. *See* section 111 of AC21. As noted by the accompanying Senate Report, foreign-born high-skilled individuals have played an important role in U.S. economic prosperity and the competitiveness of U.S. companies in numerous fields. *Id.* AC21 sought to provide such benefits by improving both the employment-based immigrant visa process and the H–1B specialty occupation worker program.

i. AC21 Provisions Relating to Employment-Based Immigrant Visas

AC21 contained several provisions designed to improve access to employment-based immigrant visas for certain workers. Section 104 of AC21, for example, sought to ameliorate the impact of the ''per-country limitations,'' which generally limit the number of immigrant visas that may be issued to the nationals of any one country to no more than 7 percent of the total number of immigrant visas. *See* INA 202(a)(2), 8 U.S.C. 1152(a)(2). Sections 104(a) and (b) of AC21 amended the INA to effectively waive application of the per-country limitations when such application would result in immigrant visas going unused in any quarter of the fiscal year. *See* AC21 104(a) and (b) (amending INA 202(a)(5), codified at 8 U.S.C. 1152(a)(5)); *see also* S. Rep. No. 260, 106th Cong., 2nd Sess. at 2. This provision recognized ''the discriminatory effects of [the per-country limitations] on nationals from certain Asian Pacific nations,'' specifically Chinese and Indian nationals, which ''prevent[ed] an employer from hiring or sponsoring someone permanently simply because he or she is Chinese or Indian, even though the individual meets all other legal criteria.'' *See* S. Rep. No. 260, at 22.

Section 104(c) of AC21 was designed to further ameliorate the impact of the per-country limitations on H–1B nonimmigrant workers who are the beneficiaries of approved EB–1, EB–2, or EB–3 Form I–140 petitions. Specifically, section 104(c) of AC21 authorized the extension of H–1B status beyond the statutory 6-year maximum for such individuals if immigrant visas are not immediately available to them because the relevant preference category is already over-subscribed for that foreign national's country of birth. *See* AC21 104(c). In support of this provision, Congress noted that ''these immigrants would otherwise be forced to return home at the conclusion of their allotted time in H–1B status, disrupting projects and American workers.'' *See* S. Rep. No. 260, at 22. Section 104(c) ''enables these foreign nationals to remain in H–1B status until they are able to receive an immigrant visa and adjust their status within the United States, thus limiting the disruption to American businesses.'' *Id.*

AC21 also sought to more generally ameliorate the impact of the lack of employment-based immigrant visas on the high-skilled beneficiaries of approved Form I–140 petitions. Sections 106(a) and (b) of AC21, as amended by section 11030A of the 21st Century Department of Justice Appropriations Authorization Act, Public Law 107–273 (2002), authorized the extension of H–1B status beyond the statutory 6-year maximum for H–1B nonimmigrant workers who are being sponsored for LPR status by U.S. employers and are subject to lengthy adjudication or processing delays. Specifically, these provisions exempted H–1B nonimmigrant workers from the 6-year limitation on H–1B status contained in INA 214(g)(4), if 365 days or more have elapsed since the filing of a labor certification application (if such certification is required under INA 212(a)(5), 8 U.S.C. 1182(a)(5)), or a Form I–140 petition under INA 203(b), 8 U.S.C. 1153(b). These provisions were intended to allow such high-skilled individuals to remain in the United States as H–1B nonimmigrant workers, rather than being forced to leave the country and disrupt their employers due to a long-pending labor certification application or Form I–140 petition. *See* S. Rep. No. 260, at 23.

Finally, to provide stability and flexibility to beneficiaries of approved Form I–140 petitions subject to immigrant visa backlogs and processing delays, AC21 also provided certain workers the improved ability to change jobs or employers without losing their positions in the immigrant visa queue. Specifically, section 106(c) of AC21 provides that certain Form I–140 petitions filed under the EB–1, EB–2, and EB–3 preference categories will remain valid with respect to a new qualifying job offer if the beneficiary changes jobs or employers, provided an application for adjustment of status has been filed and such application has been pending for 180 days or more. *See* AC21 106(c) (creating INA 204(j)). The new job offer must be in the same or a similar occupational classification as the job for which the original Form I–140 petition was filed. *Id.*

ii. AC21 Provisions Seeking To Improve the H–1B Nonimmigrant Worker Classification

As noted above, one of the principal purposes for the enactment of AC21 was to improve the country's access to high-skilled workers. AC21 therefore contains several additional provisions intended to expand and strengthen the H–1B program.

a. Exemptions From the H–1B Numerical Cap

Section 103 of AC21 amended the INA to create an exemption from the H–1B numerical cap for those H–1B nonimmigrant workers who are employed or offered employment at an institution of higher education, a nonprofit entity related or affiliated to such an institution, or a nonprofit research organization or governmental research organization. *See* INA 214(g)(5)(A) and (B); 8 U.S.C. 1184(g)(5)(A) and (B). Congress deemed such employment advantageous to the United States, based on the belief that increasing the number of high-skilled foreign nationals working at U.S. institutions of higher education would increase the number of Americans who will be ready to fill specialty occupation positions upon completion of their education. *See* S. Rep. No. 260, at 21–22. Congress reasoned that ''by virtue of what they are doing, people working in universities are necessarily immediately contributing to educating Americans.'' *Id.* at 21. Congress also recognized that U.S. institutions of higher education are on a different hiring cycle from other U.S. employers, and in years of high H–1B demand, these institutions would be unable to hire cap-subject H–1B nonimmigrant workers. *Id.* at 22.

For purposes of this H–1B numerical cap exemption, the term ''institution of higher education'' is given the same meaning as that set forth in section 101(a) of the Higher Education Act of 1965, Public Law 89–329, 79 Stat. 1224 (1965), as amended (codified at 20 U.S.C. 1001(a) (''Higher Education Act'')).[10] *See* INA 214(g)(5)(A), 8 U.S.C. 1184(g)(5)(A). Due to the lack of statutory definitions, DHS defined the terms ''related or affiliated nonprofit entity,'' and ''nonprofit research organization or governmental research organization'' at 8 CFR 214.2(h)(19)(iii)(B) and (C), respectively, and adopted these definitions as a matter of interpretation in the cap exemption context.[11]

b. Application of the H–1B Numerical Cap to Persons Previously Counted

Section 103 of AC21 also amended the INA to ensure that H–1B nonimmigrant workers can change jobs or employers without again being counted against the H–1B cap. Specifically, section 103 provides that an individual who has been counted against the H–1B numerical cap within the 6 years prior to petition approval shall not be counted against the cap unless that individual would be eligible for a new 6-year period of authorized H–1B admission. *See* INA 214(g)(7), 8 U.S.C. 1184(g)(7). In addition, an individual previously in the United States in H–1B nonimmigrant status is eligible for a full 6 years of authorized admission as an H–1B nonimmigrant after residing and being physically present outside the United States for the immediate prior year. *Id.*

Section 103 of AC21 also amended the INA to address cases in which an H–1B nonimmigrant worker seeks to change employment from a cap-exempt entity to a ''cap-subject'' entity. Section 103 provides that once employment ceases with respect to a cap-exempt entity, the H–1B nonimmigrant worker will be subject to the cap if not previously counted and no other exemptions from the cap apply. *See* INA 214(g)(6), 8 U.S.C. 1184(g)(6).

c. H–1B Portability

Section 105 of AC21 further improved the H–1B program by increasing job portability for H–1B nonimmigrant workers. Specifically, section 105 allows an H–1B nonimmigrant worker to begin concurrent or new H–1B employment upon the filing of a timely, nonfrivolous H–1B petition. *See* INA 214(n), 8 U.S.C. 1184(n). The H–1B nonimmigrant worker must have been lawfully admitted to the United States, must not have worked without authorization after the lawful admission, and must be in a period of stay authorized by the Secretary.[12] Employment authorization based on the pending petition continues until adjudication. *See* INA 214(n)(1), 8 U.S.C. 1184(n)(1). If the H–1B petition is denied, the employment authorization provided under this provision ceases. *Id.* Congress created H–1B portability to ''allow an H–1B visa holder to change employers at the time a new employer files the initial paperwork, rather than having to wait for the new H–1B petition to be approved. This responds to concerns raised about the potential for exploitation of H–1B visa holders as a result of a specific U.S. employer's control over the employee's legal status.'' *See* S. Rep. No. 260, at 22–23.

B. Processing Applications for Employment Authorization Documents

The Secretary of Homeland Security has broad authority to extend employment authorization to noncitizens in the United States. *See, e.g.,* INA sections 103(a) and 274A(h)(3)(B), 8 U.S.C. 1103(a) and 1324a(h)(3)(B). DHS regulations at 8 CFR 274a.12(a), (b), and (c) describe three broad categories of foreign nationals authorized to work in the United States. Individuals in the first class, described at 8 CFR 274a.12(a), are authorized to work in the United States incident to their immigration status, without restriction as to the location of their employment or the type of employment they may accept. In many cases, their immigration status and attendant employment authorization is evidenced by the Arrival-Departure Record (Form I–94). Those individuals seeking to obtain an EAD that contains not only evidence of employment authorization, but also a photograph, typically must file a separate application with USCIS. *See* 8 CFR 274a.13(a).

Individuals in the second class, described at 8 CFR 274a.12(b), are employment authorized incident to their nonimmigrant status, but each individual's employment authorization is valid only with a specific employer. Individuals in this second group do not file separate requests for evidence of employment authorization and are not generally issued EADs. These individuals instead obtain a Form I–94 indicating their nonimmigrant status and attendant employment authorization.

Individuals in the third class, described at 8 CFR 274a.12(c), are required to apply for employment authorization and may begin working only if USCIS approves their application. This employment authorization is subject to the restrictions described in the regulations for the specific employment eligibility category. Generally, the approval of an EAD application by an individual described in 8 CFR 274a.12(c) is within the discretion of USCIS. There is no right to appeal the denial of an EAD application. *See* 8 CFR 274a.13(c).

Individuals requesting an EAD must file Form I–765 with USCIS in accordance with the form instructions. *See* 8 CFR 274a.13. Under current regulations, if USCIS does not adjudicate the Form I–765 within 90 days from the date USCIS receives the application, the applicant will be granted an interim document evidencing employment authorization

[10] Section 101(a) of the Higher Education Act of 1965, as amended, defines ''institution of higher education'' as an educational institution in any state that:

(1) admits as regular students only persons having a certificate of graduation from a school providing secondary education, or the recognized equivalent of such a certificate, or persons who meet the requirements of [20 U.S.C. 1091(d)];

(2) is legally authorized within such state to provide a program of education beyond secondary education;

(3) provides an educational program for which the institution awards a bachelor's degree or provides not less than a 2-year program that is acceptable for full credit toward such a degree, or awards a degree that is acceptable for admission to a graduate or professional degree program, subject to review and approval by the Secretary [of Education];

(4) is a public or other nonprofit institution; and

(5) is accredited by a nationally recognized accrediting agency or association, or if not so accredited, is an institution that has been granted preaccreditation status by such an agency or association that has been recognized by the Secretary [of Education] for the granting of preaccreditation status, and the Secretary [of Education] has determined that there is satisfactory assurance that the institution will meet the accreditation standards of such an agency or association within a reasonable time.

[11] *See* USCIS Memorandum from Michael Aytes, ''Guidance Regarding Eligibility for Exemption from the H–1B Cap Based on § 103 of the American Competitiveness in the Twenty-First Century Act of 2000 (AC21) (Public Law 106–313)'' (June 6, 2006) (''Aytes Memo June 2006'') at 2–4.

[12] *See* USCIS Memorandum from Donald Neufeld, ''Consolidation of Guidance Concerning Unlawful Presence for Purposes of Sections 212(a)(9)(B)(i) and 212(a)(9)(C)(i)(I) of the Act'' (May 6, 2009) (''Neufeld May 2009 Memo'') (describing various ''periods of authorized stay''), available at *https://www.uscis.gov/sites/default/files/USCIS/Laws/Memoranda/Static_Files_Memoranda/2009/revision_redesign_AFM.PDF.*

with a validity period not to exceed 240 days. *See* 8 CFR 274a.13(d).

C. The Increasing Challenges Caused by Immigrant Visa Backlogs

The final rule addresses in part some of the challenges that flow from the statutory limits on immigrant visas, consistent with existing DHS authorities. The number of employment-based immigrant visas statutorily allocated per year has remained unchanged since the passage of the Immigration Act of 1990. In the intervening 25 years, the country's economy has expanded dramatically. The size of the U.S. economy, as measured by U.S. gross domestic product (GDP), increased by about 83 percent since 1990, rising from $8.955 trillion in 1990 to $16.397 trillion in 2015.[13] Over the same period, GDP per capita increased by just over 42 percent, rising from $35,794 in 1990 to $50,970 in 2015.[14] The number of entities doing business in the United States increased by at least 24 percent during the same period.[15] Over the same period, employer demand for immigrant visas has increasingly outpaced supply in some categories and for some nationalities, resulting in growing waits for some sponsored employees to obtain their LPR status. Such delays have resulted in substantial inequalities and other hardships flowing from limits on the ability of sponsored workers to change employment to enhance their skills, to accept promotions, or to otherwise change their positions. Since AC21 was enacted in October of 2000, certain workers seeking LPR status in the United States have faced increasing challenges as a consequence of the escalating wait times for immigrant visas. Numerical limitations in the various employment-based preference categories, combined with the per-country limitations that further reduce visa availability to certain workers, has produced significant oversubscription in the EB–2 and EB–3 categories, particularly for individuals born in India and China. This oversubscription results in substantial delays in obtaining LPR status for many workers, especially for workers from oversubscribed countries who can face delays that extend for more than a decade.[16]

AC21 was enacted as a response to the long and growing delays for many beneficiaries of Form I–140 petitions, to ameliorate the detrimental impact of such delays on the U.S. economy, U.S. businesses, and affected workers themselves. Those delays, however, have grown substantially longer than those that existed at the time AC21 was passed. Although DHS has worked diligently to improve processing times during the intervening period, visa backlogs due to statutory numerical limits for many individuals seeking EB–2 and EB–3 classification have grown significantly for certain individuals.[17] DHS recognizes the resulting realities confronting individuals seeking employment-based permanent residence who, due to immigrant visa unavailability, are required to wait many years for visas to become available before they can file applications for adjustment of status or seek immigrant visas abroad and become LPRs. In many instances, these individuals are in the United States in a nonimmigrant, employer-specific temporary worker category (*e.g.,* H–1B or L–1 visa classification) and may be unable to accept promotions or otherwise change jobs or employers without abandoning their existing efforts—including great investments of time and money—to become permanent residents. Their employment opportunities may be limited to their original job duties with the U.S. employer that sponsored their temporary admission to the United States, despite the fact that they may have gained professional experience that would otherwise allow them to progress substantially in their careers.

Many individuals subject to the immigrant visa backlogs confront the choice between remaining employed in a specific job under the same terms and conditions originally offered to them, or abandoning the pursuit of an immigrant visa altogether if they do not have another Form I–140 petition filed on their behalf. When such a worker changes employers or jobs—including a change to an identical job with a different employer or to a new but related job for the same employer—the worker is typically subject to uncertainty as to whether USCIS will approve his or her application for LPR status based on the change. Moreover, these individuals must consider whether such changes would involve expensive additional immigration processes, greatly discouraging them. Indeed, under current regulations, some changes in employment could result in the loss of nonimmigrant status, loss of the ability to change to another nonimmigrant status, loss of an approved immigrant visa, loss of the ability to obtain an immigrant visa or adjust to LPR status, or the need for the affected worker and his or her family to immediately depart the United States. As a result, these employees often suffer through many years of effective career stagnation, as they are largely dependent on current employers for immigration status and are substantially restricted in their ability to change employers or even accept promotions from, or make lateral movements within, their current employers.

Simply put, many workers in the immigrant visa process are not free to consider all available employment and career development opportunities. This effectively prevents U.S. employers from treating them like the high-potential individuals the employer hired them to be, thus restricting productivity and the promise they offer to our nation's economy. The lack of predictability and flexibility for such workers may also prevent them from otherwise investing in and contributing to the local, regional, and national economy or fully integrating into American society.

[13] U.S. Department of Commerce, Bureau of Economic Analysis, Table 1.1.6 Real Gross Domestic Product, Chained (2009) Dollars, *https://www.bea.gov/iTable/index_nipa.cfm.*

[14] U.S. Department of Commerce, Bureau of Economic Analysis, Table 7.1 Selected Per Capita Product and Income Series and Chained (2009) Dollars, *https://www.bea.gov/iTable/index_nipa.cfm.*

[15] *Compare* U.S. Census data collected in 1992 identifying over 4.61 million firms doing business in the United States, available at *http://www.census.gov/prod/www/economic_census.html,* with U.S. Census data collected in 2012 identifying over 5.72 million firms doing business, available at *http://www.census.gov/econ/susb/.*

[16] According to the Visa Bulletin for November 2016, immigrant visas are currently issuable to all persons qualifying under the EB–1 preference category. The EB–2 category Application Final Action date cutoff is current for all countries except for China and India; the cutoff date for China is July 15, 2012 and the cutoff date for India is November 1, 2007, meaning nationals of these countries may have to wait 4 to 9 years for a visa to be authorized for issuance. The Application Final Action cut-off dates for nationals of most countries under the EB–3 preference category are set at July 1, 2016 (a wait of less than five months). But for EB–3 Indian nationals, the Application Final Action cutoff dates are set at March 8, 2005 (a wait of more than 10 years) and EB–3 cutoff dates for Chinese nationals are set at April 15, 2013 (a wait of more than 3 years). *See* Visa Bulletin for November 2016, *https://travel.state.gov/content/visas/en/law-and-policy/bulletin/2017/visa-bulletin-for-november-2016.html.*

[17] According to the Visa Bulletin for October 2000 (the month AC21 was enacted), visa availability was current for all persons qualifying under the EB–1 preference category. The EB–2 category was current for all countries except for China and India. The EB–2 cut-off dates were March 8, 1999 for persons chargeable to China (a wait of 19 months) and November 1, 1999 for persons chargeable to India (a wait of 11 months). The EB–3 category likewise was current for all countries except for China and India, with a cut-off date of March 15, 1998 for individuals charged to China (a wait of 31 months) and February 8, 1997 for individuals charged to India (a wait of 44 months). *See http://dosfan.lib.uic.edu/ERC/visa_bulletin/2000–10bulletin.html.*

IV. Discussion of Comments

A. Overview of the Comments

During the 60-day public comment period, DHS received 27,979 comments offering a wide variety of opinions and recommendations on the NPRM and related forms. A range of entities and individuals submitted comments, including nonimmigrants seeking to become LPRs, U.S. workers, schools and universities, employers, labor organizations, professional organizations, advocacy groups, law firms and attorneys, and nonprofit organizations.

Many commenters expressed support for the rulemaking, in whole or in part. Supporters of the proposed rule agreed that it would help the United States attract and retain high-skilled foreign workers and would provide some relief to nonimmigrants and their families during their transition to LPR status. In particular, these commenters approved of the proposals to retain priority dates for the beneficiaries of immigrant visa petitions; provide grace periods of up to 60 days for certain high-skilled nonimmigrant workers to enhance job portability; extend grace periods of up to 10 days for certain high-skilled nonimmigrant workers so that they may more easily change or extend their nonimmigrant status; and codify guidance on counting previously exempt workers under nonimmigrant visa caps, as well as policies determining admission periods for such workers. Some commenters who generally supported the proposals also suggested changes to certain provisions.

Other commenters opposed the proposed rule for different reasons. Some commenters who opposed the proposed rule questioned DHS's legal authority to promulgate some of the regulatory changes contained therein. A substantial number of other commenters, however, objected to the proposed rule because they believed many proposed changes should and could be more expansive. Such commenters, for example, believed that the rule should have substantially broadened the criteria for obtaining independent employment authorization for beneficiaries of immigrant visa petitions, rather than limiting such a benefit to cases involving compelling circumstances. Many commenters who opposed the rule were intending immigrants who described their personal experiences to illustrate how they would have been helped by the additional changes they requested. Some commenters argued that the proposed rule did nothing more than codify existing policies and that DHS could have gone further under existing statutory authorities.

A number of other comments were opposed to the proposed rule based on generalized concerns about its impact on the U.S. economy. Some commenters were concerned that this rule may facilitate the displacement of American workers in certain sectors of the U.S. economy, such as in the information technology sector. Other commenters were concerned that the rule could facilitate the displacement of U.S. workers and a decrease in wages for U.S. citizen workers. One commenter opposing the proposed rule advocated for developing U.S. citizens' employment skills to enable them to have more employment opportunities.

Others submitted comments related to the potential for fraud or to perceived irregularities in the rulemaking process. Commenters, for example, expressed concern that this rule could increase the potential for fraud and abuse, particularly by employers seeking to take advantage of the immigration system. Commenters also expressed concern that the substance of the rulemaking was unduly affected by a former lobbyist. Other commenters were concerned that provisions in the proposed rule would provide greater financial benefits to immigration attorneys and to USCIS than to the foreign workers who are the subject of the rule.

Finally, DHS received a number of comments that were beyond the scope of this rulemaking. For example, several commenters asked DHS to include provisions creating new immigration benefits for inventors, researchers, and founders of start-up enterprises, a proposal that was not raised in the NPRM and some of which is the subject of a different rulemaking.[18] Other commenters focused on the U.S. political climate without addressing the proposed rule. Similarly, some submitted comments on the merits of other commenters' views without providing their own views on the proposal itself.

DHS has reviewed all of the public comments received in response to the proposed rule and thanks the public for its extensive input during this process. In the discussion below, DHS summarizes and responds to all relevant comments that were timely submitted on the NPRM, which are grouped by subject area.

[18] *See* International Entrepreneur Rule, 81 FR 60129 (Aug. 31, 2016).

B. Authority of DHS To Administer and Enforce Immigration Laws

1. Description of DHS's Legal Authority

As discussed at length in section II.B. above, the authority of the Secretary for these regulatory amendments is found in various sections of the INA, ACWIA, AC21, and the HSA. General authority for issuing the final rule is found in section 103(a) of the INA, 8 U.S.C. 1103(a), which authorizes the Secretary to administer and enforce the immigration and nationality laws, as well as section 102 of the HSA, 6 U.S.C. 112, which vests all of the functions of DHS in the Secretary and authorizes the Secretary to issue regulations. Other sections of the INA, together with ACWIA and AC21, provide specific statutory authority for multiple provisions of the final rule as detailed in section III.A of this preamble. DHS notes that, to the extent some of the commenters' requests for changes require action from Congress or other Departments, the Department lacks the authority to adopt these changes. DHS believes that this final rule improves upon existing policies and provides additional flexibilities consistent with DHS's existing authority to administer the U.S. immigration system under the relevant statutes passed by Congress.

2. Public Comments and Responses

Comment. Many commenters opposed the rule based on what they perceived to be insufficient legal authority supporting the proposed changes. Many of these commenters asserted that the provisions in this rule were tantamount to new immigration legislation and that the rule thus effected an ''unconstitutional'' circumvention of Congress' role to establish the immigration laws. A few commenters claimed that only certain discrete proposals included in this rule are beyond DHS's legal authority.

Response. DHS maintains that each proposed revision in this rule is fully within DHS's statutory authority. Section 103(a) of the INA, 8 U.S.C. 1103(a), expressly vests the Secretary with broad authority to administer and enforce the immigration laws, including by establishing regulations or prescribing such forms as necessary to carry out this authority. Additionally, section 102 of the HSA 6 U.S.C. 112, vests all of the functions of DHS in the Secretary and authorizes the Secretary to issue regulations.

This rulemaking reflects the lawful exercise of statutory authority delegated by Congress. In the preamble to this final rule, DHS has identified the statutory authorities for all of the revisions being made, including various provisions of the INA, the HSA, ACWIA and AC21. Through this rulemaking, DHS is exercising its authority to promulgate regulations as necessary to properly implement and administer existing immigration laws. As such, this final rule will improve processes for U.S. employers seeking to sponsor and retain immigrant and nonimmigrant workers; provide greater stability and job flexibility for such workers; and increase transparency and consistency in the application of DHS policy related to affected classifications.

Comment. Several commenters questioned the general basis for various immigration actions taken by the Executive Branch related to businesses and high-skilled workers. These commenters believed that the Executive Branch has exceeded its role by taking it upon itself to ''achieve something that [C]ongress has failed to do.''

Response. As noted above, DHS has the requisite legal authority to issue this final rule. In enacting the INA, ACWIA, AC21, and the HSA, Congress accorded DHS the responsibility for implementing and administering these laws. Consistent with that authority, DHS is promulgating this final rule to further define and clarify existing statutory requirements. With this final rule, DHS is also responding to a specific directive from the Secretary to strengthen and improve various employment-based visa programs within the Department's existing legal authority,[19] including to ''consider amending its regulations to ensure that approved, longstanding visa petitions remain valid in certain cases where the beneficiaries seek to change jobs or employers.'' [20] These executive actions do not impinge on Congress's legislative role.

Comment. Commenters stated that this rule would effectively increase the number of immigrant visas issued in excess of their respective annual caps. These commenters also expressed concern that the rule would increase the number of H–1B workers who would be cap-exempt. Specifically, commenters stated that this rule circumvents overall caps on authorized visas through a two-step process: (1) Authorizing an unlimited number of individuals to seek permanent residence in excess of the cap on immigrant visas; and (2) giving these individuals (and their spouses and children) employment authorization while they wait for their immigrant visas to become available. For example, one commenter stated that the rule would ''nullify[ ] Americans' statutory protections against job-threatening flows of excess foreign labor.'' Other commenters believed that the perceived increase in the number of visas that would be issued under this rule reflects the Administration's favoring of skilled immigrant workers over natural-born U.S. citizens. One commenter claimed that the proposal to allow an H–1B worker whose employer has applied for LPR status on the worker's behalf to stay and work in the United States beyond the 6-year limit violates the Constitution, including by ''waiv[ing] federal law without action of the Congress of the United States.'' Additionally, one commenter expressed concern that the proposed changes would allow foreign workers in the United States on expired H–1B visas to extend their stay indefinitely by applying for employment-based LPR status. The commenter stated that this was an impermissible change because Congress is responsible for setting the annual limits on H–1B visas.

Response. DHS is not modifying immigrant or nonimmigrant numerical limits set forth in the INA and is not changing the classes of foreign workers who qualify for employment-based immigrant or nonimmigrant visas. Contrary to commenters' statements, the provisions contained in this rule reflect a clear congressional mandate with respect to H–1B beneficiaries who are pursuing LPR status, but face long waits due to backlogs resulting from the statutory limits on immigrant visas or certain other adjudication or processing delays. Through the enactment of AC21, Congress authorized these individuals to remain in the United States beyond their initial 6-year period of authorized admission. *See* AC21 104(c) and 106(a) and (b).

Finally, with regard to the concerns about this rule increasing the number of H–1B visas that are exempt from the annual limit, DHS notes that, for the most part, this regulation codifies longstanding policy and practice implementing the relevant provisions of AC21. This rule generally codifies already existing policy interpretations identifying which employers are cap-exempt under the H–1B program and DHS also includes revised definitions of ''related or affiliated nonprofit entity'' and ''governmental research organizations'' to clarify certain terms and to avoid confusion. *See* IV, part J. In particular, although the revised definitions may expand the number of petitioners that are cap-exempt, DHS believes that the changes improve current policy by better reflecting current operational realities for institutions of higher education and governmental research organizations, and are consistent with the exemption enacted by Congress. In addition, DHS added a provision that will protect against indefinite H–1B extensions under section 106(a) of AC21. *See* 8 CFR 214.2(h)(13)(iii)(D)(*10*).

Additionally, DHS is not providing compelling circumstances employment authorization to an unlimited number of foreign workers and their dependents while they wait for immigrant visas to become available. Rather, DHS is allowing certain high-skilled nonimmigrant workers and their dependents, who are all on the path to LPR status, to apply for independent and temporary employment authorization if they meet certain criteria, including demonstrating that the workers need such employment authorization due to compelling circumstances. While some of the dependents of these individuals may not have been part of the workforce at the time they receive such employment authorization, they would eventually become part of the workforce even without this separate employment authorization as they are already on the path to permanent residence. *See* Section IV, part F of this preamble for a discussion of compelling circumstances employment authorization.

C. Immigration Fraud and National Security Concerns

1. Description of Final Rule and Changes From the NPRM

DHS's core responsibilities include enhancing homeland security and preventing terrorism, enforcing and administering the immigration laws, and ensuring the integrity of the immigration system.[21] When drafting this rule, DHS carefully considered the impact of the proposed regulatory provisions on the safety and security of our nation and the integrity of the immigration system. DHS believes that the regulations as proposed appropriately address these concerns and further believes that this final rule will not compromise its vigilance.

2. Public Comments and Responses

Comment. Several commenters raised concerns about terrorism stemming from foreign nationals in various immigration statuses, and the adequacy of

[19] *See* Memo from Jeh Charles Johnson, Secretary of Homeland Security, ''Policies Supporting U.S. High-Skilled Business and Workers'' (Nov. 20, 2014)(Secretary Johnson Nov. 20, 2014 memo), available at *http://www.dhs.gov/sites/default/files/publications/14_1120_memo_business_actions.pdf.*

[20] *Id.*

[21] *See https://www.dhs.gov/our-mission.*

background checks for those seeking to acquire immigration status.

Response. DHS takes its core mission to safeguard the homeland extremely seriously, and it has a number of mechanisms in place to detect fraud and security threats. Individuals requesting immigration benefits from USCIS are subject to a variety of background and security checks, which vary depending on the benefit. USCIS created the Fraud Detection and National Security Directorate (FDNS) in part to investigate whether individuals or organizations filing for immigration benefits pose a threat to national security, public safety, or the integrity of the immigration system. FDNS officers resolve background check information and other concerns that surface during the processing of immigration benefit applications and petitions. Resolution of specific questions related to an application or petition often requires communication with law enforcement or intelligence agencies to make sure that the information pertains to the applicant or petitioner and to determine whether the information would have an impact on his or her eligibility for the benefit. FDNS officers also check various databases and public information, as well as conduct other administrative inquiries, including pre- and post-adjudication site visits, to verify information provided on, and in support of, applications and petitions. FDNS uses the Fraud Detection and National Security Data System (FDNS–DS) to identify fraud and track potential patterns. In addition, FDNS routinely works with U.S. Immigration and Customs Enforcement (ICE), U.S. Customs and Border Protection (CBP), and other law enforcement and intelligence agencies, consistent with all relevant policies on information sharing and referrals.[22]

Comment. DHS received several comments concerning alleged fraud in the EB–1, H–1B, and L–1 visa programs, including falsification of worker qualifications and other misuses. These commenters requested that additional measures be taken to combat fraud.

Response. DHS continually seeks to strengthen its abilities to detect and combat immigration-related fraud. Possible consequences for fraud already include detention and removal, inadmissibility to the United States, ineligibility for naturalization and other benefits, and criminal prosecution. *See, e.g.,* INA 101(f), 204(c), 212(a)(2) and (a)(6), 236(c), 237(a)(1)(A) and (G), (a)(2) and (a)(3), 316(a), 318, 8 U.S.C. 1101(f), 1154(c), 1182(a)(2) and (a)(6), 1226(c), 1227(a)(1)(A) and (G), (a)(2) and (a)(3), 1427(a), 1429. USCIS adjudicators receive training to recognize potential fraud indicators across all benefit types and the guidelines for referring cases of suspected fraud for further investigation.

Additionally, as provided under section 214(c)(12) of the INA, 8 U.S.C. 1184(c)(12), a Fraud Prevention and Detection Fee must be paid by an employer petitioning for a beneficiary's initial grant of H–1B or L nonimmigrant classification, as well as for a beneficiary who is changing employers within these classifications. The INA requires fees deposited into the Fraud Prevention and Detection Account to be divided into thirds, and allocated to DHS, DOL, and DOS. *See* INA 286(v); 8 U.S.C. 1356(v). DHS uses its portion of the fees to support activities related to preventing and detecting fraud in the delivery of all immigration benefit types.[23]

Additionally, FDNS currently combats fraud and abuse across all benefit types—including the EB–1, EB–2, EB–3, H–1B, and L–1 programs—by developing and maintaining efficient and effective anti-fraud and screening programs, leading information sharing and collaboration activities, and supporting the law enforcement and intelligence communities. As mentioned above, FDNS's primary mission is to determine whether individuals or organizations requesting immigration benefits pose a threat to national security, public safety, or the integrity of the nation's immigration system. USCIS verifies information and combats immigration fraud using various tools, including the Administrative Site Visit and Verification Program (ASVVP), under which FDNS conducts compliance review site visits for petitions in the H–1B, L–1, and religious worker programs. USCIS also conducts checks of various USCIS and other databases, including the FDNS–DS and the Validation Instrument for Business Enterprises (VIBE). USCIS has formed a partnership with ICE, under which FDNS pursues administrative inquiries into most application and petition fraud and ICE conducts criminal investigations into major fraud conspiracies. Individuals with information regarding fraud and abuse in the immigration benefits system are encouraged to contact FDNS at *reportfraudtips@uscis.dhs.gov*, by mail at 111 Massachusetts Ave. NW., Ste. 7002, Mail Stop 2280, Washington, DC 20529–2280, or call (202) 529–2280.

DHS believes that existing rules and measures collectively provide adequate tools to detect and combat fraud and abuse, and that this rulemaking does not require new or additional protections. Accordingly, DHS has not made any changes in response to these comments.

D. Petitions for Employment-Based Immigrants and Priority Date Retention

1. Description of Final Rule and Changes From the NPRM

The final rule clarifies when priority dates are established for employment-based immigrants and expands the ability of beneficiaries of approved Form I–140 petitions in the EB–1, EB–2, and EB–3 categories to retain their priority dates for use with subsequently filed Form I–140 petitions. First, the final rule fills a hole in current regulations. Existing regulations establish that the priority date of an employment-based immigrant visa petition accompanied by a labor certification is established when the labor certification is accepted for processing by DOL. Those regulations, however, do not indicate when the priority date is established for an employment-based petition that is *not* accompanied by a labor certification. To provide further clarity, this final rule provides, generally, that the priority date of a Form I–140 petition that does not require a labor certification is the date such petition is properly filed with USCIS. *See* final 8 CFR 204.5(d).

Second, the final rule disallows retention of the priority date of an approved Form I–140 petition if the approval of the petition is revoked because of fraud, willful misrepresentation of a material fact, the invalidation or revocation of a labor certification, or material error. *See* final 8 CFR 204.5(e). Third, the final rule amends existing automatic revocation regulations to prevent Form I–140 petitions that have been approved for 180 days or more from being automatically revoked based solely on the withdrawal of the petition by the petitioner or the termination of the petitioner's business. *See* final 8 CFR 205.1(a)(3)(iii)(C) and (D). In response to comments, the final rule also prevents automatic revocation of approved petitions that are withdrawn or where

[22] Individuals may report suspicious activity to ICE Homeland Security Investigations at *www.ice.gov/webform/hsi-tip-form* or at (866) 347–2423.

[23] Further information about USCIS use and collection of fees can be found in March 2015 Congressional testimony available at *https://www.uscis.gov/tools/resources-congress/presentations-and-reports/oversight-us-citizenship-and-immigration-services-ensuring-agency-priorities-comply-law-senate-committee-judiciary-subcommittee-immigration-and-national-interest-march-2015.*

the business terminates 180 days after an associated adjustment of status application is filed. *See id.* These approved petitions will continue to be valid for priority date retention purposes, unless approval is revoked on other grounds specified in final 8 CFR 204.5(e)(2).[24] They also generally will remain valid for various other purposes under immigration laws including: (1) Job portability under INA section 204(j); (2) extensions of status for certain H–1B nonimmigrant workers under sections 104(c) and 106(a) and (b) of AC21; and (3) eligibility for employment authorization in compelling circumstances under final 8 CFR 204.5(p).

In addition, the final rule clarifies that an approved Form I–140 petition that is subject to withdrawal or business termination cannot on its own serve as a bona fide employment offer related to the petition. *See* final 8 CFR 205.1(a)(3)(iii)(C) and (D). To obtain an immigrant visa or adjust status, beneficiaries of these petitions must have either new Form I–140 petitions filed on their behalf, or, if eligible for job portability under section 204(j) of the INA, new offers of employment in the same or a similar occupational classification. *See id.*; final 8 CFR 245.25(a)(2).

DHS believes these regulatory changes are critical to fully implementing the job portability provisions of AC21. Therefore, the final rule retains these proposals with minor modifications to reflect public comment summarized below.

2. Public Comments and Responses

i. Establishing a Priority Date

Comment. Several commenters supported the proposed clarification of the methods for establishing priority dates.

Response. DHS agrees with commenters and believes such clarification will provide increased transparency and certainty for stakeholders. As noted above, the final rule generally establishes that the priority date of an employment-based immigrant visa petition that does not require a labor certification is the date on which such petition is appropriately filed with USCIS. *See* final 8 CFR 204.5(d). Given commenters' support of this provision, DHS adopts this provision as proposed, including the proposed technical edits to delete obsolete references and otherwise improve the readability of the rule. *Id.*

ii. Retaining a Priority Date

Comment. Some commenters stated that the policy that provides for the retention of priority dates in cases in which an employer withdraws an approved petition already existed before this rulemaking. Those commenters suggested that the rule thus provides no additional benefits to such beneficiaries as they await adjustment of status.

Response. DHS believes the final rule clarifies and expands the ability of beneficiaries of approved EB–1, EB–2, and EB–3 Form I–140 petitions to retain their priority dates for use with subsequently filed EB–1, EB–2, and EB–3 Form I–140 petitions. *See* final 8 CFR 204.5(e). The prior regulations disallowed priority date retention in all instances in which approval of a Form I–140 petition was revoked. Thus, under the prior regulations, revocation of a Form I–140 petition based on withdrawal by the petitioner would have prevented the beneficiary of the petition from retaining his or her priority date. The NPRM proposed to change the prior regulations so that the beneficiary of a Form I–140 petition can retain the priority date of that petition unless USCIS denies the petition or revokes the petition's approval due to: (1) Fraud or a willful misrepresentation of a material fact; (2) revocation or invalidation of the labor certification associated with the petition or (3) a determination that there was a material error with regards to USCIS's approval of the petition. *See* final 8 CFR 204.5(e)(2).

This change expands the ability of beneficiaries to retain the priority dates of approved Form I–140 petitions, including but not limited to when a petition's approval is revoked based solely on withdrawal of the petition. This provision improves the ability of certain workers to accept promotions, change employers, or pursue other employment opportunities without fear of losing their place in line for certain employment-based immigrant visas.

Comment. Although many commenters supported the retention of priority dates, one commenter objected to the retention of the earliest priority date in cases in which a worker is shifting between employment-based immigrant visa (EB) preference categories. The commenter believed the provision was unfair to individuals who have been waiting in those EB preference queues. The commenter did not believe it was fair to have an individual who is recently entering a specific queue to receive a better position than an individual who has been waiting in that queue for some time, even if the former individual has been waiting in a different queue for a longer period of time.

Response. The ability to retain priority dates in cases in which a worker is changing EB preference categories has long been permitted under existing regulations at 8 CFR 204.5(e); it is not a policy newly afforded by this rulemaking. DHS believes that allowing certain beneficiaries of multiple approved Form I–140 petitions to continue to retain the earliest established priority date for use with subsequently approved Form I–140 petitions, including cases of transfers between EB preference categories, provides needed stability, job flexibility, and certainty for workers while they await adjustment of status. The policy also facilitates the ability of individuals to progress in their careers while they wait for visa availability. DHS believes the policy is consistent with the goals of the AC21 statute and has accordingly chosen to maintain it.

Comment. A number of commenters supported the provisions in proposed 8 CFR 205.1(a)(3)(iii)(C) and (D), which provide that approval of a Form I–140 petition will not be automatically revoked based solely on withdrawal by the petitioner or termination of the petitioner's business if 180 days or more have passed since petition approval. The commenters said these provisions provide needed clarity and assurance to workers about the retention of priority dates in cases involving withdrawal or business termination. Several other commenters requested that DHS allow Form I–140 petitions to remain valid and approved despite petitioner withdrawal or business termination regardless of the amount of time that has passed since petition approval (*i.e.,* even for petitions that have not been approved for 180 days or more).

Response. DHS agrees that retaining the NPRM proposal related to validity of Form I–140 petitions in the event of withdrawal or business termination will bring clarity and assurance to workers that a petition's approval is not automatically revoked based solely on an employer's withdrawal of the petition or termination of the employer's business 180 days or more after the petition is approved or the associated application for adjustment of status is filed. This provision is intended to provide greater stability and flexibility to certain workers who are the beneficiaries of approved Form I–

[24] The four grounds are (i) fraud, or a willful misrepresentation of a material fact; (ii) revocation by the Department of Labor of the approved permanent labor certification that accompanied the petition; (iii) invalidation by USCIS or the Department of State of the permanent labor certification that accompanied the petition; and (iv) a determination by USCIS that petition approval was based on a material error.

140 petitions and are well on the path to obtaining LPR status in the United States.

DHS notes, however, that commenters may have confused provisions that govern the retention of *priority dates* with provisions that govern the retention of *petition approval.* As proposed and in this final rule, 8 CFR 204.5(e)(2) allows for the retention of the *priority date* of an approved EB–1, EB–2, or EB–3 Form I–140 petition regardless of the amount of time that has passed since petition approval. As discussed, once such a petition has been approved, the beneficiary may retain that priority date for use with another EB–1, EB–2, or EB–3 Form I–140 petition, so long as the approval of the former petition was not revoked due to: (1) Fraud or a willful misrepresentation of a material fact; (2) revocation or invalidation of the labor certification associated with the petition; or (3) a determination that there was a material error with regards to USCIS's approval of the petition. *See* final 8 CFR 204.5(e)(2). In contrast, final 8 CFR 205.1(a)(3)(iii)(C) and (D) allow for retention of a petition's approval, despite withdrawal or business termination, but only if such withdrawal or termination occurs 180 days or more after the approval or 180 days or more after the associated application for adjustment of status is filed. Thus, under this rule, the beneficiary of a Form I–140 petition may be able to retain his or her priority date even if approval of the petition is revoked due to withdrawal or business termination.

To further provide clarity in this area, DHS removed the phrase ''provided that the revocation of a petition's approval under this clause will not, by itself, impact a beneficiary's ability to retain his or her priority date under 8 CFR 204.5(e)'' from proposed 8 CFR 205.1(a)(3)(iii)(C) and (D). DHS intended this phrase to simply restate that under § 204.5(e), a priority date may be retained, despite withdrawal or business termination that occurs less than 180 days after the petition's approval. DHS is removing the phrase from the proposed text because it could be construed as creating an unintended exception to the priority date retention provision.

DHS declines to adopt commenters' proposal that a Form I–140 petition remains approved if the withdrawal or business termination occurs at any time before the Form I–140 has been approved for at least 180 days. DHS believes that the 180-day threshold is consistent with and furthers the goals of job portability under INA 204(j). Additionally, DHS believes the 180-day threshold protects against fraud and misuse while providing important stability and flexibility to workers who have been sponsored for permanent residence. In addition to the period that it typically takes for a petitioning employer to obtain a labor certification from DOL and approval of a Form I–140 petition from DHS, the 180-day requirement provides additional assurance that the petition was bona fide when filed. The final rule, therefore, maintains Form I–140 petition approval despite petitioner withdrawal or business termination when such petitions have been approved for 180 days or more, or its associated adjustment of status application has been pending for 180 days or more. *See* final 8 CFR 205.1(a)(3)(iii)(C) and (D).

Comment. One commenter suggested changes to the regulatory text concerning the requirement that the Form I–140 petition be approved for 180 days or more. Specifically, the commenter recommended amending the text to make clear that the 180-day threshold would not apply in cases in which an applicant has a pending Application to Register Permanent Residence or Adjust Status (Form I–485) that may provide job portability under INA 204(j). The commenter stated that, as proposed, the regulation would create a ''double'' waiting period in the portability context, requiring the foreign national to wait 180 days from approval of the Form I–140 petition and an additional 180 days from filing of the application of adjustment of status in order to be able to move to a new position. The commenter believed this outcome would be inconsistent with congressional intent under AC21.

Response. DHS thanks the commenter for identifying the potential for confusion given the text of proposed § 205.1(a)(3)(iii)(C) and (D) and DHS's stated goal to codify and expand upon its existing policy implementing INA 204(j). DHS proposed to allow a Form I–140 petition to remain valid for certain purposes if such a petition was withdrawn or the petitioner's business terminated 180 days or more after the Form I–140 petition had been approved.

This provision was intended to build upon existing DHS policies that have governed the validity of Form I–140 petitions in the event of withdrawal or business termination before and after beneficiaries are eligible to change jobs or employers under INA 204(j). DHS did not intend that its regulatory proposal would modify the existing timeframe before an individual would become eligible to port under INA 204(j); rather, this provision was intended to protect those individuals who are not yet eligible for INA 204(j) portability from the automatic revocation of the approval of a Form I–140 petition that had been approved for 180 days or more. Consistent with the intent of AC21 and DHS policy, DHS is revising the regulatory language at 8 CFR 205.1(a)(3)(iii)(C) and (D) to make clear that an approved Form I–140 petition involving withdrawal or business termination occurring 180 days or more after *either* petition approval *or* the filing of an associated application for adjustment of status remains approved, unless its approval is revoked on other grounds. *See* final 8 CFR 205.1(a)(3)(iii).

Comment. One commenter recommended that the final rule require that the beneficiary of an employment-based Form I–140 petition remain with the petitioning employer for at least 3 years before the employee is able to retain the priority date of that petition. The commenter stated that a 3-year ''mandatory stay'' would provide some stability and security to petitioning employers.

Response. DHS declines to adopt the commenter's suggested ''mandatory stay'' requirement as it is contrary to the principles and policy goals of this final rule. Furthermore, DHS notes that Form I–140 petitions are for prospective employment, and there is no guarantee that the beneficiary of an approved Form I–140 petition has or would be able to obtain work authorization to commence employment with the petitioner prior to obtaining lawful permanent residence. In addition, allowing priority date retention furthers the goals of AC21 to grant stability, flexibility, and mobility to workers who are facing long waits for LPR status.

Comment. Several commenters requested that the rule's provision restricting revocation of a petition's approval based on withdrawal or business termination apply retroactively to petitions whose approvals were revoked prior to the rule's publication.

Response. DHS appreciates the commenters' suggestion; however, DHS has determined that retroactive application of this provision would be problematic. Generally, there is a presumption against retroactive application of new regulations. *Cf. Bowen* v. *Georgetown Univ. Hosp.,* 488 U.S. 204 (1988). Moreover, in this case, retroactive application of the revised automatic revocation provision would impose a disproportionate operational burden on USCIS, as it would require significant manual work. USCIS systems cannot be queried based on the specific reason(s) for revocation, and USCIS would be required to manually identify and review these cases in order to verify the reason(s) for revocation, thus creating a highly labor-intensive process that would significantly strain USCIS resources. Therefore, the final 8 CFR 205.1(a)(3)(iii)(C) and (D) provisions will apply prospectively from the effective date of this final rule.

iii. Priority Date Not Retained if Approval Revoked for Fraud, Willful Misrepresentation, DOL Revocation, Invalidation by USCIS or DOS, Material Error, or Petition Denial

Comment. Some commenters supported the rule's requirement that priority dates will not be retained in cases of fraud, willful misrepresentation, revocation or invalidation of the labor certification, a determination that petition approval was the result of an error, or the denial of the petition. Other commenters opposed the inability to retain priority dates where a Form I–140 petition's approval has been revoked based on a determination that USCIS erroneously approved the petition. One commenter requested that DHS change the standard for revoking petition approval in error to ''material'' error to remain consistent with other USCIS policies in cases where DHS's error in a prior adjudication requires review of that adjudicatory outcome.

Response. DHS agrees that it is important for the integrity of the immigration system not to retain a priority date in cases in which the approval of a Form I–140 petition is revoked for fraud, willful misrepresentation of a material fact, the invalidation or revocation of a labor certification, or USCIS error. Based on feedback from commenters, however, DHS has determined that the text of the proposed rule at § 204.5(e)(2)(iv) that reads, ''[a] determination by USCIS that petition approval was in error,'' needs to be clarified. In the final rule, that text is amended to read, ''[a] determination by USCIS that petition approval was based on a material error'' in order to clarify that a priority date will only be lost in those cases in which the error leading to revocation involves the misapplication of a statutory or regulatory requirement to the facts at hand. *See* final 8 CFR 204.5(e)(2)(iv). The change to the ''material error'' standard is consistent with other USCIS policy that addresses agency deference to prior adjudicatory decisions.[25] Examples of material errors include situations in which an adjudicator relied on an inaccurate employer identification number and associated financial information that did not pertain to the petitioner for purposes of establishing its continuing ability to pay the proffered wage; information later comes to light indicating that the petitioner did not establish the ability to pay under the applicable regulatory criteria; or an adjudicator finds evidence in a subsequent related matter that the beneficiary did not have the education or experience required for the position offered. DHS declines to accept commenters' recommendations that the final regulation remove the error standard in its entirety because of the need to take appropriate action in cases in which the petition was not approvable in the first instance. Furthermore, it should be noted that the scope of the ''material error'' standard pertains only to whether the priority date is retained based on a USCIS revocation of the petition approval.

Comment. One commenter suggested that USCIS allow the retention of Form I–140 priority dates even in cases in which it is later discovered that the petitioner made material misrepresentations on the original petition and the petition's approval is revoked, as well as cases in which the petition's approval is revoked based on USCIS error—so long as it can be reasonably verified that the beneficiary had no involvement in the misrepresentation or the error later discovered by USCIS.

Response. DHS understands that revocation of long approved Form I–140 petitions due to the later discovery of willful misrepresentation(s) committed by the petitioner, but that are unbeknownst to the beneficiary, can negatively impact the beneficiary by causing the loss of his or her priority date and, therefore, the beneficiary's place in line for an immigrant visa. The revocation of the approval of a long approved Form I–140 petition due to material errors that are not the fault of the beneficiary can also negatively impact the beneficiary. DHS, however, believes it would be inappropriate to allow a Form I–140 petition that had its approval revoked for fraud or willful misrepresentation of a material fact, or because the Form I–140 petition was not eligible for approval in the first place, to confer a priority date. Allowing the beneficiary of such petition to remain in line ahead of other individuals who are the beneficiaries of properly approved Form I–140 petitions would be contrary to DHS's goal of upholding the integrity of the immigration system.

Comment. Some commenters requested that beneficiaries of approved Form I–140 petitions who are not yet eligible for 204(j) portability be permitted to change jobs and adjust status to lawful permanent residence without the requirement of obtaining a new application for labor certification and a new approved Form I–140 petition. Some who advocated for this change noted that the ability to reuse or ''port'' an approved Form I–140 petition should be available after the initial petition has been approved for 180 days or more, and others requested that portability be allowed immediately after the petition's approval. Similar to job portability under INA 204(j) in certain regards, these and other commenters suggested that beneficiaries of approved Form I–140 petitions should be allowed to change jobs, file a Form I–485 application and adjust status to lawful permanent residence on the basis of the original Form I–140 petition as long as the new job is in the same or a similar occupation as the job described in the approved Form I–140 petition. Some commenters stated that there is an increase in time and monetary costs associated with multiple labor certification filings. Most of the commenters agreed that very few benefits were provided by requiring a new labor certification. Commenters also expressed that ''recertification'' additionally deters employers from sponsoring current foreign worker employees who are beneficiaries of Form I–140 petitions based on new jobs. One commenter urged DHS to allow a withdrawn or revoked Form I–140 petition to remain valid for the purposes of obtaining an immigrant visa, in order to fully implement Congress's intent in passing AC21.

Response. A foreign worker may obtain an employment-based immigrant visa only if he or she is the beneficiary of an approved employment-based immigrant visa petition. *See* INA 204(b), 8 U.S.C. 1154(b). In this final rule, DHS is allowing certain approved Form I–140 petitions to remain approved for various purposes despite withdrawal or business termination. However, such a petition may not be used to obtain lawful permanent residence, unless it meets the requirements of INA 204(j).

With respect to obtaining lawful permanent residence under the EB–2 and EB–3 classifications, the INA requires that the worker be the beneficiary of a valid Form I–140 petition, which generally must be supported by a valid labor certification at the time of adjustment of status. *See* INA 203(b)(2), (3); 204(a)(1)(F); and 212(a)(5)(A) and (D), 8 U.S.C. 1153(b)(2),

[25] *See* USCIS Memorandum from William Yates, ''The Significance of a Prior CIS Approval of a Nonimmigrant Petition in the Context of a Subsequent Determination Regarding Eligibility for Extension of Petition Validity'' (Apr. 24, 2004).

(3); 1154(a)(1)(F); 1182(a)(5)(A) and (D). Outside of the 204(j) context, an approved Form I–140 petition filed by an employer that no longer intends to employ the worker upon approval of the Form I–485 application, whether presently or at any time in the future, does not represent a bona fide job offer and, therefore, is not sufficient to support an application for adjustment of status.

INA section 212(a)(5)(A) and (D) generally prohibits any foreign worker seeking to perform skilled or unskilled labor from being admitted to the United States under the EB–2 and EB–3 immigrant visa classifications unless the Secretary of Labor has determined and certified that there are not sufficient workers who are able, willing, qualified, and available to perform that work at the location the foreign worker will perform the work and that the employment of that foreign worker will not adversely affect the wages and working conditions of similarly situated U.S. workers. Under current DOL regulations, a permanent labor certification remains valid only for the particular job opportunity, for the individual named on the labor certification, and for the area of intended employment stated on the application for permanent labor certification. *See* 20 CFR 656.30(c)(2). However, section 106(c)(2) of AC21 created an exception to this admissibility requirement, by allowing an approved Form I–140 petition supported by the associated labor certification to remain valid for certain long-delayed adjustment applicants ''with respect to a new job accepted by the individual after the individual changes jobs or employers if the new job is in the same or a similar occupational classification as the job for which the certification was issued.'' INA 212(a)(5)(A)(iv), 8 U.S.C. 1182(a)(5)(A)(iv). DHS does not have authority to regulate the terms and requirements of these labor certifications and therefore cannot prescribe what is necessary for the labor certification to remain valid even for long-delayed applicants for adjustment of status, although DHS does have authority to invalidate labor certifications for fraud or willful misrepresentation. The INA designates DOL as the federal department responsible for making permanent labor certification determinations.

While DHS cannot expand portability beyond the INA 204(j) context, the final rule does provide some additional flexibility and stability for individuals who may not be eligible for INA 204(j) portability, by allowing beneficiaries of approved Form I–140 petitions to retain their priority dates in certain situations and allowing certain Form I–140 petitions to remain valid, including for purposes of section 204(j) portability, notwithstanding withdrawal of the petition or termination of the petitioner's business, as described above.[26]

iv. Beneficiary Standing To Challenge the Revocation of an Employment-Based Immigrant Visa Petition's Approval

Comment. Several commenters expressed concern that individual beneficiaries of Form I–140 petitions are not provided notice when USCIS seeks to revoke the approval of those petitions. The commenters stated that this policy prevented beneficiaries from checking the status of their pending Form I–140 petitions and providing the evidence needed to avail themselves of AC21 portability. The commenters stated that under USCIS's current practice, a beneficiary may be unaware that approval of his or her Form I–140 petition has been revoked until his or her application for adjustment of status is denied. The commenters stated that not providing beneficiaries with notice and an opportunity to respond in such cases raises serious issues of fundamental fairness that could be remedied by permitting beneficiaries of petitions that may afford portability under section 204(j) to participate in visa petition proceedings, consistent with Congress's intent when it enacted AC21. The commenters urged DHS to undertake rulemaking to bring notice regulations in line with the realities of today's AC21 statutory scheme. Finally, a commenter stated that beneficiaries of Form I–140 petitions have interests equal to or greater than those of petitioners, including because revocation impacts beneficiaries' ability to retain priority dates, their admissibility, their eligibility to have immigrant visa petitions approved on their behalf, and their eligibility for adjustment of status under section 245(i) of the INA, 8 U.S.C. 1255(i). The commenter added that the enactment of AC21 had altered the analysis of which individuals should be considered ''interested parties'' before USCIS on various issues, including the ability to extend H–1B status beyond the 6-year maximum period and to port to a ''same or similar'' occupation under INA section 204(j). Commenters also cited to various recent federal cases that have supported the commenters' interpretation of AC21.

Response. DHS appreciates the concerns raised by these comments. While DHS is unable to address these concerns in this final rule because they are outside the scope of this rulemaking, DHS is considering separate administrative action outside of this final rule to address these concerns.

E. Continuing and Bona Fide Job Offer and Supplement J Form

1. Description of Final Rule and Changes From NPRM

The final rule at 8 CFR 245.25 codifies DHS policy and practice requiring that a foreign worker seeking to adjust his or her status to that of an LPR must have a valid offer of employment at the time the Form I–485 application is filed and adjudicated. DHS at final 8 CFR 245.25(a)(2) codifies the existing policy and practice to determine eligibility to adjust status based on a request to port under section 204(j) of the INA. In the final rule at 8 CFR 245.25(a)(2)(ii)(A) and (B), DHS reaffirms that a qualifying immigrant visa petition has to be approved before DHS examines a portability request under INA 204(j) and determines an individual's eligibility or continued eligibility to adjust status based on the underlying visa petition. DHS also codifies current practice regarding the adjudication of portability requests when the Form I–140 petition is still pending at the time the application for adjustment of status has been pending for 180 days or more in final 8 CFR 245.25(a)(2)(ii)(B).

Based on its program experience in adjudicating adjustment of status applications, USCIS determined that certain threshold evidence regarding the job offer is required in all cases to successfully determine eligibility for adjustment of status based on an employment-based immigrant visa petition and facilitate the administrative processing of INA 204(j) porting requests. USCIS has consequently developed a new form—Supplement J to Form I–485, Confirmation of Bona Fide Job Offer or Request for Job Portability Under INA Section 204(j) (''Supplement J'')—to standardize the collection of such information. The offer of employment may either be the original job offer or, pursuant to INA 204(j), a new offer of employment, including qualifying self-employment, that is in the same or similar occupational

[26] The priority date of the earliest petition will be preserved in cases where the Form I–140 petition has been approved, no matter the amount of time that has passed since the approval, subject to the restrictions in 8 CFR 204.5(e)(2). *See* final 8 CFR 204.5(e)(1). The priority date can be retained even if approval is subsequently revoked, unless it is revoked for fraud, willful misrepresentation of a material fact, the invalidation or revocation of a labor certification, or USCIS material error as required by 8 CFR 204.5(e)(2).

classification as the original job offer.[27] *See* final 8 CFR 245.25(a)(1)–(2). In the final rule at 8 CFR 245.25(a) and (b), DHS clarifies that it may require individuals to use Supplement J, or successor form, to confirm existing or new job offers prior to adjudication of an application to adjust status. DHS also eliminates duplicative evidentiary provisions that were proposed in 8 CFR 245.25(b). As amended, the final 8 CFR 245.25(a) makes clear that any supporting material and credible documentary evidence may be submitted along with Supplement J, according to the form instructions. The definition of ''same or similar occupational classification'' that was proposed in 8 CFR 245.25(c) is being retained without change in the redesignated final 8 CFR 245.25(b).

The use of Supplement J will ensure uniformity in the collection of information and submission of initial evidence. Supplement J will be used to assist USCIS, as appropriate, in confirming that the job offer described in a Form I–140 petition is still available at the time an individual files an application for adjustment of status, or a qualifying job offer otherwise continues to be available to the individual before final processing of his or her application for adjustment of status. Supplement J also will be used by applicants for adjustment of status to request job portability, and by USCIS to determine, among other things, whether a new offer of employment is in the same or a similar occupational classification as the job offer listed in the Form I–140 petition.

Supplement J collects necessary information about the job offer and includes attestations from the foreign national and employer regarding essential elements of the portability request. In a number of ways, Supplement J will improve the processing of porting requests submitted under INA 204(j). As further described in the responses to comments below, DHS is making a revision to the Supplement J instructions to clarify that individuals applying for adjustment of status on the basis of a national interest waiver (NIW), as well as aliens of extraordinary ability, are not required to use Supplement J. Currently, USCIS is not adding an extra fee for submission of this new supplement, but may consider implementing a fee in the future.

2. Public Comments and Responses

i. Portability Under INA 204(j)

Comment. One commenter requested that DHS clarify regulatory language to reflect current practice that permits a foreign national whose application for adjustment of status has been pending for 180 days or more to request portability under INA 204(j) in cases in which the Form I–140 petition underlying the application for adjustment of status is not yet approved. The commenter noted that current policy allows for such portability requests to be made provided the Form I–140 petition was approvable based on the facts in existence at the time of filing, with the exception of the petitioner's ability to pay the offered wage. The commenter stated that this has been USCIS's policy since 2005, when DHS confirmed through policy guidance that the 180-day portability clock under INA 204(j) begins to run when the Form I–485 application is filed, not when the Form I–140 petition is approved. This commenter cited to the Aytes Memo, ''Interim guidance for processing I–140 employment-based immigrant petitions and I–485 and H–1B petitions affected by the American Competitiveness in the Twenty-First Century Act (AC21) (Public Law 106–313)'' (May 12, 2005, revised Dec. 27, 2005) (Aytes 2005 memo) at 2, 4–5.

Response. DHS agrees that clarification is needed in the final rule regarding DHS's practice for qualifying Form I–140 petitions that remain pending when the beneficiary's application for adjustment of status has been pending for 180 days or more. As noted by the commenter, there may be instances in which an individual can request job portability pursuant to INA 204(j) because the worker's Form I–485 application has been pending for 180 days or more, but the Form I–140 petition has not yet been adjudicated. In such cases, however, the qualifying Form I–140 petition must be approved before a portability request under INA 204(j) may be approved.

In response to this comment, DHS amended proposed 8 CFR 245.25(a)(2) to reflect DHS's current policy and longstanding practice related to such pending Form I–140 petitions.[28] In final 8 CFR 245.25(a)(2)(ii)(A) and (B), DHS reaffirms that a qualifying immigrant visa petition must be approved before DHS examines a portability request under INA 204(j) and determines an individual's eligibility or continued eligibility to adjust status on the basis of the underlying visa petition. DHS also sets forth in this final rule how USCIS will assess specific Form I–140 petition eligibility requirements, including the petitioner's ability to pay, when a porting request has been made on a pending Form I–140 petition.

First, in accordance with existing practice, USCIS will only adjudicate a qualifying Form I–140 petition in accordance with the standards described in final 8 CFR 245.25(a)(2)(ii) when USCIS has been notified that the beneficiary intends to port to a new job pursuant to INA 204(j). As indicated in the precedent decision, *Matter of Al Wazzan,* 25 I&N Dec. 359, 367 (BIA 2010), the qualifying immigrant visa petition—

> must have been filed for an alien who is ''entitled'' to the requested classification and that petition must have been ''approved'' by a USCIS officer pursuant to his or her authority under the Act . . . [A] petition is not made ''valid'' merely through the act of filing the petition with USCIS or through the passage of 180 days.

The burden is on the applicant to demonstrate eligibility or otherwise maintain eligibility for adjustment of status to lawful permanent residence.[29] *See* INA sections 204(e) and 291, 8 U.S.C. 1154(e) and 1361; *see also Tongatapu Woodcraft of Hawaii, Ltd.* v.

[27] For additional information on USCIS policy regarding the parameters of porting to self-employment, please see USCIS memorandum, ''Determining Whether a New Job is in ''the Same or a Similar Occupational Classification'' for Purposes of Section 204(j) Job Portability'' (Mar. 18, 2016) (''Same or Similar Memo March 2016'').

[28] As indicated in the proposed rule, regulatory provisions would ''largely conform DHS regulations to longstanding agency policies and procedures established in response to certain sections of [ACWIA] and [AC21].'' *See* 80 FR 81899, 81901 (Dec. 31, 2015). The new regulatory provision under 8 CFR 245.25(a)(2)(ii) is one such provision that ''update[s] and conform[s] [DHS's] regulations governing adjustment of status consistent with longstanding agency policy.'' *Id.* at 81915.

[29] USCIS may inquire at any time whether an applicant for adjustment of status has, or continues to have, a qualifying job offer until the applicant ultimately obtains lawful permanent residence. *See* INA sections 204(a)(1)(F), (b), (e), (j) and 212(a)(5), 8 U.S.C. 1154(a)(1)(F), (b), (e), (j), and 1182(a)(5); *cf. Yui Sing Tse* v. *INS,* 596 F.2d 831, 835 (9th Cir. 1979) (finding that an alien need not intend to remain at the certified job forever, but at the time of obtaining lawful permanent resident status, both the employer and the alien must intend that the alien be employed in the certified job); *Matter of Danquah,* 16 I&N Dec. 191 (BIA 1975) (adjustment of status denied based on the ground that the labor certification was no longer valid because the foreign national was unable to assume the position specified in the labor certification prior to obtaining adjustment of status). USCIS may become aware of certain information that raises questions about whether an applicant for adjustment of status continues to have a qualifying job offer (*e.g.*, a letter from the petitioner requesting the withdrawal of the petition). In this and similar instances when the Form I–140 petition has already been approved, USCIS may issue a Notice of Intent to Deny (NOID) or Request for Evidence (RFE) to the applicant to make sure that the applicant has a new job offer that preserves his or her eligibility to become a lawful permanent resident in connection with the same Form I–485 application and based on the same qualifying petition pursuant to INA 204(j).

Feldman, 736 F.2d 1305, 1308 (9th Cir. 1984) (stating that the applicant ''bears the ultimate burden of proving eligibility'' and that this burden ''is not discharged until'' lawful permanent residence is granted); 8 CFR 103.2(b)(1).

Second, in determining whether a Form I–140 petitioner meets the ''ability to pay'' requirements under 8 CFR 204.5(g)(2) for a pending petition that a beneficiary seeks to rely upon for 204(j) portability, DHS reviews the facts in existence at the time of filing. *See* final 8 CFR 245.25(a)(2)(ii)(B)(*1*).[30] Thus, during the adjudication of the petition, DHS reviews any initial evidence and responses to requests for evidence (RFEs), notices of intent to deny (NOIDs), or any other requests for more information that may have been issued, to determine whether the petitioner met the ability to pay requirement as of the date of the filing of the petition. To effectuate the intent of INA 204(j) to enable workers to change employment, DHS looks only at the facts existing at the time of filing to determine whether the original petitioner has the ability to pay, notwithstanding the language in 8 CFR 204.5(g)(2), which otherwise requires that a petitioner has continuing ability to pay after filing the petition and until the beneficiary obtains lawful permanent residence. To require that the original Form I–140 petitioner demonstrate a continuing ability to pay when the beneficiary no longer intends to work for that petitioner is illogical and would create an incongruous obstacle for the beneficiary to change jobs, thus unnecessarily undermining the purpose of INA 204(j). USCIS will not review the original petitioner's continuing ability to pay after the filing date of the qualifying petition before it may approve such petition and then review a portability request. Under this final rule, USCIS will continue to determine whether the subsequent offer of employment by an employer that is different from, or even the same as, the employer in the original Form I–140 petition is bona fide.

Third, DHS is clarifying for INA 204(j) portability purposes that a qualifying Form I–140 petition will be approved if eligibility requirements (separate and apart from the ability to pay requirement) have been met at the time of filing and until the foreign national's application for adjustment of status has been pending for 180 days. *See* final 8 CFR 245.25(a)(2)(ii)(B)(*2*). Consistent with current policy and practice, DHS will review the pending petition to determine whether the preponderance of the evidence establishes that the petition is approvable or would have been approvable had it been adjudicated before the associated application for adjustment of status has been pending for 180 days or more.[31] For example, if DHS receives a written withdrawal request from the petitioner, or the petitioner's business terminates, *after* the associated application for adjustment of status has been pending for 180 days or more, DHS will not deny the petition based solely on those reasons.[32] DHS, however, will deny a Form I–140 petition if DHS receives the written withdrawal request, or a business termination occurs, *before* the associated application for adjustment of status has been pending for 180 days, even when DHS adjudicates the petition after the associated application for adjustment of status has been pending for 180 days or more.

Section 8 CFR 245.25(a)(2), as amended in this final rule, is consistent with AC21, existing regulations, USCIS policies implementing AC21, and current practice. Specifically, DHS reads 8 CFR 245.25(a)(2), as amended in this final rule, in harmony with 8 CFR 103.2(b)(1), which requires an applicant or petitioner to ''establish that he or she is eligible for the requested benefit at the time of filing the benefit request and must continue to be eligible through adjudication.'' In cases involving a request for INA 204(j) portability that is filed before USCIS adjudicates the Form I–140 petition, DHS will assess a petitioner's ability to pay as of the date the Form I–140 petition was filed and all other issues as of the date on which the application for adjustment of status was pending 180 days, regardless of the date on which the petition is actually adjudicated. DHS believes this policy meaningfully implements congressional intent in enacting INA 204(j) to allow workers who cannot immediately adjust status based on backlogs to move to new employment while their applications for adjustment of status remain pending.

Accordingly, for petitioners to satisfy the ability to pay requirement in this limited context, eligibility will be deemed established through adjudication for purposes of 8 CFR 103.2(b)(1) if the ability to pay existed at the time the priority date is established through time of the petition's filing. *See* 8 CFR 204.5(g)(2). Similarly, again in this limited INA 204(j) context, DHS is defining eligibility for all other Form I–140 eligibility requirements for purposes of 8 CFR 103.2(b)(1) (*i.e.,* separate and apart from the ability to pay requirement) as being established if such eligibility can be demonstrated at time of filing through the date the associated application for adjustment of status has been pending for 180 days, instead of the date the final decision is issued.

DHS believes that this specific adjudicatory practice is consistent with the requirements in 8 CFR 103.2(b)(1),[33] accommodates the circumstances contemplated in final 8 CFR 245.25(a)(2)(ii), and is important to ensure that the goals of AC21 are met. As a practical matter, petitioners have diminished incentives to address inquiries regarding qualifying Form I–140 petitions once the beneficiaries have a new job offer that may qualify for INA 204(j) portability and the relevant focus has shifted to whether the new job offer meets the requirements of INA 204(j). Accordingly, denying a qualifying Form I–140 petition for either ability to pay issues that occur after the time of filing, or for other petition eligibility issues that transpire after the associated application for adjustment of

[30] *See* Aytes 2005 Memo, at 2; Donald Neufeld Memorandum ''Supplemental Guidance Relating to Processing Forms I–140 Employment-Based Immigrant Petitions and I–129 H–1B Petitions, and Form I–485 Adjustment Applications Affected by the American Competitiveness in the Twenty-First Century Act of 2000 (AC21) (Pub. L. 106–313), as amended, and the American Competitiveness and Workforce Improvement Act of 1998 (ACWIA), Title IV of Div. C. of Public Law 105–277'' at 9, (May 30, 2008) (''Neufeld May 2008 Memo'').

[31] *See* Aytes 2005 Memo, at 1 (stating in the response to Section I, Question 1 that if it is discovered that a beneficiary has ported under an unapproved Form I–140 petition and Form I–485 application that has been pending for 180 days or more, the adjudicator should, among other things, ''review the pending I–140 petition to determine if the preponderance of the evidence establishes that the case is approvable or would have been approvable had it been adjudicated within 180 days'').

[32] Under current INA 204(j) portability practice, DHS considers the date it receives a withdrawal request from the petitioner as the date of withdrawal regardless of the date on which DHS adjudicates the Form I–140 petition.

[33] The current language in 8 CFR 103.2(b)(1) requires in pertinent part that a petitioner ''establish that he or she is eligible for the requested benefit at the time of filing the benefit request and must continue to be eligible through adjudication.'' This policy was codified through a final rule (with request for comments) in 2011 in which DHS noted the ''longstanding policy and practice, as well as a basic tenet of administrative law, [ ] that the decision in a particular case is based on the administrative record that exists at the time the decision is rendered.'' 76 FR 53764, 53770 (Aug. 29, 2011) (citing *Citizens to Preserve Overton Park* v. *Volpe,* 401 U.S. 402 (1972)). The practice that DHS currently outlines in 8 CFR 245.25(a)(2)(ii), in which DHS interprets eligibility through ''adjudication'' in 8 CFR 103.2(b)(1) as eligibility at the time of filing (for the ability to pay requirement) or eligibility at the time of filing and up to the day before the associated application for adjustment of status has been pending for 180 days (for other requirements separate and apart from the ability to pay requirement), were in place since at least 2005, are consistent with the AC21 statute, and were not superseded by the amendments to 8 CFR 103.2(b)(1) in 2011.

status has been pending for 180 days or more, would be contrary to a primary goal of AC21. Such a policy would in significant part defeat the aim to allow individuals the ability to change jobs and benefit from INA 204(j) so long as their associated application for adjustment of status has been pending for 180 days or more. DHS notes that this does not prevent DHS from requiring a response from the Form I–140 petitioner and taking appropriate action on a request for evidence or notice of intent to deny issued before the associated application for adjustment of status has been pending for 180 days or more or, if appropriate for reasons described below, after that period.

Finally, DHS maintains through this final rule its existing policy and practice to deny a pending Form I–140 petition at any time, and even after the associated application for adjustment of status has been pending for 180 days or more, if the approval of such petition is inconsistent with a statutory requirement in the INA or other law. *See* final 8 CFR 245.25(a)(2)(ii)(B)(*2*). For example, DHS will deny an otherwise qualifying Form I–140 petition at any time if the beneficiary seeks or has sought LPR status through a marriage that has been determined by DHS to have been entered into for the purpose of evading the immigration laws. *See* INA 204(c), 8 U.S.C. 1154(c). DHS also will deny, at any time, a pending Form I–140 petition that involves a petitioner or an employer that has been debarred, under INA 212(n)(2)(C)(i) and (ii), 8 U.S.C. 1182(n)(2)(C)(i) and (ii), even when the debarment occurs after the filing of the petition. Similarly, DHS will deny a Form I–140 petition, at any time, if the beneficiary is required by statute to be licensed to perform his or her job and the beneficiary loses such licensure before the petition is adjudicated. *See e.g.,* INA 212(a)(5)(B) and (C), 8 U.S.C. 1182(a)(5)(B) and (C). DHS notes that these examples do not encompass all scenarios when a statute requires DHS to deny a pending Form I–140 petition. DHS will review such petitions on a case-by-case basis.

Comment. Some commenters requested that DHS eliminate references to the Department of Labor's Standard Occupational Classification (SOC) system in the regulatory text governing the adjudication of porting requests. One commenter noted that occupations that rely on similar skills, experience, and education are often classified in disparate major groups within the SOC structure. This commenter was also concerned that the SOC system is updated only once every 8 years, a schedule that is often outpaced by the speed of innovation, particularly with STEM occupations. Another commenter described concern that adjudicators will rely exclusively on the SOC codes when determining whether two jobs are in the same or similar occupational classification(s) (''same or similar determinations'').

Response. DHS agrees with the commenters and, in this final rule, removes the specific reference to SOC codes in the final rule. *See* final 8 CFR 245.25. This change from the proposed rule is consistent with DHS policy under which SOC codes are just one factor that may be considered, in conjunction with other material evidence, when making the portability determination. To demonstrate that two jobs are in the same or similar occupational classification(s) for purposes of INA 204(j) portability, applicants and/or their employers should submit all relevant evidence. Such evidence includes, but is not limited to, a description of the job duties for the new position; the necessary skills, experience, education, training, licenses or certifications required for the new job; the wages offered for the new job; and any other material and credible evidence submitted by the applicant. Applicants or their employers may also reference DOL's labor market expertise as reflected in its SOC system, which is used to organize occupational data and classify workers into distinct occupational categories, as well as other relevant and credible information, when making portability determinations.

DHS recognizes that variations in job duties are natural and may occur because they involve employers in different economic sectors. This does not necessarily preclude two positions from being in similar occupational classifications for purposes of 204(j) portability. SOC codes provide a measure of objectivity in such assessments and thus can help address uncertainty in the portability determination process.

Comment. Several commenters stated that the definition of ''same or similar'' in proposed 8 CFR 245.25(c) is overly restrictive and will particularly cause difficulty for workers seeking promotions because the definition may not cover moves to certain higher level positions. In contrast, another commenter stated that the proposed definition is arbitrary and capricious, and that the definition effectively lowers the standard set in prior DHS guidance. That commenter believed the new definition would effectively nullify the statutory requirements related to labor certification approval.

Response. DHS disagrees with these comments. Congress did not define the term ''same or similar,'' thus delegating that responsibility and authority to DHS. Through this final rule, DHS adopts a definition that is consistent with the statutory purpose underlying INA 204(j), and that reflects both common dictionary definitions and longstanding DHS practice and experience in this area. As has long been the case, to determine whether two jobs are in the same occupational classification, USCIS looks to whether the jobs are ''identical'' or ''resembling in every relevant respect.'' [34] To determine whether two jobs are in similar occupational classifications, USCIS looks to whether the jobs share essential qualities or have a ''marked resemblance or likeness.'' [35]

DHS recognizes that individuals earn opportunities for career advancement as they gain experience over time. Cases involving career progression must be considered under the totality of the circumstances to determine whether the applicant has established by a preponderance of the evidence that the relevant positions are in similar occupational classifications for INA 204(j) portability purposes. For further guidance on the DHS analysis of cases involving career progression, commenters are encouraged to read the March 16, 2016, USCIS policy memorandum, ''Determining Whether a New Job is in 'the Same or a Similar Occupational Classification' for Purposes of Section 204(j) Job Portability.'' [36]

ii. Concerns Raised Regarding Supplement J

Comment. DHS received a number of comments on the new Supplement J to Form I–485, many of which came from individuals who are currently in the process of pursuing lawful permanent residence as beneficiaries of Form I–140 petitions. Many commenters stated that the Supplement J requirement is an unnecessary burden that will make portability requests under INA 204(j) more complex and cumbersome. Commenters also stated that the requirement would create uncertainty and confusion among employers and applicants. Commenters noted that employers may understand the Supplement J requirement as a

[34] For additional information on USCIS policy regarding the parameters of porting to ''same'' or ''similar'' employment, please see Same or Similar Memo March 2016.

[35] *Id.*

[36] *Id.*

disincentive to retaining or hiring new foreign nationals, as the requirement would increase administrative burdens and legal risks for employers in an already time-consuming and expensive process. Commenters stated that employers unfamiliar with the INA 204(j) process may be unwilling to cooperate in the completion of Supplement J. They also noted that the Supplement J requirement may require employers to draft new company policies concerning the supplement, thus further increasing administrative burdens. Some commenters stated that the Supplement J requirement would disrupt employers' existing procedures covering individuals seeking portability under INA 204(j).

Response. The majority of commenters that opposed the Supplement J requirement argued that it would be burdensome and complex, but they did not provide detailed explanations, analysis, or evidence supporting these assertions. Individuals requesting job portability under INA 204(j) have typically complied with that provision by submitting job offer letters describing the new job offer and how that new job is in the same or a similar occupational classification as the job offer listed in the underlying Form I–140 petition. The Supplement J requirement is intended to replace the need to submit job offer and employment confirmation letters by providing a standardized form, which will benefit both individuals and the Department. Under this rule, individuals will now have a uniform method of requesting job portability and USCIS will have a standardized means for capturing all of the relevant information necessary for processing.[37] DHS believes that a single standardized form, with accompanying instructions, provides greater clarity to the public regarding the types of information and evidence needed to support job portability requests. The form also ensures continued compliance with Paperwork Reduction Act (PRA) requirements.

Given the large overall number and variety of benefit requests and applications that USCIS adjudicates each year, DHS can more efficiently intake and process INA 204(j) portability requests on Supplement J than those submitted through letter correspondence. Among other things, Supplement J provides a consistent format and uniform content, which allows DHS to more easily find and capture necessary information as well as match the form with the corresponding Form I–485 application. Because there is no standardized form currently associated with porting requests, DHS contract and records staff cannot efficiently enter data associated with those requests. With the Supplement J, standardized data can more readily be entered and tracked in agency electronic systems. This, in turn, will greatly enhance USCIS's ability to monitor the status of portability requests, track file movement, and otherwise improve accountability and transparency regarding USCIS's processing of portability requests.

DHS does not agree with several commenters' statements that the Supplement J requirement will increase uncertainty with respect to job portability requests. Rather, DHS believes that Supplement J will reduce past uncertainties by facilitating (1) the tracking of portability requests through the adjudication process, (2) the provision of timely acknowledgements and notices, and (3) the ability of individuals to know if their new job is in a same or a similar occupational classification before the Form I–485 application is adjudicated.

Additionally, an individual who seeks to port in the future may affirmatively file Supplement J to seek a determination as to whether a new job offer is in the same or a similar occupational classification. A DHS decision will inform the individual whether the new job offer can support the pending Form I–485 application and continued eligibility to obtain lawful permanent residence without the need for a new employer to file a new Form I–140 petition. This process will provide transparency into USCIS's ''same or similar'' determinations, providing individuals with increased certainty and better allowing them to make informed career decisions, such as whether to change jobs prior to final adjudication of the pending Form I–485 application.

While an applicant may be required to submit Supplement J when requesting job portability, or in response to an RFE or NOID, DHS does not believe that this new requirement will create significant new burdens or legal risks for employers and employees. As discussed in more detail in the Regulatory Impact Analysis (RIA), the submission of Supplement J will not impose significant additional burdens of time on employers, because employers are already required in such cases to submit job offer or employment confirmation letters supporting INA 204(j) portability. For this same reason, DHS believes the Supplement J requirement will also not impose significant new legal costs, including by increasing the likelihood that individuals or employers will need to consult with lawyers.[38]

While DHS presents a sensitivity analysis for the potential annual costs of Supplement J in the RIA as ranging from $126,598 to $4,636,448, DHS believes that the submission of Supplement J does not impose significant additional burdens on USCIS or employers because applicants are already required to submit letters from employers when requesting INA 204(j) portability. DHS does not have information on how long it currently takes to complete employment confirmation or job offer letters, so DHS cannot conduct side-by-side comparisons. However, anecdotal input suggests that, notwithstanding concern to the contrary, the Supplement J requirement in fact is roughly equivalent to the letter-writing process, as employment confirmation and job offer letters currently provide information similar to that requested in Supplement J.

Additionally, USCIS recognizes in the RIA that the simplified and standardized process provided by the Supplement J requirement may facilitate the ability of employees to change employers. This process, along with the potential for an increased awareness of INA 204(j) portability as a result of this regulation, could potentially increase the number of Supplement J forms submitted. While beneficial to applicants, such an increase has the potential to result in higher turnover for some employers, along with additional costs that may be incurred due to employee replacement. However, DHS does not currently have data on the percentage of employees who port to other employers vis-à-vis those who port to other positions with their same employers. In the RIA, DHS qualitatively discusses the potential costs to employers resulting from employee turnover.

DHS reiterates that the Supplement J requirement will streamline adjudication by providing clear instructions on the types of information

[37] Along with Supplement J, individuals will still be able to provide additional information and documentary evidence supporting any aspect of the porting request. Individuals, if they so choose, may also include a letter further explaining how the new job offer is in the same or a similar occupational classification as the job offer listed in the qualifying Form I–140 petition.

[38] DHS notes that the RIA in this rulemaking provides potential filing costs of Supplement J as prepared by human resources specialists, in-house attorneys, and other attorneys. DHS included such legal costs not because it believes that legal assistance will be required to fill out Supplement J, but because many individuals and employers already use attorneys to submit portability requests under INA 204(j).

required to be submitted to USCIS. Additionally, DHS does not believe that employers will need to create any new administrative processes for filling out Supplement J, as employers are already required to submit job offer or employment confirmation letters. DHS believes that Supplement J places similar burden on employers from what is required through the current process. Similarly, because Supplement J requests substantially the same information that is currently provided by employers through letter correspondence, DHS does not believe the Supplement J creates any new legal risks for those employers. For a more detailed analysis of the economic impact of this rule, please refer to the full RIA published on *regulations.gov*.

Comment. Several commenters expressed concern that Supplement J will allow employers to take advantage of and assert more control over foreign workers. Some commenters specifically focused on the requirement that employers review and sign Supplement J before it is submitted to USCIS. Those commenters believed that this requirement could create a power dynamic in which employers could further control and exploit workers, including by forcing them to accept depressed wages.

Response. DHS does not believe that Supplement J will give employers more power over, or the ability to take advantage of, foreign workers. When the use of Supplement J becomes effective, an applicant for adjustment of status will continue to have the same flexibility to accept other job offers, if eligible for INA 204(j) portability, as they currently have.

Applicants requesting portability under INA 204(j) must provide evidence that the employer is a viable employer extending a bona fide offer of full-time employment to the applicant, and that the employer will employ the applicant in the job proffered upon the applicant's grant of lawful permanent resident status. The current practice is to have applicants submit this evidence in the form of job offer letters from employers. These letters must contain the employer's signature, as well as a certification that everything in the letter is true and correct. Supplement J does not depart from this past practice in any meaningful way. Because Supplement J requests the same information as is currently provided in letters that are currently provided by employers, and that contain the employer's signature, DHS does not see how the Supplement J requirement increases the ability to take advantage of, or otherwise assert control over, employees.

Comment. Many commenters also expressed concern that the Supplement J requirement will cause additional processing delays or fail to alleviate current employment-based immigrant visa wait times. Many commenters who were on the path to obtaining lawful permanent residence expressed their belief that the Supplement J requirement will exacerbate the already backlogged process for adjusting status. Commenters also suggested the requirement will lead to even more procedural requests for evidence, further delaying completion of processing efforts. Another commenter requested elimination of the Supplement J requirement from the rule, stating that the requirement would deter employers from hiring porting workers and thus set back efforts to increase portability among workers.

Response. DHS does not believe the Supplement J requirement will exacerbate or otherwise increase Form I–485 application processing times, nor will it deter employers from hiring porting workers, because it is simply replacing the existing requirement to provide letters from employers. To the contrary, DHS believes Supplement J will streamline the processing of Form I–485 applications, minimizing any processing delays caused by a potential increase in porting resulting from this rule. USCIS currently reviews employment letters, often in response to inquiries issued by USCIS, when adjudicating Form I–485 applications. Now USCIS will review and process Supplement J submissions instead. Supplement J aims to reduce exchanges between applicants and adjudicators, including by eliminating the need for USCIS to issue RFEs and NOIDs to obtain employment confirmation letters, thereby reducing the adjudication time involved in such cases. It allows DHS to standardize data entry and tracking pertaining to permanent job offers that are required in order for the principal beneficiaries of Form I–140 petitions to be eligible for adjustment of status. Moreover, the electronic capture of data pertaining to job offers will help DHS monitor the status of certain Form I–485 applications awaiting visa allocation and will enable DHS to better determine which Form I–485 applications have the required evidence prior to final processing.

DHS agrees with commenters, however, that Supplement J will not alleviate current employment-based immigrant visa wait times. Many Form I–485 applications may remain pending for lengthy periods of time due to the retrogression of visa numbers for particular employment-based immigrant visa preference categories, which may lead to visas becoming unavailable after Form I–485 applications are filed. Congress established the numerical limitations on employment-based immigrant visa numbers. The Department of State allocates employment-based immigrant visas based on the applicant's preference category, priority date, and country of chargeability. Supplement J does not affect the statutory availability of employment-based immigrant visas or the allocation of such numbers by DOS. USCIS cannot approve an individual's application for adjustment of status until a visa has again become available to that individual.

Supplement J improves administration of the portability provisions that Congress created so that individuals experiencing lengthy delays in the adjudication of their Form I–485 applications can change jobs while retaining their eligibility to adjust status on the basis of an approved Form I–140 petition. Supplement J will result in the more efficient adjudication of Form I–485 applications once visas become available, which DHS believes will encourage, not deter employers from hiring workers eligible to port under section 204(j).

Comment. Several commenters indicated that Supplement J will require the use of attorneys, which may diminish employers' desires to extend new job offers pursuant to INA 204(j) and therefore limit job portability. One commenter expressed the belief that corporate human resources representatives will not feel comfortable filling out Supplement J and will therefore seek the involvement of immigration attorneys.

Response. An attorney is not required to complete or file Supplement J, although individuals and employers may choose to be represented by attorneys. As indicated previously, Supplement J will standardize information collection for job portability requests under INA 204(j) and request information and evidence that many individuals and employers already submit to demonstrate eligibility under INA 204(j). While DHS is aware that many individuals and employers have in the past been represented by or received assistance from attorneys in relation to portability requests under INA 204(j), DHS disagrees that requiring the use of Supplement J will substantially increase the likelihood that individuals or employers will need to consult with attorneys on future submissions, given that the information collected by the form largely overlaps with the information that individuals and employers already provide through less formalized channels.[39] As noted above, Supplement J does not impose any new requirements and will assist DHS in determining an individual's eligibility to adjust status to lawful permanent residence in certain employment-based immigrant visa categories, as well as to modernize and improve the process for requesting job portability under INA 204(j).

iii. Miscellaneous Comments on Supplement J

Comment. Several commenters asked for clarification on whether individuals granted EB–2 national interest waivers would be required to file Supplement J.

Response. Grantees of national interest waivers will not be required to file Supplement J. Individuals seeking immigrant visas under certain employment-based immigrant visa categories do not require job offers from employers, including those filing EB–1 petitions as an alien of extraordinary ability and those filing EB–2 petitions based on a national interest waiver, which waives the normal EB–2 job offer requirement when DHS determines that doing so is in the national interest. *See* 8 CFR 204.5(h)(5) and (k)(4)(ii). An individual classified as an alien of extraordinary ability or granted a national interest waiver is not required to demonstrate a job offer at the time of adjudication of the Form I–485 application and therefore would not need to submit Supplement J (although they are not precluded from doing so). However, USCIS may inquire whether such applicants are continuing to work in the area or field that forms the basis of their immigrant visa eligibility. USCIS may also assess inadmissibility by determining whether an individual would likely become a public charge under INA 212(a)(4). USCIS revised the Supplement J instructions to clarify that the form need not be filed by aliens of extraordinary ability or individuals applying for adjustment of status on the basis of a national interest waiver.

Comment. Several commenters stated that Supplement J requires certain information that is not relevant to either a portability determination under INA 204(j) or to confirm that a job offer is available and bona fide. Specifically, commenters referred to sections in Supplement J that require employers to provide information such as type of business, gross annual income, net annual income, and number of employees. Commenters suggested revising the form to only require that kinds of information normally contained in employment confirmation letters.

Response. DHS agrees that certain information requested by Supplement J, such as the size of the employer's workforce, by itself, may not be determinative in the assessment of whether two jobs are in the same or similar occupational classification(s), or whether the job offered in the underlying Form I–140 petition is still available. However, such information can be relevant in the ''same or similar'' determination under the totality of the circumstances, as well as when USCIS is assessing whether a job offer is bona fide. DHS believes the information requested on Supplement J will assist USCIS in validating employers and in assessing whether a prospective employer is viable and making a bona fide job offer to the applicant. And in cases involving the same employer named in the underlying Form I–140 petition, Supplement J will assist USCIS in determining whether the employer is still viable and is still extending a bona fide job offer to the applicant.

Comment. Some commenters expressed concern that Supplement J would prevent economic growth and reduce labor mobility among workers who have various talents, especially in the technology sector. They argued that the ability of high-skilled talent to move between various organizations, or between different industries of the U.S. economy, would spur economic growth.

Response. DHS disagrees that the Supplement J requirement would prevent economic growth and hinder labor mobility. As noted previously, Supplement J simply allows DHS to collect and process information that employers already provide using a standardized information collection instrument, but it does not change the applicable standards of review. Contrary to assertions that Supplement J will limit worker mobility, DHS believes that Supplement J will facilitate the ability for eligible individuals to change between jobs while increasing the awareness of the availability of job portability under INA 204(j).

F. Compelling Circumstances Employment Authorization

1. Description of Final Rule and Changes From NPRM

The final rule provides a stopgap measure, in the form of temporary employment authorization, to certain nonimmigrants who are the beneficiaries of approved employment-based immigrant visa petitions, are caught in the continually expanding backlogs for immigrant visas, and face compelling circumstances. This stopgap measure is intended to address certain particularly difficult situations, including those that previously may have forced individuals on the path to lawful permanent residence to abruptly stop working and leave the United States. When sponsored workers and their employers are in particularly difficult situations due to employment-based immigrant visa backlogs, the compelling circumstances employment authorization provision may provide a measure of relief, where currently there is none.

Specifically, the final rule provides that, to obtain a temporary grant of compelling circumstances employment authorization, an individual must (1) be in the United States in E–3, H–1B, H–1B1, O–1, or L–1 nonimmigrant status, including in any applicable grace period, on the date the application for employment authorization is filed; (2) be the principal beneficiary of an approved Form I–140 petition; (3) establish that an immigrant visa is not authorized for issuance based on his or her priority date, preference category, and country of chargeability according to the Final Action Date in effect on the date the application is filed; and (4) demonstrate compelling circumstances that justify the exercise of USCIS discretion to issue an independent grant of employment authorization. *See* final 8 CFR 204.5(p)(1). The final rule limits the grant of employment authorization in compelling circumstances to a period of 1 year. *See* final 8 CFR 204.5(p)(4). Additionally, the principal beneficiary may seek renewals of this employment authorization in 1-year increments if: (1) He or she continues to face compelling circumstances and establishes that an immigrant visa is not authorized for issuance based on his or her priority date, preference category, and country of chargeability according to the Final Action Date in effect on the date the renewal application is filed; or (2) the difference between his or her priority date and the relevant Final Action Date is 1 year or less (without having to show compelling circumstances). *See* final 8 CFR 204.5(p)(3)(i). The final rule allows

[39] As noted previously, the RIA in this rulemaking provides potential filing costs of Supplement J as prepared by human resources specialists, in-house attorneys, and other attorneys. DHS recognizes that not all entities have human resources specialists or low-cost access to attorneys. DHS reaffirms, however, that aid of an attorney or a human resources specialist is not required to fill out Supplement J. DHS included these costs because many larger entities already rely on such individuals when preparing documents for use in portability requests under INA 204(j).

family members of these individuals to also apply for employment authorization, and provides that the validity period for their EADs may not extend beyond that authorized for the principal beneficiary. *See* final 8 CFR 204.5(p)(2) and (p)(3)(ii). The large majority of these individuals, after availing themselves of this temporary relief, are likely to continue on their path to permanent residence.

DHS is finalizing the compelling circumstances employment authorization provision with several changes to the proposed regulatory text to clarify the eligibility requirements for initial and renewal applications filed by principals and dependents. An individual requesting an EAD must file an application on Form I–765 with USCIS in accordance with the form instructions. Under final 8 CFR 204.5(p)(3), some individuals may be eligible for a renewal of their compelling circumstances EAD on either or both bases of eligibility, depending on their circumstances. DHS also recognizes that an applicant may seek to renew his or her compelling circumstances EAD on a different basis than that on the initial application. In the responses to comments below, DHS further explains the provisions in the final rule, including the manner in which DHS determined the specific population of beneficiaries who would be eligible for this type of employment authorization and its rationale for providing employment authorization only to those individuals who are facing compelling circumstances.

2. Public Comments and Responses

i. Support for Compelling Circumstances Employment Authorization

Comment. Some commenters supported the rule completely as written and therefore supported employment authorization based on compelling circumstances as proposed. Many of these commenters expressed general support and did not provide a detailed explanation for their position. Other commenters highlighted the benefits of compelling circumstances employment authorization, such as facilitating the ability of certain nonimmigrants to work for other employers (*i.e.,* not just the sponsoring employer).

Response. DHS appreciates these comments. The compelling circumstances provision fills a gap in the regulations and provides short-term relief to high-skilled individuals who are already on the path to lawful permanent residence, but who find themselves in particularly difficult situations generally outside of their control while they wait for their immigrant visas to become available.

Comment. One commenter supported the provision making individuals with a felony conviction ineligible for compelling circumstances employment authorization and recommended that such felons be ''deported without asking questions.''

Response. DHS confirms that, consistent with other processes, applicants who have been convicted of any felony or two or more misdemeanors are ineligible for employment authorization under the compelling circumstances provision. *See* final 8 CFR 204.5(p)(5). DHS, however, will not deport individuals without due process or in a manner inconsistent with controlling statutory and regulatory authority.

ii. Status of Individuals Who Are Granted a Compelling Circumstances EAD

Comment. A few commenters asked DHS to clarify the ''status'' of an individual who receives employment authorization based on compelling circumstances. One commenter asked DHS to clarify whether such individuals will be given a period of ''deferred action'' so as to provide them with a temporary reprieve from removal or other enforcement action. Similarly, the commenter asked DHS to confirm that individuals who receive employment authorization under compelling circumstances will not accrue unlawful presence. Another commenter asked DHS to provide an underlying status for beneficiaries of compelling circumstances EADs or to consider such beneficiaries to be in lawful status for purposes of INA 245(k)(2)(A), 8 U.S.C. 1255(k)(2)(A), so that these beneficiaries would be eligible to file applications for adjustment of status from within the United States, rather than having to consular process.

Response. Congress sets the categories or ''statuses'' under which foreign nationals may be admitted to the United States. While individuals eligible for compelling circumstances EADs must have lawful nonimmigrant status at the time they apply, such individuals will generally lose that status once they engage in employment pursuant to such an EAD. Such a foreign national will no longer be maintaining his or her nonimmigrant status, but he or she will generally not accrue unlawful presence during the validity period of the EAD or during the pendency of a timely filed and non-frivolous application. This means that if an individual who was employed under a compelling circumstances EAD leaves the United States to apply for a nonimmigrant or immigrant visa at a consular post abroad, the departure will not trigger the unlawful presence grounds of inadmissibility, as long as he or she is not subject to those grounds by virtue of having otherwise accrued periods of unlawful presence. USCIS intends to adjust its policy guidance to confirm that holders of compelling circumstances EADs will be considered to be in a period of stay authorized by the Secretary for that purpose. Because such individuals will be considered as being in a period of authorized stay for purposes of calculating unlawful presence, DHS does not believe it generally would be necessary to provide them with deferred action, which is an act of prosecutorial discretion that may be granted to individuals who generally have no other legal basis for being in the United States.

Comment. Commenters suggested that individuals who use compelling circumstances EADs should be permitted to adjust their status to lawful permanent residence once a visa becomes available, regardless of whether they are maintaining nonimmigrant status.

Response. With limited exception,[40] the INA does not permit the relief these commenters are requesting. Workers who initially apply for compelling circumstances EADs must be in a lawful nonimmigrant status. When a high-skilled worker engages in employment under a compelling circumstances EAD, he or she will no longer be working under the terms and conditions contained in the underlying nonimmigrant petition. Although the foreign national may remain in the United States and work under a compelling circumstances EAD, and generally will not accrue unlawful presence while the EAD is valid, he or she may be unable to adjust status to lawful permanent residence in the United States when his or her priority date becomes current. An individual who is seeking lawful permanent residence based on classification as an employment-based immigrant is generally barred by statute from applying to adjust status in the United States if he or she is not in lawful nonimmigrant status. *See* INA 245(c)(2) and (7), 8 U.S.C. 1254(c)(2) and (7). If an individual working on a compelling circumstances EAD finds an employer who is willing to sponsor him or her for a nonimmigrant classification (such as

[40] *See, e.g.,* INA 245(i) and (k), 8 U.S.C. 1255(i) and (k).

the H–1B nonimmigrant classification), he or she would have to leave the United States and may need to obtain a nonimmigrant visa from a consulate or embassy overseas before being able to return to the United States to work in that status. *See* INA 248, 8 U.S.C. 1258; 8 CFR 248.1(b). Once the individual has been admitted in nonimmigrant status, he or she may be eligible to adjust status to lawful permanent residence, if otherwise eligible.

iii. Changing the Scope of Proposed Employment Authorization

Comment. A majority of commenters supported the ability of high-skilled workers to obtain independent employment authorization but stated that the proposal in the NPRM was too restrictive, particularly because of the inclusion of the compelling circumstances requirement. Commenters instead supported employment authorization for foreign workers in the United States who are beneficiaries of approved Form I–140 petitions, who are maintaining nonimmigrant status, and who are waiting for their immigrant visa priority dates to become current, regardless of whether they face compelling circumstances.

A common concern expressed by commenters opposing the compelling circumstances requirement was that the number of individuals who would be eligible for such EADs would be too narrow. Some commenters suggested that it would be better to never finalize the rule if the compelling circumstance provision were to remain intact. Certain commenters opposed DHS's introduction of a compelling circumstances requirement because no other employment authorization category is conditioned upon a showing of compelling circumstances. One commenter, for example, reasoned that the ''compelling circumstances'' requirement should be eliminated because applicants for adjustment of status, who similarly are on the path to lawful permanent residence, need not demonstrate compelling circumstances to obtain an EAD. Other commenters noted that recipients of deferred action under the Deferred Action for Childhood Arrivals (DACA) policy are not required to establish compelling circumstances to qualify for employment authorization and stated that it is only fair that nonimmigrants with approved Form I–140 petitions who are contributing to society by working and paying taxes be treated equivalently. Some commenters concluded that the Department is ''targeting'' certain foreign workers by imposing the compelling circumstances condition.

Response. The Department believes the compelling circumstances employment authorization provision strikes a reasonable balance between competing priorities. By providing greater flexibility to certain high-skilled foreign workers who are on the path to permanent residence but are facing particularly difficult situations, the provision incentivizes such workers to continue contributing to our economy; affords greater fairness to such individuals who have already cleared significant legal hurdles to becoming LPRs; and complements the flexibilities otherwise introduced by this rulemaking in a way that harmonizes with the broader immigration system. DHS therefore declines to expand the group of people who may be eligible for employment authorization under 8 CFR 204.5(p).

DHS believes the expansions suggested by commenters have the potential to create uncertainty among employers and foreign nationals with consequences for predictability and reliability in the employment-based immigration system. Among other things, the suggestions could lead to unlimited numbers of beneficiaries of approved immigrant visa petitions choosing to fall out of nonimmigrant status, as described in greater detail below. The resulting unpredictability in the employment-based immigrant visa process must be carefully weighed in light of the Secretary's directive to ''provide stability'' to these beneficiaries, while modernizing and improving the high-skilled visa system.[41] DHS is cognizant of these consequences for foreign nationals who may apply for compelling circumstances EADs, and carefully weighed these consequences when assessing the classes of individuals who should be eligible for such EADs. Moreover, the INA affords numerous mechanisms for high-skilled workers to obtain employment in the United States under a variety of applicable nonimmigrant classifications and, as necessary, change from one nonimmigrant status to another.[42] DHS regulations accordingly provide the processes and criteria for obtaining such statuses on behalf of high-skilled workers.[43] By authorizing grants of employment authorization in 1-year increments to certain high-skilled individuals facing difficult situations, DHS intends to provide something different—a stopgap relief measure for intending immigrants, well on their way to achieving lawful permanent resident status, in the event certain circumstances arise outside their control, and that the existing framework fails to meaningfully address. Where no such circumstances are present, these individuals can avail themselves of other opportunities already permitted them under the INA and DHS regulations, including the improved flexibilities provided by this final rule. Among other things, this final rule provides high-skilled workers with nonimmigrant grace periods and includes provisions that help such workers retain approval of their employment-based immigrant visa petitions and related priority dates. These provisions enhance flexibility for employers and nonimmigrant workers and will decrease instances where the compelling circumstances EAD might otherwise be needed. Relatedly, DHS believes that providing compelling circumstances EADs only to the subset of the employment-sponsored population in need of this relief will limit disincentives for employers to sponsor foreign workers for permanent residence. DHS thus disagrees that the proposed eligibility factors for employment authorization in compelling circumstances are too restrictive and negate the value of the entire regulation. Further, DHS disagrees with the commenters' characterizations that the limitations on the compelling circumstances EAD are unfairly or improperly ''targeting'' certain high-skilled workers. DHS believes that the compelling circumstances EAD provides a useful benefit for all eligible high-skilled workers by allowing them to continue to progress in their careers and remain in the United States while they await immigrant visas, despite compelling circumstances that might otherwise force them to leave the United States. Retaining these high-skilled nonimmigrant workers who are well on their way to becoming LPRs is important when considering the contributions of these individuals to the U.S. economy, including through contributions to entrepreneurial endeavors and advances in research and development.[44]

[41] *See* Memo from Jeh Charles Johnson, Secretary of Homeland Security, Policies Supporting U.S. High-Skilled Business and Workers 2 (Nov. 20, 2014), available at *http://www.dhs.gov/sites/default/files/publications/14_1120_memo_business_actions.pdf.*

[42] *See* INA 101(a)(15), 214(e), and 248, 8 U.S.C. 1101(a)(15), 1184(e), and 1258.

[43] *See* 8 CFR parts 214 and 248.

[44] *See* Hart, David, et al., ''High-tech Immigrant Entrepreneurship in the United States,'' Small Business Administration Office of Advocacy, at 60 (July 2009), available at: *https://www.sba.gov/sites/*

Comment. Several commenters stated that the Department clearly has the legal authority to implement the compelling circumstances EAD, as well as the legal authority to significantly broaden eligibility for such EADs. Other commenters questioned DHS's legal authority to extend employment authorization to certain non-U.S. citizens based on compelling circumstances. One such commenter emphasized that employment for other categories is expressly authorized by statute.

Response. DHS agrees with the commenters who recognized that the Department has the statutory authority to grant employment authorization to these individuals. Such authority stems, in part, from the Secretary's broad discretion to administer the Nation's immigration laws and broad authority to ''establish such regulations . . . and perform such other acts as he deems necessary for carrying out his authority under the [INA].'' *See* INA 103(a)(3), 8 U.S.C. 1103(a)(3). Further, section 274A(h)(3)(B) of the INA, 8 U.S.C. 1324a(h)(3)(B) recognizes that employment may be authorized by statute or by the Secretary. *See Arizona Dream Act Coalition* v. *Brewer,* 757 F.3d 1053, 1062 (9th Cir. 2014) (''Congress has given the Executive Branch broad discretion to determine when noncitizens may work in the United States.''); *Perales* v. *Casillas,* 903 F.2d 1043, 1048, 1050 (5th Cir. 1990) (describing the authority recognized by INA 274A(h)(3) as ''permissive'' and largely ''unfettered''). The fact that Congress has directed the Secretary to authorize employment to specific classes of foreign nationals (such as the spouses of E and L nonimmigrants) does not diminish the Secretary's broad authority to administer the INA and to exercise discretion in numerous respects, including through granting employment authorization as a valid exercise of such discretion. *See* INA sections 103 and 274A(h)(3)(B), 8 U.S.C. 1103, and 1324a(h)(3)(B). The Secretary's exercise of discretion to grant employment authorization is narrowly tailored in this final rule to address the needs of a group of individuals who face compelling circumstances. The employment authorization is valid for 1 year, with limited opportunities for renewal, and is only available to discrete categories of nonimmigrant workers.

Comment. Several commenters opposed to the compelling circumstances limitation noted that such limitation was not referenced in the Secretary's November 20, 2014 Memorandum, ''Policies Supporting U.S. High-Skilled Businesses and Workers.'' [45] Similarly, many commenters stated that the proposed rule did not deliver portable work authorization for high-skilled workers and their spouses, as described in the White House Fact Sheet on Immigration Accountability Executive Action.[46]

Response. In the November 20, 2014 Memorandum, the Secretary directed USCIS to take several steps to modernize and improve the immigrant visa process for high-skilled workers. In relevant part, the Secretary instructed USCIS to carefully consider regulatory or policy changes to better assist and provide stability to the high-skilled beneficiaries of approved Form I–140 petitions. DHS believes this rule meets the Secretary's objectives. Although the compelling circumstances provision was not specifically referenced in the November 20, 2014 Memorandum, it was proposed by the Department in response to the Secretary's directive to ''carefully consider other regulatory or policy changes to better assist and provide stability to the beneficiaries of approved Form I–140 petitions.'' [47] The compelling circumstances provision specifically enables the beneficiaries of such petitions to remain and work in the United States if they face compelling circumstances while they wait for an immigrant visa to become available, and therefore directly responds to the Secretary's directive.

The White House Fact Sheet on Immigration Accountability Executive Action referenced by the commenters concerning portability of high-skilled workers and their spouses is addressed in several elements of this rulemaking, including through the new H–1B portability provisions, the section 204(j) portability provisions, and provisions revising the circumstances under which Form I–140 petitions are automatically revoked. To the degree these comments specifically relate to provisions authorizing employment of H–4 nonimmigrant spouses of H–1B nonimmigrant workers who have been sponsored for permanent resident status, that provision was subject to separate notice-and-comment rulemaking and is now codified at 8 CFR 214.2(h)(9)(iv).

Comment. Several commenters claimed that the compelling circumstances EAD provision has limited value because it introduces additional hurdles for individuals who wish to ultimately adjust their status domestically. Some commenters asserted that the provision would provide employers with increased avenues to exploit workers.

Response. DHS appreciates that workers who are eligible for the compelling circumstances EAD may nevertheless choose to not to apply for this option after weighing all immigration options relevant to their specific situations. DHS is providing this new option in addition to others already available to foreign workers, such as changing status to another nonimmigrant category or applying for an extension of stay with a new employer in the same nonimmigrant category. DHS anticipates that an individual evaluating whether to apply for a compelling circumstances EAD will consider the benefits and drawbacks of using such an EAD. DHS expects that such individuals will specifically consider the effects of losing nonimmigrant status by working under a compelling circumstances EAD, which may require consular processing to reenter the United States on a nonimmigrant or immigrant visa. DHS believes that the rule provides a meaningful benefit to high-skilled individuals who otherwise may face particularly difficult situations.

Finally, commenters did not suggest how the compelling circumstances EAD would facilitate the ability of employers to exploit their employees. DHS disagrees that the availability of such EADs, which are available to high-skilled nonimmigrant workers on a voluntary basis, would result in

default/files/rs349tot_0.pdf (presenting the economic contributions of high-skilled immigrants and the need to retain them, and concluding that 36 percent of immigrant-founded companies conduct R&D and 29 percent of immigrant-founded companies held patents, both higher percentages than native-founded companies); Fairlie, Robert, ''Open for Business: How Immigrants are Driving Small Business Creation in the United States,'' The Partnership for a New American Economy (August, 2012), available at: *http://www.renewoureconomy.org/sites/all/themes/pnae/openforbusiness.pdf;* ''Immigrant Small Business Owners a Significant and Growing Part of the Economy'' (June 2012), available at: *http://www.fiscalpolicy.org/immigrant-small-business-owners-FPI-20120614.pdf;* Anderson, Stuart, ''American Made 2.0 How Immigrant Entrepreneurs Continue to Contribute to the U.S. Economy, National Venture Capital Association,'' available at: *http://nvca.org/research/stats-studies/.*

[45] *See* Memo from Jeh Charles Johnson, Secretary of Homeland Security, Policies Supporting U.S. High-Skilled Business and Workers 2 (Nov. 20, 2014), available at *http://www.dhs.gov/sites/default/files/publications/14_1120_memo_business_actions.pdf.*

[46] *See* FACT SHEET: Immigration Accountability Executive Action, White House (Nov. 20, 2014), *https://www.whitehouse.gov/the-press-office/2014/11/20/fact-sheet-immigration-accountability-executive-action.*

[47] *See id.* at 2.

increased exploitation of such workers.[48]

iv. Illustrations of Compelling Circumstances

In the NPRM, DHS provided four examples of situations that, depending on the totality of the circumstances, may be considered compelling and justify the need for employment authorization: (1) Serious illness or disability faced by the nonimmigrant worker or his or her dependent; (2) employer retaliation against the nonimmigrant worker; (3) other substantial harm to the applicant; and (4) significant disruption to the employer. These situations are meant to be illustrative, as compelling circumstances will be decided on a case-by-case basis and may involve facts that vary from those provided above. For that reason, DHS invited the public to suggest other types of compelling circumstances that may warrant a discretionary grant of separate employment authorization. DHS also requested comments on the manner in which applicants should be expected to document such compelling circumstances. In response, DHS received numerous comments providing examples and suggestions, which are discussed below.

Comment. Several commenters requested that DHS clearly define the term ''compelling circumstances.'' Some of these commenters stated that the subjectivity of the compelling circumstances provision would lead to unfair and inconsistent results. Other commenters stated that the lack of a definition would lead to confusion.

Another commenter requested that DHS expand on the phrase ''other substantial harm to the applicant,'' believing that this provision may be the most common basis for demonstrating compelling circumstances. Another commenter suggested that DHS broaden the circumstances in which employer retaliation would be considered to be compelling, so as to benefit employees involved in labor disputes. The commenter noted that, as discussed in the preamble of the NPRM, the category titled ''Employer Retaliation'' would require an employee to document that an employer had taken retaliatory action before the employee could become eligible to apply for employment authorization based on compelling circumstances. To alleviate undue risk, the commenter recommended revising the category so that it would cover individuals involved in labor disputes. The commenter believed this change would reduce the harm that retaliation can cause to employees and prevent the chilling effect such retaliation can have on the exercise of labor rights.

A commenter also requested that, as related to DHS's proposal to consider significant disruption to employers, compelling circumstances apply when an employer attests that departure of the employee will: (1) Delay a project; (2) require the company to expend time or resources to train another employee to fill the role; (3) result in additional costs to recruit and hire a new employee; or (4) harm the company's professional reputation in the marketplace.

Response. DHS understands that establishing a bright-line definition may be easier to apply in the view of some stakeholders; however, it may also have the effect of limiting DHS's flexibility to recognize the various circumstances that could be considered compelling. Such flexibility is better afforded through a mechanism that permits DHS to determine which situations involve compelling circumstances on a case-by-case basis. Therefore, in the preamble to the NPRM, DHS identified four illustrative (*i.e.,* non-exhaustive) types of circumstances in which the Department may consider granting employment authorization. The possible types of circumstances that DHS may consider compelling are not restricted to these examples. In finalizing this rule, DHS considered comments requesting additional scenarios for DHS to add to the illustrative list of potential compelling circumstances in the NPRM. The broad range of additional scenarios suggested underscores the importance for retaining flexibility in making these discretionary determinations. Therefore, DHS declines to define the term ''compelling circumstances'' in more concrete and limiting terms in this rulemaking. In response to the public comments, however, the agency provides this updated list of illustrative circumstances that USCIS, in its discretion, might find compelling. USCIS emphasizes that this list is not exhaustive of the types of situations that might involve compelling circumstances.

• *Serious Illnesses and Disabilities.* The nonimmigrant worker can demonstrate that he or she, or his or her dependent, is facing a serious illness or disability that entails the worker moving to a different geographic area for treatment or otherwise substantially changing his or her employment circumstances. A move to another part of the country to ensure proper medical care is just one example of compelling circumstances resulting from a serious illness or disability of the principal beneficiary or his or her family member.

• *Employer Dispute or Retaliation.* The nonimmigrant worker can demonstrate that he or she is involved in a dispute regarding the employer's alleged illegal or dishonest conduct as evidenced by, for example, a complaint filed with a relevant government agency[49] or court, and that the employer has taken retaliatory action that justifies granting separate employment authorization to the worker on a discretionary basis or that the dispute otherwise is shown to have created compelling circumstances. DHS recognizes that employer retaliation in response to a dispute is not limited to termination of employment and could include any number of actions taken by an employer, including harassment. Depending on the unique circumstances of a situation, an employer dispute could rise to the level of compelling circumstances even absent employer retaliation, but DHS declines to adopt the suggestion to grant a compelling circumstances EAD on the sole basis that the applicant is involved in a labor dispute. DHS is allowing sufficient flexibility under this ground, including by not defining ''retaliation'' or ''labor dispute'' in this rule or confining the ground to LCA violations alone. DHS further notes that the employer retaliation example does not identify the universe of fact patterns that might involve improper behavior by employers. DHS believes that the approach outlined in this final rule will make appropriate relief available for certain employees who can demonstrate

[48] DHS takes worker exploitation seriously. The Department has created the Blue Campaign to combat human trafficking and aid victims. More information about the Blue Campaign can be found at *www.dhs.gov/blue-campaign.* Other U.S. Government resources include the Department of Justice's Office of Special Counsel for Immigration-Related Unfair Employment Practices, which enforces the anti-discrimination provision of the INA. *See* INA section 274B; 8 U.S.C. 1324b. More information about reporting an immigration-related unfair employment practice may be found at *http://www.justice.gov/crt/about/osc.* In addition, the U.S. Equal Employment Opportunity Commission (EEOC) enforces Title VII of the Civil Rights Act of 1964 (Title VII), as amended, and other federal laws that prohibit employment discrimination based on race, color, national origin, religion, sex, age, disability and genetic information. More information about Title VII and the EEOC may be found at *www.eeoc.gov.* DHS also notes that DOL's Wage and Hour Division investigates allegations of employee abuse. Information about reporting a potential wage and hour violation can be found at *www.dol.gov* or by calling 1–866–4USWAGE (1–866–487–9243).

[49] Relevant government agencies include, but are not limited to, the Department of Labor, the Equal Employment Opportunity Commission, the National Labor Relations Board, and state or local counterparts to these federal agencies (*e.g.,* the Massachusetts Labor and Workforce Development Office, the New Hampshire Public Employee Labor Relations Board, and the Oregon Employment Relations Board).

that they do not have the option of remaining with their current employer or that they face retaliatory actions if they do remain with their current employer.

• *Other Substantial Harm to the Applicant.* The nonimmigrant worker can demonstrate that due to compelling circumstances, he or she will be unable to timely extend or otherwise maintain status, or obtain another nonimmigrant status, and absent continued employment authorization under this proposal the applicant and his or her family would suffer substantial harm. In some situations, this showing might be tied to financial hardship facing the principal and his or her spouse and children. An example of such substantial harm may involve an H–1B nonimmigrant worker who has been applying an industry-specific skillset in a high-technology sector for years with a U.S. entity that is unexpectedly terminating its business, where the worker is able to establish that the same or a similar industry (*e.g.,* nuclear energy, aeronautics, or artificial intelligence) does not materially exist in the home country. Another example might include a nonimmigrant worker whose return to his or her home country would cause significant hardship to the worker and his or her family by resulting in a series of circumstances regarding the family being uprooted that in their totality, rise to the level of compelling circumstances. In this circumstance, the employment authorization proposal would provide the individual with an opportunity to find another employer to sponsor him or her for immigrant or nonimmigrant status and thereby protect the worker and his or her family members from the substantial harm they would suffer if required to depart the United States.

Although approaching or reaching the statutory temporal limit on an individual's nonimmigrant status will not, standing alone, amount to compelling circumstances, this could be a factor considered by DHS in weighing the totality of the circumstances on a case-by-case basis. Likewise, job loss alone will not be considered substantial harm to the applicant, unless an individual can show additional circumstances that compound the hardship associated with job loss.

• *Significant Disruption to the Employer.* The nonimmigrant worker can show that due to compelling circumstances, he or she is unexpectedly unable to timely extend or change status, there are no other possible avenues for the immediate employment of such worker with that employer, and the worker's departure would cause the petitioning employer substantial disruption. DHS does not believe that, standing alone, a time delay in project completion would likely rise to a compelling circumstance, as a commenter suggested; however, such delays when combined with other factors, such as the cost to train or recruit a replacement or harm to an employer's reputation in the marketplace, might rise to a compelling circumstance. Additional examples of significant disruption may include the following:

◦ An L–1B nonimmigrant worker sponsored for permanent residence by an employer that subsequently undergoes corporate restructuring (*e.g.,* a sale, merger, split, or spin-off) such that the worker's new employer is no longer a multinational company eligible to employ L–1B workers, there are no available avenues to promptly obtain another work-authorized nonimmigrant status for the worker, and the employer would suffer substantial disruption due to the critical nature of the worker's services. In such cases, the employment authorization proposal would provide the employer and worker a temporary bridge allowing for continued employment while they continue in their efforts to obtain a new nonimmigrant or immigrant status.

◦ An H–1B nonimmigrant worker who provides critical work on biomedical research for a non-profit entity, affiliated with an institution of higher education, that subsequently reorganizes and becomes a for-profit entity, causing the worker to no longer be exempt from the H–1B cap. In cases where the worker may be unable to obtain employment authorization based on his or her H–1B status, and the employer is unable to file a new H–1B petition based on numerical limitations or to obtain another work-authorized nonimmigrant status, the employment authorization available under 8 CFR 204.5(p) could provide a temporary bridge for continued employment of the worker as his or her departure would create substantial disruption to the employer's biomedical research.

Comment. The NPRM requested that commenters submit examples of additional scenarios that could be considered for compelling circumstances EADs. Many commenters suggested fact patterns that they believed should rise to the level of a compelling circumstance. DHS received the following specific suggestions:

• *Extraordinary Wait.* Many commenters asked DHS to consider a lengthy wait for an immigrant visa to be a compelling circumstance. A number of commenters noted that having to continuously extend nonimmigrant status was in itself a compelling circumstance and that employment authorization should be granted on that basis alone. Commenters suggested various timeframes for when the wait for an immigrant visa would be lengthy enough to qualify as a compelling circumstance, including situations involving beneficiaries: Who are facing waits of over 5 years before they are eligible to file their applications for adjustment of status; who have completed 6 years in H–1B nonimmigrant status and have an approved Form I–140 petition; who have an approved Form I–140 petition and are facing at least a three month wait before they may be eligible to file their applications for adjustment of status; or who have reached the limit of their nonimmigrant status solely because of the backlog on immigrant visas.

• *Academic Qualifications.* Several commenters suggested that DHS should grant compelling circumstances EADs to individuals seeking to gain advanced academic experience, such as those obtaining a U.S. graduate degree based on specialized research or entering a fellowship program. One commenter requested that U.S. educated advanced-degree holders in the fields of science, technology, engineering, and mathematics (STEM) be granted compelling circumstances employment authorization. Another commenter requested employment authorization under compelling circumstances for workers who are pursuing part-time education and would like to switch to a different type of job.

• *Dissatisfaction with Current Position or Salary.* Some commenters indicated that job dissatisfaction should be a compelling circumstance, because remaining in such employment can cause emotional harm and other problems.

• *Home Ownership.* One commenter recommended that home ownership be considered a compelling circumstance.

• *Unemployment.* One commenter recommended that unemployment be considered a compelling circumstance.

• *Effects on Derivatives.* One commenter suggested that certain family situations should be considered compelling circumstances. Specifically, the commenter stated that employment authorization should be approved where the employee submits evidence that his or her departure will: (1) Negatively affect the employee's, or a derivative family member's, professional career; or (2) disrupt the ongoing education of the employee's child. Many commenters requested that DHS amend the proposed regulation to protect derivatives who may be ''aging out.'' The majority of these commenters believed that ''aging out'' itself constituted a compelling circumstance.

• *Entrepreneurship.* Some commenters advocated for granting employment authorization to individuals who would like to start a business. These commenters suggested that such entrepreneurship should always be a compelling circumstance.

• *National Interest Waivers.* Several commenters urged DHS to include approval of a national interest waiver as a stand-alone compelling circumstance. One commenter requested that DHS grant employment authorization to beneficiaries who have pending petitions for national interest waivers, and that DHS eliminate the requirement that individuals be maintaining lawful nonimmigrant status to adjust status pursuant to an employment-based immigrant visa petition. Another commenter requested that employment authorization be granted to physicians with national interest waivers who have worked for at least 3 years in federally designated underserved areas.

Response. Compelling circumstances are generally situations outside a worker's control that warrant the Secretary's exercise of discretion in granting employment authorization, on a case-by-case basis, given the totality of the circumstances. Adjudicators will look at various factors, including all factors identified by the applicant, and may consider whether the evidence supports providing compelling circumstances employment authorization, such as where the high-skilled nonimmigrant worker is facing retaliation from the employer for engaging in protected conduct, where loss of work authorization would result in significant disruption to the employer or cause significant harm to the worker, or other circumstances of similar magnitude.

DHS acknowledges that many beneficiaries eagerly await the opportunity to become lawful permanent residents. The Department works closely with DOS to improve the immigrant visa processing system, but notes that it is inevitable that beneficiaries may experience long waits and that processing times will vary. As indicated in the NPRM, DHS does not believe that a long wait for an immigrant visa constitutes a compelling circumstance on its own. Many workers who face a lengthy wait for an immigrant visa, including those who have reached their statutory maximum time period in nonimmigrant status, often face difficult choices. DHS does not consider that these common consequences, on their own, would amount to compelling circumstances. Nor does DHS believe that many of the other scenarios suggested by commenters involve compelling circumstances on their own. Home ownership, notable academic qualifications, or dissatisfaction with a position or salary, standing alone, do not rise to the level of a compelling circumstance. However, any one of these situations could rise to the level of compelling circumstances in combination with other circumstances.

Likewise, unemployment, in and of itself, will generally not be considered a compelling circumstance. However, unemployment could rise to the level of a compelling circumstance if, for example, the applicant demonstrates that the unemployment was a result of serious illness, employer retaliation, or would result in substantial harm or significant employer disruption, as described above and in the NPRM. *See* 80 FR 81899, at 81925. The compelling circumstances requirement is a higher standard than mere inconvenience, and the applicant would need to establish the harm resulting from the loss of employment and the benefits to be gained by being able to continue employment in the United States.

DHS closely considered comments advocating for protection of derivatives. DHS has determined it is appropriate to extend the benefits provided by the compelling circumstances provision to spouses and children of principal beneficiaries whose employment authorization has not been terminated or revoked. *See* final 8 CFR 204.5(p)(2). DHS, however, purposefully made the determinative factor the principal's status, because it is the principal's status that forms the basis for the family's presence in the United States. A principal beneficiary, however, would be able to present evidence that, for example, his or her departure will negatively impact the derivative family member's professional career or disrupt the ongoing education of the employee's child, and DHS will consider these factors together with all supporting factors as part of the overall analysis.

DHS also specifically considered comments expressing concern for children who may ''age out'' or have recently ''aged out'' of immigration benefit eligibility. DHS notes that, by statute, once a person turns 21, he or she is no longer a ''child'' for purposes of the INA, subject to certain statutory exceptions by which individuals who surpass that age are or may be considered to remain a ''child'' by operation of law.[50] *See* INA 101(b)(1) and 203(d), 8 U.S.C. 1101(b)(1) and 1153(d). Such an individual would no longer qualify as an eligible dependent beneficiary of the principal's Form I–140 petition and would not be able to immigrate to the United States on that basis. As such, DHS will not extend the benefits of a compelling circumstances employment authorization to children who have aged out and will not consider the potential for aging-out as a *per se* compelling circumstance standing alone.

While circumstances relating to a business start-up could be relevant to a presentation of compelling circumstances, an interest in entrepreneurship standing alone cannot support an employment authorization request based on a compelling circumstance. With regard to Form I–140 petitions approved in the EB–2 category based on a national interest waiver, in this final rule DHS is confirming that beneficiaries of approved Form I–140 petitions under the EB–2 category, which include national interest waiver beneficiaries and physicians working in medically underserved areas, are eligible to apply for employment authorization based on compelling circumstances, as long as they meet all other applicable requirements.[51]

v. Nonimmigrant and Immigrant Classifications of Individuals Eligible To Request Employment Authorization Based on Compelling Circumstances

In the NPRM, DHS proposed to limit the discretionary grant of employment authorization based on compelling circumstances only to certain workers who are in the United States in E–3, H–1B, H–1B1, O–1, or L–1 nonimmigrant status and who are the beneficiaries of approved employment-based immigrant

[50] The Child Status Protection Act (CSPA) was enacted on August 6, 2002, and provides continuing eligibility for certain immigration benefits to the principal or derivative beneficiaries of certain benefit requests after such beneficiaries reach 21 years of age. *See* Public Law 107–208; INA sections 201(f), 203(h), 204(k) 207(c)(2), and 208(b)(3), 8 U.S.C. 1151(f), 1153(h), 1154(k), 1157(c)(2), and 1158(b)(3). Specifically, the CSPA addresses certain situations involving delays in the adjudication of petitions or applications. The CSPA has wide applicability, covering family-sponsored and employment-based beneficiaries, Diversity Visa immigrants, refugees, and asylees.

[51] DHS observes that physicians receiving employment authorization based on compelling circumstances who have sought a national interest waiver based on an immigrant visa petition under section 203(b)(2)(B)(ii) of the Act remain subject to all requirements relating to the national interest waiver. Similarly, a physician who may be eligible for a compelling circumstance EAD may still be subject to, and limited by, any applicable obligations under sections 212(e) and 214(l) of the Act.

visa petitions. *See* proposed 8 CFR 204.5(p)(1)(i). DHS invited public comment on the proposed nonimmigrant classifications, including whether other nonimmigrant classifications should be considered. DHS also invited public comment on the requirement that applicants be the beneficiaries of approved EB–1, EB–2, or EB–3 immigrant visa petitions. These comments are addressed below.

Comment. Commenters specifically asked DHS to expand eligibility for the compelling circumstances provision to other nonimmigrant classifications, including to the E–1, E–2, and J–1 nonimmigrant classifications. Some of these commenters noted that nonimmigrants in these classifications could experience the same types of hardship as nonimmigrants covered by the proposed rule.

Response. In developing the proposed rule, DHS carefully considered the classes of nonimmigrant workers who should be eligible to apply for compelling circumstances EADs. Providing additional benefits to E–1 and E–2 nonimmigrants would impact international treaties and foreign policy considerations and DHS therefore believes it is inappropriate to include them in this rulemaking. Likewise, changes related to J–1 nonimmigrants could not be made solely by DHS, as the program is administered predominantly by DOS. Moreover, many J–1 nonimmigrants are statutorily required to complete a 2-year foreign residence requirement before they can remain in the United States, and providing them with employment authorization in many circumstances could be contrary to these statutory restrictions. *See* INA 101(j), 212(e), 214(l), and 248, 8 U.S.C. 1101(j), 1182(e), 1184(l) and 1258. Therefore, DHS declines to include these classifications as eligible for employment authorization for compelling circumstances.

Comment. One commenter focused on DHS's inclusion of E–3 and H–1B1 nonimmigrants in the compelling circumstances provision, and asked whether DHS intended to include E–3 and H–1B1 nonimmigrants among the categories of nonimmigrants that are afforded ''dual intent.''

Response. DHS notes that the doctrine of ''dual intent'' is beyond the scope of this regulation. DHS notes, however, that individuals in these categories can be the beneficiaries of approved Form I–140 petitions while continuing to maintain nonimmigrant status.

Comment. One commenter requested that DHS grant compelling circumstances EADs to individuals in the employment-based fourth preference (EB–4) category, including certain religious workers; Iraqis who have assisted the United States; Iraqi and Afghan translators; employees of international organizations; and others. The commenter further noted that some Iraqi translators have been neglected by the U.S. immigration system, and that DHS, through the NPRM, was continuing this asserted neglect.

Response. DHS aligned this rulemaking with the principles underlying AC21 and ACWIA, codifying longstanding policies and practices implementing those statutes, and building upon those provisions to provide stability and flexibility to certain foreign workers who are successfully sponsored for LPR status by their employers. DHS has carefully tailored the compelling circumstances EAD provision as a stopgap measure for certain high-skilled individuals facing particularly difficult situations who are on the path to lawful permanent residence under the EB–1, EB–2 and EB–3 immigrant visa classifications.

DHS declines the commenter's request to include EB–4 beneficiaries as eligible to apply for employment authorization based on compelling circumstances because Congress, with very limited exception,[52] did not prioritize the EB–4 visa category in AC21, which this rule was broadly intended to complement. Moreover, DHS did not propose to expand the scope of the rulemaking to address issues related to EB–4 beneficiaries, and therefore cannot adopt the commenter's suggestion.

vi. *Application Timeframes for Compelling Circumstances EADs*

Comment. One commenter suggested that individuals should be permitted to apply for an initial compelling circumstances EADs well in advance (a minimum of 180 days) of the expiration of their current nonimmigrant status. Other commenters sought clarification on the timing requirements for renewal applications.

Response. DHS believes that establishing a timeframe for individuals to request initial employment authorization based on compelling circumstances is not necessary. Under this rule, an applicant can file a Form I–765 application to request an initial EAD based on compelling circumstances at any time before the expiration of his or her nonimmigrant status. For approval, the applicant must be able to demonstrate that he or she meets the criteria in 8 CFR 204.5(p)(1) or (2) on the date of filing, including that compelling circumstances exist. DHS notes that a Form I–765 application filed far in advance of the expiration of the foreign national's nonimmigrant status may be adjudicated before such status expires; however, DHS's approval of the employment authorization based on compelling circumstances would still be limited to an initial grant of 1 year beginning on the date of approval.

With respect to the timing of the renewal application, DHS has reviewed the renewal provision as proposed and agrees with commenters that the proposed regulatory text was ambiguous regarding the timing of renewal applications. Therefore, DHS clarifies in the final rule at § 204.5(p)(3) that applications for renewal of employment authorization based on compelling circumstances must be filed by the applicant prior to the expiration of his or her current employment authorization. Requiring renewal applications to be properly filed prior to the expiration of the current employment authorization is consistent with DHS's goal of promoting ongoing employment and also encourages such applicants to avoid accruing unlawful presence, which could affect their eligibility to obtain LPR status. Like other Form I–765 applicants, individuals applying for employment authorization based on compelling circumstances, at either the initial or renewal stage, must be in the United States when applying for the benefit.

Comment. One commenter asked DHS to clarify whether a beneficiary in a grace period may submit an initial request for employment authorization pursuant to compelling circumstances.

Response. DHS affirms that beneficiaries may file an initial application for a compelling circumstances EAD if, on the date of filing, they are in a period authorized by § 214.1(l)(l) or (2), as well as any other grace period authorized by this chapter. *See* final 8 CFR 204.5(p)(1)(i).

vii. *EAD Validity Period*

Comment. Some commenters opposed granting extensions in 1-year increments and requested that extensions instead be granted in longer increments. Several commenters noted that providing employment authorization in 1-year increments would cause certain beneficiaries to incur filing fees and other expenses on an annual basis. Another commenter requested that certain individuals be granted ''indefinite renewals for 3 years'' if they have been in H–1B status for 10 years and have had their Form I–140 petitions approved for 5 years. Similarly, one

[52] *See* AC21 104(a).

commenter requested employment authorization under compelling circumstances for up to 3 years so that the validity period would be in line with the initial periods of petition approval for individuals in the H–1B and L–1 classifications and consistent with section 104 of AC21. Commenters contended that such proposals would provide increased certainty and the ability to plan, while minimizing the possibility of employment disruptions.

Response. DHS disagrees that a single grant of employment authorization under compelling circumstances should last longer than 1 year. The compelling circumstances provision is meant to be a stopgap measure for nonimmigrant workers facing particularly difficult circumstances outside of their control, such as a serious illness, employer retaliation, significant disruption to the employer, or other substantial harm. The compelling circumstances EAD is not a substitute for completing the employment-based immigrant visa process or for obtaining nonimmigrant classifications authorizing foreign nationals to work or live in the United States. While some nonimmigrants may experience compelling circumstances that last beyond one year, DHS anticipates many of the compelling circumstances presented will be resolved within that timeframe. DHS thus intends to require confirmation that a foreign national's circumstances justify an extension of employment authorization each year to ensure that such employment authorization continues to be merited. DHS confirms that employment authorization for compelling circumstances will be granted only in 1-year increments.

viii. *Visa Bulletin Dates*

Comment. Several commenters generally objected to conditioning compelling circumstances EADs on the unavailability of immigrant visas, and they requested that DHS remove all references to the State Department Visa Bulletin in the compelling circumstances provision. Commenters asserted that this restriction weakens the compelling circumstances provision because a beneficiary with an available immigrant visa may still have a lengthy wait before receiving independent employment authorization. Other commenters objected to the references to priority dates in the regulatory text because of the unpredictability of the Visa Bulletin's priority date movement.

Response. DHS disagrees with commenters who requested eliminating the requirement that an immigrant visa must not be immediately available and authorized for issuance to an individual at the time the application is filed. DHS designed this provision specifically to assist those individuals who otherwise may apply for and be granted an immigrant visa or adjustment of status but for the unavailability of an immigrant visa. The Department determined that linking eligibility for an EAD based on compelling circumstances to the authorization to issue an immigrant visa will provide stability to individuals already on the path to lawful permanent residence. The Visa Bulletin notifies individuals whether visas are authorized for issuance.

At the same time, DHS also wants to ensure that foreign workers whose priority dates have already been reached take appropriate measures to apply for permanent residence, as the compelling circumstances EAD is not a substitute for lawful permanent residence. DHS, therefore, believes it is reasonable to condition compelling circumstances EADs to the unavailability of immigrant visas, thereby ensuring that foreign workers avail themselves of the opportunity to apply for and obtain lawful permanent residence when able to do so.

Comment. A few commenters requested that DHS clarify which chart in the newly reformatted Visa Bulletin would govern the eligibility for individuals seeking employment authorization based on compelling circumstances (*i.e.,* the ''Application Final Action Date'' chart or the ''Dates for Filing Employment-Based Visa Applications'' chart).

Response. All references in 8 CFR 204.5(p) to the Visa Bulletin dates are to the ''Final Action Date'' chart. DHS intends that this date will be used to determine eligibility for both the initial and renewal applications for employment authorization. To provide clarification in this regard, DHS modified 8 CFR 204.5(p)(1)(ii) by replacing the phrase ''immediately available'' with ''authorized for issuance'' to signal that the relevant date for eligibility for an initial grant of employment authorization would be the Final Action Date for the principal beneficiary's preference category and country of chargeability that was effective on the date the application for employment authorization, or successor form, is filed.

ix. *Renewals of Employment Authorization Granted Pursuant to Compelling Circumstances*

Comment. Several commenters expressed confusion about the regulatory provisions governing renewals of compelling circumstances EADs and were concerned that, as proposed, the provisions were internally inconsistent and even in conflict with one another. In particular, commenters stated that interactions between the priority date limitations proposed for initial applicants (proposed 8 CFR 204.5(p)(1)(ii)), eligibility for renewals without demonstrating compelling circumstances (proposed 8 CFR 204.5(p)(3)(i)(B)), and ineligibility grounds (proposed 8 CFR 204.5(p)(5)(ii)) may prevent some eligible individuals from renewing their compelling circumstances EADs.

Response. DHS agrees with commenters that the final rule needs to clarify when an applicant can qualify for a renewal by demonstrating compelling circumstances or based solely on his or her priority date. Moreover, DHS recognizes that the proposed regulatory language at § 204.5(p) could have led commenters to conclude that the provision was internally inconsistent or contradictory. In the NPRM, DHS proposed to require initial applicants to show that an immigrant visa was not immediately available to the principal beneficiary. *See* proposed 8 CFR 204.5(p)(1)(ii). For renewals, DHS proposed that principal beneficiaries would need to demonstrate either that they continue to face compelling circumstances or that their priority dates are ''1 year or less'' (either before or after) from the date visas are authorized for issuance according to the current Visa Bulletin. *See* proposed 8 CFR 204.5(p)(3)(i)(A) and (B). In addition, DHS proposed at § 204.5(p)(5)(ii) that an individual would be ineligible to apply for or renew a compelling circumstances EAD if ''[t]he principal beneficiary's priority date is more than 1 year beyond the date immigrant visas were authorized for issuance'' according to the Visa Bulletin in effect at the time of filing.

As noted by commenters, the proposed ineligibility ground based on a priority date being current for more than one year was superfluous with respect to initial applicants (who were required to show that a visa was not immediately available), as their eligibility would have already ended at the time their immigrant visa was authorized for issuance. The proposed ineligibility ground was also superfluous with respect to the second renewal criterion (*i.e.,* that the difference between the beneficiary's priority date and the date visas are authorized for issuance must be ''1 year or less''), because that ineligibility ground was already embedded within that renewal ground. In addition, there was significant confusion as to the interaction between the proposed ineligibility ground and the first ground for renewal (*i.e.,* that the beneficiary continues to demonstrate compelling circumstances). DHS acknowledges that the proposed ineligibility ground was superfluous to the initial eligibility ground and the second renewal criterion, and that the provisions were confusing as written. Therefore, without changing the eligible population as identified in the NPRM for the compelling circumstances EAD, DHS has streamlined the ineligibility and renewal grounds to eliminate any superfluous overlap and to clarify eligibility for renewal under the Final Rule.

In response to public comment, DHS is simplifying the renewal criteria for compelling circumstances EADs. As modified, the final rule makes clear that a principal beneficiary seeking to renew an EAD based on compelling circumstances remains eligible if his or her priority date is not authorized for immigrant visa issuance with respect to his or her preference category and country of chargeability based on the Final Action Date in the Visa Bulletin in effect on the date the renewal application is filed. This modification tracks the eligibility criteria for the initial application for the EAD, and therefore should be readily understood by all parties, making it easier for both the public and USCIS to determine whether someone is eligible for renewal under that basis. DHS retains the second renewal criterion where a principal beneficiary will be eligible to renew the EAD if his or her priority date is one year or less (either before or after) of the Final Action Date in the Visa Bulletin in effect on the date the renewal application is filed. For purposes of greater clarity, in this final rule DHS has included an illustrative example in the regulatory text applicable to renewal applications by principal beneficiaries based on the Visa Bulletin in effect on the date the renewal application is filed. In addition to these changes, DHS made additional edits in this provision to clarify the Visa Bulletin in effect on the date the application for employment authorization is filed establishes the Final Action date for purposes of a renewal application.

Together, the renewal criteria operate to preclude eligibility to individuals for whom a visa has been authorized for issuance for over one year. Therefore, DHS removed the separate ineligibility criteria from § 204.5(p)(5) as unnecessary. DHS believes that these changes should eliminate the confusion or inconsistency in the regulatory provisions.

Comment. Several commenters suggested that individuals with compelling circumstances EADs be able to renew such EADs without restriction (*i.e.,* without needing to meet the proposed eligibility criteria for renewal). Commenters submitted a variety of reasons for requesting this revision, including that such a change would: Be ‘‘truly useful for the immigrant community;’’ help stop employer exploitation of workers; provide greater certainty to immigrants waiting to become LPRs; and help address the lack of available immigrant visas. In addition, several commenters questioned the usefulness of allowing for renewal where the applicant's priority date is less than 1 year from the current cut-off date for the relevant employment-based category and country of nationality in the most recently published Visa Bulletin. Some commenters sought clarification about the situations in which an applicant may seek renewal of compelling circumstances EADs.

Response. DHS agrees that the renewal of the employment authorization under this provision could be based on the same compelling circumstances that supported the initial grant of a compelling circumstances EAD. Moreover, DHS clarifies that individuals may also base their renewal applications on new compelling circumstances that may exist on the date of filing the renewal application.

DHS disagrees with the suggestion that no additional restrictions tied to authorization for immigrant visa issuance should apply to renewal eligibility. DHS intends this provision to provide short-term relief to certain high-skilled workers who are well on their way to LPR status to help them when they are facing compelling circumstances while they wait for their immigrant visas to become available. Consistent with that intent, applicants seeking to benefit from employment authorization based on compelling circumstances must also continue to pursue lawful permanent residence. Therefore, DHS believes it appropriate to deny a renewal application, even when compelling circumstances continue to be shown, in cases where the applicant should already have had ample time to obtain an immigrant visa and become a lawful permanent resident. Thus, renewal will not be granted under any circumstances if the applicant's priority date is more than one year earlier than the applicable Final Action date on the Visa Bulletin in effect at the time of filing the renewal application. In cases in which the Visa Bulletin at the time of a renewal application is filed indicates that the beneficiary's priority date is not authorized for immigrant visa issuance, applicants can seek renewal of their employment authorization based on a showing of new or continuing compelling circumstances.

In addition, DHS believes that important additional flexibility for principal beneficiaries of Form I–140 petitions results from retaining the second ground for renewal, which allows applicants to renew employment authorization without a showing of compelling circumstances if the applicant's priority date is close to becoming or recently became eligible for immigrant visa issuance (*i.e.,* is one year or less either before or after the date on which immigrant visas are authorized for issuance). This provision recognizes that applicants, most of whom are high-skilled workers who have invested a substantial amount of time in the United States, are at advanced stages in the immigration process and, after waiting many years, may be able to obtain lawful permanent residence in the near future. If the immigrant visa has recently been authorized for issuance or may be authorized for issuance in the near future, it is consistent with the purpose for this provision to continue the employment authorization, even if the compelling circumstances that justified the initial employment authorization no longer exist, to avoid the possibility that there will be a significant break in employment authorization late in an individual's lawful permanent residence process that would jeopardize his or her ultimate eligibility to obtain lawful permanent resident status or unnecessarily disrupt the business of his or her employer.

Because there was confusion reflected in many comments with regard to eligibility to make a renewal request and the relevance of the Visa Bulletin, DHS has revised the regulatory text to foster a better understanding and simplify the use and implementation of the compelling circumstances EAD renewal process by both applicants and USCIS adjudicators. DHS has edited the text at 8 CFR 204.5(p)(3)(i)(A) to mirror the requirements for initial eligibility, as well as to eliminate a separate ineligibility ground (*see* proposed 8 CFR 204.5(p)(5)(ii)) that caused great confusion among commenters. In summary, in the final rule at 8 CFR 204.5(p)(3)(i), the principal beneficiary may apply for a renewal of his or her employment authorization in one of two ways.

First, § 204.5(p)(3)(i)(A) allows the principal beneficiary to apply for renewal of employment authorization if he or she continues to face compelling circumstances and an immigrant visa is not authorized for issuance to the principal beneficiary based on his or her priority date listed in the Visa Bulletin for the applicable preference category and country of chargeability in effect on the date of filing. This first renewal ground mirrors the initial eligibility requirements set forth at final § 204.5(p)(1)(ii) and (iii).

Consequently, under this final rule, a principal beneficiary who continues to experience compelling circumstances, and whose immigrant visa is not authorized for issuance, may be able to renew the compelling circumstances EAD if DHS determines that the issuance of employment authorization is justified.

Second, final 8 CFR 204.5(p)(3)(i)(B) allows the principal beneficiary to apply for a renewal of his or her employment authorization without having to show compelling circumstances if, based on his or her priority date, he or she is near the date that an immigrant visa could be issued under the applicable preference category and country of chargeability. Specifically, the difference between the principal beneficiary's priority date and the Final Action Date must be 1 year or less according to the Visa Bulletin in effect on the date the renewal application is filed. This 1-year limitation extends both before and after the specified Final Action Date, thereby allowing beneficiaries whose priority dates are 1 year or less before the relative current priority date, as well as those beneficiaries whose priority dates are 1 year or less after the relative current priority date, to request renewal of their EADs. Allowing for renewals of employment authorization without a demonstration of continuing compelling circumstances provides a bridge for those individuals who may be issued an immigrant visa in the near future. As enumerated in the proposed rule at 8 CFR 204.5(p)(5), this renewal ground incorporates an important DHS policy goal of encouraging individuals to become lawful permanent residents by limiting eligibility for a compelling circumstances EAD to only those whose priority dates have been current for one year or less according to the Visa Bulletin in effect on the date the renewal is filed. DHS believes this provides a reasonable window during which an individual may either apply for adjustment of status, and thereby be issued employment authorization pursuant to that filing, or complete the immigrant visa process abroad. Additionally, DHS has revised this provision to clarify which Visa Bulletin governs for purposes of calculating the difference between the beneficiary's priority date and the Final Action Date.

To avoid further confusion, DHS provides the following examples to facilitate a better understanding of the eligibility requirement for renewal with respect to the Visa Bulletin, and DHS has incorporated one of these examples in the regulatory text:

- The first example involves a Visa Bulletin Final Action cut-off date of November 1, 2000 for the beneficiary's preference category and country of chargeability. If the beneficiary is basing the renewal application on compelling circumstances, his or her priority date must be on or after November 1, 2000 to apply for a renewal under § 204.5(p)(3)(i)(A), as immigrant visas will not be authorized for issuance to beneficiaries with priority dates on or after November 1, 2000.
- The second example again involves a Visa Bulletin Final Action cut-off date of November 1, 2000, but the beneficiary is seeking a renewal under 8 CFR 204.5(p)(3)(i)(B), which provides that ''[t]he difference between the principal beneficiary's priority date and the date upon which visas are authorized for issuance for the principal beneficiary's preference category and country of chargeability is 1 year or less according to the current Visa Bulletin on the date the application for employment authorization is filed.'' Because this 1-year window extends both ways—before and after the specified Final Action Date—the beneficiary's priority date can be as early as October 31, 1999 or as late as October 31, 2001. Beneficiaries qualifying for renewal under this alternative need not show compelling circumstances to meet the eligibility criteria. *See* final 8 CFR 204.5(p)(3)(i)(B). If, however, the beneficiary's priority date is on or before October 30, 1999, he or she would be ineligible to renew the compelling circumstances EAD under the final rule. If the priority date is on or after November 1, 2001, the beneficiary could not seek a renewal under the priority date range described in final 8 CFR 204.5(p)(3)(i)(B), but may be eligible to renew if he or she is able to demonstrate continuing compelling circumstance described in final 8 CFR 204.5(p)(3)(i)(A).

Finally, to implement this provision, DHS is revising Form I–765 and accompanying form instructions with this final rule and will conduct public outreach and publish guidance explaining the filing requirements and eligibility criteria for this new employment authorization category. Information about renewing applications for employment authorization granted pursuant to compelling circumstances will be included.

x. Automatically Granting Advance Parole to Individuals Who Have Compelling Circumstances EADs

Comment. Some commenters requested that DHS automatically provide advance parole [53] in conjunction with compelling circumstances EADs. Some of these commenters indicated that the President had promised to grant advance parole to certain individuals, and they urged DHS to provide such an immigrant benefit here. The commenters also requested that DHS allow such individuals to adjust their status to lawful permanent residence after being paroled into the United States once an immigrant visa became available to them.

Response. Section 212(d)(5)(A) of the INA, 8 U.S.C. 1182(d)(5)(A), provides the Secretary with discretionary authority to parole an individual into the United States temporarily ''only on a case-by-case basis for urgent humanitarian reasons or significant public benefit.'' *See also* 8 CFR 212.5. Neither the President nor the Secretary, in his November 20, 2014 memorandum, specified that parole may be extended to foreign workers who are the beneficiaries of either a pending or an approved Form I–140 petition.[54] A DHS officer may, however, grant parole to individuals who are beneficiaries of approved Form I–140 petitions if, in the officer's discretion, the parole either would be for ''urgent humanitarian reasons'' or provide a ''significant public benefit.''

Importantly, as already noted, individuals who are seeking lawful permanent residence based on classification as an employment-based immigrant are generally barred by statute from applying to adjust their status in the United States if they are not in lawful nonimmigrant status. *See* INA 245(c)(2) and (7), 8 U.S.C. 1255(c)(2) and (7). Although INA 245(k), 8 U.S.C. 1255(k), enables certain individuals who failed to continuously maintain a lawful status for up to 180

[53] As explained on the Form I–131, Application for Travel Document, and the form instructions, advance parole documents allow individuals to return to a United States port of entry after temporary foreign travel. See USCIS Web site, Form I–131, Application for Travel Document, available at *https://www.uscis.gov/i-131;* see also 212(d)(5) of the INA, 8 U.S.C. 1182(d)(5).

[54] *See* Memo from Jeh Charles Johnson, Secretary of Homeland Security, ''Policies Supporting U.S. High-Skilled Business and Workers'' (Nov. 20, 2014), available at *http://www.dhs.gov/sites/default/files/publications/14_1120_memo_business_actions.pdf.*

days to apply for adjustment of status, these individuals must be present in the United States pursuant to a lawful admission. Individuals who are paroled into the United States, however, are not considered to be ''admitted'' into the United States. *See* INA 101(a)(13)(B) and 212(d)(5)(A), 8 U.S.C. 1101(a)(13)(B) and 1182(d)(5)(A). Therefore, an individual who is granted advance parole, leaves the United States, and reenters on parole is not eligible for adjustment of status pursuant to section 245(k).

As such, granting advance parole to individuals who receive compelling circumstances EADs would not, as a rule, make them eligible for employment-based adjustment of status or otherwise enhance stability or certainty in the efforts of these individuals to become lawful permanent residents. DHS thus will not automatically grant advance parole in conjunction with all compelling circumstances EADs. However, to better assist individuals with compelling circumstances EADs who need to travel, DHS will consider granting advance parole, as appropriate for urgent humanitarian reasons or significant public benefit, to such individuals on a case-by-case basis.

xi. Employment Authorization Parity for Legal and Undocumented Workers, Including Individuals Granted Deferred Action for Childhood Arrivals (DACA)

Comment. Commenters asked why Deferred Action for Childhood Arrivals (DACA) recipients are not required to demonstrate compelling circumstances in order to obtain employment authorization and questioned whether being undocumented in the United States is sufficient to demonstrate compelling circumstances. These commenters noted that applying compelling circumstances only to nonimmigrants seeking an independent basis of employment authorization and not to DACA recipients sets an unfair higher bar for nonimmigrants and rewards individuals who came to the United States unlawfully relative to those who have abided by U.S immigration laws.

Many commenters stated that granting employment authorization to DACA recipients, while declining to do so for nonimmigrants, provides a significant advantage to undocumented individuals and encourages unauthorized immigration. Other commenters stated that it is unfair to provide employment authorization to undocumented individuals through DACA and not to nonimmigrants abiding by complex U.S. immigration laws and currently suffering from a lack of job mobility while awaiting available immigrant visas. These commenters highlighted the benefits of independent employment authorization, including freedom from what they perceive as restrictive and immobile H–1B employment, increased opportunity for upward mobility with their current employer, and greater mobility within the U.S. job market in general. One commenter stated that denying independent employment authorization for nonimmigrants with approved Form I–140 petitions creates the equivalent to modern day slavery for nonimmigrant employees, while DACA recipients are allowed to work for whatever employer they choose. A number of commenters stated that their dependent children, who came to the United States legally, should be granted the same benefits as DACA recipients. Several commenters expressed the opinion that being in the United States in a legal status is more difficult than being in the United States under a grant of DACA.

Response. As an initial matter, although DACA requestors do not have to demonstrate compelling circumstances, DACA recipients, like other deferred action recipients, must show ''economic necessity'' for employment.[55] Further, DACA is strictly limited to individuals who are removable from the United States, meet other certain guidelines (*e.g.,* that they came to the United States under the age of sixteen; continuously resided in the United States since June 15, 2007; were under the age of 31 as of June 15, 2012; and have not been convicted of certain crimes or otherwise pose a threat to national security or public safety), and merit a favorable exercise of discretion.[56] As a result, the DACA process does not provide incentives for individuals to unlawfully migrate to the United States. DACA does not apply to all undocumented individuals who entered the United States as children. Even for those individuals who do satisfy the DACA guidelines, not all individuals receive DACA because of the discretionary nature of the process.

DHS disagrees with commenters who contend that the limitations placed on the compelling circumstances EAD give DACA recipients an advantage over nonimmigrant workers. DACA recipients are individuals who are removable from the United States but whose removal is deferred. They do not have a lawful immigration status either before or after receiving DACA and instead are simply provided with relief from removal for periods of two years at a time, if they remain eligible. DACA is a discretionary policy related to enforcement and removal and is not comparable to individuals with nonimmigrant status. DHS considers DACA requests pursuant to an exercise of discretion on a case-by-case basis. Nonimmigrant workers are in a more advantageous position than DACA recipients with respect to the immigration laws by virtue of being in the United States in a lawful immigration status. Among other things, presence in nonimmigrant status is not a basis for removability, family members of nonimmigrants are typically able to obtain benefits through the nonimmigrant, and nonimmigrants are better situated with respect to eligibility to pursue lawful permanent residence and, thereafter, U.S. citizenship.

G. Nonimmigrant Grace Periods

1. Description of Final Rule and Changes From NPRM

Under the final rule, DHS may provide grace periods of up to 10 days before the petition validity period (or other authorized validity period) begins, and of up to 10 days after the validity period ends to individuals in certain employment-authorized nonimmigrant visa classifications that previously have not been afforded these periods, namely the E–1, E–2, E–3, L–1 and TN classifications. *See* final 8 CFR 214.1(l)(1). Similar grace periods are currently available to nonimmigrants with H–1B, O, and P classification. Extending such grace periods in these other classifications—which, like in the H–1B, O, and P classifications, are generally available to high-skilled individuals with authorized stays of multiple years—promotes stability and flexibility for such workers, thereby furthering goals consistent with those underlying AC21.

In response to public comment, DHS is striking a phrase from the proposed regulation that was unnecessarily limiting and not fully consistent with how existing 10-day grace periods may be used by H, O and P nonimmigrants. Specifically, DHS is deleting from proposed 8 CFR 214.1(l)(1) the phrase that could have been read to limit use of a 10-day grace period only ''to prepare for departure from the United States or to seek an extension or change of status based on a subsequent offer of employment.'' As noted, this deletion will further the purpose of the NPRM proposal to extend to the E–1, E–2, E–

[55] 8 CFR 274a.12(c)(14).

[56] *See* DACA Frequently Asked Questions at *https://www.uscis.gov/humanitarian/consideration-deferred-action-childhood-arrivals-process/frequently-asked-questions.*

3, L–1 and TN nonimmigrant classifications a benefit similar to the one already available to the H, O, and P nonimmigrant classifications. DHS is also making minor technical edits to this provision.

Under the final rule, DHS may also authorize a grace period of up to 60 days in the E–1, E–2, E–3, H–1B, H–1B1, L–1, and TN classifications during the period of petition validity (or other authorized validity period). *See* final 8 CFR 214.1(l)(2). In response to public comments, DHS is retaining this provision while adding the O–1 visa classification to the list of nonimmigrant classifications eligible for the 60-day grace period. To enhance job portability for these high-skilled nonimmigrants, this rule establishes a grace period for up to 60 consecutive days, or until the existing validity period ends, whichever is shorter, whenever employment ends for these individuals. The individual may not work during the grace period. An individual may benefit from the 60-day grace period multiple times during his or her total time in the United States; however, this grace period may only apply one time per authorized nonimmigrant validity period. DHS believes that limiting this grace period to one instance during each authorized validity period balances the interests of nonimmigrant flexibility with the need to prevent abuse of this provision.

This 60-day grace period further supports AC21's goals of providing improved certainty and stability to nonimmigrants who need to change jobs or employers. The 60-day grace period would provide needed flexibility to qualifying nonimmigrants who face termination of employment prior to the end of their petition validity periods. The grace period, for example, allows such nonimmigrants to remain in the United States without violating their status and potentially obtain new job offers from employers that seek to file new nonimmigrant petitions, and requests for an extension of stay, on their behalf. In such cases, even though prior employment may have terminated several weeks prior to the filing of the new petition, DHS may consider such an individual to have not violated his or her nonimmigrant status and allow that individual to extend his or her stay with a new petitioner, if otherwise eligible. If the new petition is granted, the individual may be eligible for an additional grace period of up to 60 days in connection with the new authorized validity period.

Finally, the final rule at 8 CFR 214.1(l)(3) makes clear that the nonimmigrant worker, during either a 10-day or 60-day grace period, may apply for and, if otherwise eligible, be granted an extension of stay or change of status. The beneficiary may also commence employment under H–1B portability per § 214.2(h)(2)(i)(H), discussed in some detail below, if otherwise eligible. To further effectuate the intended purpose of these provisions, DHS is also making clarifying edits to the regulatory text at § 214.1(l)(2), and (l)(3).

2. Public Comments and Responses

i. Length of the 10-Day Grace Periods

Comment. While numerous commenters supported the proposal to make 10-day grace periods available to additional high-skilled nonimmigrant workers, one commenter suggested that the 10-day grace periods be lengthened to 15 or 30 days to provide nonimmigrant workers additional time to wrap up affairs after extended periods of stay in the United States.

Response. DHS is not adopting the commenter's suggestion to provide longer grace periods of up to 15 or 30 days. DHS has long provided 10-day grace periods in the H–1B, O, and P nonimmigrant classifications, and DHS has determined that such grace periods are sufficient to provide individuals in these classifications the time they need to initiate or conclude their affairs in the United States. Because individuals who obtain E–1, E–2, E–3, L–1 or TN classification are similarly situated to those who obtain H–1B, O, or P classification, DHS believes 10-day grace periods would also be sufficient for nonimmigrants in the former classifications.

ii. Eligibility for 10-Day Grace Periods

Comment. Many commenters encouraged USCIS to broaden the classes of individuals eligible for the 10-day grace periods to include other nonimmigrant worker visa classifications. Commenters specifically requested that DHS add the following visa classifications to proposed 8 CFR 214.1(l)(1): A, H–1B1, H–2B, H–3, G, I, O, P, and Q.

Response. DHS declines to adopt these suggestions. First, DHS already provides a grace period of up to 10 days to some of these classifications, including the H–2B, H–3 O and P categories. *See* 8 CFR 214.2(h)(13)(i)(A), 8 CFR 214.2 (o)(10) and 8 CFR 214.2 (p)(12). Second, DHS is unable to extend authorized periods of admission to H–1B1 nonimmigrants through the use of such grace periods. The INA specifies that the admission for H–1B1 nonimmigrants ''shall be 1 year,'' with extensions in 1 year increments. *See* INA 214(g)(8), 8 U.S.C. 1184(g)(8). Third, this rulemaking is intended to benefit high-skilled workers and their employers by streamlining the processes for employer sponsorship of such workers for immigrant visas, increasing job portability and otherwise providing stability and flexibility for such workers, and providing additional transparency and consistency in the application of DHS policies and practices related to high-skilled worker programs. Because several of the additional nonimmigrant classifications proposed by commenters are not focused on facilitating the employment of high-skilled workers by employers in the United States, DHS believes providing grace periods in these classifications would not align with the purpose of this rule. For these reasons, DHS believes that the eligible classifications added to the final rule should be limited to individuals admissible in E–1, E–2, E–3, L–1 or TN classification, as well as their dependents.

iii. Miscellaneous Comments on 10-Day Grace Periods

Comment. A few commenters suggested that DHS clarify whether the 10-day grace periods will be reflected on the approved petition or whether those periods may be automatically assumed by nonimmigrant workers. Another commenter noted that CBP usually annotates the Form I–94 when admitting an individual in H–1B classification to reflect the grace period of up to 10 days at the end of the H–1B authorized period of stay, but that the USCIS-issued Form I–797 Notice of Action for an approval of an extension of stay or change of status, which includes a Form I–94, does not reflect that grace period. This commenter further explained that, accordingly, if an individual is granted H–1B status pursuant to an extension of stay or change of status and remains in the United States in H–1B status for the petition's authorized validity period (*i.e.,* without leaving and seeking readmission into the United States as an H–1B nonimmigrant), he or she will not have any evidence of having been granted the grace period. Finally, one commenter requested that USCIS add the following language to its Form I–797 approval notices: ''Beneficiary may be admitted up to 10-days prior to the validity period of the petition and will have a 10-day grace period at the end of nonimmigrant status to depart the United States or apply for another nonimmigrant or immigrant status.''

Response. The commenters correctly point out that USCIS does not presently provide grace periods of up to 10 days before or after petition validity approval when issuing Form I–797 or Form I–94, whether such issuance relates to an initial request for nonimmigrant status, a change of nonimmigrant status, or an extension of such status. Under existing regulations, DHS does not consider the 10-day grace periods to be automatically provided; rather, they are provided through an exercise of discretion on a case-by-case basis. USCIS is revising Form I–797 to facilitate consistent application of the discretionary 10-day grace periods and will continue to explore ways of notifying petitioners and beneficiaries when grace periods are provided. Specifically, DHS is revising 8 CFR 214.1(l)(1) to clarify that 10-day grace periods may be authorized as a matter of discretion, on a case-by-case basis, to nonimmigrants seeking changes of status or extensions of stay. *See* revised 8 CFR 214.1(l)(1). DHS further notes that if such individuals travel abroad and seek admission at a port of entry upon return, they may show the Form I–797 to a CBP officer who has the discretion to grant 10-day grace periods to eligible H–1B, E–1, E–2, E–3, L–1 and TN nonimmigrant workers. *See* INA 214(a)(1), 8 U.S.C. 1184(a)(1); final 8 CFR 214.2(l)(1).

Comment. A few commenters requested that USCIS revise the proposed rule at 8 CFR 214.1(l)(1), which states that eligible nonimmigrants ''*may* be admitted . . . for the validity period of the petition . . . plus an additional period of up to 10 days.'' Because of the use of the word ''may,'' commenters believed the proposed provision was more limiting than the existing regulatory language at 8 CFR 214.2(h)(13)(i)(A), which states that an H beneficiary ''*shall* be admitted . . . for the validity period of the petition, plus a period of up to 10 days.'' The commenters requested that DHS harmonize these provisions and clarify whether, under the final rule, H–1B nonimmigrants would be eligible for a discretionary (''may'') grace period of up to 10 days, whereas other H nonimmigrant classifications would be eligible for a mandatory (''shall'') grace period of up to 10 days.

Response. DHS declines to revise the language in 8 CFR 214.1(l)(1) in response to commenters' suggestions. DHS chose to use the word ''may,'' as opposed to the word ''shall,'' in accordance with Federal regulatory drafting guidelines, to clarify that USCIS and CBP have the discretionary authority to limit periods of stay for all nonimmigrant classifications, including H nonimmigrants, consistent with current practice. Use of ''may'' rather than ''shall'' is also consistent with the regulatory provision allowing 10-day grace periods for O and P nonimmigrants. *See* 8 CFR 214.2(o)(10) and (p)(12). DHS maintains broad discretion when admitting individuals in nonimmigrant classifications, including when determining whether to grant grace periods to such individuals. By statute, DHS has the authority and responsibility to decide which foreign nationals enter the country and under what terms and conditions.[57] *See* INA 214(a)(1), 8 U.S.C. 1184(a)(1) (providing that ''the admission to the United States of any alien as a nonimmigrant shall be for such time and under such conditions as the [Secretary] may by regulations prescribe''); INA 215(a)(1), 8 U.S.C. 1185(a)(1) (authority to establish reasonable regulations governing aliens' entry or admission to and departure from the United States).[58] DHS has drafted the grace period provision to clarify that it maintains discretion to admit an individual with a full 10-day grace period, some part of that period, or no grace period at all, and to assure consistent administration of the grace period provision.

Additionally, in response to public comment, DHS is removing from the 10-day grace period provision in 8 CFR 214.1(l)(1) the clause that reads, ''to prepare for departure from the United States or to seek an extension or change of status based on a subsequent offer of employment.'' DHS is removing this clause to avoid an unintended limitation on the use of such grace periods and to maintain consistency with grace periods already enjoyed by H, O and P nonimmigrants. While DHS maintains that the 10-day grace period commencing when the relevant validity period expires is typically used by individuals to prepare for departure from the United States or to extend or change status, DHS determined upon further examination that the clause is unnecessarily limiting and does not fully comport with how the existing 10-day grace period may be used by H, O and P nonimmigrants. Such grace periods are also used for other permissible non-employment activities such as changing one's status to that of a dependent of a nonimmigrant spouse or vacationing prior to departure. DHS clarifies that, under this final rule, nonimmigrants in E–1, E–2, E–3, L–1, or TN status may engage in the same types of activities during the 10-day grace period that H, O, and P nonimmigrants currently engage in under the existing 10-day grace period.

Comment. One commenter requested that DHS add a regulatory provision that would deem nonimmigrants in a 10-day grace period as being in a period of stay authorized by the Secretary.

Response. Under 8 CFR 214.1(l)(1), the 10-day grace period is considered to be a period of nonimmigrant stay. Consistent with existing policy guidance, this is a period of stay authorized by the Secretary. Therefore, DHS does not believe additional revision to the regulatory text is necessary.[59]

Comment. One commenter suggested that USCIS allow eligible nonimmigrant workers who have experienced a cessation of employment and were unable to find work during the 60-day grace period, to use the additional 10-day grace period so that they can prepare to depart the United States.

Response. DHS declines to adopt the commenter's suggestion to allow eligible nonimmigrant workers the ability to add a 10-day grace period to the end of any 60-day grace period. DHS intends the 60-day grace period in 8 CFR 214.1(l)(2) to afford eligible high-skilled workers sufficient time following a cessation of employment to pursue other employment opportunities, seek a change or extension of status, or make the preparations necessary to depart the country. As the 10-day grace period at the end of a period of nonimmigrant validity is intended to serve the same purposes, providing both would be unnecessary and duplicative. DHS notes, however, that in limited instances it may be possible for a nonimmigrant worker to qualify for both grace periods. Use of both grace periods may occur, for instance, when a nonimmigrant worker, upon his or her last admission, was provided with a grace period of up to 10 days at the expiration of the validity period, and then experiences a cessation of employment in the last 60 days of the validity period. In these limited cases, DHS may consider the nonimmigrant to have maintained his or her status for up to 60 days immediately preceding the expiration of the validity period, and the nonimmigrant may also use the 10-day grace period after the validity period ends.

iv. Length of the 60-Day Grace Period

Comment. Numerous commenters expressed support for the proposal

[57] *Id.*

[58] The President assigned to the Secretary of Homeland Security (acting with the concurrence of the Secretary of State) the functions under INA 215(a) with respect to noncitizens. Exec. Order No. 13323, 69 FR 241 (Dec. 30, 2003).

[59] For further guidance on periods of authorized stay, please see Neufeld May 2009 Memo (describing various ''periods of authorized stay''), available at *https://www.uscis.gov/sites/default/files/USCIS/Laws/Memoranda/Static_Files_Memoranda/2009/revision_redesign_AFM.PDF.*

establishing a 60-day grace period for certain nonimmigrant classifications, including support for 60 days as sufficient time to find a new job. However, a significant number of other commenters believed that the 60-day grace period did not provide sufficient time for such purposes. These commenters suggested the grace period be lengthened to 90 or 120 days. One commenter suggested that USCIS extend the 60-day grace period to 90 days if a new petitioning employer submits evidence to USCIS indicating that it provided a written job offer to the nonimmigrant employee. Other commenters suggested giving USCIS the authority to extend the grace periods on a case-by-case basis. Commenters cited the difficulties of finding new jobs in the current economy, relocation and state-specific professional licensing requirements, personal responsibilities that complicate decision making when conducting job searches, and the fact that employer recruitment often takes 8–12 weeks.

Response. DHS appreciates the many comments suggesting alternate periods of time for the grace period, and the reasons offered in support of a longer grace period. However, DHS will retain the 60-day grace period, rather than provide additional time, to encourage affected high-skilled workers to pursue other options in the United States in an expedient manner. Adding a grace period of up to 60 consecutive days upon cessation of employment allows the affected high-skilled workers sufficient time to respond to sudden or unexpected changes related to their employment. DHS believes that such time may be used to seek new employment, seek a change of status to a different nonimmigrant classification, including B–1/B–2 classification, or make preparations for departure from the United States.

v. Frequency of the 60-Day Grace Period

Comment. Some commenters stated that 60-day grace periods should be available multiple times during any authorized validity period, rather than ''one time'' as described in the NPRM. The majority of these commenters stated that 60-day grace periods should be made available to foreign workers at least once per year. Other commenters suggested making 60-day grace periods available once every 3 years, once per visa extension or change of status, or each time a foreign worker loses his or her job. Commenters stated that lengthy delays in obtaining lawful permanent residence can leave foreign workers waiting for adjustment of status for 10 years or more, and it is likely that they could lose their jobs more than once during this time.

Many commenters stated that the term ''one-time'' in the proposed regulatory text was unclear, and they did not understand whether the rule allowed for one grace period per lifetime, per employer, per petition validity period, or per total period of stay in any given status. Some commenters proposed alternative approaches to measuring the one-time 60-day grace period, including allowing the 60-day grace period to be divisible so that the unused portion of a 60-day grace period could be used toward a subsequent cessation of employment within the same period of valid nonimmigrant status, or carried forward into a new validity period and aggregated with a subsequent 60-day grace period.

Response. Given the number and diversity of comments received, DHS recognizes that the proposal did not clearly convey the intended operation of the 60-day grace period. Accordingly, in the final rule, DHS clarifies that, while the grace period may only be used by an individual once during any single authorized validity period, it may apply to *each* authorized validity period the individual receives. DHS also clarifies that the grace period can last up to 60 consecutive days or until the existing validity period ends, whichever is shorter. As modified, the final rule provides that while the nonimmigrant worker may only receive one grace period in an authorized validity period, he or she would be eligible for a new grace period of up to 60 days in connection with any subsequently authorized validity period. Any days available in such a grace period must be used consecutively, and unused days may not be used later in the same authorized validity period or carried over into a subsequent validity period. DHS believes that limiting the grace period to up to 60 days once during each authorized nonimmigrant validity period, and not allowing for aggregation or carryover of time, is most consistent with the intent of the grace period: to provide a single limited, but reasonable, period of time during which DHS may, when adjudicating an extension of stay or change of status petition, consider the nonimmigrant to have maintained valid nonimmigrant status following cessation of employment.[60] While DHS appreciates the alternative approaches suggested by commenters, DHS believes that most of the underlying concerns are addressed by these clarifications made to this provision in the final rule.

[60] The 60-day grace period provision does not limit the scope of employer violations under section 212(n)(2)(c)(vii) of the Act, or the remedies available to correct such violations. See 8 U.S.C. 1182(n)(2)(c)(vii)(concerning employer failure to pay wages during ''nonproductive time'', commonly referred to as ''benching'').

vi. Classifications Eligible for the 60-Day Grace Period

Comment. Several commenters suggested that DHS broaden the classes eligible for the 60-day grace period to include other nonimmigrant worker visa classifications, namely those working in A, H–3, G, I, O, P, or Q nonimmigrant status.

Response. In response to these comments, DHS is adding O–1 nonimmigrants to the classes of individuals eligible for the 60-day grace period. DHS has decided not to add the other nonimmigrant classifications requested by commenters because the fundamental purposes of those classifications do not align with the fundamental purpose of this rule. As discussed previously, this rulemaking is intended to benefit high-skilled workers and their employers by streamlining the processes for employer sponsorship of such workers for immigrant visas, increasing job portability and otherwise providing stability and flexibility for such workers, and providing additional transparency and consistency in the application of DHS policies and practices related to high-skilled worker programs. The additional nonimmigrant classifications proposed by commenters, however, are not focused on facilitating the employment of high-skilled workers by employers in the United States. Authorizing grace periods for these nonimmigrant classifications would thus not align with the purpose of this rule.

Comment. One commenter suggested broadening the classes of individuals who might benefit from a 60-day grace period to include those nonimmigrant workers whose petitions to extend stay or change employers within an eligible visa classification are denied. This commenter opined that the inclusion of petition denials is consistent with the grace period's purpose of facilitating stability and job flexibility.

Response. DHS declines to adopt the commenter's suggestion to provide grace periods after an approved validity period in cases in which petitions requesting an extension of stay or a change of employers are denied. The 60-day grace period is intended to apply to individuals whose employment ends prior to the end of their approved validity period. It is not intended to apply after that period based on a denial of a benefit request. DHS notes that individuals may be eligible for the 60-day grace period if they port to new H–

1B employers under INA 214(n) and the petition for new employment (*i.e.,* the H–1B petition used to port) is denied prior to the expiration of the validity period of the previously approved petition on which the individual's status had been based. However, the 60-day grace period would not apply where a petition for new employment under section 214(n), or an extension of stay petition with the same employer, is denied after expiration of the validity period.

vii. Clarifying the Meaning of ''Up To'' in the 60-Day Grace Period

Comment. A few commenters asked DHS to clarify how it would exercise its discretion to eliminate or shorten the 60-day period on a case-by-case basis. These commenters wanted to know the circumstances in which DHS might deem it appropriate to eliminate or shorten the grace period, and the manner in which the beneficiary would be notified.

Response. At the time a petitioner files a nonimmigrant visa petition requesting an extension of stay or change of status, DHS will determine whether facts and circumstances may warrant shortening or refusing the 60-day period on a case-by-case basis. If DHS determines credible evidence supports authorizing the grace period, DHS may consider the individual to have maintained valid nonimmigrant status for up to 60 days following cessation of employment and grant a discretionary extension of stay or a change of status to another nonimmigrant classification. *See* 8 CFR 214.1(c)(4) and 248.1(b). Such adjudications require individualized assessments that consider the totality of the circumstances surrounding the cessation of employment and the beneficiary's activities after such cessation. While many cases might result in grants of 60-day grace periods, some cases may present factors that do not support the favorable exercise of this discretion. Circumstances that may lead DHS to make a discretionary determination to shorten or entirely refuse the 60-day grace period may include violations of status, unauthorized employment during the grace period, fraud or national security concerns, or criminal convictions, among other reasons.

viii. Employment Authorization During the Grace Periods

Comment. Several commenters requested that employment authorization be granted during grace periods so that foreign workers can begin their new jobs while awaiting approval of a petition filed by a new employer.

Response. DHS declines to provide employment authorization during the grace periods. Consistent with the intent of the grace periods as proposed, as well as similar grace periods already provided in DHS regulations, the final rule does not allow eligible nonimmigrants to be employed during either the 10- or 60-day grace periods unless otherwise authorized under 8 CFR 274a.12. DHS authorizes these grace periods simply to facilitate the ability of qualified nonimmigrants to transition to new employment in the United States, seek a change of status, or prepare to depart the United States. Consistent with longstanding policy, DHS declines to authorize individuals to work during these grace periods.

Comment. Several commenters requested that USCIS allow nonimmigrant workers to pursue their own businesses during grace periods.

Response. DHS declines to allow nonimmigrant workers to use the grace periods provided by this rule to work to start their own businesses. The grace periods allow qualified nonimmigrants to transition to new employment while maintaining nonimmigrant status, or seek a change of status, or prepare to depart the United States. These grace periods are not intended to provide a separate basis for employment authorization. Therefore, the final rule at 8 CFR 214.1(l)(3) provides that an individual may not work during the grace period unless otherwise authorized under 8 CFR 274a.12.

H. Job Portability for H–1B Nonimmigrant Workers

1. Description of Final Rule and Changes from NPRM

The final rule at 8 CFR 214.2(h)(2)(i)(H) codifies longstanding DHS policies implementing H–1B job portability under INA 214(n). This section of the final rule enhances the ability of H–1B nonimmigrant workers to change jobs or employers by authorizing them to accept new or concurrent employment upon the filing of a nonfrivolous H–1B petition (''H–1B portability petition''). *See* INA section 214(n), 8 U.S.C. 1184(n); 8 CFR 214.2(h)(2)(i)(H). Under section 214(n), the H–1B nonimmigrant worker must have been lawfully admitted into the United States, must not have worked without authorization after such lawful admission, and must be in a period of stay authorized by the Secretary.[61] *See* 8 CFR 214.2(h)(2)(i)(H)(*1*). Although DHS is not making any changes to the H–1B portability provisions proposed in the NPRM, the Department confirms that to be eligible for H–1B portability the new H–1B petition must have been filed while the foreign worker is in H–1B status or is in a period of authorized stay based on a timely filed H–1B extension petition. Employment authorization under the pending H–1B portability petition continues until adjudication. *See* 8 CFR 214.2(h)(2)(i)(H)(*2*).

The final rule allows H–1B employers to file successive H–1B portability petitions (often referred to as ''bridge petitions'') on behalf of H–1B nonimmigrant workers. An H–1B nonimmigrant worker who has changed employment based on an H–1B portability petition filed on his or her behalf may again change employment based on the filing of a new H–1B portability petition, even if the former H–1B portability petition remains pending. Eligibility for employment pursuant to a second or subsequent H–1B portability petition, however, would effectively depend on (1) whether any prior H–1B portability petitions have been approved or remain pending, and (2) whether the individual's Form I–94, issued upon admission or extended pursuant to an approved H–1B petition, has expired. If the request for an extension of stay was denied in a preceding H–1B portability petition and the individual's Form I–94 authorizing admission in or extension of H–1B status has expired, a request for an extension of stay in any successive H–1B portability petition(s) must also be denied. *See* 8 CFR 214.2(h)(2)(i)(H)(*3*). Successive H–1B portability petitions thus may provide employment authorization as long as each such H–1B portability petition separately meets the requirements for H–1B classification and for an extension of stay.

2. Public Comments and Responses

i. H–1B Status Requirement

Comment. Several commenters objected to limiting H–1B portability to workers who are in H–1B nonimmigrant status or in an authorized period of stay based on a timely filed H–1B extension petition. These commenters requested that the regulation permit any worker who was previously issued an H–1B visa or otherwise provided H–1B nonimmigrant status to port to H–1B employment through a request for a change of status from another nonimmigrant category. Commenters stated that the current limitation was contrary to the plain language of the INA and congressional intent, outside

[61] Neufeld May 2009 Memo (describing various ''periods of authorized stay'').

the Department's authority, and inconsistent with DHS's stated goal of maximizing job flexibility for skilled foreign workers. One commenter stated that such a policy would impose further restrictions and fees on employers in the medical field, deterring them from recruiting physicians to work in medically underserved areas.

Response. DHS disagrees with these commenters. USCIS has long interpreted INA 214(n) as allowing only those nonimmigrants who are currently in H–1B status, or in a period of authorized stay as a result of a timely filed H–1B extension petition, to begin employment upon the filing by prospective employers of new H–1B portability petitions on the nonimmigrants' behalf. H–1B portability does not apply to a nonimmigrant who is in a valid status other than H–1B.[62] This interpretation is consistent with the text of INA 214(n)(1), which refers specifically to foreign workers admitted in or otherwise provided H–1B status. *See* INA 214(n)(1), 8 U.S.C. 1184(n)(1). This interpretation is also in harmony with congressional intent behind the creation of the provision. As noted in the Senate Report accompanying the bill, the H–1B portability provision at INA 214(n), titled ''increased portability of H–1B status,'' was intended to ''respond[ ] to concerns raised about the potential for exploitation of H–1B visa holders as a result of a specific employer's control over the employee's legal status.'' *See* S. Rep. No. 260, at 22–23. The Senate Report also noted that: ''[t]he bill allows an H–1B visa holder to change employers at the time a new employer files the initial paperwork, rather than requiring the visa holder to wait for the new H–1B application to be approved.'' *Id.* at 10, 22. For these reasons, DHS believes this limitation is consistent with Congress's intent.

Additionally, DHS does not agree that these clarifications would impose new restrictions on employers. As noted above, USCIS has long interpreted INA 214(n) as requiring an individual to maintain lawful H–1B status, or be in an authorized period of stay based on a timely filed extension of H–1B status, in order to ''port'' to a new employer. As this is longstanding policy and practice, DHS disagrees that the codification of such provision would present a new deterrent to employers recruiting certain H–1B nonimmigrants, such as physicians.

Comment. One commenter expressed qualified support for the proposed H–1B portability provision at 8 CFR 214.2(h)(2)(i)(H). The commenter expressed appreciation for the provision under the assumption that it rendered the so-called ''240-day rule'' at 8 CFR 274a.12(b)(20), which applies to timely filed H–1B extensions with the same employer, moot. This assumption was based on the fact that the proposed regulation provided H–1B portability to the beneficiary of the H–1B extension petition until such petition was adjudicated by USCIS. The commenter stated, however, that there was apparent discrepancy between the text of the proposed H–1B portability provision and the regulatory text at 8 CFR 274a.12(b)(20), and the commenter requested that DHS address such discrepancy.

Response. DHS appreciates the commenter's observations regarding the perceived implications of the portability provision at 8 CFR 214.2(h)(2)(i)(H) on the 240-day rule under 8 CFR 274a.12(b)(20). DHS notes that there is a difference in how these rules are applied, however, and that the portability provision does not in fact render the 240-day rule moot for H–1B nonimmigrants. Under the H–1B portability provision, if an H–1B employer is filing a petition for a change in employment (or an amended petition) for the same employee, then the H–1B nonimmigrant is authorized to work for that same employer in the new employment until the petition is adjudicated. *See* 8 CFR 214.2(h)(2)(i)(H)(*2*). However, if an H–1B employer files a timely petition for an employee seeking continuation of the same employment with the same employer without change, DHS does not consider that to be new employment, and thus is ineligible for H–1B portability. The statutory provision at INA 214(n)(1) plainly refers to new employment in describing what type of employment is authorized, and therefore limits the applicability of that provision. Thus, while a petition seeking extension of the *same* employment for the same employer is pending, employment authorization is not provided by 8 CFR 214.2(h)(2)(i)(H) and 8 CFR 274a.12(b)(9), but would be provided by 8 CFR 274a.12(b)(20), which authorizes employment for an additional 240 days beginning on the date of the expiration of the previously authorized period of stay.

Thus, an eligible nonimmigrant may be granted employment authorization until the adjudication of the H–1B petition if he or she chooses to engage in concurrent or new employment (including new employment with the same employer) or may be granted employment authorization for a period not to exceed 240 days if he or she chooses to continue the current employment with the same employer. For these reasons, DHS disagrees with the commenter's assessment that this provision renders 8 CFR 274a.12(b)(20) moot.

ii. International Travel and Successive Portability Petitions (''Bridge Petitions'')

Comment. A few commenters requested that DHS further clarify the effect of travel outside of the United States on the status of beneficiaries of pending bridge petitions. *See* 8 CFR 214.2(h)(2)(i)(H)(*3*). Many of these commenters expressed the view that DHS prohibited beneficiaries with pending successive portability petitions from traveling outside the United States. Other commenters objected to the potential consequences that beneficiaries of pending bridge petitions face if they travel internationally, including having DHS consider their petitions abandoned. One commenter asked DHS to extend portability to H–1B nonimmigrants who are employed, but are travelling for business or vacation purposes, asserting that true portability should allow job changes for H–1B nonimmigrants who are employed by their sponsors, whether the nonimmigrants are physically in the United States or not.

Response. DHS is aware that H–1B nonimmigrants (and their employers) have expressed concern about their eligibility for admission to the United States during the pendency of a new employer's petition on their behalf. DHS has long acknowledged that otherwise admissible H–1B nonimmigrants may travel and be admitted in H–1B status while H–1B portability petitions on their behalf are pending. However, individuals requesting admission as H–1B nonimmigrants must prove at the port of entry that they are eligible for admission in that status.[63]

Generally, if an individual's original H–1B petition has expired prior to the time that the beneficiary seeks admission to the United States, or if such petition is otherwise no longer valid, the beneficiary must present evidence that USCIS has approved a new H–1B petition to be admitted to the United States. If the original H–1B petition has not yet expired, however, the beneficiary of an H–1B portability petition who travels abroad may be admissible if, in addition to presenting

[62] See Aytes 2005 Memo, at 7.

[63] *See* USCIS Memorandum from Michael A. Pearson, ''Initial Guidance for Processing H–1B Petitions as Affected by the 'American Competitiveness in the Twenty-First Century Act' (Public Law 106–313) and Related Legislation (Public Law 106–311) and (Public Law 106–396)'' (June 19. 2001).

a valid passport and visa (unless visa-exempt), he or she provides a copy of the previously issued Form I–94 or Form I–797 approval notice for the original H–1B petition (evidencing the petition's validity dates), and a Form I–797 receipt notice demonstrating that the new H–1B petition requesting an amendment or extension of stay was timely filed on the individual's behalf. The inspecting officer at the port of entry will make the ultimate determination as to whether the applicant is admissible to the United States as an H–1B nonimmigrant.

Comment. One commenter opposed conditioning H–1B portability on the approval of the H–1B portability petition. The commenter noted that if an employer delays the filing, and chooses not to pay for premium processing, the employee will not be able to port for (potentially) several months. The commenter asked DHS to instead require that portability be conditioned on the portability petition being non-frivolous. Another commenter requested that where the H–1B nonimmigrant's Form I–94 remains valid and unexpired, the regulation should confirm that the denial or withdrawal of a portability petition in the ''chain'' will not result in the denial of successive portability petitions. The commenter advocated that in such situations, pending petitions should remain viable unless denied.

Response. DHS disagrees that an employee who is the beneficiary of a pending portability petition, whether or not premium processing has been requested, would be unable to change jobs for several months. As noted above, as long as a worker is in H–1B nonimmigrant status, or is in a period of authorized stay as a result of a timely filed H–1B petition, that worker may begin new employment upon the filing by the prospective employer of an H–1B portability petition on the foreign worker's behalf. There is no requirement that the portability petition be approved at the time the worker begins the new employment.

DHS notes that an H–1B beneficiary who has a valid and unexpired Form I–94 remains in a period of authorized stay. As long as the petitioner can demonstrate that the beneficiary remained in valid H–1B nonimmigrant status when a successive portability petition was filed, the timely filed petition and associated extension of stay request should not be denied simply because of a denial or withdrawal of the preceding portability petition. DHS does not consider an H–1B portability petition that is filed before the validity period expires to constitute a ''bridge petition''; rather, a bridge petition is one filed after expiration of the Form I–94, but during the time in which the individual was in a period of authorized stay based on a preceding timely filed extension petition.

DHS believes that this rule achieves the ameliorative purpose of section 214(n) to enhance the job flexibility of H–1B nonimmigrant workers and minimize the potential exploitation of such workers by employers. DHS thus adopts the proposed provision without change.

iii. Portability to New Employment Subject to the Cap

Comment. One commenter asked DHS to clarify H–1B portability in the context of a change from cap-exempt to cap-subject employment. The commenter asked DHS to explicitly allow cap-subject employment to begin prior to the beginning of the fiscal year (October 1), noting that H–1B portability provides ''employment authorization'' but not status.

Response. An H–1B nonimmigrant worker's cap-subject employment may not begin prior to October 1 of the fiscal year for which his or her cap-subject petition is approved. *See* INA section 214(g)(1), 8 U.S.C. 1184(g)(1). Therefore, in the circumstances described by the commenter, the H–1B nonimmigrant worker would not be eligible to begin working upon the timely filing of a nonfrivolous petition under 8 CFR 214.2(h)(2)(i)(H).

I. H–1B Licensing Requirements

1. Description of Final Rule and Changes From NPRM

The final rule amends existing DHS regulations to incorporate the Department's current policy[64] for determining when H–1B status may be granted notwithstanding the H–1B beneficiary's inability to obtain a required professional license. In response to public comment, the final rule also expands upon the bases for granting H–1B status in such cases. *See* final 8 CFR 214.2(h)(4)(v)(C).

First, in this final rule, DHS is making clarifications to the proposal in the NPRM covering unlicensed beneficiaries who will work, under the supervision of licensed senior or supervisory personnel, in an occupation that typically requires licensure. *See* proposed 8 CFR 214.2(h)(4)(v)(C)(*1*). The proposed rule required petitioners to provide evidence concerning the duties to be performed by the prospective beneficiary, as well as the identity, physical location, and credentials of the individual(s) who will supervise the foreign worker. In the final rule, DHS is retaining these requirements with an amendment clarifying that petitioners must also submit evidence of compliance with applicable state requirements. DHS is adding this requirement, consistent with existing policy and practice, to clarify that the performance of such work by an unlicensed beneficiary, in an occupation that typically requires a license, would only be permissible if it is otherwise consistent with applicable state licensure requirements and exceptions to such requirements. In such cases, if the evidence demonstrates that the unlicensed H–1B nonimmigrant may fully perform the duties of the occupation under the supervision of licensed senior or supervisory personnel, H–1B classification may be granted. *See* final 8 CFR 214.2(h)(4)(v)(C)(*1*).

Second, DHS is expanding the bases under which an individual may be granted H–1B nonimmigrant status despite the individual's inability to obtain a required license in the United States. The proposed rule expressly allowed for a temporary exception to the licensure requirement for individuals who were substantively qualified for licensure but who could not obtain such licensure due only to the need to have a Social Security number or employment authorization. In response to public comment, DHS is clarifying that a temporary exception to the licensure requirement may also be available in cases in which the inability to obtain the license is due to a ''similar technical requirement.'' Final 8 CFR 214.2(h)(4)(v)(C)(*2*)(*i*). DHS is expanding this provision in recognition that other technical obstacles may exist that would similarly prevent beneficiaries from obtaining licenses required for employment in certain occupations. Under the final rule, petitioners filing H–1B petitions on behalf of such beneficiaries are required to submit evidence from the relevant licensing authority indicating that the only obstacle to the beneficiary's licensure is the lack of a Social Security number, the lack of employment authorization, or the inability to meet a similar technical

[64] *See* USCIS Memorandum from Donald Neufeld, ''Adjudicator's Field Manual Update: Chapter 31: Accepting and Adjudicating H–1B Petitions When a Required License Is Not Available Due to State Licensing Requirements Mandating Possession of a Valid Immigration Document as Evidence of Employment Authorization'' (Mar. 21, 2008) (''Neufeld Memo March 2008''); INS Memorandum from Thomas Cook, ''Social Security Cards and the Adjudication of H–1B Petitions'' (Nov. 20, 2001) (''Cook Memo Nov. 2001'').

requirement. *See* final 8 CFR 214.2(h)(4)(v)(C)(*2*)(*ii*).

Petitions for such unlicensed H–1B beneficiaries may be approved for up to 1 year. *See* final 8 CFR 214.2(h)(4)(v)(C)(*2*). Thereafter, an H–1B petition filed on such a beneficiary's behalf may not be approved unless the required license has been obtained, the beneficiary is employed in a different position that requires another type of license, or the beneficiary is employed in the same occupation but in a different location that does not require a license. *See* final 8 CFR 214.2(h)(4)(v)(C)(*3*).

2. Public Comments and Responses

i. Duties Without Licensure—Expand Circumstances

Comment. Most of the commenters who addressed the proposed changes supported DHS's proposals and thanked DHS for clarifying exceptions to the general requirement making approval of H–1B petitions contingent on licensure when licensure is required for the relevant occupation. Two commenters asked DHS to include additional bases for excusing the general licensure requirement, such as by adding the phrase ''or other requirement'' to 8 CFR 214.2(h)(4)(v)(C)(*2*)(*ii*).

Response. DHS regulations provide that if an occupation, including a health care occupation, requires a state or local license to fully perform the duties of the occupation, the H–1B beneficiary must have the license prior to the approval of the petition. *See* 8 CFR 214.2(h)(4)(v). However, some states will not issue a foreign national a state license without evidence of an approved H–1B petition or other employment authorization. DHS has long acknowledged these beneficiaries sometimes face situations where the beneficiary is qualified for licensure but may not obtain the licensure because of a technical requirement, and the Department responded over 8 years ago by allowing for the *temporary* approval of H–1B petitions in such cases, provided all other requirements are met.[65] By incorporating this policy into the final regulations, DHS intends to provide clear guidance to help certain beneficiaries who cannot obtain the necessary license because they are unable to satisfy a technical prerequisite, including because they do not yet possess a Social Security number or are not yet legally authorized to work in the United States.

In addition, DHS agrees with commenters and recognizes that there may be other analogous technical requirements not specifically identified in the proposed rule that similarly prevent a beneficiary from obtaining a license. DHS is therefore providing additional flexibility in the final rule by allowing beneficiaries to demonstrate that a ''similar technical requirement'' bars the issuance of a license to an individual who is not yet in H–1B status. In such situations, the petitioner must still demonstrate that the beneficiary is otherwise qualified to receive the state or local license, meaning that all educational, training, experience, and other substantive requirements have been met. The petitioner must also still demonstrate that the beneficiary has applied for such license in accordance with state or local rules and procedures, unless such rules and procedures prohibit the beneficiary from applying for the license without first meeting the technical requirement.

Comment. One commenter requested the same accommodation (*i.e.,* a 1-year approval) for physicians who complete their graduate medical education in H–1B nonimmigrant status using a limited or restricted license but who require an unrestricted license to begin post-training work in H–1B status. This commenter noted that these physicians sometimes face circumstances in which they have not yet completed their post-graduate training (*i.e.,* medical residency), which is a prerequisite to obtaining an unrestricted state license in many states, but must have an H–1B petition filed on their behalf to avoid a lapse in status. This commenter requested that USCIS consider the completion of the requisite post-graduate training as another technical impediment to obtaining a license.

Response. DHS declines to adopt the commenter's suggestion. As with other occupations, DHS will require physicians who complete their graduate medical education in H–1B status using a restricted license to demonstrate that the only obstacle to the issuance of an unrestricted license is the lack of a Social Security number, a lack of employment authorization, or the inability to meet a similar technical requirement that precludes the issuance of the license. DHS does not view the absence of completed post-graduate training as analogous to the purely technical prerequisites discussed above. The Department did not propose to excuse substantive prerequisites for obtaining licensure and disagrees that exceptions should extend to such prerequisites.

ii. Unlicensed Employment Under Supervision

Comment. Several commenters were concerned about petitioners being required to provide evidence ''as to the identity, physical location, and credentials of the individual(s) who will supervise the alien.'' *See* 8 CFR 214.2(h)(4)(v)(C)(*1*). One commenter indicated that the quoted text could be interpreted in different ways. According to the commenter, although the text may have been intended to require petitioners to provide broad details about the supervisor(s) who will oversee the work of the nonimmigrant worker, adjudicators may interpret this provision as requiring petitioners to provide the actual identities and qualifications of those supervisors. The commenter believed such an interpretation would pose a major logistical challenge for many petitioners. As an example, the commenter referred to medical residents who often rotate through numerous assignments and different supervisors, sometimes on a monthly basis, during their training. The commenter believed that in such cases it would be overly burdensome for petitioners to provide the actual identities of the supervisors, and the commenter urged DHS to eliminate this requirement. Some commenters recommended that DHS strike the provision requiring petitioners to provide specific information about supervisors and replace it with a provision requiring petitioners to proffer evidence from the appropriate licensing authority supporting the employment.

Additionally, commenters were concerned that the proposed rule gave USCIS too much authority to ''second-guess'' established practices followed by state licensing authorities. One commenter was of the view that if the relevant state licensing authority deems the proposed supervision to be adequate, USCIS should not evaluate the level at which duties are performed or the degree of supervision received. Another commenter stated that refining the regulatory text would help to avoid denials of H–1B petitions filed for unlicensed workers whose supervision is deemed adequate by the state but determined to be inadequate by USCIS.

Response. In this final rule, DHS is clarifying that, consistent with current policy, the petitioner is required to provide details about the supervisor(s) overseeing the work of the nonimmigrant worker, including physical location, credentials and identity of such supervisor(s). Petitioners are encouraged to fully document each case, as this helps DHS

[65] *See* Neufeld Memo March 2008.

ensure that while the beneficiary may as yet be unlicensed, he or she will be supervised by one or more individuals with the proper license. Finally, as the burden of proof is on the petitioner to establish eligibility for the benefit requested, the petitioner must also submit evidence that it is complying with state requirements. DHS is modifying the regulatory text at 8 CFR 214.2(h)(4)(v)(C)(*1*) to clarify the petitioner's burden of proof with respect to compliance with state requirements. As the final rule simply codifies current policy, DHS does not anticipate that petitioners would have to change the way they currently satisfy these requirements.[66]

iii. Duration of H–1B Petition Approval

Comment. A few commenters suggested a longer duration of approval for H–1B petitions involving unlicensed H–1B beneficiaries, noting that limiting the duration of H–1B nonimmigrant status to 1 year seemed both ''arbitrary'' and ''unnecessary.'' The commenters urged DHS to allow petitions to be approved for the full H–1B period requested—up to 3 years—regardless of whether the occupational license is subject to renewal before the requested petition expiration date. Alternatively, another commenter suggested an option whereby USCIS would approve H–1B status for the period requested on the petition and then send a request for proof of licensure 1 year after approval (rather than require a new petition). According to the commenter, if proof is not provided at that point, the grant of H–1B status could be revoked. One commenter proposed that DHS extend the 1-year exception to any foreign beneficiary who presents a health care worker certificate[67] at the time of the filing of the H–1B petition. The commenter noted that this proposal would relieve the need for DHS to parse through a myriad of state licensing prerequisites, while still guaranteeing that only qualified workers are granted H–1B status. The commenter noted that the proposal would provide additional certainty to petitioners and allow for more consistent DHS decision-making.

Response. USCIS has long used a 1-year period as the duration for approval for beneficiaries that cannot obtain licensure due to technical requirements. Petitioners wishing to extend H–1B status for such beneficiaries beyond one year are required to file new petitions with requests for extensions and evidence that the necessary licensure has in fact been obtained.[68] While DHS recognizes that short approval periods impose a burden on employers, DHS must balance employer burden against the need to affirmatively confirm that the beneficiary ultimately received the requisite licensing. Extending the period of H–1B petition validity beyond 1 year in cases in which the beneficiary does not have a license needlessly weakens DHS's oversight of beneficiaries' eligibility for H–1B status.

DHS also declines to implement the commenter's proposal to approve petitions for beneficiaries lacking necessary licensure for the period requested on the petition and then issue an RFE to request proof of licensure 1 year after approval. Such a proposal would be operationally and administratively burdensome, both because it would require USCIS to track petitions and because it would require USCIS to incur the costs of re-determining eligibility without collecting an appropriate fee. The proposal could add also uncertainty for petitioners and H–1B nonimmigrant workers while their petitions are under re-review. For these reasons, DHS retains in the final rule the current 1-year limitation on the duration of approval of H–1B petitions filed on behalf of unlicensed workers under 8 CFR 214.2(h)(4)(v)(C)(*2*).

DHS also declines to adopt the commenter's request to provide an exception to the 1-year limit for a foreign beneficiary who submits a health care worker certificate with the H–1B petition. State laws govern licensure requirements for individuals to fully practice their profession, and DHS regulations accordingly require the petitioner to submit a copy of the beneficiary's license to establish that the beneficiary is fully qualified to practice in his or her specialty occupation. *See* 8 CFR 214.2(h)(4)(iii)(C)(*3*). The licensure exception only applies where the individual is fully qualified for the state license, but is unable to acquire the license due to a technical, non-substantive reason. While a health care worker certification may help prove such qualification, such certificates, which are issued by private organizations, do not confer authorization to engage in the specialty occupation and are not sufficient evidence of a beneficiary's qualifications for the specialty occupation. Accordingly, such health care certificates are not acceptable substitutes for evidence establishing that the foreign national is licensed to practice his or her occupation. For these reasons, DHS declines to make changes to those requirements in the final rule.

iv. Unrestricted Extendable Licenses

Comment. One commenter stated that the proposed rule did not reference the most recent USCIS guidance regarding unrestricted extendable licenses in health care occupations. The commenter cited a May 20, 2009 USCIS memorandum from Barbara Q. Velarde titled, ''Requirements for H–1B Beneficiaries Seeking to Practice in a Health Care Occupation'' (''2009 Velarde Memorandum''), that states, in part, that H–1B approvals in such instances should be for the full duration of time requested on the petition (*i.e.,* up to 3 years) notwithstanding the renewal date on the license, if the petition is otherwise approvable. The commenter asked that the applicability of the policy be expanded to include additional occupations beyond those in health care, and proposed that 8 CFR 214.2(h)(4)(v)(A) be amended accordingly.

Response. DHS did not propose to codify or change USCIS policy addressing the approval of petitions for individuals in health care occupations who are issued unrestricted extendable licenses, as articulated in the 2009 Velarde Memorandum, and therefore declines to address this comment in this rulemaking. USCIS will continue to adjudicate these petitions consistent with the policy guidance articulated in the 2009 Velarde Memorandum, and the agency declines to make any changes to this policy or the memorandum at this time.

J. Employers Exempt From H–1B Numerical Limitations and Qualifying for Fee Exemptions

1. Description of the Final Rule and Changes From the NPRM

In this final rule, DHS codifies its longstanding policy interpretations identifying which employers are exempt

[66] *See* the Adjudicator's Field Manual at Chapter 31.3(d)(2).

[67] A foreign national seeking admission to perform labor as a health care worker, other than a physician, is only admissible to the United States if he or she presents a certification from a USCIS-approved credentialing organization verifying that the worker has met the minimum requirements for education, training, licensure, and English proficiency in his or her field. *See* INA section 212(a)(5), 8 U.S.C. 1182(a)(5); 8 CFR 212.15.

[68] The 1-year time period dates back to 2001, when the former INS issued guidance to adjudicators to approve H–1B petitions for 1-year periods for teachers who could not obtain state licensure unless they obtained Social Security numbers, which in turn could not be obtained unless they were already authorized to work in the United States. *See* Cook Memo Nov. 2001. *See also* USCIS Memorandum from Barbara Q. Velarde, ''Requirements for H–1B Beneficiaries Seeking to Practice in a Health Care Occupation'' (May 20, 2009), available at *https://www.uscis.gov/sites/default/files/USCIS/Laws/Memoranda/Static_Files_Memoranda/2009/health_care_occupations_20may09.pdf.*

from the H–1B numerical limitations (*i.e.,* which employers are ''cap-exempt'') and makes conforming changes to the provisions that establish which employers are exempt under ACWIA from paying certain H–1B fees. DHS also modifies those policies in response to public comment as they relate to (1) nonprofit entities related to or affiliated with institutions of higher education, and (2) governmental research organizations. DHS is making revisions to the H–1B cap- and fee-exemption provisions where needed to reflect these modifications.

In the final rule, DHS is improving upon and codifying current policy interpreting the statutory cap and fee exemptions for a nonprofit entity that is related to or affiliated with an institution of higher education. *See* INA 214(c)(9) and (g)(5), 8 U.S.C. 1184(c)(9) and (g)(5); *see also* final 8 CFR 214.2(h)(8)(ii)(F)(*2*)(*iv*) and (h)(19)(iii)(B). Under current policy, DHS allows nonprofit entities to qualify for the cap and fee exemptions if such nonprofit entities are (1) connected or associated with an institution of higher education through shared ownership or control by the same board or federation; (2) operated by an institution of higher education; or (3) attached to an institution of higher education as a member, branch, cooperative, or subsidiary. In addition to proposing to retain this policy (*see* proposed 8 CFR 214.2(h)(8)(ii)(F)(*2*); 8 CFR 214.2(h)(19)(iii)(B)(*4*)), the NPRM proposed to also allow nonprofit entities to qualify for the cap and fee exemptions on the basis of having a written affiliation agreement with an institution of higher education. As proposed, the regulatory text would have allowed such an agreement to serve as the basis for the cap and fee exemptions if the agreement established an active working relationship between the nonprofit entity and the institution of higher education for the purposes of research or education and so long as one of the nonprofit entity's primary purposes was to directly contribute to the research or education mission of the institution of higher education.

In the final rule, DHS is replacing the phrase ''primary purpose'' with ''fundamental activity'' to avoid potential confusion. This change makes it clearer that nonprofit entities may qualify for the cap and fee exemptions even if they are engaged in more than one fundamental activity, any one of which may directly contribute to the research or education mission of a qualifying college or university. Further, the term ''related or affiliated nonprofit entity'' is defined consistently for both cap-exemption and ACWIA fee-exemption purposes. This change results in a standard that better reflects current operational realities for institutions of higher education and how they interact with, and sometimes rely on, nonprofit entities.

Second, the final rule revises the definition of ''governmental research organization,'' in response to public comment, so that the phrase includes state and local government research entities in addition to federal government research entities. *See* 8 CFR 214.2(h)(8)(ii)(F)(*3*) and (h)(19)(iii)(C). Both the ACWIA fee and H–1B cap statutes provide exemptions for ''governmental research organizations,'' without specifying whether such organizations must be federal government entities. *See* INA 214(c)(9)(A) and (g)(5)(B), 8 U.S.C. 1184(c)(9)(A) and (g)(5)(B). DHS believes it is reasonable to interpret this language to include state and local government entities and that doing so is consistent with the goals of this rulemaking to improve access to and retention of high-skilled workers in the United States. DHS further believes that this interpretation will promote and encourage the significant and important research and development endeavors happening through state and local governments.

Third, the final rule codifies other existing policies and practices in this area. Specifically, the final rule codifies: (1) The requirements for exempting H–1B nonimmigrant workers from the cap in cases in which they are not directly employed by a cap-exempt employer (final 8 CFR 214.2(h)(8)(ii)(F)(*4*)); (2) the application of cap limitations to H–1B nonimmigrant workers in cases in which cap-exempt employment ceases (final 8 CFR 214.2(h)(8)(ii)(F)(*5*)); and (3) the procedures for concurrent cap-exempt and cap-subject employment (final 8 CFR 214.2(h)(8)(ii)(F)(*6*)). As discussed below, DHS did not make any changes to these provisions in response to public comment.

2. Public Comments and Responses

i. Include Government Entities in the Definition of ''Related or Affiliated''

Comment. One commenter stated that DHS's failure to specifically reference government entities as a type of entity that could have a qualifying relationship or affiliation with an institution of higher education meant that government entities would be unable to request exemptions from the H–1B numerical limitations and ACWIA fees. The commenter argued that by only referring to nonprofit entities, the rule excluded government entities, notably Department of Veterans Affairs (VA) hospitals, from these exemptions. The commenter suggested revising the text of the proposed regulation at 8 CFR 214.2(h)(8)(ii)(F)(*2*) and (h)(19)(iii)(B) to specifically include governmental entities related to or affiliated with institutions of higher education in the provisions providing for exemption from the H–1B numerical limitations and ACWIA fees.

Response. DHS thanks the commenter for the suggestion. In enacting sections 214(c)(9) and 214(g)(5) of the INA, Congress specifically identified the types of entities that are eligible for the cap and fee exemptions. DHS will not introduce additional entity types by regulation, but the agency will continue to consider exemption requests from government entities that are also organized as nonprofit entities. DHS notes that it did not propose a change to the definition of a ''nonprofit organization'' in 8 CFR 214.2(h)(19)(iv) for purposes of the cap or fee exemptions. Consistent with the current practice, DHS will assess on a case-by-case basis whether a governmental organization has established that it is a nonprofit entity related to or affiliated with an institution of higher education for purpose of the ACWIA fee and H–1B numerical limitations.

ii. Clarify That a Nonprofit Entity Only Needs To Meet One of the Criteria in 8 CFR 214.2(h)(8)(ii)(F)(2) and 8 CFR 214.2(h)(19)(iii)(B)

Comment. One commenter requested that DHS clarify in the final rule that a nonprofit entity, in order to qualify for exemption from the H–1B numerical limitation, need only meet one of the criteria set forth in 8 CFR 214.2(h)(8)(ii)(F)(*2*). The commenter recommended specific edits to the regulatory text to clarify this point and to avoid potential confusion over the disjunctive nature of the criteria in the definition. The commenter also requested that DHS make corresponding revisions to the fee-exemption provision at proposed 8 CFR 214.2(h)(19)(iii)(B).

Response. DHS believes that the regulatory text at proposed 8 CFR 214.2(h)(8)(ii)(F)(*2*) clearly provides that a nonprofit entity may qualify as ''related to or affiliated with'' an institution of higher education if it meets any one of the listed criteria. However, in response to the comment, DHS is revising the final rule by adding the phrase ''if it satisfies any one of the following conditions'' to the proposed text. DHS is also making conforming changes to 8 CFR 214.2(h)(19)(iii)(B).

iii. The ''Primary Purpose'' Requirement for Nonprofit Entities Seeking Exemptions Based on Formal Written Affiliation Agreements

Comment. As noted above, the NPRM would have allowed nonprofit entities to qualify for cap and fee exemptions based on formal written affiliation agreements with institutions of higher education so long as such agreements establish an active working relationship with the institution of higher education for the purposes of research or education, and the nonprofit entity establishes that one of its primary purposes is to directly contribute to the educational or research mission of the institution of higher education. *See* proposed 8 CFR 214.2(h)(8)(ii)(F)(*2*)(*iv*) and 8 CFR 214.2(h)(19)(iii)(B)(*4*). This proposed path to eligibility for the cap and fee exemptions, which is not available under current policy, was intended to expand eligibility to nonprofit entities that maintain common, bona fide affiliations with institutions of higher education. Commenters were of the view that the term ''a primary purpose'' would make the provision overly restrictive and inconsistent with both the INA and the purpose of the proposed rule. Some commenters suggested eliminating any reference to the ''purpose'' of the nonprofit, while one commenter suggested simply deleting the word ''primary'' while maintaining reference to the ''purpose'' of the nonprofit entity. Another commenter claimed that the proposed regulatory definition was beyond DHS's statutory authority.

Response. In response to public comment, DHS is revising 8 CFR 214.2(h)(8)(ii)(F)(*2*)(*iv*) and (h)(19)(iii)(B)(*4*) to clarify the definition. Specifically, instead of referring to ''a primary purpose'' of the nonprofit entity, the final rule will require the nonprofit entity to show that ''*a fundamental activity* of the nonprofit entity is to directly contribute to the research or education mission of the institution of higher education'' (emphasis added). DHS emphasizes that a nonprofit entity may meet this definition even if it is engaged in more than one fundamental activity, so long as at least one of those fundamental activities is to directly contribute to the research or education mission of a qualifying college or university. This modified definition should capture those nonprofit entities that have bona fide affiliations with institutions of higher education and is consistent with the intent underlying the statute.

While some commenters suggested deleting the requirement altogether, such that any entity could qualify merely by entering into any kind of affiliation agreement with a qualifying institution of higher education, DHS believes that Congress did not intend such a broad exemption from the cap and fee provisions. With respect to institutions of higher education, Congress intended to exempt those foreign national workers who would directly contribute to the research or education missions of those institutions; there is no evidence that Congress intended to allow exemptions based on agreements unrelated to those missions.[69] Finally, DHS disagrees with the suggestion that the proposed definition is beyond DHS's statutory authority. Congress chose not to define the term ''related or affiliated,'' thus delegating the authority and responsibility to interpret that term to DHS. In this rule, DHS acts within its statutory authority by codifying a definition that is consistent with the statutory intent to provide exemptions for certain nonprofit entities that directly contribute to the higher education of Americans.[70]

iv. Formal Written Affiliation Agreement

Comment. Similarly, several commenters objected to the requirement in proposed 8 CFR 214.2(h)(8)(ii)(F)(*2*)(*iv*) and 8 CFR 214.2(h)(19)(iii)(B)(*4*) that the qualifying affiliation agreement be formal and in writing. These commenters proposed deleting this requirement and simply revising the rule to only require that the nonprofit entity have ''an affiliation'' with an institution of higher education in order to qualify for the cap and fee exemptions.

In addition, these commenters offered suggested edits to the regulatory text to ensure that a nonprofit entity that submits a formal written affiliation agreement is also not required to affirmatively prove that the entity is not owned or controlled by the institution of higher education. These commenters requested that proposed 8 CFR 214.2(h)(8)(ii)(F)(*2*)(*iv*) be revised to remove the phrase ''absent shared ownership and control'' to describe the nonprofit entity's affiliation with an institution of higher education. Some of these commenters also asked DHS to make conforming edits to 8 CFR 214.2(h)(19)(iii)(B)(*4*), so the cap and fee exemption provisions remain identical. These commenters also suggested that DHS include deference to other agency determinations of affiliation as an alternative to requiring a formal written affiliation agreement.

Response. DHS appreciates the concerns expressed by the commenters but believes that it is reasonable to require nonprofit entities to submit formal written affiliation agreements with institutions of higher education as evidence that they are adequately affiliated with such institutions and thus exempt from the cap and fee exemptions. DHS believes that submission of such affiliation agreements is important to ensure that the nonprofit entities will directly further the educational or research missions of the affiliated institutions of higher education.[71] A petitioner may wish to submit, or DHS may require the submission of, additional evidence to corroborate the nature of the affiliation and the nonprofit entity's activities.

Based on the comments received, DHS is removing the phrase ''absent a demonstration of shared ownership or control'' from 8 CFR 214.2(h)(8)(F)(*2*)(*iv*) and 8 CFR 214.2(h)(19)(iii)(B)(*4*) to clarify that a nonprofit entity need not prove the absence of shared ownership or control when relying on the existence of a formal affiliation agreement to establish that the entity is related to or affiliated with an institution of higher education. As proposed, the language was intended merely to signify that an affiliation agreement was one option for establishing that the requisite affiliation or relationship exists between the entities; DHS did not intend the phrase to require evidence of the absence of ownership or control.

DHS is not adopting the commenters' recommendation to allow for deference to another agency's determination that a nonprofit entity is related to or affiliated with an institution of higher education. Such determinations, including those made by state or local agencies, could be based on a different substantive standard than the INA requires and could result in inconsistent treatment of similar relationships and affiliations. Therefore, in the final rule, DHS adopts a standard that it will apply consistently across all H–1B petitions claiming cap and fee exemptions.

[69] *See* S. Rep. No. 106–260 (Apr. 11, 2000) (providing that individuals should be considered cap exempt because ''by virtue of what they are doing, people working in universities are necessarily immediately contributing to educating Americans'' and not simply referencing the identity of the petitioning employer).

[70] *Id.*

[71] *See* Aytes Memo June 2006, at 3 (citing S. Rep. No. 106–260, which stated that individuals should be considered cap exempt ''by virtue of what they are doing'' and not simply by reference to the identity of the petitioning employer).

v. Impose Additional Requirements To Qualify as an Institution of Higher Education

Comment. One commenter suggested DHS limit the cap exemption for educational institutions to those institutions that are accredited by an accrediting agency recognized by the Department of Education and that meet federal and state standards for quality educational institutions.

Response. DHS is not adopting the commenter's suggestion because the term ''institution of higher education'' is specifically defined in the INA by reference to 20 U.S.C. 1001(a). *See* INA 214(g)(5)(A), 8 U.S.C. 1184(g)(5)(A). The definition in 20 U.S.C. 1001(a) includes specific reference to accreditation and other standards. As such, DHS will not impose additional requirements or modify the definition of the term ''institution of higher education'' in this final rule.

vi. Impose Additional Requirements on the Nature of Employment at a Qualifying Nonprofit Entity and Nonprofit Research Organization

Comment. One commenter suggested that DHS limit the availability of cap and fee exemptions, for nonprofit entities and nonprofit research organizations, only to those entities and organizations that can document that the employment of H–1B nonimmigrant workers is for the purpose of educating Americans to work in specialty occupation fields. To accomplish this change, the commenter recommended that DHS revise the definition of the terms ''nonprofit entity'' and ''nonprofit research organization'' at proposed 8 CFR 214.2(h)(8)(ii)(F)(*3*). Specifically, the commenter recommended incorporating into the definition the condition that the entity or organization is primarily employing cap-exempt H–1B nonimmigrant workers to educate Americans so that they may immediately qualify for employment in a specialty occupation upon graduation.

Response. DHS declines to adopt the commenter's suggestion. DHS does not believe it would be consistent with congressional intent to impose such a highly limiting restriction on the otherwise broad array of nonprofit entities and nonprofit research organizations that may be eligible for a cap exemption under INA 214(g)(5). As previously discussed, legislative history indicates that Congress intended to include those entities and organizations that are directly contributing to the education and research missions of institutions of higher education. DHS believes the regulatory text in this final rule appropriately reflects this intent.

vii. Expand Interpretation of Research Organization

Comment. Several commenters stated that the current definition of the terms ''nonprofit research organization'' and ''governmental research organization'' in the ACWIA fee-exemption regulation at 8 CFR 214.2(h)(19)(iii)(C), which the proposed rule adopted for purposes of the AC21 H–1B cap exemption at 8 CFR 214.2(h)(8)(ii)(F)(*3*), is inappropriately limited. These commenters questioned the basis for the requirement that qualifying nonprofit research and governmental research organizations be ''primarily'' engaged in or promoting research. The commenters therefore recommended deleting the words ''primarily'' and ''primary'' in 8 CFR 214.2(h)(19)(iii)(C).

Response. DHS does not agree with the commenters' suggestions to remove the requirement that research organizations be either (1) nonprofit entities ''primarily'' engaged in basic or applied research or (2) governmental entities whose ''primary'' mission is the performance or promotion of basic or applied research. These limitations have been in place since 1998 with regard to fee exemptions [72] and have been in effect for more than a decade for purposes of the cap exemptions.[73] The ''primarily'' and ''primary'' requirements were not the subject of any comments when the ACWIA fee regulation was promulgated,[74] and the commenters who raised concerns with these limitations in this rulemaking provided no legal or policy justification for eliminating those requirements. DHS believes that maintaining these longstanding interpretations, which include the ''primarily'' and ''primary'' requirements, will serve to protect the integrity of the cap and fee exemptions as well as clarify for stakeholders and adjudicators what must be proven to successfully receive such exemptions. The requirements thus will be retained for purposes of the ACWIA fee exemption under final 8 CFR 214.2(h)(19)(iii)(C), and also will continue to apply to the cap exemption. *See* final 8 CFR 214.2(h)(8)(ii)(F)(*3*) (adopting the ACWIA fee exemption definition for purposes of the cap exemption).

Comment. A commenter expressed the view that proposed 8 CFR 214.2(h)(19)(iii)(C), as adopted for purposes of the AC21 H–1B cap exemption at 8 CFR 214.2(h)(8)(ii)(F)(*3*), would incorrectly limit ''governmental research organizations'' to federal government research organizations. The commenter stated that DOL reviewed the same issue when it published its final ACWIA prevailing wage rules and concluded that the words ''Governmental'' (capitalized) and ''governmental'' (lower case) convey different meanings, the former referring only to federal governmental entities and the latter referring to federal, state, and local governmental entities. The commenters therefore recommended deleting references in 8 CFR 214.2(h)(19)(iii)(C) to the ''United States Government.''

Response. DHS agrees with the suggestion that the term ''governmental'' should be interpreted to include state and local governmental research organizations in addition to U.S. (*i.e.,* federal) governmental research organizations. Whether governmental research organizations should include state and local government research entities was a straightforward determination when ACWIA was first enacted in 1998. In its original form, the ACWIA statute provided a fee exemption to employers described in INA section 212(p)(1), 8 U.S.C. 1182(p)(1), which in turn referenced ''Governmental'' (capitalized) research organizations. *See* ACWIA sections 414(a), 415(a). Thereafter, DOL and the legacy Immigration and Naturalization Service (INS) promulgated prevailing wage and ACWIA fee-exemption regulations, respectively.[75] In these rulemakings, DOL and INS specifically discussed suggestions from commenters that the term ''Governmental research organization'' should include state and local governmental organizations. DOL concluded that because the ''G'' in the word ''Governmental'' was capitalized, the provision was limited to U.S. (federal) governmental research organizations.[76] For its part, INS explained that it did not exempt state and local governmental organizations from the fee because Congress did not specifically reference them.[77]

In evaluating the commenter's analysis supporting its request that the phrase ''governmental research

[72] *See* Petitioning Requirements for the H–1B Nonimmigrant Classification Under Public Law 105–277, 63 FR 65657 (Nov. 30, 1998) (interim rule) (promulgating the ACWIA fee regulation at 8 CFR 214.2(h)(19)(iii)(C)). This rule was finalized with unrelated amendments in 2000. *See* Petitioning Requirements for the H–1B Nonimmigrant Classification Under Public Law 105–277, 65 FR 10678 (Feb. 29, 2000).

[73] *See* Aytes Memo June 2006, at 4–5.

[74] *See* 65 FR 10678.

[75] 65 FR 80109 (Dec. 20, 2000) (DOL rule); 65 FR 10678 (Feb. 29, 2000) (INS rule).

[76] *See* 65 FR 80109, 80183.

[77] *See* 65 FR 10678, 10680.

organization'' no longer be limited to federal governmental organizations in this final rule, DHS takes into account Congress's actions following enactment of ACWIA and the current ambiguous statutory language. In 2000, two years after ACWIA was signed into law, Congress enacted the cap exemption provision in AC21, which exempted ''governmental research organizations'' (lowercase) from the H–1B cap. *See* AC21 103. Congress also passed legislation that amended the ACWIA fee statute by removing the cross-reference to section 212(p) (which used the capitalized ''Governmental'') from the section 214(c)(9) text and replacing it with language indicating that certain ''governmental'' (lowercase) research entities are exempt. *See* Public Law 106–311, section 1. Legacy INS and later USCIS have not since revised the regulation limiting the fee exemption to federal governmental research organizations.

DHS believes that these intervening statutory changes support the commenter's requested change. In addition, the commenter's requested change would ensure that the DHS and DOL interpretations remain consistent in this context and reflect a recognition that the federal government does not have a monopoly on consequential government-led research and development efforts.[78] Accordingly, DHS is accepting the commenter's suggestion to define ''governmental research organizations'' to include state and local government research organizations for purposes of the cap exemption and fee exemption. DHS is therefore adopting a definition of ''governmental research organization'' for both cap and fee exemptions that covers federal, state, and local governmental research organizations.[79] See final 8 CFR 214.2(h)(19)(iii)(C).

viii. Requirement That the H–1B Worker Perform a Majority of Duties ''at'' the Cap Exempt Entity

Comment. One commenter objected to extending the cap exemption to individuals who are employed ''at'' a qualifying institution, organization or entity rather than limiting the cap exemption to those employed ''by'' such an institution, organization or entity. Other commenters supported the extension of the cap exemption but objected to the ''majority of work time'' requirement, which was proposed as a condition for the cap exemption when an H–1B beneficiary is not a direct employee of a qualifying institution, organization or entity. These commenters contested the proposed rule's requirements that an H–1B beneficiary who is not directly employed by a qualifying institution, organization or entity can only be eligible for a cap exemption if such beneficiary will spend a majority of his or her work time performing job duties at a qualifying institution, organization or entity and if those job duties directly and predominately further the essential purpose, mission, objectives or functions of the qualifying institution, organization or entity. *See* proposed 8 CFR 214.2(h)(8)(ii)(F)(*4*). These commenters requested that DHS eliminate the proposed requirement that such an H–1B beneficiary show that the majority of his or her work time will be spent performing job duties at a qualifying institution, organization or entity. These commenters also objected to the requirement that the H–1B petitioner establish that there is a nexus between the duties to be performed by the H–1B beneficiary and the essential purpose, mission, objectives or functions of the qualifying institution, organization or entity.

Response. DHS believes that its policy extending the cap exemption to individuals employed ''at'' and not simply employed ''by'' a qualifying institution, organization or entity is consistent with the language of the statute and furthers the goals of AC21 to improve economic growth and job creation by immediately increasing U.S. access to high-skilled workers, and particularly at these institutions, organizations, and entities.[80] DHS, moreover, believes that the ''majority of work time'' requirement is a reasonable means to ensure that Congress' aims in exempting workers from the H–1B cap based on their contributions at qualifying institutions, organizations or entities are not undercut by employment that is peripheral to those contributions. DHS is not adopting the changes suggested by the commenters as these provisions in the final rule simply codify policy and practice designed to protect the integrity of the cap exemption. *See* final 8 CFR 214.2(h)(8)(ii)(F)(*4*).

ix. Codify Existing USCIS Deference Policy

Comment. Some commenters stated that the final rule should codify the current deference policy from the 2011 Interim Policy Memo under which USCIS generally defers to a prior agency determination that a nonprofit entity is exempt from the H–1B numerical limitations based on its relation to or affiliation with an institution of higher education.[81] These commenters stated that the lack of a deference regulation has led to uncertainty and unpredictability for employers and prospective H–1B nonimmigrant workers because adjudicators reviewing the same facts can reach opposite conclusions.

Response. DHS is not adopting this suggestion. The deference policy was expressly instituted as interim guidance to promote consistency in adjudications while USCIS reviewed its overall policy on H–1B cap exemptions for nonprofit entities that are related to or affiliated with an institution of higher education. This final rule represents the culmination of USCIS's review of past policy and public input on this issue. In this final rule, DHS specifies the means by which a nonprofit entity may establish that it is related to or affiliated with an institution of higher education. The final rule better reflects current operational realities for institutions of higher education and how they interact with, and sometimes rely on, nonprofit entities, and account for the nature and scope of common, bona fide affiliations between nonprofit entities and institutions of higher education. Rather than continuing to provide deference to past determinations of cap exemption under the 2011 Interim Policy Memo, the final rule includes the final evidentiary criteria that USCIS will now use to determine whether individuals employed at a nonprofit entity will be exempt from H–1B numerical limitations, and, as such, supersedes past guidance in this area.

[78] *See* National Science Foundation, Survey of State Government Research and Development: FYs 2012 and 2013 (June 2015), available at *https://www.nsf.gov/statistics/2015/nsf15323/pdf/nsf15323.pdf.*

[79] As noted, it has long been USCIS policy to apply the same definition of ''governmental research organization'' for both cap and fee exemptions. *See* Aytes Memo June 2006, at 4–5. In the NPRM for this rulemaking, DHS made clear its intent to continue aligning definitions for both exemptions by explicitly linking the AC21 cap exemption to the ACWIA fee-exemption definitions. *See* 80 FR at 81910 (explaining that DHS is adopting the ACWIA fee definition of ''governmental research organization'' for purposes of the cap exemption); *see also id.* at 81919 (explaining that ''DHS also proposes to conform its regulations to current policy with respect to the definitions of several terms in section 214(g)(5) and the applicability of these terms to both: (1) ACWIA provisions that require the payment of fees by certain H–1B employers; and (2) AC21 provisions that exempt certain employers from the H–1B numerical caps''). Multiple commenters supported this approach.

[80] *See* S. Rep. No. 260, at 10.

[81] *See* USCIS Interim Policy Memorandum, ''Additional Guidance to the Field on Giving Deference to Prior Determinations of H–1B Cap Exemption Based on Affiliation'' (Apr. 28, 2011) (2011 Interim Policy Memo).

x. Create a Mechanism To Obtain a Pre-Determination of Cap Exemption

Comment. One commenter suggested that DHS create a mechanism for an H–1B petitioner to obtain a pre-determination of whether it qualifies for an exemption from the H–1B numerical limitations.

Response. DHS appreciates the commenter's suggestion and is in the process of evaluating how to address the administration of these cap and fee exemption provisions procedurally.

xi. Allot H–1B Visas Subject to the Cap on a Quarterly Basis

Comment. One commenter suggested that DHS allot H–1B visas subject to the H–1B numerical limitations on a quarterly basis.

Response. DHS is unable to address this suggestion as it is outside the scope of this rulemaking.

xii. Request for Continuation of Cap-Subject Employment When Concurrent Cap-Exempt H–1B Employment Ends

Comment. A few commenters suggested that when cap-exempt employment ceases, any concurrent H–1B employment with a cap-subject employer should be authorized to continue until the end of the existing H–1B validity period. One commenter stated that tying the validity period of an unrelated cap-exempt petition to the validity of a concurrent cap-subject petition is overly burdensome, as there is no requirement that employment for the cap-exempt petitioner and the cap-subject petitioner be related, and they may be on different hiring cycles. Another commenter stated that cap-exempt H–1B visa holders may have difficulty changing jobs as their only logical option is to move to another cap-exempt employer or, in the alternative, to attempt to obtain a cap-subject H–1B visa, which has frequently required going through the H–1B lottery in April of each year.

Response. DHS appreciates the challenges that cap-subject employers and H–1B visa holders may face when previously approved cap-exempt concurrent employment ceases, and that transitioning from cap-exempt employment to cap-subject employment may be challenging. However, as soon as an H–1B nonimmigrant worker ceases employment with a cap-exempt employer, that worker becomes subject to the H–1B numerical limitations. Section 103 of AC21 specifically provides that if an H–1B nonimmigrant worker was not previously counted against the cap, and if no other exemption from the cap applies, then the H–1B nonimmigrant worker will be subject to the cap once employment with a cap-exempt entity ceases. *See* INA 214(g)(6), 8 U.S.C. 1184(g)(6).

In the scenario contemplated by the commenter, the basis for the H–1B nonimmigrant worker's employment with an employer that normally would be cap-subject is an exemption from the otherwise controlling H–1B numerical limits based on concurrent employment at a cap-exempt institution, entity or organization as described in section 214(g)(5)(A) and (B) of the INA, 8 U.S.C. 1184(g)(5)(A) and (B). If the concurrent cap-exempt employment ceases before the end of the petition validity period of the cap-subject employment, and the H–1B nonimmigrant worker is not otherwise exempt from the numerical limitations, USCIS may revoke the approval of the cap-subject concurrent employment petition. Because the concurrent employment at a cap-subject employer is considered cap-exempt solely because the H–1B nonimmigrant worker's concurrent cap-exempt employment is continuing, DHS believes it is reasonable to limit the cap-subject concurrent employment approval period to the approved concurrent cap-exempt employment. Although concurrent employers may be on different hiring cycles, this does not change the fact that the concurrent cap-subject employment is contingent upon the continuation of the cap-exempt employment. As such, DHS is not adopting the commenter's suggestion to allow for approval validity periods of cap-subject concurrent employment to exceed the validity period of the concurrent cap-exempt employment.

xiii. Prohibit Cap-Exempt H–1B Worker From Concurrent Employment

Comment. One commenter stated that a cap-exempt H–1B worker should be unable to obtain approval for concurrent employment except under another cap-exempt H–1B petition. This commenter disagreed with the codification in proposed 8 CFR 214.2(h)(8)(ii)(F)(*5*) of the existing policy allowing a cap-exempt H–1B nonimmigrant worker, based on continued employment at an institution, organization or entity under INA 214(g)(5)(A) and (B), to be concurrently employed by a cap-subject employer. The commenter suggested revising the rule to prohibit concurrent employment by a cap-exempt H–1B nonimmigrant worker unless the concurrent employment is independently exempt from the H–1B numerical limitations.

Response. DHS is not adopting this suggestion because it is inconsistent with our longstanding policy and practice to allow a cap-exempt H–1B nonimmigrant worker, who is cap-exempt based on continued employment at an institution, organization or entity under INA 214(g)(5)(A) and (B), to be concurrently employed by a cap-subject employer. Consistent with INA 214(g)(6), if the H–1B nonimmigrant worker ''ceases'' his or her cap-exempt employment, the H–1B nonimmigrant worker would become subject to the numerical cap, unless otherwise exempt.

K. Exemptions to the Maximum Admission Period of H–1B Nonimmigrants

1. *Description of the Final Rule and Changes From the NPRM*

In this final rule, DHS is consolidating and codifying longstanding DHS policy implementing sections of AC21 related to the method for calculating time counted toward the maximum period of H–1B admission, as well as determining exemptions from such limits. Specifically, the final rule addresses: (1) When an H–1B nonimmigrant worker can recapture time spent physically outside of the United States (*see* final 8 CFR 214.2(h)(13)(iii)(C)); (2) whether the beneficiary of an H–1B petition should be counted against the H–1B numerical cap (*see* final 8 CFR 214.2(h)(13)(iii)(C)(*2*)); (3) when an individual qualifies for an H–1B extension beyond the general 6-year limit due to lengthy adjudications delays (*see* final 8 CFR 214.2(h)(13)(iii)(D)); and (4) when an individual qualifies for an H–1B extension beyond the general 6-year limit due to the per-country limitations on immigrant visas (*see* final 8 CFR 214.2(h)(13)(iii)(E)). Together, these provisions in the final rule will enhance consistency among DHS adjudicators and provide a primary repository of governing rules for the regulated community.

In response to public comment, DHS is also providing several clarifications in the final rule. First, DHS has amended the regulatory text at 8 CFR 214.2(h)(13)(iii)(C) to more clearly provide that remaining H–1B time may be recaptured at any time before the foreign worker uses the full period of H–1B admission described in section 214(g)(4) of the INA. Second, DHS has made several edits to simplify and streamline the regulatory text at 8 CFR 214.2(h)(13)(iii)(D), which describes eligibility for the ''lengthy adjudication delay'' exemption afforded by section 106(a) and (b) of AC21 to the general 6-year maximum period of H–1B admission. In particular, the final rule makes clear that to be eligible for this exemption, the individual must have had an application for labor certification or a Form I–140 petition filed on his or her behalf at least 365 days before the date the exemption would take effect. *See* final 8 CFR 214.2(h)(13)(iii)(D)(*1*), (*5*), and (*7*). The final rule further clarifies that an individual becomes ineligible for the lengthy adjudication delay exemption if he or she fails to apply for adjustment of status or an immigrant visa within 1 year of the date an immigrant visa is authorized for issuance. *See* final 8 CFR 214.2(h)(13)(iii)(D)(*10*). The final rule also clarifies that exemptions pursuant to section 106(a) of AC21 may only be made in 1-year increments. *See* final 8 CFR 214.2(h)(13)(iii)(D)(*2*).

Finally, DHS is making a correction to 8 CFR 214.2(h)(13)(iii)(E), which was intended to codify existing policy regarding eligibility for H–1B status beyond the general 6-year maximum, pursuant to section 104(c) of AC21, for certain individuals who are beneficiaries of Form I–140 petitions but are affected by the per-country limitations.[82] In the proposed rule, DHS unintentionally departed from existing policy by requiring an individual seeking an H–1B extension under this provision to show visa unavailability both at the time of filing *and* at the time of adjudication. In the final rule, consistent with longstanding policy, DHS requires petitioners to *only* demonstrate immigrant visa unavailability as of the date the H–1B petition is filed with USCIS. *See* final 8 CFR 214.2(h)(13)(iii)(E).

2. Public Comments and Responses

i. Recapture of H–1B Time

Comment. A few commenters urged DHS to clarify that there is no ''statute of limitations'' on recapture. Some of these commenters noted that nothing in INA 214(g)(7) restricts USCIS from granting unused H–1B time when a recapture request is made more than 6 years after the initial grant of the H–1B petition. One commenter asked DHS to clarify that time spent inside the United States in another nonimmigrant status is ''recapturable.'' This commenter stated that the proposed regulatory text allows recapture only for time in which the foreign national was physically outside the United States.

Response. In the final rule, DHS clarifies that, consistent with its existing policy, there is no time limitation on recapturing the remainder of the initial 6-year period of H–1B admission under INA 214(g)(4).[83] DHS notes, however, that the remainder of any time granted pursuant to an AC21 extension cannot be recaptured. The purpose of this clarification is to promote consistency and efficiency in recapture determinations in accordance with the policy objectives described in USCIS's December 5, 2006 policy memorandum from Michael Aytes outlining the recapture policy.[84]

The relevant USCIS policy memoranda,[85] although not codified, specify that the ''remainder'' period of the initial 6-year admission period is that full admission period minus any time that the H–1B nonimmigrant worker previously spent in the United States in valid H–1B or L–1 status. This policy thus allows time spent inside the United States in any other nonimmigrant status (*i.e.,* any nonimmigrant status other than H–1B or L–1) to be ''recapturable.'' This final rule does not impose any additional limits on this policy. *See* final 8 CFR 214.2(h)(13)(iii)(C).

Comment. One commenter requested that the regulation clarify and expand the types of evidence that may be submitted to support the specific amount of time the H–1B nonimmigrant worker seeks to recapture. The commenter suggested that USCIS consider, in addition to passport stamps and travel tickets, other similar records and evidence of an individual's presence in another country, such as employer, school or medical records.

Response. DHS believes that the final regulation is broad enough to allow for submission of the additional types of records proposed by the commenter, and that the language suggested by the commenter therefore is unnecessary. *See* final 8 CFR 214.2(h)(13)(iii)(C)(*1*).

ii. *AC21 106(a) and (b)—Lengthy Adjudication Delay Exemptions*

Comment. One commenter expressed concern that the proposed provision relating to lengthy adjudication delay exemptions was under-inclusive. The commenter interpreted the language to suggest that 1-year extensions of H–1B status pursuant to section 106(a) of AC21 would be available *only* if the permanent labor certification application or Form I–140 petition was filed 365 days or more prior to the 6-year limitation being reached. The commenter stated that such a policy would be legally impermissible because under section 106(a) of AC21, and as reflected in current DHS policy memoranda, these 1-year H–1B extensions are available to a beneficiary of a permanent labor certification application or Form I–140 petition filed at least 365 days prior to the requested *extension start date,* even if that date is less than 365 days before the 6-year limitation will be reached. The commenter further noted that individuals should be eligible for such 1-year H–1B extensions even if they are in their 6th year of H–1B status or even if they are not in H–1B status at all.

Response. DHS agrees with the commenter that AC21 and current DHS policy allow certain beneficiaries to obtain H–1B status for another year if 365 days have passed since the filing of the permanent labor certification or Form I–140 petition, even if the permanent labor certification application or Form I–140 petition was not filed 365 days or more prior to the end of the 6-year limitation.[86] Section

[82] Under longstanding agency policy, H–1B extensions of stay may be granted pursuant to section 104(c) of AC21 regardless of whether the beneficiary of the Form I–140 petition will seek immigrant status by means of adjustment of status or consular processing. *See* Neufeld May 2008 Memo, at 6. Section 104(c) specifies that individuals become ineligible for extensions of stay after a decision is made on an application for adjustment of status, and this final rule provides that eligibility likewise terminates when the beneficiary's application for an immigrant visa is approved or denied. *See* final 8 CFR 214.2(h)(13)(iii)(E)(*2*)(*ii*). If individuals who seek to consular process are authorized for H–1B extensions of stay under section 104(c) despite adjudication of their immigrant visa applications, they could remain eligible for the extension indefinitely, even if their immigrant visa applications or adjustment of status applications are denied. These individuals could also strategically choose to seek an immigrant visa by means of consular processing rather than by adjusting status in order to benefit from indefinite extensions of H–1B status.

[83] USCIS Memorandum from Michael Aytes, ''Guidance on Determining Periods of Admission for Aliens Previously in H–4 or L–2 Status; Aliens Applying for Additional Periods of Admission beyond the H–1B Six Year Maximum; and Aliens Who Have Not Exhausted the Six-Year Maximum But Who Have Been Absent from the United States for Over One Year.,'' at 4–5 (Dec. 5, 2006) (Aytes Dec. 2006 memo), available at *https://www.uscis.gov/sites/default/files/USCIS/Laws/Memoranda/Static_Files_Memoranda/periodsofadm120506.pdf.*

[84] *Id.*

[85] Aytes, Dec. 2006 memo; USCIS memorandum from Michael Aytes, ''Procedures for Calculating Maximum Period of Stay Regarding the Limitations on Admission for H–1B and L–1 Nonimmigrants (AFM Update AD 05–21)'' (Oct. 21, 2005), available at *https://www.uscis.gov/sites/default/files/USCIS/Laws/Memoranda/Static_Files_Memoranda/Archives%201998-2008/2005/recaptureh1bl1102105.pdf* (''Because section 214(g)(4) of the Act states that 'the period of authorized admission' may not exceed 6 years, and because 'admission' is defined as 'the lawful entry of the alien into the United States after inspection and authorization by an immigration officer' only time spent in the United States as an H–1B counts towards the maximum.'')

[86] DHS does not require that an individual who relies on one permanent labor certification application or Form I–140 petition for purposes of

Continued

106(a) of AC21 states that the limitations contained in section 214(g)(4) of the INA do not apply to the H–1B nonimmigrant worker if 365 days or more have elapsed since the filing of an application for permanent labor certification or Form I–140 petition on the individual's behalf. The regulation as proposed did not accurately capture the statute or DHS policy and practice, and DHS has therefore corrected the provision in this final rule to make clear that an application for permanent labor certification or Form I–140 petition only needs to be filed at least 365 days before the exemption would take effect.[87] *See* final 8 CFR 214.2(h)(13)(iii)(D)(*1*), (*5*), and (*7*).

Further, DHS agrees with the commenter that, in certain circumstances, foreign workers need not be in H–1B status to be eligible for the lengthy adjudication delay exemptions under section 106(a) and (b) of AC21, as long as they ''previously held'' H–1B status. This provision, as proposed and finalized in this rule, allows foreign workers to obtain additional periods of H–1B status through petitions to change status or through admission after H–1B visa issuance at a U.S. consulate.

Comment. A few commenters objected to the provision that makes an individual ineligible for the lengthy adjudication delay exemption if he or she fails to file an application for adjustment of status within 1 year of the date an immigrant visa becomes available. Commenters thought that the 1-year requirement is unnecessary, is beyond DHS's legal authority, is contrary to the statute, and would force inappropriate concurrent or premature filings. Additionally, commenters stated that including a provision tying AC21 extension time to immigrant visa availability would hamper H–1B portability and be difficult to apply due to pace of visa availability progression and retrogression. Related to this, a commenter requested that DHS clarify the exact circumstances under which an immigrant visa is deemed to be immediately available. One commenter asked DHS to revise the provision by extending the 1-year limit to a minimum of two years to provide additional time for beneficiaries of Form I–140 petitions who lose their jobs to port to new H–1B employment. Finally, one commenter objected to the proposed requirements on the grounds that they could negatively affect an H–1B beneficiary who is subject to the J–1 program's 2-year foreign residence requirement under section 212(e) of the INA because the foreign national would be unable to file an application for adjustment of status until he or she fulfills the two-year home residency requirement of section 212(e) or obtains a waiver of the residency requirement.

Response. In section 106(a) of AC21, Congress provided exemptions to the general 6-year limitation on H–1B admission for certain individuals who experience lengthy adjudication delays in the processing of their applications for adjustment of status. However, in section 106(b), Congress placed a 1-year temporal limitation on the extension period afforded to these individuals. The intent of this exemption was to help facilitate the adjustment of status of those individuals whose process was stymied due to adjudication delays. Allowing foreign workers to benefit from the exemption when they do not file applications for adjustment of status after an immigrant visa becomes immediately available, may allow such workers to remain in H–1B status indefinitely, which would run counter to the purpose of the statute. *See* S. Rep. No. 260, at 23. To avoid this result, DHS is confirming that beneficiaries of section 106(a) must file an application for adjustment of status within 1 year of immigrant visa availability.[88]

DHS believes that, overall, the 1-year filing requirement is consistent with congressional intent and provides a reasonable amount of time for an individual to take the necessary steps toward obtaining lawful permanent residence, despite visa number retrogression and progression. In addition, DHS believes that tying the extension to immigrant visa availability will encourage individuals to pursue lawful permanent residence without interfering with the ability of petitioners to file H–1B portability petitions on behalf of foreign workers.[89] DHS therefore is finalizing the provision with some technical clarifying revisions.

The final rule also retains current policy that alleviates concerns raised by commenters about the 1-year filing requirement. Specifically, the rule resets the 1-year clock following any period in which an application for adjustment of status or immigrant visa could not be filed due to the unavailability of an immigrant visa. It also authorizes USCIS to excuse the failure to timely file such an application, as a matter of discretion, if an individual establishes that the failure to apply was due to circumstances beyond his or her control. The final rule further clarifies that for purposes of determining when an individual becomes ineligible for the lengthy adjudication delay exemption, DHS will look to see if he or she failed to apply for adjustment of status or an immigrant visa within 1 year of the date an immigrant visa is authorized for issuance based on the applicable Final Action Date in the Visa Bulletin. *See* final 8 CFR 214.2(h)(13)(iii)(D)(*10*).

DHS recognizes that individuals admitted in J–1 status who are subject to a 2-year foreign residence requirement may experience uncertainty when seeking post-sixth year H–1B extensions under section 106(a) of AC21, but the Department believes that this uncertainty is balanced by including the discretion to excuse late filings due to circumstances beyond the individual's control. *See id.*

Comment. One commenter opposed the provision that prohibits extensions of H–1B status based on lengthy adjudication delays in cases in which the approval of the Form I–140 petition has been revoked, particularly in cases in which the revocation is based on employer withdrawal. The commenter stated that such a policy is contrary to the statute, will hinder worker portability, and will increase costs to new employers.

Response. DHS did not propose an across-the-board ban on future H–1B extensions in cases in which employers withdraw their Form I–140 petitions. In

an extension under this provision rely on the same labor certification application or Form I–140 petition for purposes of a subsequent extension request.

[87] As explained in the proposed rule, requests for 1-year extensions of H–1B status under the lengthy adjudication delay can include any periods of time the foreign national spent outside the United States during previous H–1B petition validity for which ''recapture'' is sought, as well as any H–1B ''remainder'' periods available to the foreign national. *See* 8 CFR 214.2(h)(13)(iii)(C); 8 CFR 214.2(h)(9)(iii)(A)(*1*) and 8 CFR 214.2(h)(15)(ii)(B) (explaining that in no case may an H–1B approval period exceed 3 years or the period of LCA validity).

[88] Unless otherwise indicated on the USCIS Web site at *www.uscis.gov/visabulletininfo,* individuals seeking to file applications for adjustment of status with USCIS must use the DOS monthly Visa Bulletin ''Final Action Dates'' chart indicating when individuals may file such applications. The Visa Bulletin is available at *https://travel.state.gov/content/visas/en/law-and-policy/bulletin.html.* When USCIS determines that there are more immigrant visas available for the fiscal year than there are documentarily qualified immigrant visa applicants (as reported by DOS) and pending applicants for adjustment of status, after accounting for the historic drop off rate (*e.g.,* denials, withdrawals, abandonments), USCIS will state on its Web site that applicants may instead reference the ''Dates for Filing Visa Applications'' charts in this Visa Bulletin to determine whether they may apply for adjustment of status. Specific questions related to DOS's determinations are beyond the scope of this rulemaking.

[89] Individuals who apply for adjustment of status generally may apply for employment authorization and, if eligible, may receive employment authorization documents. Upon issuance of employment authorization, such individuals would not require H–1B portability to be able to work in the United States.

fact, under this final rule, DHS will no longer automatically revoke the approval of a Form I–140 petition based on petitioner withdrawal or termination of the petitioner's business if the petition has been approved or the associated application for adjustment of status has been pending for 180 days or more. As long as the approval has not been revoked, the Form I–140 petition will generally continue to be valid with regard to the beneficiary for various job portability and status extension purposes under the immigration laws, including extensions of status for certain H–1B nonimmigrant workers under sections 104(c) and 106(a) and (b) of AC21. *See* final 8 CFR 205.1(a)(3)(iii)(C) and (D).

Comment. One commenter suggested that in situations in which an H–1B nonimmigrant worker applies to change status to another nonimmigrant classification but is faced with a lengthy adjudication, DHS should permit the worker to enter a requested start date for the new classification on the Application to Extend/Change Nonimmigrant Status (Form I–539). The commenter also asked DHS to clarify where on the form the beneficiary should list the date on which his or her H–1B period of admission ends.

Response. This issue will not be addressed in this final rule, as it outside the scope of this rulemaking. This rule does not concern questions relating to how individuals seeking to change status from the H–1B classification to other nonimmigrant classification may complete forms to account for delays in processing. DHS may consider this comment in future policy guidance or rulemaking. DHS also notes that applicants requesting a change of status through the filing of a current version of Form I–539 with USCIS may provide a future change of status effective date. *See* Form I–539 (version 04/06/15), Application to Extend/Change Nonimmigrant Status, Part 2, Question 2.

iii. AC21 Section 104(c)—Per Country Limitations

Comment. One commenter recommended that DHS change its longstanding policy of granting extensions of H–1B status in 3-year increments under section 104(c) of AC21 for H–1B nonimmigrant workers who are the beneficiaries of approved Form I–140 petitions. That commenter requested that DHS instead grant extensions to cover the entire period during which such workers have pending applications for adjustment of status. The commenter believed that such a change would result in additional benefits, including avoiding gaps in employment authorization, encouraging employers to file H–1B extension petitions, facilitating portability, and realizing cost savings for both existing and new employers.

Response. DHS declines the commenter's suggestion to grant extensions of H–1B status for individuals who are eligible for extensions of stay in H–1B status under section 104(c) of AC21 that would cover the entire period their applications for adjustment of status are pending adjudication. Although section 104(c) of AC21 provides authorization for H–1B status beyond the general 6-year maximum under section 214(g)(4) of the Act for certain beneficiaries when the H–1B petitioner can demonstrate that an immigrant visa is not available to the beneficiary at the time of filing, DHS regulations, consistent with section 212(n) of the Act, limit H–1B petition approval validity period to the validity period of the corresponding DOL-approved labor condition application. *See* 8 CFR 214.2(h)(9)(iii)(A)(*1*) and (h)(15)(ii)(B)(*1*). DOL regulations dictating H–1B labor condition application validity, which are not the subject of this rulemaking, establish an upper limit of 3 years. *See* 20 CFR 655.750(a)(1). Furthermore, the language of AC21 section 104(c) does not confer an automatic extension of status. An extension of up to 3 years provides a reasonable mechanism to ensure continued eligibility. USCIS accordingly grants such exemptions in increments of up to 3 years until it adjudicates the beneficiary's application for adjustment of status.[90] *See* 8 CFR 214.2(h)(13)(iii)(E)(*1*).

Although the heading for section 104(c) refers to a ''one-time protection,'' the statutory text makes clear that the exemption remains available until the beneficiary has an EB–1, EB–2, or EB–3 immigrant visa immediately available to him or her.[91] *See* AC21 104(c) (authorizing H–1B extensions under this exemption ''until the alien's application for adjustment of status has been processed and a decision made thereon''). An H–1B petition filed under section 104(c) may include any time remaining within the normal 6-year period of authorized H–1B stay in addition to the time requested in the exemption request, but in no case may the approval period exceed 3 years or the validity period of the LCA. *See* 8 CFR 214.2(h)(13)(iii)(E)(*5*).

Comment. A few commenters requested that, for purposes of determining eligibility for this extension, DHS consider visa unavailability at the time of filing, not at the time of adjudication. Commenters noted that by doing so, the regulation would be more consistent with a plain-language reading of the statute. One commenter stated that such an interpretation would lead to greater efficiencies by increasing certainty within the process, including by allowing the petitioner and the beneficiary to know at the time of filing whether the beneficiary would qualify for the benefit sought.

Response. DHS appreciates the comments and recognizes that the proposed regulatory text was not consistent with its current practice to evaluate visa unavailability only at the time of filing.[92] Therefore, DHS has revised the regulatory text in the final rule by striking the phrase, ''the unavailability must exist at time of the petition's adjudication.'' *See* final 8 CFR 214.2(h)(13)(iii)(E). Thus, consistent with current practice, when determining whether an H–1B nonimmigrant worker is eligible for an extension of H–1B status under section 104(c), USCIS officers will continue to review the Visa Bulletin that was in effect at the time of filing of the Form I–129 petition. If the Visa Bulletin in effect on the date the H–1B petition is filed shows that the foreign worker was subject to a per country or worldwide visa limitation in accordance with the foreign worker's immigrant visa ''priority date,'' the H–1B extension request under section 104(c) may be granted.

Comment. One commenter requested that DHS clarify that the per-country limitation applies to beneficiaries of approved Form I–140 petitions who are ineligible for an immigrant visa either because the ''per country'' limit for their country has been reached or because the ''worldwide'' limit on immigrant visas in the EB–1, EB–2, and EB–3 categories has been reached. *See* 8 CFR 214.2(h)(13)(iii)(E). The commenter

[90] DHS notes that individuals may be eligible for H–1B extensions of stay under section 104(c) of AC21 before filing an application for adjustment of status, so long as a Form I–140 petition has been approved on their behalf and they are otherwise eligible for the extension.

[91] *See* Neufeld May 2008 Memo, at 6, discussing DHS policy allowing for H–1B extensions, in a maximum of three year increments, until such time as the foreign national's application for adjustment of status has been adjudicated, despite the title of section 104(c).

[92] *See* USCIS Memorandum from Donald Neufeld, ''Supplemental Guidance Relating to Processing Forms I–140 Employment-Based Immigrant Petitions and I–129 H–1B Petitions, and Form I–485 Adjustment Applications Affected by the American Competitiveness in the Twenty-First Century Act of 2000 (AC21) (Pub. L. 106–313), as amended, and the American Competitiveness and Workforce Improvement Act of 1998 (ACWIA), Title IV of Div. C. of Public Law 105–277'' (May 30, 2008).

noted that such an action would be consistent with current policy as expressed in USCIS's Neufeld May 2008 Memo, which clarified that both ''per country limitations'' and ''worldwide'' unavailability of immigrant visas can serve as the basis for extension under section 104(c).[93]

Response. DHS agrees with the commenter that the per-country limitation exemption applies to all beneficiaries of approved Form I–140 petitions whose priority dates are on or after the applicable cut-off date in either the country-specific or worldwide columns of the Visa Bulletin chart. These beneficiaries may apply for an extension under 8 CFR 214.2(h)(13)(iii)(E), consistent with longstanding policy. The reference to ''per country limitations'' in section 104(c) invokes chargeability: The determination as to which country's numerical limits the beneficiary's visa will be ''charged to'' or counted against. *See* INA 202(b), 8 U.S.C. 1152(b). For purposes of section 104(c), when reviewing the relevant Visa Bulletin chart, there is no difference between nationals of countries who are identified separately on the Visa Bulletin because their applicable per-country limitation has been exceeded (*i.e.,* nationals of India, China, or Mexico), and nationals of those countries who are grouped under the ''All Chargeability'' column, as long as the priority date has not been reached for the particular beneficiary in question.

iv. Spousal Eligibility for H–1B Extensions Beyond Six Years Under AC21

Comment. Several commenters objected to proposed 8 CFR 214.2(h)(13)(iii)(E)(*6*) and (h)(13)(iii)(D)(6), which would limit H–1B extensions under sections 104(c) and 106(a) of AC21 to principal beneficiaries of permanent labor certification applications or Form I–140 petitions, as applicable. Some commenters requested that 8 CFR 214.2(h)(13)(iii)(E)(*6*) and (h)(13)(iii)(D)(*6*) be stricken from the final rule entirely, asserting that DHS's alleged overly narrow reading of sections 104(c) and 106(a) would: Conflict with Congress's determination that family members are ''entitled to the same status'' as the principal beneficiary of an immigrant visa petition; create an unnecessary burden on some dependent spouses by forcing them to obtain a change of status to H–4 nonimmigrant status before an employment authorization application based on their H–4 status can be adjudicated (see 8 CFR 214.2(h)(9)(iv) and 274a.12(c)(26)); possibly create uncertainty and long gaps in employment eligibility; impede the efforts by some universities to recruit and retain the most high-skilled individuals for positions that are often hard to fill; and prevent U.S. employers from benefiting from the talent of both spouses.

Some commenters asked DHS only to revise the provision concerning extensions under section 104(c), such that a spouse who is in H–1B nonimmigrant status could benefit from his or her spouse's certified labor certification or approved Form I–140 petition as the basis for an H–1B extension under section 104(c). One commenter stated that section 106(a) of AC21 may be used as a basis to allow an H–1B nonimmigrant worker to seek a 1-year extension of H–1B status beyond 6 years when his or her spouse, who is also an H–1B nonimmigrant worker, is the beneficiary of an appropriately filed permanent labor certification application.

Response. DHS disagrees with the commenters' statements and is not adopting any of the suggested changes. In the final rule, DHS is formalizing longstanding DHS policy, without change, that requires a foreign worker seeking an extension of H–1B status to independently meet the requirements for such an extension.[94] *See* 8 CFR 214.2(h)(13)(iii)(D)(*9*) and (h)(13)(iii)(E)(*6*). DHS believes this policy best fulfills Congress's intent in enacting AC21. The legislation expressly allows H–1B nonimmigrant status beyond the 6-year general limitation for ''the beneficiary of a petition filed under § 204(a) of [the INA] for a preference status under paragraph (1), (2), or (3) of § 203(b) [of the INA].'' AC21 104(c). Section 203(b) of the INA, in turn, applies to principal beneficiaries of Form I–140 petitions, but not derivative beneficiaries who are separately addressed in section 203(d) of the INA. DHS concludes that the reference to a single beneficiary in section 104(c) of AC21 reasonably supports an interpretation that the provision applies only to the principal beneficiary of the Form I–140 petition.

Similarly, section 106(a) clearly states that the exemption is available for any H–1B beneficiary on whose behalf an immigrant petition or labor certification has been filed. As amended, that section states in pertinent part: ''The limitation contained in section 214(g)(4) of the Immigration and Nationality Act (8 U.S.C. 1184(g)(4)) with respect to the duration of authorized stay shall not apply to any nonimmigrant alien previously issued a visa or otherwise provided nonimmigrant status under section 101(a)(15)(H)(i)(b) of such Act (8 U.S.C. 1101(a)(15)(H)(i)(b)), if 365 days or more have elapsed since the filing of any of the following: (1) Any application for labor certification under section 212(a)(5)(A) of such Act (8 U.S.C. 1182(a)(5)(A)), in a case in which certification is required or used by the alien to obtain status under section 203(b) of such Act (8 U.S.C. 1153(b)). (2) A petition described in section 204(b) of such Act (8 U.S.C. 1154(b)) to accord the alien a status under section 203(b) of such Act.''

As with section 104(c), DHS also interprets the reference to ''section 203(b)'' in section 106(a) to apply to principal beneficiaries of Form I–140 petitions, but not derivative beneficiaries who are separately addressed in section 203(d) of the INA, which provides that family members may be accorded the same immigrant visa preference allocation as the principal beneficiary.

DHS notes, however, that derivative beneficiaries may be eligible for an independent grant of work authorization in accordance with 8 CFR 214.2(h)(9)(iv) and 274a.12(c)(26). Those regulations extend eligibility for employment authorization to certain H–4 dependent spouses of H–1B nonimmigrant workers who are seeking LPR status, including H–1B nonimmigrant workers who are the principal beneficiaries of an approved Form I–140 petition or who have had their H–1B status extended under section 106(a) and (b) of AC21. Accordingly, DHS is not revising its longstanding policy to address the commenters' suggestion.

L. Whistleblower Protections in the H–1B Nonimmigrant Program

1. Description of Final Rule and Changes From NPRM

In this final rule, DHS enhances worker protection by providing whistleblower protections in cases of retaliation by the worker's employer. The final rule provides that a qualifying employer seeking an extension of stay

[93] Neufeld May 2008 memo, at 6.

[94] *See* USCIS Memorandum from Donald Neufeld, '' Supplemental Guidance Relating to Processing Forms I–140 Employment-Based Immigrant Petitions and I–129 H–1B Petitions, and Form I–485 Adjustment Applications Affected by the American Competitiveness in the Twenty-First Century Act of 2000 (AC21) (Pub. L. 106–313), as amended, and the American Competitiveness and Workforce Improvement Act of 1998 (ACWIA), Title IV of Div. C. of Public Law 105–277'' at 6 (May 30, 2008), available at *https://www.uscis.gov/sites/default/files/USCIS/Laws/Memoranda/Static_Files_Memoranda/Archives%201998-2008/2008/ac21_30may08.pdf.*

for an H–1B nonimmigrant worker, or a change of status from H–1B status to another nonimmigrant classification, would be able to submit documentary evidence indicating that the beneficiary faced retaliatory action from his or her employer based on a report regarding a violation of the employer's LCA obligations. *See* final 8 CFR 214.2(h)(20). If DHS determines such documentary evidence to be credible, DHS may consider any loss or failure to maintain H–1B status by the beneficiary related to such violation as an ''extraordinary circumstance'' under 8 CFR 214.1(c)(4) and 248.1(b). Those regulations, in turn, authorize DHS to grant a discretionary extension of H–1B stay or a change of status to another nonimmigrant classification. *See* 8 CFR 214.1(c)(4) and 248.1(b). Finally, DHS makes a technical change to 8 CFR 214.2(h)(20), fixing the reference to the labor ''condition'' application.

2. Public Comments and Responses

Comment. Several commenters supported the provisions in the proposed rule regarding the protection of whistleblowers in the H–1B nonimmigrant program. The commenters believe that the regulatory text will enhance the likelihood that H–1B nonimmigrant workers will report employer violations and misconduct. One commenter, however, opposed the proposed codification of the ACWIA whistleblower protections in 8 CFR 214.2(h)(20), unless the phrase ''the beneficiary faced retaliatory action'' was amended to read, ''the beneficiary suffered from retaliatory action described in 8 U.S.C. 1182(n)(2)(C)(iv).'' The commenter reasoned that the statutory provision provides a precise definition of retaliatory action and that, without a more precise definition in the regulation, DHS would create arbitrary incentives for H–1B nonimmigrant workers to abuse the whistleblower process as a shortcut to obtaining lawful permanent residence.

Response. DHS appreciates the commenters' support for inclusion of the whistleblower protections in the final rule. DHS also believes the regulatory text is sufficiently clear and is not adopting the suggested change to the text at 8 CFR 214.2(h)(20). DHS notes that INA 212(n)(2)(C)(iv) and (v) require DHS and DOL to devise a process for protecting individuals who file complaints about their employers' retaliatory actions, but the statutory provisions do not require such individuals to demonstrate that they have suffered as a result of such actions. Therefore, DHS believes that adopting the commenter's suggestion would be unduly restrictive. Moreover, DHS notes that the whistleblower provision does not provide a shortcut, or even a path, to lawful permanent residence status as asserted by the commenter.

Comment. One commenter expressed concern about the provision in the proposed rule that requires new employers to present DHS with the DOL complaint and evidence of retaliatory action. The commenter believed that provision may infringe on the worker's privacy and discourage the worker from taking advantage of the whistleblower protection. The commenter recommended that such workers be provided the option of providing documentary evidence in a sealed envelope with the H–1B petition, or in some other way that protects his or her privacy.

Response. While DHS appreciates the commenter's concerns regarding the privacy of whistleblowers, DHS has a fundamental interest in the integrity of the information and documentary evidence submitted as part of a nonimmigrant visa petition. Under 8 CFR 103.2(a)(2), the petitioner must ensure the credibility of such evidence. If the beneficiary of an H–1B petition were allowed to provide sealed evidence of which the petitioner may have no knowledge, then the petitioner would not be able to certify the veracity of such evidence in compliance with 8 CFR 103.2(a)(2). Moreover, because DHS did not propose to revise 8 CFR 103.2(a)(2) in the NPRM to allow for the proposed provision of sealed evidence by a beneficiary, DHS is unable to provide a regulatory accommodation to modify those requirements in this final rule. However, DHS will consider ways to address the concerns raised by the commenter in the future. In addition, DHS notes that the regulations do not preclude petitioners from working with beneficiaries of H–1B petitions to acquire and submit the requisite documentary evidence in a manner that would protect the beneficiaries' privacy.

Comment. One commenter requested that workers who have exceeded the maximum period of stay in H–1B status be allowed to apply for whistleblower protection. The commenter believed that by the time some workers become aware of employer violations, they may no longer be in status.

Response. The final rule allows for credible documentary evidence to be provided, in support of a petition seeking an extension of H–1B stay or change of status to another classification, indicating that the beneficiary faced retaliatory action from his or her employer based on the reporting of a violation of the employer's labor condition application obligations under section 212(n)(2)(C)(iv) of the INA. USCIS may consider a loss or failure to maintain H–1B status by the beneficiary related to such violation as due to, and commensurate with, ''extraordinary circumstances'' as defined by 8 CFR 214.1(c)(4) and 248.1(b). These provisions allow DHS to take into account that the employee may no longer be in valid H–1B status at the time the new H–1B petition is submitted to DHS. However, this provision does not allow the beneficiary to stay beyond the maximum (generally, 6-year) period of stay for an H–1B nonimmigrant workers, unless otherwise eligible.

Comment. One commenter requested that DHS clarify the types of employment considered appropriate for whistleblowers when ''seeking appropriate employment.'' *See* INA 212(n)(2)(C)(iv). The commenter further recommended that the H–1B nonimmigrant worker should be permitted to work in another position that is within the occupational classification of the LCA filed on his or her behalf by the petitioning employer.

Response. DHS notes that the final rule does not restrict the types of jobs or occupational classifications that whistleblowers may seek; however, a beneficiary seeking employment in such circumstances must be granted the appropriate work authorization to work for a new employer.

Comment. One commenter requested that DHS expand upon the types of documentary evidence the Department would accept to establish violations of employer LCA obligations. The commenter stated that acceptable forms of evidence should be broadened to include other relevant documents, such as an employment offer, prevailing wage confirmation letter, and ETA Form 9089, even if the worker has not filed a complaint against the employer.

Response. Section 212(n)(2)(C)(v) of the INA requires the Secretary of Labor and the Secretary of Homeland Security to devise a process under which an H–1B nonimmigrant worker may file a complaint regarding a violation of clause (iv), which prohibits employers from intimidating, threatening, restraining, coercing, blacklisting, discharging, or in any other manner discriminating against an employee as retaliation for whistleblowing. Under that section, an H–1B nonimmigrant worker who is otherwise eligible to remain and work in the United States may be allowed to seek other appropriate employment in the United States for a period not to exceed the maximum period of stay authorized for

H–1B classification. *See* INA section 212(n)(2)(C)(v), 8 U.S.C. 1182(n)(2)(C)(v). In addition, DHS has not limited the scope of credible evidence that may be included to document an employer violation. Rather, DHS generally requests credible documentary evidence indicating that the beneficiary faced retaliatory action from his or her employer due to a report regarding a violation of the employer's LCA obligations.

Comment. One commenter requested that the final rule include a provision granting employment authorization to an H–1B nonimmigrant worker who faces retaliatory action due to employer violations of LCA obligations, and his or her spouse and eligible dependents, in order to help defray the financial costs resulting from such violations.

Response. There is no express independent employment authorization for an H–1B nonimmigrant worker who faces retaliatory action due to employer violations of LCA obligations. However, under provisions in the rule, an H–1B nonimmigrant worker facing employer retaliation, along with his or her dependents, may benefit from the grace period of up to 60 days during which the worker could extend or change status. Alternatively, if the H–1B nonimmigrant worker is the beneficiary of a qualifying and approved employment-based immigrant visa petition, the worker may obtain employment authorization in compelling circumstances pursuant to 8 CFR 204.5(p), if otherwise eligible.

Comment. One commenter requested that DHS institute specific penalties against employers that are proven to have violated statutory requirements related to the H–1B program, particularly when those violations may have caused H–1B nonimmigrant workers to lose their H–1B status.

Response. DHS notes that the INA already provides penalties for employers that violate statutory requirements regarding H–1B compliance. Those penalties are listed in section 212(n)(2)(C) of the INA.

Comment. One commenter requested that DHS provide 30-day grace periods to H–1B nonimmigrant workers who experience involuntary termination. The commenter noted that a 30-day grace period would help such workers due to the considerable time it may take to gather credible evidence of retaliation and seek new employment.

Response. The final rule provides H–1B nonimmigrants, among others, a grace period during each authorized nonimmigrant validity period of up to 60 days or until the existing validity period ends, whichever is shorter, whenever employment ends for these individuals. *See* 8 CFR 214.1(l)(2). Therefore, DHS does not believe it is necessary to add a specific provision to the regulations that gives a shorter grace period to H–1B nonimmigrants who may have been the victims of employer retaliation. DHS believes that the 60-day grace period allows certain high-skilled workers facing a sudden or unexpected end to their employment sufficient time to seek new employment, seek a change of status to a different nonimmigrant classification, or make preparations for departure from the United States.

Comment. One commenter requested that the debarment provisions in the H–1B program should be revised to strengthen whistleblower protections. The commenter stated that current H–1B debarment regulations fail to protect the existing workforce when violations are found, thus inadvertently penalizing the H–1B nonimmigrant workers themselves by making it impossible for them to renew their visas once their employers are debarred. The commenter further stated that the rule should include provisions to exempt the existing workforce from being affected by employer debarment or to make H–1B nonimmigrant workers whose employers are debarred automatically eligible for other forms of relief, such as deferred action or independent EADs.

Response. DHS does not believe it is necessary to revise 8 CFR 214.2(h)(20) to address the commenter's concerns, as various types of relief are available to these workers under this rule. For example, H–1B nonimmigrant workers of employers who are subsequently debarred from the H–1B program may be eligible to use the 60-day grace period afforded by this rule to seek new employment, seek a change of status to a different nonimmigrant classification, or make preparations for departure from the United States. Moreover, these workers may be eligible to apply for a compelling circumstances EAD.

Comment. One commenter noted that INA 212(n)(2)(C) requires DHS to establish a process for H–1B nonimmigrant workers to file complaints with DOL regarding illegal retaliation. The commenter encouraged DHS to coordinate this process with DOJ's Office of Special Counsel for Immigration-Related Unfair Employment Practices (OSC) and argued that creating a streamlined, consistent reporting mechanism for whistleblowers would promote integrity in the enforcement process.

Response. DHS believes that the commenter is referencing INA 212(n)(2)(c)(v), which requires DOL and DHS to devise a process to ensure H–1B nonimmigrants who file whistleblower complaints are able to seek continued employment in the United States in H–1B status or under other nonimmigrant classifications, if otherwise eligible. USCIS has implemented this statute by excusing an individual's failure to maintain H–1B status if there is credible evidence that the failure was due to employer retaliation. In this final rule, DHS is codifying this practice under new 8 CFR 214.2(h)(20), the provision addressing retaliatory action claims. Under that provision, USCIS may permit individuals who face retaliatory action from an employer based on a report regarding violations of the employer's LCA obligations, as described in section 212(n)(2)(C)(iv) of the Act, and whose loss or failure to maintain H–1B status relates to the employer violation, to extend their stay in H–1B status or change status to another classification. DHS currently collaborates with its interagency partners on matters of shared statutory responsibility and will continue to seek ways to enhance such collaboration in the future.

M. Haitian Refugee Immigrant Fairness Act of 1998

1. Changes to DHS HRIFA Regulations

DHS did not receive public comments regarding the proposed changes to the DHS regulations concerning individuals applying for adjustment of status under the Haitian Refugee Immigrant Fairness Act of 1998 (HRIFA), Public Law 105–277, div. A, title IX, sections 901–904, 112 Stat. 2681–538–542 (codified as amended at 8 U.S.C. 1255 note (2006)). Therefore, DHS is retaining these changes as proposed. Under the final rule, DHS will be required to issue an EAD, rather than an interim EAD, within the timeframes currently provided in 8 CFR 245.15(n)(2). Additionally, HRIFA-based applicants for adjustment of status are eligible for the automatic 180-day extension of expiring EADs, provided they file a timely request for renewal. *See* final 8 CFR 245.15(n)(2).

N. Application for Employment Authorization

1. Description of Final Rule and Changes From NPRM

In this final rule, DHS is adopting with minimal changes the NPRM's proposed regulatory text to update 8 CFR 274a.13 governing the processing of Applications for Employment Authorization (Forms I–765) and is also changing its policy concerning how early USCIS will accept renewal applications in the same employment category (by allowing, except when impracticable, filings up to 180 days before expiration). First, DHS is modifying the changes to 8 CFR 274a.13(a) proposed in the NPRM by adding a provision indicating that USCIS may announce through its Web site, in addition to form instructions, which employment categories may file EAD applications concurrently with underlying benefit requests. Second, as proposed, DHS is eliminating the regulatory provision at current 8 CFR 274a.13(d) that directs USCIS to adjudicate Forms I–765 within 90 days of filing and that requires interim employment authorization documents to be issued if the adjudication is not completed within the 90-day timeframe.[95] Third, to help prevent gaps in employment authorization, DHS is providing for the automatic extension of expiring EADs (and underlying employment authorization, if applicable) for up to 180 days with respect to individuals who are seeking renewal of their EADs (and, if applicable, employment authorization) based on the same employment authorization categories under which they were granted. For a renewal applicant who is a Temporary Protected Status (TPS) beneficiary or individual approved for TPS ''temporary treatment benefits,'' [96] the renewal application can indicate an employment authorization category based on either 8 CFR 274a.12(a)(12) or (c)(19). In addition to the employment category requirement, the renewal applicant must continue to be employment authorized incident to status beyond the expiration of the EAD or be applying for renewal under a category that does not first require adjudication of an underlying benefit application, petition, or request. The rule clarifies that this requirement applies to individuals granted TPS described in 8 CFR 274a.12(a)(12) and pending applicants for TPS issued EADs under 8 CFR 274a.12(c)(19). The final rule requires, as proposed, that qualifying applicants file their renewal applications timely (*i.e.,* prior to the expiration of their EADs) for the automatic EAD extension to apply.[97] However, this rule clarifies that for renewal applications based on TPS, the automatic EAD extension provision will apply to individuals who file during the re-registration period described in the **Federal Register** notice applicable to their country's TPS designation, even if they file after their EADs are facially expired. This final rule is making this clarification because, in limited cases, the re-registration period may extend beyond the EAD validity period.

DHS listed 15 employment categories in the Supplementary Information to the NPRM that meet the regulatory criteria.[98] DHS reaffirms the list of 15 employment eligibility categories as qualifying for automatic EAD/ employment authorization extensions under this final rule.[99] USCIS will

[95] Excepted from the 90-day processing requirement in 8 CFR 274a.13(d)), prior to its elimination in this rulemaking, are the following classes of aliens: Applicants for asylum described in 8 CFR 274a.12(c)(8); certain H–4 nonimmigrant spouses of H–1B nonimmigrants; and applicants for adjustment of status applying under the Haitian Refugee Immigrant Fairness Act of 1998 (HRIFA). Application processing for asylum applicants is governed by current 8 CFR 274a.13(a)(2) and does not include provisions for interim employment authorization documentation. The employment authorization of applicants for adjustment of status under HRIFA is governed by 8 CFR 245.15(n). The provision at 8 CFR 274a.13(d) also exempts applicants for adjustment of status described in 8 CFR 245.13(j). In 2011, 8 CFR 245.13 was removed from DHS regulations. *See* 76 FR 53764, 53793 (Aug. 29, 2011). However, the cross-reference to 8 CFR 245.13(j) in current 8 CFR 274a.13(d) was inadvertently retained. Prior to its removal in 2011, 8 CFR 245.13 provided for adjustment of status for certain nationals of Nicaragua and Cuba pursuant to section 202 of the Nicaraguan Adjustment and Central American Relief Act, Public Law 105–100, 111 Stat. 2160, 2193 (Nov. 19, 1997). The application period for benefits under this provision ended April 1, 2000. USCIS removed 8 CFR 245.13 from DHS regulations in 2011 as it no longer has pending applications pursuant to this provision. *See* 76 FR at 53793.

[96] Individuals approved for TPS ''temporary treatment benefits'' includes those who obtain employment authorization based on *prima facie* eligibility for TPS during adjudication of their TPS applications. *See* INA 244(a)(4), 8 U.S.C. 1254a(a)(4); 8 CFR 244.5, 244.10(e).

[97] This final rule also adopts, with clarifying changes, the provisions related to the new automatic EAD extension provision, including that: An EAD that is automatically extended will continue to be subject to any limitations and conditions that applied before the extension (*see* final 8 CFR 274a.13(d)(2)); although the validity of the expiring EAD will be extended for up to 180 days, such validity will be automatically terminated upon the issuance of a notification of denial of the renewal application (*see* final 8 CFR 274a.13(d)(3)); and automatic extensions may also be terminated before the renewal application is adjudicated either through written notice to the applicant, or a notice to a class of aliens published in the **Federal Register**, or any other applicable authority (*see* final 8 CFR 274a.13(d)(3)).)

[98] In the NRPM, DHS listed 15 employment authorization categories under which renewal applicants would be able to receive automatic EAD extensions. Note that this list corrects an error in the NPRM wherein DHS failed to include Palau among the list of nations specified in the eligible employment category based on 8 CFR 274a.12(a)(8). As corrected, the list of 15 employment authorization categories are: Aliens admitted as refugees (*see* 8 CFR 274a.12(a)(3)); aliens granted asylum (*see* 8 CFR 274a.12(a)(5)); aliens admitted as parents or dependent children of aliens granted permanent residence under section 101(a)(27)(I) of the INA, 8 U.S.C. 1101(a)(27)(I) (*see* 8 CFR 274a.12(a)(7)); aliens admitted to the United States as citizens of the Federated States of Micronesia, the Marshall Islands, or Palau under agreements between the United States and those nations (*see* 8 CFR 274a.12(a)(8)); aliens granted withholding of deportation or removal (*see* 8 CFR 274a.12(a)(10)); aliens granted Temporary Protected Status (TPS) (regardless of the employment authorization category on their current EADs) (*see* 8 CFR 274a.12(a)(12) and (c)(19)); aliens who have properly filed applications for TPS and who have been deemed *prima facie* eligible for TPS under 8 CFR 244.10(a) and have received an EAD as a ''temporary treatment benefit'' under 8 CFR 244.10(e) and 274a.12(c)(19); aliens who have properly filed applications for asylum or withholding of deportation or removal (*see* 8 CFR 274a.12(c)(8); aliens who have filed applications for adjustment of status under section 245 of the INA, 8 U.S.C. 1255 (*see* 8 CFR 274a.12(c)(9)); aliens who have filed applications for suspension of deportation under section 244 of the INA (as it existed prior to April 1, 1997), cancellation of removal under section 240A of the INA, or special rule cancellation of removal under section 309(f)(1) of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (*see* 8 CFR 274a.12(c)(10)); aliens who have filed applications for creation of record of lawful admission for permanent residence (*see* 8 CFR 274a.12(c)(16)); aliens who have properly filed legalization applications pursuant to section 210 of the INA, 8 U.S.C. 1160 (*see* 8 CFR 274a.12(c)(20)); aliens who have properly filed legalization applications pursuant to section 245A of the INA, 8 U.S.C. 1255a (*see* 8 CFR 274a.12(c)(22)); aliens who have filed applications for adjustment of status pursuant to section 1104 of the LIFE Act (*see* 8 CFR 274a.12(c)(24)); and aliens who are the principal beneficiaries or qualified children of approved VAWA self-petitioners, under the employment authorization category ''(c)(31)'' in the form instructions to the Application for Employment Authorization (Form I–765).

[99] The TPS-related employment authorization categories, 8 CFR 274a.12(a)(12) and (c)(19), are included in the list of categories that are eligible for the automatic 180-day EAD extension. The category based on 8 CFR 274a.12(a)(12) denotes that the EAD is for employment authorization based on a grant of TPS. The category based on 8 CFR 274a.12(c)(19) denotes that the EAD is for employment authorization for a TPS applicant who is *prima facie* eligible for TPS based on a pending TPS application. EADs are considered ''temporary treatment benefits'' when provided to such pending TPS applicants. *See* 8 CFR 244.5, 244.10(e). If TPS is granted before the expiration date on the individual's EAD based on 8 CFR 274a.12(c)(19), USCIS usually allows the individual to continue using that EAD until it expires and does not issue an 8 CFR 274a.12(a)(12)-based EAD for a TPS beneficiary until the individual requests an EAD during the next TPS re-registration period for the individual's country. If the relevant TPS country designation is extended, the re-registration process is published in the **Federal Register** and includes instructions on filing to show continued maintenance of TPS eligibility and to renew work authorization documentation. In the past, there have been some very limited circumstances where the designated filing period extended beyond the existing EAD validity date. Therefore, an applicant who files an application to renew his or her EAD may receive an automatic extension under this rule, as long as the application is filed during the designated TPS re-registration filing period in the TPS **Federal Register** notice, even where that period may extend beyond the current EAD validity date. Additionally, because the 8 CFR 274a.12(a)(12) and (c)(19) eligibility categories both relate to TPS, the applicant may benefit from the automatic 180-day extension as long as the receipt notice for the EAD renewal application and the facially expired card in the applicant's possession bear either of these two eligibility categories, but they do not need to match each other. Therefore, if an individual has an EAD bearing the 8 CFR 274a.12(c)(19) eligibility category, but has since

Continued

maintain, and update as necessary, the list of qualifying employment categories on its Web site.

Current DHS policy allows EAD renewal applications submitted under certain categories to be filed up to 120 days before the applicant's current EAD expires. In response to the comments received requesting additional time for advance filing, DHS will adopt a filing policy that will generally permit the filing of an EAD renewal application up to 180 days before the current EAD expires, except when impracticable. This filing policy will be posted on the USCIS Web site and will take into consideration any other regulatory provisions that might require a longer or shorter filing window depending on the specific renewal EAD employment category.

The measures DHS is taking in this final rule will provide additional stability and certainty to employment-authorized individuals and their U.S. employers, while reducing opportunities for fraud and better accommodating increased security measures, including technological advances that utilize centralized production of tamper-resistant documents.

2. Public Comments and Responses

i. Adjudication Timeframes for Initial and Renewal Applications of Employment Authorization

Comment. Many commenters disagreed with the proposal to eliminate the 90-day processing requirement for adjudicating EAD requests. These commenters expressed concerns that eliminating this requirement would cause gaps in employment authorization for certain foreign workers, lead to longer adjudication times, ultimately lead to job losses, and cause hardship for many beneficiaries. Some commenters further noted that delays in the adjudication of EAD applications for certain vulnerable populations—such as crime victims, victims of domestic and other gender-based violence—could place them in even more desperate situations. Another commenter stated that the fee associated with the 90-day adjudication provides a ''social contract'' that ensures that USCIS will timely adjudicate requests and prevent delays that could harm the employment prospects of applicants.

Response. DHS carefully considered these concerns, but disagrees with the assertion that eliminating the 90-day processing time for Applications for Employment Authorization (Forms I–765) from the regulations will cause gaps in employment, undue hardship, job losses, or longer adjudication times. DHS believes that, regardless of the imposition of a fee, Forms I–765 must be adjudicated within reasonable timeframes. Although DHS is eliminating the 90-day processing timeframe for Forms I–765 from the regulatory text, USCIS continues to be committed to the processing goals it has established for Form I–765. Many renewal applicants who may have benefitted from the 90-day timeframe for Form I–765 will now be able to benefit from this rule's provision regarding automatic EAD extensions for up to 180 days for certain employment categories. DHS anticipates that the automatic EAD extension will ensure continued employment authorization for many renewal applicants and prevent any work disruptions for both the applicants and their employers.

Eliminating the 90-day EAD processing timeframe will also support USCIS's existing practice regarding concurrent filing of EAD applications based on underlying immigration benefits. For example, although victims of domestic violence can receive their initial EADs only after USCIS adjudicates the underlying victim-based benefit request, USCIS allows the concurrent filing of the Form I–765 with the underlying victim-based benefit request so that such victims receive EADs expeditiously following a grant of the benefit request. *See* Form I–765 form instructions, at page 7 (instructions for self-petitioners under the Violence Against Women Act (VAWA)). Before USCIS adopted this practice, applicants who concurrently filed a victim-based benefit request with a Form I–765 would have their Form I–765 denied if the underlying benefit was not adjudicated within 90 days of filing. USCIS issued such denials on the ground that the applicant was not yet eligible to receive an EAD because the underlying benefit request was still pending. Removal of the 90-day regulatory timeframe allows USCIS to not only accept Forms I–765 concurrently filed with the underlying victim-based benefit requests, but also permits the Form I–765 to remain pending until USCIS completes its adjudication of the benefit request. Once USCIS issues a final decision on the underlying benefit request that permits approval of the Form I–765, USCIS will be able to immediately issue a decision on the Form I–765 and produce an EAD. This will result in the victim-based EAD applicant receiving employment authorization faster than if the applicant were required to file Form I–765 only after receiving a grant of the underlying benefit request.

Comment. Many commenters supported keeping the 90-day timeframe for adjudicating EADs in the regulations. These commenters stated that the regulatory timeframe provides certainty for applicants, offers a potential legal remedy if EADs are not delivered on time, and provides interim relief if adjudication deadlines are not met. Several of these commenters asserted that DHS's plan to publish operational policy guidance was an inadequate substitute for keeping the 90-day timeframe in the regulations, especially as it could strip applicants of legal protection when EAD adjudications take longer than 90 days.

Another commenter suggested that DHS keep the 90-day adjudication requirement in the regulations but add limited exceptions. According to the commenter, these exceptions could address situations involving security concerns, situations in which underlying benefit applications or petitions are still being adjudicated, and situations involving operational emergencies that prevent DHS from making timely adjudications.

Response. DHS disagrees that operational policy statements regarding the 90-day application adjudication timeframe will be inadequate. The public will be able to rely on USCIS's announcements regarding Form I–765 processing, which will reflect USCIS's up-to-date assessment of its operational capabilities. Applicants also will continue to have redress in case of adjudication delays by contacting USCIS. *See https://www.uscis.gov/forms/tip-sheet-employment-authorization-applications-pending-more-75-days.*

DHS also declines to adopt the suggestion by commenters to retain the 90-day adjudication timeframe in the regulations and modify it to provide for exceptions, such as in cases involving security concerns. Applying different processing standards to certain applicants adds complexity to the overall management of the agency's workloads, and to the customer service inquiry process.

The additional relief from processing delays that DHS is providing in this final rule is the new provision that automatically extends the validity of EADs and, if needed, employment authorization for up to 180 days for certain applicants who timely file renewal EAD applications under the same eligibility category. The automatic

received TPS and is applying for a renewal under the 8 CFR 274a.12(a)(12) eligibility category, he or she would still get the benefit of the automatic 180-day extension under this rule.

extension will only apply to such renewal applicants if their employment is authorized incident to status beyond the expiration of their current EADs or if their eligibility is not dependent on USCIS first adjudicating an underlying immigration benefit.

ii. Earlier Filing for EAD Renewals

Comment. Several commenters asked DHS to permit the filing of a renewal EAD application up to 180 days in advance of the expiration of the applicant's current EAD. These commenters noted that DHS currently will not accept a renewal EAD application that is filed more than 120 days prior to the expiration date. They suggested that by permitting earlier filing, renewal applicants who are not eligible for the automatic 180-day extension will have a greater chance of having their applications adjudicated before their EADs expire and thus avoid a gap in employment authorization. One commenter also stated that a longer filing window would better align with the current Form I–129 filing window for H–1B and L–1 nonimmigrants, allowing nonimmigrant workers (and dependents eligible to apply for EADs) to concurrently apply for extensions of stay and employment authorization. Moreover, commenters stated that allowing applications to be submitted further in advance would benefit DHS by affording it more time to manage its workload, and alleviate concerns about its ability to process all Forms I–765 within 90 days.

Response. DHS strongly encourages eligible individuals to file renewal EAD applications (Forms I–765) sufficiently in advance of the expiration of their EADs to reduce the possibility of gaps in employment authorization and EAD validity. DHS appreciates commenters' desire to avoid such gaps and agrees with commenters that modifying the filing policy to allow Forms I–765 to be filed earlier is a reasonable solution. Therefore, DHS is adopting a flexible filing policy to permit the filing of a renewal EAD application as early as 180 days in advance of the expiration of the applicant's current EAD.[100] USCIS will permit the 180-day advance filing policy when practicable, taking into account workload, resources, filing surges, processing times, and specific regulatory provisions that mandate specific filing windows. DHS will continue to monitor the current filing conditions of Form I–765 applications and will set the filing time period for renewal EAD applications as appropriate. USCIS will post filing time periods for renewal EAD applications on its Web site.

iii. Concurrent Filings

Comment. One commenter suggested allowing applicants to file for EADs concurrently with related benefit requests (*e.g.,* a nonimmigrant visa petition or an application for adjustment of status). Although this is currently allowed to the extent permitted by the form instructions or as announced on the USCIS Web site, this commenter stated that form instructions rarely specify when an EAD may be filed concurrently with another petition, and also stated that forms should not be a substitute for the law when determining when a benefit can be requested. For example, the commenter noted that instructions have not been updated for the Application to Extend/Change Nonimmigrant Status (Form I–539) to state that some H–4 dependent spouses are now eligible for EADs. The commenter recommended amending the provision to allow concurrent filings to the extent permitted by law, rather than only as provided in form instructions.

Response. This rule provides general authority for allowing Forms I–765 to be concurrently filed with other benefit requests where eligibility for employment is contingent upon a grant of the underlying benefit request. *See* final 8 CFR 274a.13(a). It is not possible to allow concurrent filing across all eligible categories. For example, an asylum applicant cannot apply for work authorization until the completed asylum application has been pending for at least 150 days. *See* 8 CFR 208.7(a). By establishing regulatory authority for USCIS to permit concurrent filing when appropriate, this rule provides USCIS with the flexibility necessary to decide when concurrent filing is feasible based on existing operational considerations that take into account the particular circumstances of different underlying immigration benefits. Such decisions on filing procedures are appropriately placed in instructional materials rather than the regulations. Therefore, while DHS disagrees with the commenter that this more specific information should be included in the regulations, DHS agrees that locating up-to-date information regarding the availability of concurrent filing for particular eligibility categories can be challenging for the public. DHS has determined that, in addition to the form instructions proposed in the NPRM, a convenient and useful location to announce concurrent filing information is on the USCIS Web site. Accordingly, DHS is revising the regulatory text at 8 CFR 274a.13(a) in this final rule to include Web site announcements related to the concurrent filing of Forms I–765. Placing information regarding the availability of concurrent filings on USCIS's Web site will enable DHS to more efficiently make updates, particularly as the transformation to electronic processing occurs in the future.[101] USCIS also will continue posting guidance in other public engagement materials regarding concurrent filings.[102] Applicants should consult the appropriate form instructions or the USCIS Web site to determine whether they may file their Form I–765 concurrently with their underlying benefit request.

Regarding the example raised by the commenter, the Form I–539 instructions do not address issues of employment authorization. Rather, the Form I–539 instructions outline who is eligible to apply for an extension of stay or change of nonimmigrant status. However, the current version of the Form I–765 instructions clearly state that some H–4 nonimmigrant spouses of H–1B nonimmigrant workers are eligible for employment authorization and may also be able to concurrently file their Form I–765 with Form I–539. DHS also currently permits such H–4 nonimmigrant spouses seeking an extension of stay to file Form I–539 concurrently with a Petition for a Nonimmigrant Worker (Form I–129) seeking an extension of stay on behalf of the H–1B nonimmigrant worker. This provides several efficiencies, as continued H–4 status of the dependent spouse is based on the adjudication of the H–1B nonimmigrant worker's Form I–129 petition and both forms may be processed at the same USCIS location. By posting concurrent filing instructions in form instructions or on the USCIS

[100] Current USCIS policy allows early filing up to 120 days in advance.

[101] Over the next several years, USCIS will continue rolling out a secure, customer-friendly online account system that will enable and encourage customers to submit benefit requests and supporting documents electronically. This Web-based system will greatly simplify the process of applying for immigration benefits. It will assign new customers a unique account which will enable them to access case status information, respond to USCIS requests for additional information, update certain personal information, and receive timely decisions and other communications from USCIS. For more information, *see https://www.uscis.gov/about-us/directorates-and-program-offices/office-transformation-coordination.*

[102] *See, e.g.,* FAQs for employment authorization for certain H–4 Spouses *https://www.uscis.gov/working-united-states/temporary-workers/faqs-employment-authorization-certain-h-4-dependent-spouses* and *https://www.uscis.gov/i-539-addresses.* USCIS also posts information on its Web site regarding concurrent filing for individuals seeking lawful permanent residence. The Web page can be found at *https://www.uscis.gov/green-card/green-card-processes-and-procedures/concurrent-filing.*

Web site, DHS can better address such complicated adjudication processes.

With respect to the Form I–765, DHS will post on the USCIS Web site a list of the categories of applicants who may file their Forms I–765 concurrently with their underlying eligibility requests. By posting this type of comprehensive information on the USCIS Web site, applicants will have up-to-date information on filing procedures.

iv. Potential Gaps in Employment Authorization

Comment. Some commenters stated that the elimination of the 90-day processing timeframe may cause beneficiaries uncertainty and stress, and deter some individuals from traveling to their home countries. Commenters also expressed concerns about accruing unlawful presence while waiting for their EADs, which might affect their eligibility for future immigration benefits. Finally, commenters opposed eliminating the 90-day provision by noting that employers may refrain from hiring foreign workers, or even lay off foreign workers, who do not have a current EAD in order to avoid the risk of fines imposed by ICE.

Response. DHS does not believe that eliminating the 90-day EAD processing timeframe from the regulation will lead to the issues raised by commenters, except in rare instances. DHS plans to maintain current processing timeframes and will continue to post that information on its Web site.[103] Consistent with current protocols, applicants not covered by the automatic 180-day extension of employment authorization will continue to be able to call the National Customer Service Center (NCSC) if their application is pending for 75 days or more to request priority processing. Applicants covered by the 180-day automatic extension will be permitted to contact the NCSC if their application is still pending at day 165 of the auto-extension to request priority processing. For those cases that are not fit for adjudication within current processing timeframes, DHS does not believe that employment authorization should be granted, and EADs issued, before eligibility is determined.

To avoid potential gaps in employment authorization resulting from unexpected delays in processing, DHS is providing workable solutions in this final rule. As mentioned earlier in this Supplementary Information, USCIS is changing its recommended filing timelines and will accept renewal EAD applications filed as far in advance as 180 days from the expiration date of the current EAD. The extent of the advance filing window will depend on operational considerations. Affected stakeholders can, and are strongly encouraged to, reduce any potential gaps in employment authorization or employment authorization documentation by filing Forms I–765 well enough in advance of the expiration dates on their current EADs.

Further, DHS is providing automatic 180-day extensions of some EADs to renewal applicants within certain employment eligibility categories upon the timely filing of applications to renew their EADs.[104] This provision significantly mitigates the risk of gaps in employment authorization and required documentation for eligible individuals. In addition, the provision will provide consistency for employers, as the extension period is similar to that which already is used in other contexts. For example, DHS typically provides automatic 180-day extensions of EADs to TPS beneficiaries when the registration period does not provide sufficient time for TPS beneficiaries to receive renewal EADs.[105] DHS regulations also provide certain F–1 nonimmigrant students seeking extensions of STEM Optional Practical Training (OPT) with automatic extensions of their employment authorization for up to 180 days. *See* 8 CFR 274a.12(b)(6)(iv).

In response to concerns regarding accrual of unlawful presence, DHS believes that removal of the 90-day adjudication timeline from the regulations generally has no effect on the application of DHS's longstanding unlawful presence guidance. A foreign national will not accrue unlawful presence in the United States if he or she is deemed to be in an authorized period of stay. Neither the mere pendency of a Form I–765 application nor the receipt of an EAD generally determines whether an individual is in an authorized period of stay for purposes of accrual of unlawful presence. DHS has described circumstances deemed to be ''authorized periods of stay'' in policy guidance.[106]

With respect to the comments regarding freedom to travel outside the United States, DHS is not prohibiting applicants with pending Forms I–765 from traveling. However, DHS's longstanding policy is that if an applicant travels outside of the United States without a valid visa or other travel document while he or she has a pending change of status application, DHS considers the applicant to have abandoned that application.[107] Moreover, although applicants may travel abroad, they must have a valid visa or other travel document that allows them to return to the United States. An EAD, by itself, does not authorize travel.

Finally, with respect to commenters' concerns that this rule will cause employers to refrain from hiring foreign workers or may lay off foreign workers to avoid potential fines imposed by ICE, DHS believes that the steps it has taken to minimize the possibility of gaps in employment authorization will satisfactorily allay these concerns. Employers that refuse to hire workers with 180-day extensions, or that terminate such workers, may be in violation of the INA's anti-discrimination provision at section 274B, 8 U.S.C. 1324b, which prohibits, inter alia, discrimination based on a worker's citizenship status, immigration status, or national origin, including discriminatory documentary practices with respect to the employment eligibility verification (Form I–9 and E-Verify) process. Employers that violate the anti-discrimination provision may be subject to civil penalties, and victims of such discrimination may be entitled to back pay awards and reinstatement. For more information, visit *https://www.justice.gov/crt/about/osc.*

Comment. One commenter requested that DHS add a regulatory provision requiring USCIS to issue a Form I–797C Notice of Action (receipt notice) within a certain timeframe. This commenter stated that such a regulatory provision would assist individuals who use Form I–797C to ''validate'' continued employment with his or her employer or for state or federal agencies that rely on EADs to grant ''safety net'' benefits. Otherwise, according to the commenter, the value of the automatic EAD extension will be eviscerated.

[103] *See* current USCIS processing timeframes at *https://egov.uscis.gov/cris/processTimesDisplayInit.do.*

[104] ''Timely filed'' for purposes of renewal applicants filing TPS-based EAD applications means filed according to the applicable TPS country-specific **Federal Register** notice regarding procedures for obtaining EADs. In very limited cases, the filing period described in the **Federal Register** notice may extend beyond the EAD validity date.

[105] *See, e.g.,* 80 FR 51582 (Aug. 25, 2015) (Notice auto-extending EADs of Haitian TPS beneficiaries for 6 months).

[106] *See* Neufeld May 2009 Memo.

[107] *See* USCIS Memorandum from Thomas Cook, ''Travel after filing a request for a change of nonimmigrant status'' (June 18, 2001), available at *https://www.uscis.gov/sites/default/files/files/pressrelease/Travpub.pdf.*

Response. DHS declines to adopt the suggestion to impose a regulatory issuance deadline on the Form I–797C, Notice of Action (receipt notice). Issuance of the receipt notice depends on highly variable operational realities affecting the intake process, and thus cannot be held to a regulatory ''processing'' timeframe. Furthermore, DHS notes that receipt notices are generally issued in a timely manner, usually two weeks.

v. Interim EADs

Comment. Many commenters disagreed with the proposed elimination of the issuance of interim EADs with validity periods of up to 240 days when an EAD application is not adjudicated within the previously discussed 90-day timeframe. These commenters suggested that the lack of an interim EAD may result in an employer laying off a worker if his or her EAD application is not timely adjudicated.

Response. DHS anticipated and addressed these concerns raised by commenters by providing for the automatic extension of EADs of 180 days for individuals who: (1) File a request for renewal of their EAD prior to its expiration date or during the filing period described in the country-specific **Federal Register** notice concerning procedures for obtaining TPS-related EADs; (2) request a renewal based on the same employment authorization category under which the expiring EAD was granted (as indicated on the face of the EAD), or on an approval for TPS even if the expiring EAD was issued under 8 CFR 274a.12(c)(19); [108] and (3) either continue to be employment authorized incident to status beyond the expiration of the EAD or are applying for renewal under a category that does not first require the adjudication of an underlying benefit request. As discussed earlier, DHS had determined that 15 employment categories currently meet these conditions.

DHS recognizes the possibility of gaps in employment authorization for renewal applicants who are not included on the list of employment categories eligible for automatic renewal of their EADs because they require adjudication of an underlying benefit request. Such individuals are encouraged to contact the National Customer Service Center (NCSC) if their application is pending for 75 days or more to request priority processing of their application. In order to further ensure against gaps in employment authorization for renewal applicants, DHS also is modifying its 120-day advance filing policy and will accept Forms I–765 that are filed up to 180 days in advance of the EAD expiration date, except where impracticable. With this modification, DHS expects that the risk of gaps in employment authorization and the possibility of worker layoffs will be minimal.

Comment. One commenter stated that harm would be caused by limiting automatic EAD extensions, but suggested that this harm could be ameliorated by allowing for unlimited automatic extension of work authorization upon the timely filing of a renewal EAD application until a decision is made on the application. The commenter alternatively suggested lengthening the extension period to 240 days to coincide with the validity period of interim EADs and consistent with the extension of employment authorization for certain nonimmigrants pursuant to 8 CFR 274a.12(b)(20). The commenter also suggested extending the 120-day advance filing policy for EADs. According to the commenter, if the automatic extension is limited to 180 days, USCIS should accept filings 240 days in advance of the expiration of the applicants EADs.

Response. DHS declines to adopt the commenter's suggestions and retains the proposed automatic extension period of 180 days in this final rule. Due to fraud concerns, DHS will not provide for an unlimited automatic extension until USCIS issues a decision on the renewal application. In addition, without a date certain, employers would have difficulties reverifying employment authorization to comply with the Employment Eligibility Verification (Form I–9) requirements and would not have the certainty necessary to maintain a stable and authorized workforce.

Regarding the commenter's suggestion to provide for a 240-day (rather than a 180-day) automatic extension, DHS determined that 180 days would be more appropriate. The 180-day period should provide USCIS sufficient time to adjudicate Form I–765 applications, particularly when individuals file well ahead of the expiration of their EADs, as explained further below. In fact, existing regulations already contain a provision granting an automatic 180-day extension of EADs in certain instances, and that time frame has proven workable. *See, e.g.,* 8 CFR 274a.12(b)(6)(iv) (providing automatic 180-day EAD extensions for F–1 nonimmigrant students who timely file requests for STEM OPT extensions). DHS also typically provides TPS re-registrants with automatic EAD extensions of 180 days.[109] Maintaining consistency among rules regarding automatic EAD extensions will aid employers in complying with Form I–9 verification requirements, as well as other agencies making determinations on eligibility for the benefits they oversee (such as those issued by departments of motor vehicles). DHS acknowledges the regulatory provision granting an automatic extension of employment authorization for up to 240 days, as noted by the commenter, *see* 8 CFR 274a.12(b)(20), but that provision extends to certain classes of nonimmigrants who do not have or require an EAD. These classes of nonimmigrants are employment authorized for a specific employer incident to status. Because the adjudication of a Form I–765 application is materially different from the adjudication of petitions seeking extensions of stay in these nonimmigrant classifications, the 240-day time frame afforded to those nonimmigrants is inapposite. DHS believes it is more sensible that the period for automatically extending certain EADs based on the timely filing of renewal EAD applications should mirror the existing 180-day period in 8 CFR 274a.12(b)(6), as well as DHS's policy regarding automatic extensions of TPS-based EADs.

Moreover, DHS believes that providing an automatic 240-day extension is unwarranted given that the typical Form I–765 processing time is 90 days,[110] and DHS will be providing renewal applicants the opportunity to file up to 180 days in advance of the expiration of their EADs. Those Form I–765 application types that are taking more than 90 days to process are often associated with, and dependent upon, adjudication another underlying request such as Temporary Protected Status, DACA, and H–4 status. The current 120-day advance filing policy coupled with the 240-day interim EAD validity under current regulations at 8 CFR 274a.13(d) provide a total processing period of 360 days before an applicant may

[108] Under 8 CFR 274a.12(c)(19), an individual applying for Temporary Protected Status (TPS) must apply for employment authorization; such authorization is not automatic or granted incident to status unless and until the TPS application is granted. EADs are issued as ''temporary treatment benefits'' to pending TPS applicants who are considered *prima facie* eligible for TPS. Such temporary treatment benefits remain in effect until a final decision has been made on the application for TPS, unless otherwise terminated. *See* 8 CFR 244.5; 8 CFR 244.10(e).

[109] *See, e.g.,* 80 FR 51582 (Aug. 25, 2015) (notice auto-extending EADs of Haitian TPS beneficiaries for 6 months).

[110] USCIS Service Centers report that the majority of Form I–765 applications are adjudicated within 3 months. *See* current USCIS processing timeframes at *https://egov.uscis.gov/cris/processTimesDisplayInit.do* (last accessed October 31, 2016).

experience a gap in employment authorization. Under this rule, the 180-day advance filing policy and automatic 180-day employment authorization extension similarly would provide a potential processing period of 360 days. In addition, DHS expects that a long automatic extension period of 240 days without an accompanying, secure EAD would increase the risk of fraud or other misuse of the automatic extension benefit. DHS believes that this rule imposes reasonable limitations on automatic EAD extensions that protect against both fraud and gaps in employment authorization.

Comment. A commenter requested that DHS include an interim EAD for initial applications, for renewal applications in categories not eligible for automatic extension, and for renewal applications that remain pending even after the automatic 180-day extension has expired in order to prevent hardship that could result when people lack employment authorization.

Response. DHS declines to adopt the commenter's suggestion as it would undermine DHS's fraud, national security, and efficiency goals. DHS has determined that the issuance of interim EADs does not reflect the operational realities of the Department, which are intended to promote efficiency, reduce fraud, and address threats to national security, such as through the adoption of improved processes and technological advances in document production. Authorizing an interim EAD for initial and renewal EAD applications whether or not eligible for automatic EAD extensions under this rule would be problematic because some applicants would receive an immigration benefit—employment authorization—before DHS is assured that the applicant is eligible for that benefit through the adjudication of the underlying benefit request. DHS anticipates a long adjudication period will be an extremely rare occurrence, most likely involving an application with serious security concerns, in which case DHS would not grant employment authorization until such concerns are resolved.

Moreover, the resources necessary to process interim EADs are similar to the resources necessary to issue EADs of full duration. Regardless of whether the EAD is for a full duration or for an interim period, the EAD must contain all of the same security and anti-counterfeiting features. Maintaining this duplicative processing would significantly hamper USCIS's ability to maintain reasonable processing times.

vi. Automatic Extensions of EADs and Advance Parole

Comment. DHS received a number of comments referencing the combination EAD/advance parole cards issued to applicants for adjustment of status. These comments requested that DHS provide automatic extensions for advance parole when requests for advanced parole are filed timely and concurrently with requests for EAD extensions.

Response. DHS declines to permit automatic extensions of advance parole in this final rule. Advance parole is a separate adjudication and is wholly discretionary, determined on a case-by-case basis, and, therefore, DHS does not believe that it is appropriate for automatic extensions.

DHS notes that if a renewal applicant with a combination EAD/advance parole card has an urgent need to travel outside the United States while the employment authorization renewal application is pending, the applicant may request expedited adjudication of the concurrently filed advance parole request under USCIS's longstanding expedite criteria. If USCIS expedites the adjudication of the advance parole request and grants advance parole, the applicant will receive a separate advance parole authorization on Form I–512 (Authorization for Parole of an Alien into the United States) and a separate EAD following adjudication of the renewal EAD application. If the applicant does not receive an expedited approval of the advance parole request, then the applicant may receive a combination card following adjudication of both the EAD renewal application and parole request.

vii. H–4 Nonimmigrant Spouses

Comment. Some commenters noted that certain H–4 nonimmigrant spouses of H–1B nonimmigrant workers can wait up to 9 months for an EAD (including time for the visa and EAD extension) and may thus experience gaps in employment.[111] The commenters felt this time period was too long, and they stated that to avoid potential lapses in employment authorization such spouses should be provided the option to: (1) Obtain an automatic extension of their EADs, (2) file their applications for EAD extension at the same time as their requests for extension of their H–4 status, or (3) receive interim EADs.

Response. DHS disagrees with commenters that H–4 nonimmigrant spouses eligible to apply for EADs should receive automatic EAD extensions or interim EADs, and DHS thus declines to modify this rule as suggested by commenters.[112] Consistent with the commenters' requests, an H–4 nonimmigrant spouse eligible for an EAD already may concurrently file his or her EAD application with an H–4 extension request (on Form I–539), even if the Form I–539 is filed with the Form I–129, Petition Nonimmigrant Worker, that is being filed on his or her spouse's behalf. However, the Form I–765 will not be adjudicated until the underlying benefit requests are adjudicated. *See* Instructions to Form I–765. As discussed previously, because the employment authorization for an H–4 nonimmigrant spouse is contingent on the adjudication of an underlying immigration benefit, automatically extending EADs to such individuals significantly increases the risk that EADs may be extended to ineligible individuals.

In the case of an H–4 nonimmigrant spouse filing for an extension of stay and renewal of employment authorization, DHS cannot be reasonably assured that the spouse will continue to be eligible for employment authorization until a full adjudication of the Form I–765 is conducted. Under DHS regulations, an H–4 nonimmigrant spouse is eligible for employment authorization if either the H–1B nonimmigrant worker has an approved Form I–140 petition or the spouse's current H–4 admission or extension of stay was approved pursuant to the H–1B nonimmigrant worker's admission or extension of stay based on sections 106(a) and (b) of AC21. *See* 8 CFR 214.2(h)(9)(iv). Thus, before adjudicating a Form I–765 filed by the H–4 nonimmigrant spouse, USCIS must first make a determination on the principal's H–1B status, because the spouse derives his or her status from the principal. USCIS must then adjudicate the H–4 nonimmigrant spouse's application for an extension of stay. Only after concluding these adjudications with respect to the H–1B

[111] H–4 dependent spouses who may apply for employment authorization include certain H–4 dependent spouses of H–1B nonimmigrants who: Are the principal beneficiaries of an approved Form I–140, Immigrant Petition for Alien Worker; or have been granted H–1B status under sections 106(a) and (b) of the American Competitiveness in the Twenty-first Century Act of 2000, as amended by the 21st Century Department of Justice Appropriations Authorization Act. *See* 8 CFR 214.2(h)(9)(iv).

[112] DHS notes that in a separate rulemaking, commenters also requested automatic EAD extensions for H–4 nonimmigrant spouses who have requested renewal EADs. DHS declined to provide for automatic extensions of employment authorization for such nonimmigrants, because their employment authorization is contingent on the adjudication of an underlying benefit request. *See* 80 FR 10284, 10299. This rationale equally applies to this rule.

nonimmigrant worker and the H–4 nonimmigrant spouse, can USCIS adjudicate the spouse's application for a renewal EAD.

Allowing eligible H–4 nonimmigrant spouses to file Form I–765 concurrently with their Form I–539 extension applications (and, if needed, also with the Form I–129 filed on behalf of the H–1B principal) enables the receipt of employment authorization soon after the underlying immigration benefit requests are adjudicated, thereby significantly reducing the overall adjudication timeline for these H–4 nonimmigrant spouses. To further ensure against gaps in employment authorization for H–4 nonimmigrant spouses and others, except when impracticable, DHS will be permitting EAD renewal applicants to file Forms I–765 up to 180 days prior to the expiration of their current EADs.

viii. F–1 Nonimmigrant Students

Comment. A few commenters requested a 90-day processing timeframe for F–1 nonimmigrant students, because Forms I–765 based on optional practical training (OPT) do not require the submission of biometrics through an Application Support Center (ASC). Additionally, a commenter stated that eliminating the 90-day EAD processing timeframe makes it difficult for F–1 nonimmigrant students to secure employment because OPT is only authorized for 12 months. A few commenters questioned security checks or suggested that DHS implement new requirements for F–1 nonimmigrant students.

Response. DHS declines to retain the current regulatory 90-day processing requirement for Form I–765 filings by F–1 nonimmigrant students. DHS remains committed to current processing timeframes for all Form I–765 applicants, including F–1 nonimmigrant students. When making plans to secure pre-completion or post-completion OPT, F–1 nonimmigrant students should consider the advance filing periods described in the regulations at 8 CFR 214.2(f)(11)(i)(B) and factor in Form I–765 processing times, which can be found on the USCIS Web site.[113] Additionally, F–1 nonimmigrant students who timely apply for STEM OPT extensions are provided with automatic extensions of their employment authorization for up to 180 days, which provides sufficient flexibility in the event of unexpected delays. *See* 8 CFR 274a.12(b)(6)(iv).

The NPRM did not include a proposal regarding additional security checks for F–1 nonimmigrant students. Therefore, such changes would be outside the scope of this rulemaking. However, DHS notes that foreign nationals who apply for F–1 nonimmigrant visas undergo security checks before visa issuance. Additionally, USCIS conducts security checks on all F–1 nonimmigrant students on OPT before rendering a final decision on their Forms I–765. DHS may consider requiring additional security checks for F–1 nonimmigrant students in future rulemakings.

ix. Expanding Automatic Extensions to Additional Categories

Comment. One commenter requested that DHS provide automatic 180-day extensions on all timely-filed, non-frivolous EAD extension applications, or in the alternative, that DHS provide automatic extensions to individuals in J–2 nonimmigrant status. The commenter reasoned that including J–2 status in the list of employment authorization categories that allow for automatic extension comports with the proposed rationale for such extensions since adjudication of an underlying benefit request is not needed. Another commenter urged DHS to grant automatic EAD extensions to L–2, F–1 OPT, and H–4 nonimmigrants, in order to provide an incentive for employers to retain valued employees. More generally, some commenters recommended that DHS automatically extend employment authorization for all work-authorized applicants, including H–4 and L–2 nonimmigrants and categories of applicants seeking employment-authorization based on humanitarian circumstances, regardless of their current basis for work authorization, in order to prevent gaps in employment.

Response. DHS declines to provide automatic EAD extensions (and employment authorization, if applicable) to eligibility categories beyond those listed in the Supplementary Information to the NPRM at this time. However, DHS may announce in the future additional categories of individuals eligible for such automatic extensions on the USCIS Web site. *See* final 8 CFR 274a.13(d)(1)(iii). While granting automatic EAD extensions to the additional nonimmigrant categories suggested by commenters may encourage employers to retain employees and minimize the risk of gaps in employment, such an expansion would undermine DHS's national security and fraud prevention goals, as described above. DHS is limiting availability of automatic EAD extensions in a manner that reasonably ensures that the renewal applicant is eligible for employment authorization, thereby minimizing the risk that ineligible individuals will receive immigration benefits.

In addition, DHS disagrees with the commenter's assertion that the J–2 nonimmigrant category comports with the conditions stated in the NPRM and adopted in this final rule for automatic EAD extensions. DHS is limiting automatic extensions to those renewal applicants who, among other criteria, either continue to be employment authorized incident to status beyond the expiration of their EADs or are applying for renewal under a category that does not first require the adjudication of an underlying benefit request. J–2 nonimmigrants do not fit within the regulatory criteria because they must first receive approvals of their underlying requests for extension of J–2 nonimmigrant stay before they are eligible for employment authorization. The same is true with respect to the suggestion to expand the automatic extension provision to L–2, F–1 OPT, and H–4 nonimmigrants. Renewal of employment authorization for such nonimmigrants is dependent on the prior adjudication of underlying benefit requests. DHS cannot be reasonably assured these classes of individuals will remain eligible for employment authorization until full adjudication of the Form I–765 application is complete. L–2 nonimmigrants, for example, include both spouses and dependent children of L–1 nonimmigrants. However, only L–2 nonimmigrant spouses are eligible for employment authorization. USCIS must adjudicate the Form I–765 application to determine the applicant's valid L–2 nonimmigrant status, the L–1 principal's current nonimmigrant status, and evidence of the marital relationship. For F–1 OPT nonimmigrants, USCIS must determine whether the F–1 nonimmigrant student has obtained a Form I–20 A–B/I–20ID, Certificate of Eligibility of Nonimmigrant F–1 Student Status, endorsed by his or her Designated School Official within the past 30 days. If the applicant is an F–1 nonimmigrant student seeking STEM OPT, USCIS must examine the student's degree and determine whether the student's employer is an E-Verify employer, among other requirements. If the applicant is an F–1 nonimmigrant student seeking off-campus employment under the sponsorship of a qualifying

[113] *See https://egov.uscis.gov/cris/processTimesDisplayInit.do* for service center processing times. At present, Forms I–765 filed by F–1 nonimmigrants pursuant to 8 CFR 274a.12(c)(3) are processed in 3 months.

international organization, USCIS must review the international organization's letter of certification along with the timely endorsed Form I–20.[114] DHS has similarly addressed this issue with respect to H–4 nonimmigrants elsewhere in this Supplementary Information. DHS does not agree that the list of categories eligible for automatic EAD extensions should be expanded to include these additional categories at this time.

x. State Driver's License Issues

Comment. Several commenters noted that they cannot obtain or renew a driver's license without a valid visa or EAD, and if this rule results in longer waits for EADs, it would delay their ability to obtain a driver's license, thereby interrupting their daily routines. One commenter recommended granting EADs for longer periods in order to closely align with state driver license renewal periods. An individual commenter suggested that DHS notify all state departments of motor vehicles (DMVs) so that the DMVs can update their current license issuance policies to account for automatic extensions of EADs. This commenter also asked DHS to provide a list of documentary evidence that can be presented to DMV officials to establish that a renewal EAD application was timely filed and that employment authorization was automatically extended.

Response. DHS remains committed to current processing timeframes and expects to adjudicate Form I–765 applications within 90 days. Regarding the commenter's request for documentary evidence, DHS generally issues applicants a Notice of Action (Form I–797C) within two weeks of filing a renewal EAD application. An individual may choose to present the Form I–797C to a DMV, depending on state DMV rules, in combination with his or her expired EAD that has been automatically extended pursuant to this rule.[115] The combination of the qualifying Form I–797C and expired EAD is the equivalent of an unexpired EAD for purposes of this rule. *See* final 8 CFR 274a.13(d)(4). USCIS will provide guidance to stakeholders, including DMVs, on its Web site to help clarify the provisions regarding automatically extended EADs as established by this rule. However, comments related to individual state driver's license requirements are outside the scope of this rulemaking.

xi. Form I–9 and Automatic Extensions of EADs

Comment. One commenter suggested updating the instructions for Form I–9 and the M–274 Handbook (Handbook for Employers: Guidance for Completing Form I–9 (Employment Eligibility Verification Form)) to include automatic extensions of EADs. This commenter also asked that DHS place stickers on EAD cards during biometrics appointments to indicate automatic extensions, which would serve as evidence of ongoing employment authorization and maintenance of status, and thus reduce confusion during the I–9 process.

Response. DHS has determined that it is not necessary to amend the Form I–9 instructions to include information regarding automatic extensions of EADs because this rule does not change the list of acceptable documents for Form I–9 purposes. In addition, DHS believes that such detailed information regarding the automatic extension of EADs is better placed in guidance materials. DHS will update all relevant public guidance materials on I–9 Central[116] concurrently with the publication of this final rule. DHS also intends to include information regarding the automatic extension of EADs along with other comprehensive revisions to the M–274 Handbook for Employers that are currently underway.

DHS declines to place stickers on EADs at biometrics appointments for several reasons. Most EAD renewal applicants are not requested to appear for biometrics appointments. In addition, DHS has determined that considering the wide variety of affected categories and the number of potential extensions involved, providing extension stickers poses security concerns and is not economical or operationally feasible.

xii. National Security and Fraud Concerns

Comment. Some commenters criticized DHS's national security concerns and fraud prevention rationales as insufficient to support an elimination of the regulatory 90-day EAD processing timeframe, especially as DHS had not provided any data related to fraud or abuse in the program. These commenters further stated that DHS's security rationale did not explain why issuance of an interim EAD could not be based on a USCIS-issued fee receipt showing that Form I–765 had been pending for 90 days, given that USCIS routinely issues temporary Form I–551 stamps in foreign passports upon presentation of a Form I–90 fee receipt. Commenters faulted DHS for describing operational realities as a compelling reason to eliminate the interim EAD option, especially in light of a number of non-secure forms currently being submitted in some circumstances. Commenters suggested that the Form I–797C receipt could be designated an acceptable employment authorization document under current 8 CFR 274a.13(d), given that USCIS has been willing to issue a number of non-secure forms of employment authorization to some applicants.

Response. To support the Department's vital mission of securing the nation from the many threats it faces, DHS has determined that the elimination of both the 90-day EAD processing timeframe and the issuance of interim EADs from current regulations is necessary. This change at final 8 CFR 274a.13(d) reflects DHS's continued attention to security and commitment to improving adjudication processes, including technological advances in document production, to reduce fraud and address threats to national security.

The main security and fraud risks underpinning DHS's decision to remove the 90-day EAD adjudication timeline and interim EAD requirements flow from granting interim EADs to individuals before DHS is sufficiently assured of their eligibility and before background and security checks have been completed. DHS believes that any reduction in the level of eligibility and security vetting before issuing evidence of employment authorization, whether on an interim basis or otherwise, would both be contrary to its core mission and undermine the security, quality, and integrity of the documents issued.

In addition, the 90-day timeline and interim EAD requirements would hamper DHS's ability to implement effective security improvements in cases in which those improvements could extend adjudications in certain cases beyond 90 days. Given the inherent fraud and national security concerns that flow from granting immigration benefits (including EADs) to individuals prior to determining eligibility, DHS believes that the 90-day timeframe and interim EAD provisions at current 8 CFR 274a.13(d) do not provide sufficient flexibility for DHS to enforce and administer the immigration laws while enhancing homeland security.

Moreover, retaining the interim EAD provision would continue to fundamentally undermine overall

[114] *See* 8 CFR 214.2(f)(9)–(11).

[115] Depending on filing volume, USCIS may take longer than 2 weeks to issue Notices of Action (Forms I–797C).

[116] *See https://www.uscis.gov/i-9-central.*

operational efficiencies to the detriment of all applicants for employment authorization. In keeping with DHS secure document issuance policies, implementation of the interim EAD provision calls for DHS to issue tamper-resistant Form I–766 EADs.[117] Issuance of interim Forms I–766 requires the same resources as the issuance of full-duration Forms I–766, because both cards must be produced using the same operational processes at the same secure, centralized card production facility. Elimination of this costly and duplicative process is necessary to better ensure that sufficient resources are dedicated to adjudicating requests for employment authorization, rather than being diverted to monitoring the 90-day adjudication timelines and producing both interim EADs and full-duration EADs. In so doing, DHS believes that the EAD adjudication process will be more efficient and EAD processing timelines will decrease overall.

DHS rejects commenters' suggestions to designate alternate interim documents that do not evidence employment authorization or contain sufficient security features, such as the Form I–797C receipt notice, in lieu of EADs. For decades, Congress, legacy INS, and DHS have been concerned about the prevalence of fraudulent documents that could be presented to employers to obtain unauthorized employment in the United States. To address these concerns, Congress passed the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), Pub. L. 104–208, which strengthened the requirements for secure documentation used in the employment eligibility verification process.[118] Legacy INS, for its part, also took steps to reduce the number of insecure documents in circulation. For example, as described in the NPRM, legacy INS created the new, counterfeit-resistant Form I–766, which is produced at a centralized secure location, to replace the significantly less secure Form I–688B, which was produced at local offices and was easily counterfeited. In addition, legacy INS and DHS have sought to eliminate the issuance of ad hoc or otherwise insecure documents that could be used by individuals as temporary evidence of employment authorization. To reintroduce the issuance of ad hoc or insecure documents to evidence employment authorization in this rule would be a step backwards from DHS's goals in this area.

The instances in which DHS issues temporary documentation concern lawful permanent residents and, therefore, are distinguishable.[119] First, temporary documentation is only issued to lawful permanent residents after they are admitted in that immigration status. Second, USCIS verifies an individual's identity and status before issuing temporary evidence of lawful permanent resident status. Such verification may include inputting fingerprint and photograph information into the Customer Profile Management System-IDENTity Verification Tool (CPMS–IVT).[120]

While DHS strongly believes that it is necessary to eliminate the 90-day adjudication timeline and the requirement to issue interim EADs, the Department understands the need for temporary employment authorization in cases involving application processing delays. For this reason, this rule authorizes automatic extensions of employment authorization, but only for defined classes of individuals. First, DHS is limiting the automatic extension of EADs (and employment authorization, if applicable) to certain renewal applicants, rather than initial filers. As previously mentioned, this limitation meets DHS's policy to issue EADs to only those individuals who have been determined eligible. Second, to further protect the integrity of the immigration process, DHS is requiring that renewal applications be based on the same employment authorization category as that indicated on the expiring EAD, with the narrow exception of TPS beneficiaries, as described earlier. *See* final 8 CFR 274a.13(d)(1)(ii). Because the resulting Form I–797C indicates the employment authorization category cited in the application, this requirement helps to ensure, both to DHS and to employers that such a notice was issued in response to a timely filed renewal application. Third, automatic extensions are restricted to individuals who continue to be employment authorized incident to status beyond the expiration that is annotated on the face of their EADs or who are seeking to renew employment authorization in a category in which eligibility for such renewal is not dependent on a USCIS adjudication of an underlying benefit request. *See* 8 final CFR 274a.13(d)(1)(iii). This provision helps to ensure that individuals are eligible to receive automatic extensions of their EADs under this rule only if there is reasonable assurance of their continued eligibility for issuance of a full duration EAD.

xiii. Separate Rulemaking for the Elimination of the EAD 90-Day Processing Timeframe

Comment. Some commenters stated that the proposal to eliminate the 90-day rule must be promulgated through a separate rulemaking so that the public has proper notice and opportunity to comment. These commenters suggested that DHS intentionally buried the elimination of this provision at the end of a lengthy NPRM that in most other respects seeks to ease the burdens on the employment of qualified nonimmigrant and immigrant workers. According to commenters, some businesses and individuals may not realize that this rule contains a provision that will adversely affect them.

Response. DHS disagrees that the elimination of the 90-day processing timeframe for EADs merits or requires its own rulemaking. The public was given proper notice of the proposed policy in this rulemaking, and the proposal was fully described in the Summary paragraph at the beginning of the NPRM. The thousands of commenters that submitted feedback on this specific issue is evidence that the public had an opportunity to comment, and in fact did comment, on this issue.

xiv. Requests for Premium Processing

Comment. Several commenters asked USCIS to offer premium processing for Forms I–765, with some individuals asking the fee to be set at a reasonable level. One commenter also requested that premium processing be available for travel document requests.

Response. In order to balance workloads and resources in a way that ensures timely customer service across all product lines, DHS will not offer premium processing of Form I–765 applications or travel document requests at this time. DHS declines to adopt this suggestion, but may reconsider it in the future if resources permit.

[117] *See* USCIS Memorandum from Michael Aytes,''Elimination of Form I–688B, Employment Authorization Card'' (Aug. 18, 2006).

[118] *See* Conference Report on H.R. 2202, Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 142 Cong. Rec. H11071–02 (Sept. 25, 1996).

[119] Generally, a temporary Form I–551 (Permanent Resident Card) consists of either a Form I–551 stamp in the lawful permanent resident's foreign passport or a Form I–551 stamp on Form I–94 that also contains the lawful permanent resident's photograph.

[120] CPMS–IVT is a Web-based application that processes, displays and retrieves biometric and biographic data from DHS's fingerprint identity system, the Automated Biometric Identification System (IDENT). For more information, visit USCIS's Web site at *https://www.uscis.gov/news/alerts/uscis-implement-customer-identity-verification-field-offices.*

O. Employment Authorization and Reverification on Form I–9

1. Description of Final Rule and Changes From NPRM

Employers are required to verify the identity and employment authorization of all individuals they hire for employment on Form I–9. For those individuals whose employment authorization or EADs expire, employers must reverify employment authorization at the time of expiration. DHS is finalizing the changes related to the Form I–9 verification process as proposed, with the exception of minor, technical revisions, in order to conform to the new automatic employment authorization provision established by this rule.[121] *See* final 8 CFR 274a.2(b)(1)(vii). In addition, this rule finalizes the proposal providing that a facially expired EAD is considered unexpired for Form I–9 purposes if it is used in combination with a Notice of Action (Form I–797C, or successor form) indicating the timely filing of the application to renew the EAD (provided the Form I–797C lists the same employment authorization category as that listed on the expiring or expired EAD, except in the case of TPS beneficiaries, and has been automatically extended under this rule). *See* final 8 CFR 274a.13(d)(4). Newly hired employees completing Forms I–9 may choose to present their employers with this document combination to show both identity and employment authorization.[122] When the expiration date on the face of an EAD previously used for the Form I–9 is reached, a renewal applicant whose EAD has been automatically extended under this rule and who is continuing in his or her employment with the same employer should, along with the employer, update the previously completed Form I–9 to reflect the extended expiration date based on the automatic extension while the renewal is pending. The need for reverification of employment authorization is not triggered until the expiration of the additional period of validity granted through the automatic extension provisions discussed above. *See* final 8 CFR 274a.2(b)(1)(vii).

2. Public Comments and Responses

i. Reverification

Comment. Several commenters expressed a concern that the proposed automatic extension of EADs will confuse the Form I–9 reverification process because employers will have no way to know, without the help of immigration attorneys, if a renewal application was filed under the same category as the individual's current EAD, and thus no way to know if the automatic extension applies. A commenter also suggested updating the Form I–9 instructions and M–274 Handbook for Employers to reflect the automatic extensions of EADs.

Response. DHS believes that the reverification process is fairly straightforward and can be completed without the assistance of an attorney. Employers will know whether an EAD has been automatically extended under this rule by checking whether the eligibility category stated on the individual's current EAD is the same as the eligibility category stated on the individual's Form I–797C receipt notice,[123] and whether the EAD renewal category is listed on the USCIS Web site as a qualifying category for automatic EAD extensions. The Notice of Action receipt (Form I–797C) that USCIS issues to an applicant who files a Form I–765 application contains the EAD eligibility category. The EAD currently in the employee's possession, combined with a receipt notice for a timely filed EAD application under the same eligibility category, is evidence of employment authorization for Form I–9 purposes.

DHS is taking additional steps to minimize potential confusion among employers. DHS will engage in public outreach in connection with this rule. USCIS will update the Form I–797C receipt notices to include information about automatic extensions of employment authorization based on renewal applications and to direct applicants to the USCIS Web site for more information about qualifying employment categories. USCIS will also update the I–9 Central Web page on its Web site to provide guidance to employers regarding automatically extended EADs and proper completion of Form I–9. DHS intends to include this information in a future revision to the M–274 Handbook for Employers. Because DHS did not propose changes to the Form I–9 instructions to add information regarding automatic extensions of EADs in the proposed rule, DHS is unable to add this information to the form instructions in the final rule. DHS may consider such an addition in a future revision of the Form I–9 instructions under the PRA process.

ii. Use of Form I–9 To Change Employment Authorization Categories

Comment. Several commenters suggested that DHS allow foreign workers in H nonimmigrant status who are eligible for employment authorization based on compelling circumstances to ''change status'' by filling out Form I–9 and using the EAD issued based on compelling circumstances as evidence of employment authorization.

Response. DHS was unable to discern the commenters' specific concerns. However, DHS believes that the discussion below will alleviate any confusion about the Form I–9 process in these circumstances. Employers are responsible for proper completion and retention of Form I–9. *See* INA 274A(b), 8 U.S.C. 1324a(b). DHS does not use the Form I–9 process as a vehicle for workers to change their immigration status. Requests for EADs must be made on a separate form, currently the Application for Employment Authorization, Form I–765. The Form I–9 of an individual employed as an H–1B nonimmigrant who also receives an EAD while maintaining H–1B nonimmigrant status does not need to be updated merely based upon the individual's receipt of the EAD. If an H–1B nonimmigrant worker who also has been issued an EAD based on compelling circumstances obtains employment with a non-H–1B employer, then the individual may present his or her EAD to the non-H–1B employer to comply with the Form I–9 requirements, rather than presenting evidence based on the H–1B nonimmigrant status.

iii. Comments Suggesting Additional Revisions

Comment. A commenter suggested that DHS amend 8 CFR 274a.12(a) and Form I–9 to confirm that foreign nationals authorized for employment incident to status do not need to obtain an EAD. The commenter argued that the requirement in this regulatory provision to obtain an EAD effectively nullifies the portion of the provision that provides for employment authorization incident to status. The commenter noted that the suggested clarification would be even more important if the 90-day adjudication rule is eliminated.

---

[121] The technical changes include changing the cross reference in the regulatory text from ''§ 274a.13(d)'' to ''8 CFR 274a.13(d)'' in two places, and moving the parenthesis so that the reference to the Notice of Action form number reads, ''(Form I–797).'' In addition, this rule replaces ''alien'' with ''individual'' in keeping with the terminology of the paragraph.

[122] An automatically extended EAD in combination with the Notice of Action, Form I–797C, described in this rule constitute an unexpired EAD (Form I–766) under List A for Form I–9 purposes. *See* revised 8 CFR 274a.13(d)(4); 8 CFR 274a.2(b)(1)(v)(A)(*4*).

[123] This rule provides an exception for a TPS beneficiary whose EAD may not match the eligibility category on the receipt notice.

Response. The suggested amendments to both 8 CFR 274a.12(a) and Form I–9 are beyond the scope of this rulemaking. Contrary to the commenter's statement, the part of 8 CFR 274a.12(a) that requires affected individuals to obtain an EAD does not nullify such individuals' employment authorization incident to status. Rather, the provision lists certain categories of foreign nationals whose employment authorization must be evidenced by an EAD. Workers within the listed categories are employment authorized incident to status independent of their receipt of an EAD or other evidence of employment authorization.

Comment. A commenter recommended updating the M–274 Handbook for Employers to permit Form I–9 verification of H–1B nonimmigrant workers whose Form I–129 petition seeking an extension of status or change of employer was filed during the 10-day or 60-day grace periods.

Response. The current M–274 Handbook for Employers contains information regarding Form I–9 completion for H–1B nonimmigrant workers who extend their stay with the same employer or who seek a change of employers. *See* M–274, *Handbook for Employers,* page 22. This guidance applies to those H–1B nonimmigrant workers whose petitions are filed during the 10-day or 60-day grace periods. While this rule does not change that guidance, DHS will consider whether additional clarifications are necessary to the M–274 Handbook for Employers and other guidance materials, such as USCIS's I–9 Central Web page.

Comment. A commenter suggested, as an alternative to eliminating the regulatory provisions establishing the 90-day processing timeframe and the issuance of interim EADs, that the regulation instead be amended for Form I–9 purposes to require foreign workers to present to their employers List B identification documentation along with a Form I–797C receipt notice issued by USCIS to acknowledge the filing of a Form I–765 application. In the alternative, the commenter suggested that USCIS amend the Form I–9 instructions to require employers to confirm the pendency of the Form I–765 application by checking the USCIS Web site for case status information and annotating the Form I–9 accordingly.

Response. DHS declines to adopt the commenter's suggestions. The Form I–9 process mandates that employees present their employers with evidence of current employment authorization and identity. *See* 8 CFR 274a.2(b)(1)(v). A Form I–797C receipt for the filing of a Form I–765 application, standing on its own, does not establish employment authorization except when the filing was to replace a lost, stolen, or damaged EAD.[124] It is merely evidence that an application was filed with USCIS and, therefore, would not be sufficient to satisfy the Form I–9 requirements. For the reasons stated in the proposed rule, extending employment authorization to categories in which DHS lacks reasonable assurance of continued eligibility for employment authorization raises fraud and national security risks that DHS is striving to avoid. Regarding the suggestion by the commenter to require employers to check the case status of an employee's Form I–765 application, DHS believes that such a requirement raises privacy concerns and would introduce changes to the verification process that are beyond the scope of this rulemaking.

P. Other Comments

DHS received a number of comments related to matters falling outside the topics discussed above. These comments are addressed below.

1. Procedural Aspects of the Rulemaking

Comment. Some commenters submitted feedback about general immigration issues. A few commenters expressed support for, or opposition to, general immigration to the United States. Comments ranged from requesting that DHS discontinue immigration to the United States, to underscoring the need for comprehensive immigration reform, to general support for immigration.

Response. DHS is charged with administering the immigration laws enacted by Congress. Only Congress can change those laws. The comments described immediately above are therefore outside the scope of this rulemaking. DHS, however, is committed to strengthening the security and integrity of the immigration system through efficient and consistent adjudications of benefits, fraud detection, and enhanced customer service. DHS promotes flexible and sound immigration policies and programs as well as immigrant participation in American civic culture.

Comment. Several commenters objected to the ability of non-U.S. citizens to submit comments on the proposed rule.

Response. DHS welcomed comments from all interested parties without regard to citizenship or nationality. This approach is consistent with the statutory requirements established by Congress in the APA's notice-and-comment provision, which do not include a citizenship or nationality requirement and place priority on allowing all interested persons to participate in rulemaking proceedings.

2. Assertions That the Employment-Based Immigration System Enables Slavery and Servitude to Employers

Comment. DHS received numerous comments referencing the alleged slavery, servitude, or bondage of nonimmigrant workers in the United States. A number of commenters stated that the nonimmigrant visa and adjustment processes are tantamount to modern slavery or bonded labor, and that employers exploit and abuse workers subject to these processes. Other commenters stated that employers do not allow nonimmigrant workers to have a say in working conditions, leave, and other benefits.

Response. DHS takes allegations of worker slavery, bondage, and exploitation very seriously. There are statutes and regulations governing the terms and conditions of nonimmigrant employment that are intended for the protection of both U.S. and nonimmigrant workers. Commenters and nonimmigrant workers who believe they are being exploited by employers have a number of options to report misconduct. Those suffering abuse or exploitation are encouraged to immediately contact their local police department. DHS has created the Blue Campaign to combat human trafficking and aid victims. More information about the Blue Campaign can be found at *www.dhs.gov/blue-campaign.* Federal law also prohibits discrimination based on citizenship status, immigration status, national origin, and other protected characteristics. The Department of Justice's Office of Special Counsel for Immigration-Related Unfair Employment Practices enforces the anti-discrimination provision of the INA, which prohibits discrimination in hiring, firing, recruitment and referral for a fee, as well as discriminatory documentary practices in the employment eligibility verification (Form I–9 and E-Verify), based on citizenship, immigration status, or national origin. *See* INA section 274B; 8 U.S.C. 1324b. More information about reporting an immigration-related unfair employment practice may be found at *www.justice.gov/crt/office-special-counsel-immigration-related-unfair-*

[124] 8 CFR 274a.2(b)(1)(vi)(A) provides that when a worker shows a Form I–797C receipt for the filing of a Form I–765 application to replace a lost, stolen, or damaged EAD, this type of Form I–797C is considered a receipt for a Form I–9 List A document evidencing identity and employment authorization valid for 90 days.

employment-practices. The U.S. Equal Employment Opportunity Commission (EEOC) enforces Title VII of the Civil Rights Act of 1964 (Title VII), as amended, and other federal laws that prohibit employment discrimination based on race, color, national origin, religion, sex, age, disability and genetic information. More information about Title VII and the EEOC may be found at *www.eeoc.gov.* DHS also notes that DOL's Wage and Hour Division investigates allegations of employee abuse. Information about reporting a potential wage and hour violation can be found at *www.dol.gov* or by calling 1–866–4USWAGE (1–866–487–9243).

In addition, this rule enhances worker whistleblower protection by conforming regulations governing the H–1B program to certain policies and practices developed to implement the ACWIA amendments to the INA. *See* final 8 CFR 214.2(h)(20). Section 413 of ACWIA amended the INA by adding section 212(n)(2)(C), which makes it a violation for an H–1B employer to retaliate against an employee for providing information to the employer or any other person, or for cooperating in an investigation, with respect to an employer's violation of its LCA attestations. *See* INA 212(n)(2)(C)(iv), 8 U.S.C. 1182(n)(2)(C)(iv). Thus, employers may not intimidate, threaten, restrain, coerce, blacklist, discharge, or in any other manner discriminate against an employee for disclosing information that the employee reasonably believes evidences a violation of any rule or regulation pertaining to the statutory LCA attestation requirements, or for cooperating or attempting to cooperate in an investigation or proceeding pertaining to the employer's LCA compliance. *Id.*

Section 212(n)(2)(C) of the INA also requires DHS to establish a process under which an H–1B nonimmigrant worker who files a complaint with DOL regarding such illegal retaliation, and is otherwise eligible to remain and work in the United States, ''may be allowed to seek other appropriate employment in the United States for a period not to exceed the maximum period of stay authorized for such nonimmigrant classification.'' *See* INA 212(n)(2)(C)(v), 8 U.S.C. 1182(n)(2)(C)(v). This final rule formalizes DHS's current policy regarding these protections, as described above. *See* final 8 CFR 214.2(h)(20).

Through this final rule, DHS also provides flexibility to certain nonimmigrants with approved Form I–140 petitions who face compelling circumstances that warrant an independent grant of employment authorization. *See* final 8 CFR 204.5(p)(1). Such compelling circumstances may, depending on the circumstances, include employer retaliation.

Comment. Commenters also stated that employers are effectively in control of the lives of nonimmigrant workers. These commenters stated that if a nonimmigrant worker is fired or laid off by an employer, that worker is then faced with having to quickly find new employment or to return to his or her home country. According to commenters, this dynamic has created a sense of dependency on the employer, and the resulting uncertainty causes many nonimmigrant workers to be unwilling to purchase homes and make other long-term life investments in the United States.

Response. DHS is sympathetic to these comments. Through this final rule, DHS seeks to enhance worker mobility and ease the burdens nonimmigrant workers face when employment ends, either voluntarily or as a result of being laid off or terminated. DHS makes a grace period available to certain high-skilled nonimmigrant classifications (H–1B, H–1B1, O–1, E–1, E–2, E–3, L–1, and TN classifications) whose work ceases for up to 60 consecutive days during each period of petition validity (or other authorized validity period). *See* final 8 CFR 214.1(l)(2). The final rule also extends grace periods to dependents of eligible principal nonimmigrant workers. *Id.* The purpose of the 60-day grace period is to enable the nonimmigrant workers to seek new nonimmigrant employment and thus be able to extend or change their nonimmigrant status while remaining in the United States, should their employment conclude during the relevant validity period.

Comment. Some commenters explained that it is difficult for workers who have already received an approved Form I–140 petition with one employer to find a new employer who is willing to restart the immigrant visa petition process. Because of visa backlogs and country quotas, many nonimmigrants must wait years before they are eligible to adjust status to lawful permanent residence, and some commenters argued that the difficulty of the process has led workers to remain in the same job for years without promotions or salary increases. Commenters stated that the inability of nonimmigrant workers to accept promotions and to advance their careers has created a sense of hopelessness and a lack of motivation to grow skills.

Response. DHS is sympathetic to these comments and believes that this rule includes many provisions, as discussed more fully throughout the preamble, that will facilitate workers' ability to change jobs while waiting for immigrant visa availability, including the following: Expanded priority date retention, changes to the automatic revocation process, clarification on INA 204(j) portability, and the discretionary provision authorizing independent work authorization to beneficiaries who demonstrate compelling circumstances. *See* final 8 CFR 204.5(e)(1), (2) and (p); and 205.1(a)(3)(iii)(C) and (D). Additionally, individuals with approved Form I–140 petitions who are in H–1B nonimmigrant status may benefit from the H–1B portability provisions at final 8 CFR 214.2(h)(2)(i)(H).

3. Limits on Employment-Based Immigration by Country

Comment. Several commenters suggested that the per-country limits on available immigrant visas disproportionately discriminate against individuals from India, China, the Philippines, and Mexico. Some commenters stated that the system should be changed so that the number of available immigrant visas would be proportionate to the percentage of individuals from India and China working as professionals in the United States on H–1B visas. Commenters noted that the per-country limits fail to account for high population countries with larger numbers of well-educated and high-skilled professionals given that smaller countries have the same percentage of visas available to them. One commenter suggested that the per-country limits are not compatible with the equitable concept of responding to applicants on a first-come, first-served basis. Several commenters suggested that DHS increase the number of available immigrant visas or remove the per-country limits completely, both to speed up processing times and to lessen the adverse impact on Indian and Chinese nationals. Another commenter stated that the per-country limits are illogical, unfair and unpredictable, causing individuals from India and China to suffer unfairly. One commenter stated that merit should be the metric for retaining high-skilled workers, not country of birth.

Response. DHS understands the frustration expressed by commenters who have begun the process to obtain lawful permanent residence, but who are subject to long waits before their priority date becomes current as a result of the per-country visa limits applicable to their country of birth. However, DHS is unable to make immigrant visas available without regard to an individual's country of birth as these are statutory requirements under the INA. *See* generally INA 202, 8 U.S.C. 1152. In particular, INA 202(a)(2), requires that, in any fiscal year, individuals born in any given country generally may be allocated no more than seven percent of the total number of immigrant visas. Thus, only Congress can change the per-country limitations in this statutory provision. DHS notes that this Administration supported lifting the per-country cap as a part of commonsense immigration reform legislation that has considered and passed the U.S. Senate in 2013.

4. Guidance on National Interest Waivers

Comment. Some commenters stated that individuals applying for national interest waivers (NIWs) under the employment-based second preference immigrant visa (EB–2) category should be able to file their applications for adjustment of status immediately upon having their Form I–140 petitions approved, instead of enduring long waiting periods due to EB–2 immigrant visa backlogs. The commenter explained that those who qualify for NIWs would help improve the U.S. economy, wages and working conditions of U.S. workers, and educational and training programs for U.S. children and underqualified workers. Commenters compared the U.S. immigration system with other countries' systems and stated that the other countries facilitate permanent status and access to benefits faster than the United States. Another commenter requested that physicians granted NIWs be considered under the first preference employment-based immigrant visa category (EB–1) instead of the second preference as this change would attract more international physicians to come to the United States at a time when we are facing a shortage of physicians. Another commenter requested that DHS eliminate the per-country limits for NIW beneficiaries.

Response. DHS appreciates the concerns expressed by commenters regarding individuals who are subject to long waits for immigrant visas. However, DHS's ability to provide immigrant visas without regard to preference category is constrained by the statutory requirements set forth by Congress.

DHS agrees that those who qualify for NIWs could help contribute to research and medical advances, the U.S. economy, wages and working conditions of U.S. workers, and educational and training programs. Individuals who qualify for the NIW are already able to take advantage of a faster path to an immigrant visa because they are exempt from the labor certification process administered by DOL and may directly petition DHS for an immigrant visa. *See* INA 203(b)(2)(B), 8 U.S.C. 1153(b)(2)(B). However, DHS notes that by enacting INA 203(b)(1) and (b)(2), 8 U.S.C. 1153(b)(1) and (b)(2), Congress statutorily defined first- and second-preference (EB–1 and EB–2) categories for employment-based immigration, and specified that only those in the EB–2 category are eligible for a national interest waiver and that they too are subject to their respective country's annual visa allocation for that preference category. Additionally, Congress specifically provided that certain physicians working in shortage areas or veterans facilities may be eligible for NIWs. *See* INA 203(b)(2)(B)(ii), 8 U.S.C. 1153(b)(2)(B)(ii). Any changes to these provisions would need to be made by Congress. DHS notes, however, that physicians may also be eligible to seek immigrant visas under the EB–1 classification as individuals with extraordinary ability.

5. The Revised Visa Bulletin System

Comment. Several commenters submitted views on the recently revised Visa Bulletin system announced by DOS and DHS on September 9, 2015, and the subsequent revisions made on September 25, 2015, to certain dates on the October 2015 Visa Bulletin. Commenters expressed their disappointment at the September 25 revisions. One commenter requested that DHS provide relief in this final rule to the people who were affected by these revisions. Other commenters requested a better Visa Bulletin system. Finally, one commenter recommended that USCIS should continue to advance cut-off dates in the Visa Bulletin.

Response. DHS appreciates the concerns raised by individuals who may have been affected by the September 25 revisions to the October 2015 Visa Bulletin. However, further revisions to the Visa Bulletin system or dates indicated in the Visa Bulletin must be accomplished in coordination with DOS and are outside the scope of this rulemaking.

Q. Public Comments and Responses on Statutory and Regulatory Requirements

1. Regulatory Impact Analysis

Comment. Some commenters questioned the validity of the economic cost-benefit analysis in the Regulatory Impact Analysis (RIA) that DHS developed in support of the rule. These commenters expressed concern as to whether the economic analysis adhered to the intent and principles of Executive Orders 12866 and 13563. Another commenter believed that the economic analysis was biased against U.S. workers in favor of foreign workers.

Response. DHS appreciates the comments received concerning the cost-benefit economic analysis in the RIA. However, DHS does not agree that the economic analysis is invalid or fails to comply with Executive Orders 12866 and 13563, or that the analysis is biased against U.S. workers in favor of foreign workers. DHS developed the RIA supporting this rule in compliance with these Executive Orders to assess and quantify, to the extent possible, the costs and benefits of this rule as well as the number of individuals that could be affected by the provisions of the rule. DHS places a high priority on conducting its regulatory impact analysis in an objective, fact-based manner with the highest degree of transparency and integrity in order to support and inform the regulatory process.[125] DHS discusses the impact of this rule on U.S. workers in more detail in other sections of Part Q.

2. General Economy

Comment. Many commenters stated that this rule would be good for the economy in general terms. Some commenters cited the positive effects of high-skilled foreign labor on the overall economy because of the stimulating effects in other sectors of the economy. Other commenters suggested this rule would stimulate the economy as principal beneficiaries and their dependents would contribute by accepting new jobs. Commenters cited the numbers of immigrants who hold patents or Nobel prizes and the growing number of entrepreneurs. Commenters also suggested that providing further flexibilities to these immigrants would foster more innovation and entrepreneurship.

Many commenters agreed that increased stability while waiting to adjust status would encourage these high-skilled workers to more fully contribute to the economy by making increased investments. Some high-skilled workers expressed interest in making purchases or investments—such as buying houses or cars, traveling abroad, or making retirement contributions—but refrained from doing so due to their inability to predict their

[125] The full Regulatory Impact Analysis published with the NPRM is available at *https://www.regulations.gov/#!documentDetail;D=USCIS-2015-0008-0270.*

immigrant status. They also suggested that these kinds of purchases would produce many ripple effects on other industries. For example, investments in real estate would produce positive ripple effects in the construction industry. High-skilled workers also expressed a desire to invest in their local communities, but that they refrain from making such investments because they are uncertain how long they will be able to remain in those communities based on their immigration status. Other high-skilled workers commented that the lack of stability during the adjustment process caused many high-skilled foreign workers to invest in their native countries by sending back money, business, and talent. One high-skilled worker provided the example of students who come to the United States to study in STEM fields, and later return to their home countries due to the difficulties and long wait times for adjusting status in the United States. The commenter stated that the return of these foreign workers to their native countries results in losses to the United States of human capital, development of new technologies, revenue, and jobs. High-skilled workers also argued that foreign workers strengthen the U.S. economy by paying taxes, including making contributions to Social Security and Medicaid. However, these high-skilled workers felt they receive few benefits while waiting to adjust status. For example, they expressed frustration with the inability to obtain federal student loans for additional education for themselves and their children. The commenters also noted that the dependent children of high-skilled workers are not able to work and earn supplemental income while pursuing higher education, which adds to the financial constraints many immigrant families experience.

DHS also received other general comments concerning the economy in which the commenters recommended that DHS allow market supply-and-demand forces to dictate the responses to business needs for foreign workers. Other commenters asserted that only 1 to 2 percent of high-skilled foreign workers would benefit from the changes outlined in this rule.

Finally, commenters also expressed concern over the negative effects that both legal and illegal immigration have on wages, the economy, schools, the deficit, and the environment, among other things.

Response. DHS appreciates the comments received concerning the effect of this rule on the U.S. economy. The rule recognizes the value added to the U.S. economy by retaining high-skilled workers who make important contributions to it, including technological advances and research and development endeavors, which are correlated with overall economic growth and job creation.[126] Furthermore, this rule provides these workers with the stability and job flexibility necessary to continue to contribute to the U.S. economy while waiting to adjust their status. DHS believes that increased flexibility and mobility will encourage nonimmigrant workers to remain in the United States and continue to pursue LPR status, and thereby bolster our economy by making long-term purchases and continued investments in the United States. The commenters' request for USCIS to provide additional benefits, such as financial assistance for furthering education, is beyond the scope of this rule.

While DHS appreciates commenters questioning the overall reach of this rule and the assertion that only limited numbers of high-skilled foreign workers will be impacted by these provisions, DHS has made an effort to provide additional flexibilities to as many high-skilled foreign workers as possible while still adhering to its statutory limitations. DHS estimates the maximum number of foreign workers that will be impacted by this rule based on the best available information.

The aim of the INA 204(j) portability provisions is to standardize the existing porting process with additional clarifications; these provisions thus do not change the population of individuals who are eligible to port under section 204(j) of the INA. The regulatory provision authorizing employment authorization in compelling circumstances is intended to offer a stopgap measure for those nonimmigrants who have been sponsored for lawful permanent residence and need additional flexibility due to particularly difficult circumstances. DHS intentionally limited the availability of such employment authorization in part because individuals who avail themselves of this benefit will, in many cases, lose their nonimmigrant status and thus be required to apply for an immigrant visa abroad via consular processing rather than through adjustment of status in the United States.

DHS appreciates the comments on the negative impacts of legal immigration including the impacts on wages, jobs, the labor force, employer costs, and the estimates derived by the agency. DHS responds to these comments more thoroughly in other sections of Part Q of this rule.

While DHS appreciates the commenters' concerns about the negative impacts of unauthorized immigration, this rule does not address the immigration of individuals who are admitted without inspection or parole, or those who stay beyond their authorized period of admission.

With respect to comments noting a negative impact of immigration on schools and the deficit, comments lacked specific information expanding on these statements and explaining how this rule would impact schools or the deficit. Without additional information, DHS cannot determine the impact this rule would have on schools or the deficit. The impact of this rule on environmental issues is discussed more fully in Review under the National Environmental Policy Act (NEPA), Section Q, subpart 6.

3. Labor Market and Labor Force Impact, Including Jobs, Wages, and Job Portability

i. Effect of the Rule on the Availability of Jobs in the United States

Comment. Many commenters expressed concerns about the effect this rule will have on the availability of jobs in the United States. One of the primary concerns commenters had is that there would be fewer jobs for U.S. workers if more foreign workers are granted work authorization. Such commenters felt that allowing foreign workers access to employment authorization when they can demonstrate compelling circumstances would lead to increased competition for jobs and fewer opportunities for U.S. workers. In addition, commenters argued that DHS should not increase the number of foreign workers, especially in science, technology, engineering, and mathematics (STEM) fields, which commenters allege are fields that hire many high-skilled foreign workers. Some commenters cited studies suggesting evidence that a STEM worker

[126] *See* Hart, David, et al., ''High-tech Immigrant Entrepreneurship in the United States,'' Small Business Administration Office of Advocacy (July 2009), available at: *https://www.sba.gov/sites/default/files/rs349tot_0.pdf. See also* Fairlie, Robert., ''Open for Business: How Immigrants are Driving Small Business Creation in the United States,'' The Partnership for a New American Economy (Aug. 2012), available at: *http://www.renewoureconomy.org/sites/all/themes/pnae/openforbusiness.pdf;* ''Immigrant Small Business Owners a Significant and Growing Part of the Economy,'' Fiscal Policy Institute (June 2012), available at: *http://www.fiscalpolicy.org/immigrant-small-business-owners-FPI-20120614.pdf;* Anderson, Stuart, ''American Made 2.0 How Immigrant Entrepreneurs Continue to Contribute to the U.S. Economy,'' National Venture Capital Association (June 2013), available at: *http://nvca.org/research/stats-studies/.*

shortage does not exist in the United States.[127] Many commenters also cited recent DOL Bureau of Labor Statistics (BLS) data showing that native-born workers have lost 320,000 jobs while 306,000 foreign-born workers have gained jobs, and used these data to assert that immigration to the United States needs to be reduced.[128]

Other commenters expressed concern that large numbers of recent U.S. college graduates are having difficulty securing jobs. These commenters expressed their view that this rule will allow foreign workers to saturate the open job market, thereby increasing competition for jobs at all skill levels and denying them to recent U.S. graduates seeking work. Commenters noted their concern that many recent U.S. graduates carry large student loan debt and need jobs to begin paying off their loans shortly after graduation.

While many commenters expressed concern that the rule will adversely affect the availability of jobs for U.S. workers, other commenters stated that the rule will have a favorable effect. For example, some commenters asserted that immigration has a positive impact on job creation and that increasing the number of foreign workers increases employment opportunities for other workers in the labor market. Another commenter claimed that there is little evidence that immigrants diminish the employment opportunities of U.S. workers and thus they are unlikely to have an effect on the American labor force and labor market.

Response. DHS appreciates the points of view commenters expressed regarding the effect this rule may have on the U.S. labor market. In the RIA, DHS explains that only a limited number of foreign workers will seek to apply for employment authorization based on compelling circumstances under the final rule, and that DHS does not expect this number to have a measurable impact on jobs as many of these workers will already be in the labor force. For example, as of 2015, there were an estimated 157,130,000 people in the U.S. civilian labor force.[129] DHS estimates in the RIA that there will be about 92,600 dependent spouses and children that may be eligible for compelling circumstances employment authorization in the first year (the year with the largest number of eligible applicants) which represents approximately 0.06 percent of the overall U.S. civilian labor force.[130] DHS based its analysis of labor market participants on an overestimate of the number of affected spouses and children who will be initially eligible to apply, despite the fact that this results in overstating the labor market impacts. As explained in the RIA, the principal beneficiaries of approved Form I–140 petitions who will be eligible under the rule are currently in a nonimmigrant status that provides employment authorization with a specific employer. Additionally, these principal beneficiaries must demonstrate circumstances compelling enough to warrant consideration of independent employment authorization. Only some dependent spouses and children eligible to apply for employment authorization could be considered ''new'' labor market participants under this rule.[131] [132] DHS notes that many of these labor market participants are not necessarily new participants but rather participants that are eligible to enter the labor market earlier than they normally would have. Dependent spouses and children may be eligible for employment authorization only if the principal beneficiary has been granted independent employment authorization under this rule and are in a nonimmigrant status (including while in a grace period authorized by final 8 CFR 214.1(l)).[133]

From a labor market perspective, it is important to note that the number of jobs in the United States is not fixed or static. Basic principles of labor market economics recognize that individuals not only fill jobs, but also stimulate the economy and create demand for jobs through increased consumption of goods and services.[134] These regulatory changes apply mainly to nonimmigrants who have actively taken certain steps to obtain LPR status. The rule simply accelerates the timeframe by which these nonimmigrants are able to enter the U.S. labor market. Importantly, the rule does not require eligible nonimmigrants to submit an application for an EAD based on compelling circumstances, nor does granting such an EAD guarantee employment for an individual. Further, the relatively small number of people the rule affects limits any effect the rule may have on the labor market.

DHS also appreciates commenters' concerns that DHS should not increase the number of foreign workers through this rule, especially in STEM fields. While DHS does not specifically identify foreign workers in STEM fields as the main beneficiaries of this rule, the main beneficiaries of this rule may nevertheless be high-skilled workers who happen to be in STEM fields. Further, it is not the goal of this rule to increase the numbers of workers in STEM fields, rather it is to provide various flexibilities to high-skilled foreign workers in certain employment-based immigrant and nonimmigrant visa programs who are already working in

[127] For example, commenters cited to the following studies to support the claim that there are no labor shortages in STEM fields: ''Guest Workers in the U.S. Labor Market: An Analysis of Supply, Employment, and Wage Trends,'' Economic Policy Institute, Briefing Paper #359, Apr. 24, 2013, available at *http://www.epi.org/publication/bp359-guestworkers-high-skill-labor-market-analysis/./;* ''Is There A STEM Worker Shortage? A Look at Employment and Wages in Science, Technology, Engineering, and Math,'' Center for Immigration Studies (May 2014,), available at *http://cis.org/no-stem-shortage./.*/. Additionally, one commenter cited the book *Sold Out* by Michelle Malkin and John Miano to provide evidence that there is no STEM worker shortage in the United States.

[128] None of the commenters cited the source of the analysis using these Bureau of Labor Statistics (BLS) data. However, DHS has concluded through its own research that the source appears to be a news article. *See* ''New Data: U.S.-born Workers Lose Jobs while Foreign-born Find Them,'' The Daily Caller News Foundation, (Jan. 8, 2016), available at *http://dailycaller.com/2016/01/08/new-data-us-born-workers-lose-jobs-while-foreign-born-find-them/.*

[129] *See* United States Department of Labor, Bureau of Labor Statistics, Local Area Unemployment Statistics, Regional and State Unemployment—2015 Annual Averages, Table 1 ''Employment status of the civilian non-institutional population 16 years of age and over by region, division, and state, 2014–15 annual averages'' (Mar. 24, 2016), *available at http://www.bls.gov/news.release/pdf/srgune.pdf.*

[130] *Calculation:* 92,600 / 157,130,000 * 100 = 0.059 percent (or 0.06 percent rounded).

[131] Spouses of E–3 and L–1 nonimmigrants are currently eligible for employment authorization. However, due to data limitations, DHS did not remove those spouses of E–3 and L–1 nonimmigrants from the estimate of dependent spouses and children who could be eligible to apply for EADs under this rule. Moreover, a recently promulgated DHS regulation allows for certain H–4 nonimmigrant spouses of H–1B nonimmigrant workers to apply for employment authorization if the principal H–1B nonimmigrant worker: (1) Is the beneficiary of an approved Form I–140 petition, or (2) is extending status under section 106(a) and (b) of AC21 because a petitioning employer has started the employment-based permanent residence process on his or her behalf. The RIA estimates in this final rule for dependent spouses and children do not include certain H–4 spouses who are eligible to apply for work authorization under the recently promulgated DHS regulation. *See* ''Employment Authorization for Certain H–4 Dependent Spouses; Final rule,'' 80 FR 10284 (Feb. 25, 2015).

[132] DHS is not able to determine the age of dependent children at this time, and is therefore unable to predict the number of dependent children who are eligible to work under the Fair Labor Standards Act (FLSA) (*see* U.S. Department of Labor, Youth and Labor Age Requirements, available at: *http://www.dol.gov/dol/topic/youth labor/agerequirements.htm*). While USCIS does not have a policy restricting eligibility for requesting employment authorization based on age, the FLSA restricts employment eligibility.

[133] DHS did not remove spouses of E–3 and L–1 nonimmigrants from the estimate of dependent spouses and children who could be eligible to apply for employment authorization under this rule. Spouses of E–3 and L–1 nonimmigrants are currently otherwise eligible to apply for EADs.

[134] Ehrenberg, R.G., and Smith, R.S. (2012). Modern labor economics: Theory and public policy. (11th ed.). Boston, Massachusetts: Prentice Hall.

the U.S. Many of the changes outlined in the rule are primarily aimed at high-skilled workers who are beneficiaries of approved employment-based immigrant visa petitions and are waiting to become lawful permanent residents (LPRs). Additionally, the changes are meant to increase the ability of such workers to seek promotions, accept lateral positions with current employers, change employers, or pursue other employment options. DHS acknowledges there is a possibility that this rule could impact foreign-born STEM workers in the United States. However, DHS is not able to quantify the magnitude of the potential effect this rule could have on the number of such workers because we cannot separate individuals who are specifically STEM workers from the broader population of high-skilled foreign workers, who are the focus of this rule. DHS notes that commenters did not provide estimates or sources of data to more accurately determine the additional number of workers this rule may add.

Moreover, DHS appreciates the comments received citing studies suggesting that the United States does not have a STEM worker shortage. DHS notes that the intention of this rule is not to increase the number of STEM workers in the United States or to eliminate a possible STEM worker shortage. While, as just noted, there is a possibility that this rule could impact the number of STEM foreign workers, DHS does not know how many STEM foreign workers would be impacted. Further, DHS explained in a recent rulemaking that there is no straightforward answer as whether the United States has a surplus or shortage of STEM workers.[135] Moreover, according the National Science Foundation (NSF),

> It depends on which segment of the workforce is being discussed (*e.g.,* sub-baccalaureates, Ph.D.s, biomedical scientists, computer programmers, petroleum engineers) and where (*e.g.,* rural, metropolitan, ''high-technology corridors''). It also depends on whether ''enough'' or ''not enough STEM workers'' is being understood in terms of the quantity of workers; the quality of workers in terms of education or job training; racial, ethnic or gender diversity, or some combination of these considerations (p. 9).[136]

The NSF highlights the complexity in definitively stating whether there is or is not a STEM worker shortage or surplus.

DHS reviewed the cited BLS data showing that foreign-born workers are gaining jobs at a much higher rate than native-born workers in support of their argument that immigration to the United States needs to be reduced. DHS notes that the BLS employment data cited show the monthly change in employment levels of the entire U.S. population, separated into groups of native-born and foreign-born workers for comparison.[137] In addition, the BLS data commenters cite specifically show the net change in employment levels over the two-month period of November to December 2015, during which native-born workers lost 320,000 jobs while foreign-born workers gained 306,000 jobs. When one examines the same BLS employment level data for all of calendar year 2015 (January to December), the data show that native-born workers gained 2,278,000 jobs and foreign-born workers gained 873,000 jobs. Considering these longer-term trends in employment levels, the data obtained from the short, seasonal period of time between November and December 2015 presents an incomplete and misleading picture.[138]

In addition, DHS appreciates the comments it received that large numbers of recent college graduates are having difficulty securing jobs and that foreign workers will saturate the job market, thereby increasing competition for jobs and denying them to recent U.S. graduates seeking work. As this rule is primarily focused on retaining and providing flexibilities to high-skilled foreign workers who are already in the United States, DHS disagrees with these commenters. Most of the high-skilled foreign workers targeted in this rule would not be competing for similar jobs or levels of jobs as recent college graduates. However, DHS has considered the impact on the labor market, as discussed in the RIA and in other sections of this final rule. As previously discussed though, the rule simply accelerates the timeframe by which spouses and dependents are able to enter the U.S. labor market. Importantly, the rule does not require eligible spouses and dependents to submit an application for employment authorization, nor does the granting of employment authorization guarantee that spouses and dependents will obtain employment.

Comment. Several commenters requested that DHS take steps to prevent situations in which large companies lay off a number of U.S. workers and replace them with H–1B nonimmigrant workers. Commenters have stated that the laid-off U.S. workers are often forced to train their H–1B replacements or forgo severance pay. One commenter stated that large outsourcing agencies have promoted the practice of replacing U.S. workers, and the rule should prohibit entities from submitting petitions for H–1B and L–1 classification if the entities have more than 50 employees and more than 50 percent of their workforce or subcontracted vendors are on H–1B and L–1 visas.

Response. Existing law and regulation provide some protection against the types of employer abuses cited by commenters. Before filing an H–1B petition, the U.S. employer petitioner generally must first file a labor condition application (LCA) with DOL that covers the proposed dates of H–1B employment.[139] Among other things, the LCA requires the petitioner to attest to the occupational classification in which the worker will be employed, the wage to be paid to the worker, the location(s) where the employment will occur, that the working conditions provided to the H–1B nonimmigrant

[135] ''Improving and Expanding Training Opportunities for F–1 Nonimmigrant Students with STEM Degrees and Cap-Gap Relief for All Eligible F–1 Students; Final rule,'' 81 FR 13040 (11 Mar. 2016).

[136] National Science Foundation (NSF), ''Revisiting the STEM Workforce: A Companion to Science and Engineering Indicators,'' 2014, 9 (Feb. 4, 2015), available at *http://www.nsf.gov/pubs/2015/nsb201510/nsb201510.pdf.*

[137] The BLS defines ''foreign-born'' as ''persons residing in the United States who were not U.S. citizens at birth. That is, they were born outside the United States or one of its outlying areas such as Puerto Rico or Guam, to parents neither of whom was a U.S. citizen. The foreign-born population includes legally-admitted immigrants, refugees, temporary residents such as students and temporary workers, and undocumented immigrants. The survey data, however, do not separately identify the numbers of persons in these categories.'' *See http://www.bls.gov/news.release/forbrn.tn.htm.*

[138] DHS notes that the source of these data, the Current Population Survey at BLS, presents a broad picture of employment, as it is a household survey and includes agricultural workers and the self-employed, although neither of these groups is within the main target population of this rule. The BLS conducts another employment survey, the Current Employment Statistics, based on payroll data that is a more reliable gauge of measuring month-to-month change due to a smaller margin of error than the household survey. Both the payroll and household surveys are needed for a complete picture of the labor market due to the make-up of the surveys and the type of respondents. However, these commenters only rely on the household survey. It is misleading to attribute statistics that encompass all foreign-born workers in the United States to only the high-skilled employment-based workers identified in this rule. The BLS data does not distinguish foreign workers by educational attainment, and while this rule is mainly aimed at high-skilled foreign workers who likely have at least a bachelor's degree, it would be incorrect to compare this specific population to all foreign-born workers. Foreign-born workers could include low-skilled workers, temporary workers, students, or even undocumented immigrants, which are not the main target populations for this rule.

[139] *See* INA sections 101(a)(15)(H)(i)(B) and 212(n), 8 U.S.C. 1101(a)(15)(H)(i)(B) and 1182(n).

worker will not adversely affect other similarly situated workers, and that there is no strike or lockout in the occupational classification at the place of employment.[140] Petitioners who employ a certain percentage of H–1B nonimmigrant workers are considered to be ''H–1B dependent'' and are subject to additional attestations.[141] These U.S. employers are required to attest that they did not and will not displace U.S. workers employed by the employer within the period beginning 90 days before and ending 90 days after the date of the filing of any visa petition supported by the LCA and that they took good faith steps to recruit qualified U.S. workers for the prospective H–1B position.[142] Employers are not subject to these additional requirements, however, if the only H–1B nonimmigrant workers sought in the LCA receive at least $60,000 in annual wages or have attained a master's or higher degree in a specialty related to the relevant employment.[143] DOL may impose penalties and fines if an employer fails to comply with the requirements of the LCA.[144]

DHS appreciates the commenter's suggestion that the rule should prohibit certain petitioners from being allowed to submit H–1B or L–1 petitions based on how many of their employees are already foreign workers; however, DHS notes such action is beyond the scope of this regulation. While DHS does not prevent petitioners from filing based on current numbers of foreign workers, certain petitioning employers are required by law to pay additional fees when filing H or L nonimmigrant petitions, depending on the size of the employer and number of foreign workers it employs in those statuses.[145]

ii. Effect of the Rule on Job Portability for Foreign Workers

Comment. Some commenters expressed concerns about the effect this rule will have on the ability of foreign workers to change jobs or employers (the ability to port). One commenter claimed that the inability of foreign workers to port distorts the labor market by preventing such workers from taking more senior positions. According to the commenter, this inability to advance reduces the number of available jobs that U.S. workers could fill and reduces economic growth.

Other commenters stated that the rule will have a favorable effect on U.S. workers. For example, one commenter stated that job flexibility for foreign workers will improve competition in the job market and allow foreign workers to better compete with American workers, thereby improving wages for all workers. Moreover, according to the commenter, allowing foreign workers to change jobs, as outlined in the rule, would allow such workers to progress in their careers without restrictions and would make the labor market fairer for all American citizens.

Response. DHS appreciates the comments regarding the rule's effect on the labor market due to the ability or inability of high-skilled foreign workers to port. The intent of this final rule is, in part, to alleviate some of the difficulties high-skilled foreign workers experience while trying to change jobs to progress in their careers or to change employers altogether, consistent with existing statutory authorities. Currently, section 204(j) of the INA authorizes DHS to provide job flexibility for applicants with long-delayed applications for adjustment of status. Under this section, foreign nationals are eligible to port to a new position with either the same or a new employer if he or she filed an Application to Register Permanent Residence or Adjust Status (Form I–485) that has remained pending for 180 days or more, as long as the new job is in the same or a similar occupational classification as the job for which the underlying employment-based immigrant visa petition was filed.

Moreover, DHS appreciates the commenter's concern that the lack of job portability diminishes economic growth by restricting upward and lateral job mobility of foreign workers, which in turn prevents jobs from opening up that may be filled by U.S. workers. The focus of this rule is to streamline and standardize the porting process and make it easier for eligible individuals to port and advance upwards in their careers. DHS believes that standardizing job portability will thus benefit high-skilled workers in immigrant and nonimmigrant visa classifications.

iii. Effect of the Rule on Wages

Comment. Many commenters expressed concerns about the effect this rule will have on wages. One of the primary concerns commenters had is that the rule will lead to an overall reduction in wages for U.S. workers because employers will be inclined to hire immigrant workers who may work for lower wages. A few commenters claimed that some companies underpay U.S. workers by implicitly threatening to replace them with lower-paid foreign workers with H–1B or L–1 nonimmigrants. Moreover, DHS received many comments about the impact this rule would have on wages from the perspective of immigrant workers. Many of these commenters stated that the rule will lead to wage suppression because it will still be difficult for immigrant workers to change jobs easily, thereby allowing employers to offer lower wages to immigrant workers as well as U.S. workers. Commenters expressed that this resulting decline in wages would especially be felt in the technology sector. Some commenters asserted that many companies lay off native-born engineers and other technology industry workers during economic downturns, and then rehire immigrant workers at reduced wages.

Other commenters stated that the rule will have a favorable effect on the wages of high-skilled U.S. and foreign workers. Many commenters noted that high-skilled foreign workers raise the wages of U.S. workers. For example, some commenters cited recently published research showing that higher numbers of H–1B nonimmigrant workers in STEM fields appear to positively affect the wages of U.S. high-skilled workers.[146] Finally, commenters mentioned that as wages increase for high-skilled foreign workers, the economy will improve and additional taxes will be paid into the system.

Response. DHS appreciates the points of view commenters expressed regarding the effect of the rule on wages for native-born and immigrant workers, but disagrees with statements that wages will be depressed by this rule. DHS notes that a large body of research exists supporting the findings that high-skilled immigrant workers are beneficial to the U.S. economy and labor market in the long term. While recent research shows evidence that immigration of high-skilled workers leads to net long-term benefits, there is a potential for negative impacts in the short-term for some U.S.

[140] *See* INA section 212(n), 8 U.S.C. 1182(n); *see also* 20 CFR 655.730(c)(4) and (d).

[141] *See* INA section 212(n)(3)(A), 8 U.S.C. 1182(n)(3)(A); *see also* 20 CFR 655.736.

[142] *Id. See* INA section 212(n)(1) and (3), 8 U.S.C. 1182(n)(1) and (3); *see also* 20 CFR 655.736.

[143] *See* INA section 212(n)(1)(E)(ii) and (n)(3)(B), 8 U.S.C. 1182(n)(1)(E)(ii) and (n)(3)(B).

[144] *See* INA 212(n)(2), 8 U.S.C. 1182(n)(2); *see also* 20 CFR 655.800 *et seq.*

[145] *See* H and L Filing Fees for USCIS Form I–129, Petition for a Nonimmigrant Worker, available at: *https://www.uscis.gov/forms/h-and-l-filing-fees-form-i-129-petition-nonimmigrant-worker.*

[146] *See* Rothwell, J., and N.G. Ruiz,''H–1B Visas and the STEM Shortage,'' Brookings Institution, (2013), *available* at *http://www.brookings.edu/research/papers/2013/05/10-h1b-visas-stem-rothwell-ruiz.* The authors of this paper also published a companion white paper that expands upon the research published by the Brookings Institution, see Rothwell, J., and N.G. Ruiz, ''H–1B Visa and the STEM Shortage: A Research Brief. Social Science Research Network (SSRN)'' (2013), available at *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2262872.*

workers.[147] In fact, most federal government reports and academic literature show that immigration generally produces a modest increase in the wages of native-born workers in the long run, and that any negative economic effects (in the form of wages) are largely felt by other immigrant workers with education and skill levels similar to native-born workers.[148] However, there is some debate regarding wages in the economic literature. For example, lower-skilled and less educated workers may experience declining wages as an immediate, short-run response to a sudden, unexpected increase in the labor supply (*i.e.,* a labor supply shock) before wage levels recover or exceed where they were prior to the increase in the labor supply.[149] A recent Congressional Budget Office (CBO) report presents a similar finding, though with a focus on all U.S. workers rather than just native-born workers.[150] The CBO report finds that average wages for low-skilled workers would initially decline in response to a labor supply shock, but would steadily increase towards, and eventually exceed, the pre-labor supply shock wage level. The downward pressure on average wages would be an effect of the additional, new low-skilled workers being paid lower wages, rather than native-born workers being paid less. Additionally, an increased number of high and low-skilled workers in the labor force are expected to increase employment and economic growth (*i.e.,* increase the rate of growth of gross domestic product [GDP]) as well as increase labor productivity as workers gain more flexibility in the labor market and are able to pursue additional training and activities to improve skills.[151]

DHS takes seriously commenters that stated that some companies underpay U.S. workers by implicitly threatening to replace them with lower-paid foreign workers on H–1B and L–1 visas. DHS continues to work with DOL to protect U.S. workers. To protect the wages and working conditions of U.S. workers, the INA requires employers that file a request with DHS for an H–1B nonimmigrant worker to first file an LCA with DOL, attesting to pay the required wage; to provide working conditions that will not adversely affect the working conditions of U.S. workers similarly employed; that there is no strike, lockout, or work stoppage in the course of a labor dispute in the occupational classification at the place of employment at the time of filing; and to notify its U.S. workers that it intends to hire the nonimmigrant worker.[152] Similarly, the majority of employers that file a Form I–140 petition with DHS must first file a labor certification application with DOL, which requires a labor market test of U.S. workers and attestations to numerous labor conditions, such as paying the required wage,[153] providing working conditions that will not adversely affect U.S. workers, and only rejecting U.S. worker applicants for lawful, job-related reasons.[154]

iv. Effect of Employment-Based Immigration on Falling Income

Comment. Some commenters stated that median household income has been driven down by $4,000 per year because immigrants are entering the labor market.

Response. DHS does not agree with these commenters. While the commenters did not identify the source of their statement, DHS assumes the statement came from an opinion editorial that stated a series of assertions related to U.S. economic conditions.[155] Although the topic of the opinion editorial concerned the effect of immigration in the United States on native-born workers, the assertions it makes, including that ''median family income is down $4,000 since November 2007,'' are not attributed as being directly caused by immigration as some commenters state in their opposition to this rule.[156] Of note, the United States, along with many other industrialized countries, experienced a major economic recession between 2007 and 2009, and which continued to impact the global economy well after 2009. It is far more likely that median family income decreased during that period as a result of such a major economic recession and the lasting impacts of that recession, rather than solely due to the effects of immigration.

v. Effect of the Rule on Costs Incurred by Employers

Comment. Many commenters, both employers and employees, suggested that this rule overall would unnecessarily increase administrative and legal costs, as well as time burdens, for employers, which may discourage employers from hiring high-skilled foreign workers. Other commenters expressed concerns that the rule would deter employers from either retaining existing foreign workers or hiring new foreign workers by making regulatory compliance a more difficult process. Commenters suggested that hiring immigration attorneys would be necessary to complete the paperwork and thus employers would invest thousands of dollars into hiring high-skilled foreign workers, but have no guarantee of retaining those employees. Employers cited costs ranging from $10,000 to $20,000 or more per employee for both USCIS and attorney fees. Many employers expressed concern over losing their financial investment in new employees if portability is exercised more

[147] *See* ''The Economic Impact of S. 744, the Border Security, Economic Opportunity, and Immigration Modernization Act,'' Congressional Budget Office (CBO), (June 18, 2013), *available* at *http://www.cbo.gov/sites/default/files/cbofiles/attachments/44346-Immigration.pdf;* Ottaviano, G. & Peri, G., ''Rethinking the Effects of Immigration on Wages,'' *Journal of the European Economic Association,* (Feb. 2012), 10(1): 152–197.

[148] *Id.*

[149] *See* Borjas, George J., ''The Wage Impact of the *Marielitos:* A Reprisal'' (2015), *available* at *http://www.hks.harvard.edu/fs/gborjas/publications/working%20papers/Mariel2015.pdf.* Borjas' findings focus specifically on low-skilled and low-educated Cuban immigrants who arrived in the United States during the 1980 Mariel boatlift. As many as 125,000 Cubans immigrated to the United States by the end of 1980 with as many as half settling in the Miami area, thereby increasing the number of workers by about 8 percent and increasing the number of high school dropouts by almost 20 percent.

[150] *See* ''The Economic Impact of S. 744, the Border Security, Economic Opportunity, and Immigration Modernization Act,'' Congressional Budget Office (CBO), (June 18, 2013), *available* at *http://www.cbo.gov/sites/default/files/cbofiles/attachments/44346-Immigration.pdf.* According to the report, wages for the entire labor force are projected to be 0.1 percent lower through 2023, but then increase through 2033 to where wages are about 0.5 percent higher than the initial wage level in 2013. After disaggregating relative wages according to skill level, CBO estimated that wages of those in the lowest and highest quintile (low-skilled and high-skilled, respectively) would decline by 0.3 percent; the wages of those in the middle three quintiles are expected to increase by 0.5 percent. The CBO report emphasizes the overall level of wages is also affected by other factors such as the capital-to-labor ratio and total factor productivity.

[151] Treyz, Frederick R., C. Stottlemyer, and R. Motamedi, ''Key Components of Immigration Reform: An Analysis of the Economic Effects of Creating a Pathway to Legal Status, Expanding High-skilled Visas, & Reforming Lesser-skilled Visas,'' Regional Economic Models, Inc. (REMI), (2013), *available* at *http://www.remi.com/immigration-report.*

[152] *See* INA 212(n), 8 U.S.C. 1182(n); *see also* 8 CFR 214.2(h)(4)(i)(B) and 20 CFR 655.700.

[153] Before filing a labor certification application, an employer must obtain a prevailing wage determination from DOL. The prevailing wage determination establishes the minimum wage the employer may offer and pay to the foreign national, as well as advertise in the course of recruitment to U.S. workers. *See* INA 212(p), 8 U.S.C. 1182(p); *see also* 20 CFR part 656.

[154] *See* 20 CFR part 656.

[155] None of the commenters cited the source for this statement. However, a similar amount for median household income in the immigration context was published in the *National Review. See* Sessions, J., ''Who's Looking Out for the American Worker,'' National Review, (Dec. 12, 2014), *available* at *http://www.nationalreview.com/article/394614/whos-looking-out-american-worker-jeff-sessions.*

[156] *Id.*

extensively. However, some employers supported this rule because it would help them hire the best talent. Employees who commented on this issue stated that employers spend a small percentage of their revenue on immigration-related fees, which are offset from the benefits they receive from high-skilled workers.

Response. DHS appreciates the concern expressed about additional employer costs and the impact on high-skilled workers. It is unclear to DHS of the source and composition of the specific costs that commenters cited, which ranged from $10,000 to $20,000. Commenters did not provide any detailed evidence of how these total employer costs were calculated, nor did they indicate any source for these estimates. DHS assumes these total costs may be comprised of filing fees and opportunity costs of time, including the employment of a lawyer, among other costs not defined. There may be some additional costs to employers due to employee turnover, as recognized and discussed in the RIA. DHS acknowledges that the rule may negatively affect some U.S. employers that sponsor workers for employment-based immigrant visas, primarily through higher rates of employee turnover due to accepting offers of employment with other employers. DHS reiterates that these are not required benefits and employers voluntarily sponsor workers. Employers incur costs by filing an employment-based immigrant visa petition on an employee's behalf when seeking to sponsor that employee for lawful permanent residence. However, employers may view the costs associated with sponsoring an employee as a tangible investment in the company. Firms make rational decisions to hire foreign workers that fill a need such that the cost of the investment is outweighed by the potential benefit of employing that foreign worker. At the same time, if the principal beneficiary of the immigrant visa petition is in a compelling situation that qualifies for temporary employment authorization or ports and changes employers under either INA 204(j) or pursuant to the H–1B portability provisions, the petitioning employer could incur some turnover costs. Consequently, increased rates of employee turnover may occur as certain nonimmigrant workers pursue employment with different employers. Other employers, however, will benefit by being able to hire these foreign workers without having to expend any immigration petition costs.

With regard to commenters' concerns that the rule would deter employers from either retaining existing foreign workers or hiring new foreign workers by making regulatory compliance a more difficult process, DHS notes that, for the most part, it is codifying longstanding policy and practice implementing relevant provisions of AC21. Many of these changes are primarily aimed at improving the ability of U.S. employers to hire and retain high-skilled workers who are beneficiaries of approved employment-based immigrant visa petitions and are waiting to become lawful permanent residents, while increasing the ability of those workers to seek promotions, accept lateral positions with current employers, change employers, or pursue other employment options. DHS's intention is not to add to regulatory compliance, but rather to simplify and ease regulatory compliance.

4. DHS Estimate of 155,000 Compelling Circumstances Employment Authorization Applicants

Comment. Several commenters questioned the DHS estimate of 155,000 EADs that could be issued under the compelling circumstances provisions of this rule. Many commenters stated that this estimate was much higher than the actual number of individuals who would qualify for the compelling circumstances EAD. One commenter stated that there is no justification for how this number was estimated. Another commenter asked if this estimate was changed at the last minute due to pressure from lobbyists. A commenter also asked if USCIS estimated how many people with approved Form I–140 petitions will be eligible for EADs based on ''compelling circumstances.''

Response. DHS appreciates the comments regarding the estimated number of compelling circumstances EADs that could be issued under the provisions of this rule. Commenters questioned DHS's estimate of more than 155,000 EADs and the lack of justification for how USCIS estimated this number. However, commenters did not provide an alternative source of data that would provide a more accurate estimate. DHS estimated the maximum annual average of individuals who may request employment authorization under the provisions of this rule in the first two years. DHS estimated this maximum average was 155,067 for PRA purposes in the NPRM.[157] In the NPRM, DHS estimated that a maximum total of 257,039 individuals may be eligible to apply for employment authorization based on compelling circumstances in the first year of implementation and a maximum annual estimate of 53,095 individuals in the second and subsequent years.[158] As detailed in the RIA to the NPRM and final rule, DHS estimates the maximum number of individuals that may be eligible to apply for employment authorization; however, the analysis is unable to model for the number of individuals who will find themselves in compelling circumstances or predict their eligibility along those discretionary lines. Please consult the RIA for the final rule for a detailed explanation on the DHS estimates of the backlog, annual flow, and associated costs.

In the RIA for this final rule, DHS has updated the estimated maximum number of individuals that may be eligible to apply for the compelling circumstances employment authorization. DHS estimates for the final rule that a maximum total of 361,766 individuals may be eligible to apply for employment authorization based on compelling circumstances in the first year of implementation of this rule and a maximum annual estimate of 64,561 individuals in the second and subsequent years.[159] DHS reiterates that eligibility for independent employment authorization will be limited to those who meet specified criteria that demonstrate compelling circumstances, and who are physically present in the United States. Such individuals must be in specified, eligible nonimmigrant visa classifications with approved employment-based immigrant visa

[157] Calculation: [257,039 (maximum total of eligible individuals in year 1) + 53,095 (maximum annual estimate in year 2)]/2 = 155,067.

[158] For the proposed rule, DHS estimated a maximum total of 257,039 individuals, which includes the backlog estimate of 203,944 individuals (principals and eligible dependent spouses and children) and the annual estimate of 53,095 individuals. DHS assumes that all individuals in the backlog will apply for employment authorization in the first year of implementation of this rule. Moreover, as described in the RIA, the visa ''backlog'' is the estimated number of persons waiting for the availability of an immigrant visa. DHS estimated the number of persons in the specified, eligible nonimmigrant visa classifications with approved Form I–140 petitions who are currently waiting for a visa to become available in certain employment-based preference categories.

[159] For the final rule, DHS estimated a maximum total of 361,766 individuals, which includes the backlog estimate of 297,205 individuals (principals and eligible dependent spouses and children) and the annual estimate of 64,561 individuals. DHS again assumes that all individuals in the backlog will apply for employment authorization in the first year of implementation of this rule. Note that due to data limitations the estimates of the population eligible to be granted employment authorization based on compelling circumstances presented are the maximum number of individuals that may be eligible to apply; however, DHS expects that a smaller number of individuals, in practice, will choose to apply.

petitions and are currently waiting for a visa to become available in certain employment-based preference categories. Employment authorization based on compelling circumstances granted under this rule will be valid for a period of one year.

5. Unfunded Mandates Reform Act Violation

Comment. One commenter stated that these regulations violate the federal mandates in the Unfunded Mandates Reform Act (UMRA). The commenter stated that the NPRM is clearly within the scope of both the private sector and state and local area UMRA mandates. The commenter was of the view that the rule falls within UMRA based on the following factors: (1) Economic expenditures exceed $100 million (adjusted for inflation) in the first year; and (2) if implemented, the proposed amendments codifying the AC21 and ACWIA policies and practices would affect and change the numbers of individuals subject to the H–1B cap and ACWIA fees. The commenter stated that extensions and other modifications to the ACWIA fee payment requirements ''would be an intergovernmental mandate as defined by UMRA'' because the rule changes the number and definition of foreign nationals to whom the ACWIA fees applies. The commenter also stated that these statutory mandates are imposed on all ''institutions of higher education'' and ''affiliated and related non-profit entities.''

The commenter also was of the view that the unfunded mandates associated with the published NPRM significantly change how the statutory caps on immigrant and H–1B nonimmigrant visas operate for all other H–1B employers as well. The commenter asserted that the NPRM states there is a very significant impact on the entire range of STEM- and IT-related economic sectors, which rely on increases in productivity and innovation driven by immigration of H–1B workers who adjust status while employed in the United States. The commenter stated that the proposed regulations are not the result of voluntary action by taxpayer funded state and local government agencies. Additionally, the commenter cited the book *Sold Out* by Michelle Malkin and John Miano to provide evidence that there is no STEM worker shortage in the United States.

Response. For this final rule, DHS has added a statement to address the requirements of Title II of UMRA. As stated in the UMRA section of this final rule, the $100 million expenditure threshold (adjusted for inflation) may be exceeded in the first year of implementation, and the main provisions driving the cost estimate are the employment authorization granted for compelling circumstances and porting ability under section 204(j) of the INA.

While these provisions do not directly impose any additional Federal mandates on state, local, and tribal governments, in the aggregate, or by the private sector, there may be some petitioning employers that could potentially experience some employee turnover costs should the worker beneficiaries of those petitions choose to port to another employer or obtain independent employment authorization based on compelling circumstances. DHS recognizes that these provisions could place additional burdens on the state and private sector in these circumstances. However, DHS reiterates that these are not required immigration benefits. State and private sector employers make the cost-benefit decisions of whether to expend finances to petition for foreign workers.

DHS agrees with the commenter that codifying the AC21 and ACWIA policies and practices would affect and change the numbers of individuals subject to the H–1B cap exemption and ACWIA fees. DHS provides this assessment of the ACWIA fees in the RIA of this final rule (as well as the RIA published in the NPRM). As stated in the RIA, DHS reported a total of 8,589 H–1B exemptions due to an employer being a nonprofit entity related to or affiliated with an institution of higher education.[160] DHS anticipates that there may be an increase as a result of these amendments in the numbers of cap exemptions, due to the employer being a nonprofit entity related to or affiliated with an institution of higher education. However, we cannot project the size of such an increase at this time. In addition, DHS notes that because petitioners that are currently cap-subject could become eligible for cap-exempt status, the transition of such currently cap-subject petitioners could result in other cap-subject petitioners being approved.

DHS does not state in the NPRM that there will be a significant impact on any specific sectors of the economy that may be reliant on H–1B workers, nor does it identify STEM- or IT-related workers as the main beneficiaries of the provisions in the final rule. As previously mentioned, DHS does not have enough data to substantiate the commenter's conclusion from Malkin and Miano's book on STEM worker shortages. Please see section Q(3)(i) for further discussion about the rule's intended beneficiaries and the effect on foreign workers in STEM fields. DHS reiterates that the goals of this rule include enhancing U.S. employers' ability to retain and attract high-skilled and certain other workers to the United States and increasing flexibility in pursuing normal career progression for those workers pursuing LPR status in certain employment-based immigrant visa categories who are waiting for immigrant visas to become available.

6. Review Under the National Environmental Policy Act (NEPA)

Comment. A commenter asserted that this rule, like all immigration rules, must be subject to review under the National Environmental Policy Act (NEPA). Under NEPA, agencies must prepare an Environmental Impact Statement for all ''major Federal actions significantly affecting the quality of the human environment.'' The commenter argued that concerns of the impact of human population growth on the quality of the environment must be taken into consideration under NEPA. The commenter suggested that both legal and illegal immigration is the principal cause of current U.S. population growth. Furthermore, the commenter claimed that DHS should prepare an environmental assessment to address the impacts of the result from this rule.

Response. The population affected by this rule is primarily comprised of immigrants and nonimmigrants who are already in the United States and have been present for a number of years. The rule increases flexibilities in pursuing normal career progression for those workers pursuing LPR status in certain employment-based immigrant visa categories who are waiting for visas to become available. For that reason, DHS does not consider this rulemaking to significantly affect the quality of the human environment. Further, this rule is categorically excluded from NEPA review. DHS Management Directive (MD) 023–01 Rev. 01 establishes procedures that DHS and its components use to comply with NEPA and the Council on Environmental Quality (CEQ) regulations for implementing NEPA, 40 CFR parts 1500–1508. CEQ regulations allow federal agencies to establish categories of actions, which do not individually or cumulatively have a significant effect on the human environment and, therefore,

[160] Department of Homeland Security, Report on H–1B Petitions, Fiscal Year 2015 Annual Report to Congress October 1, 2014—September 30, 2015. Available at: *https://www.uscis.gov/sites/default/files/USCIS/Resources/Reports%20and%20Studies/H-1B/H-1B-FY-2015-Petitions.pdf.*

do not require an Environmental Assessment or Environmental Impact Statement. 40 CFR 1507.3(b)(1)(iii), 1508.4. The MD 023–01 Rev. 01 establishes the Categorical Exclusions that DHS has found to have no such effect. MD 023–01 Rev. 01 Appendix A Table 1.

For an action to be categorically excluded, MD 023–01 Rev. 01 requires the action to satisfy each of the following three conditions: (1) The entire action clearly fits within one or more of the Categorical Exclusions; (2) the action is not a piece of a larger action; and (3) no extraordinary circumstances exist that create the potential for a significant environmental effect. MD 023–01 Rev. 01 section V.B(1)–(3).

DHS has determined that this rule does not individually or cumulatively have a significant effect on the human environment because it fits within the Categorical Exclusion found in MD 023–01 Rev. 01, Appendix A, Table 1, number A3(d): ''Promulgation of rules . . . that interpret or amend an existing regulation without changing its environmental effect.'' Rather, this rule affects current participants in immigration programs by codifying existing policies and procedures and making amendments to DHS regulations designed to improve its immigration programs.

Finally, this rule is not part of a larger action and presents no extraordinary circumstances creating the potential for significant environmental effects because it does not introduce new populations that may have an impact on the environment. Therefore, this rule is categorically excluded from further NEPA review.

V. Statutory and Regulatory Requirements

A. Executive Orders 12866 and 13563 (Regulatory Planning and Review)

Executive Orders 12866 and 13563 direct agencies to assess the costs and benefits of available alternatives, and if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This rule has been designated a ''significant regulatory action'' that is economically significant, under section 3(f)(1) of Executive Order 12866. Accordingly, the rule has been reviewed by the Office of Management and Budget.

DHS is amending its regulations relating to certain employment-based immigrant and nonimmigrant visa programs. The amendments interpret existing law and change regulations in order to provide various benefits to participants in those programs, including: Improved processes for U.S. employers seeking to sponsor and retain immigrant and nonimmigrant workers, greater stability and job flexibility for such workers, and increased transparency and consistency in the application of DHS policy related to affected classifications. Many of these changes are primarily aimed at improving the ability of U.S. employers to retain high-skilled workers who are beneficiaries of approved employment-based immigrant visa petitions and are waiting to become LPRs, while increasing the ability of those workers to seek promotions, accept lateral positions with current employers, change employers, or pursue other employment options.

First, DHS amends its regulations consistent with certain worker portability and other provisions in AC21 and ACWIA. These amendments clarify and improve longstanding DHS policies and practices, previously articulated in DHS memoranda and precedent decisions. These amendments also implement sections of AC21 and ACWIA relating to certain foreign workers who have been sponsored for LPR status by their employers. In so doing, the rule provides a primary repository of governing rules for the regulated community and enhances consistency among DHS adjudicators. In addition, the rule clarifies several interpretive questions raised by AC21 and ACWIA.

Second, and consistent with existing DHS authorities and the goals of AC21 and ACWIA, DHS is amending its regulations governing certain employment-based immigrant and nonimmigrant visa programs to provide additional stability and flexibility to employers and workers in those programs. The final rule, among other things: Improves portability for certain beneficiaries of approved employment-based immigrant visa petitions by limiting the grounds for automatic revocation of petition approval; enhances job portability for such beneficiaries by improving their ability to retain their priority dates for use with subsequently approved employment-based immigrant visa petitions; establishes or extends grace periods for certain high-skilled nonimmigrant workers so that they may more easily maintain their nonimmigrant status when changing employment opportunities or preparing for departure; and provides additional stability and flexibility to certain high-skilled workers by allowing those who are working in the United States in certain nonimmigrant statuses, are the beneficiaries of approved employment-based immigrant visa petitions, are subject to immigrant visa backlogs, and demonstrate compelling circumstances to apply for employment authorization for a limited period. These and other changes provide much needed flexibility to the beneficiaries of employment-based immigrant visa petitions, as well as the U.S. employers who employ and sponsor them for permanent residence. In addition, these changes provide greater stability and predictability for U.S. employers and avoid potential disruptions to their operations in the United States.

Finally, consistent with providing additional certainty and stability to certain employment-authorized individuals and their U.S. employers, DHS is also changing its regulations governing the processing of applications for employment authorization to minimize the risk of any gaps in such authorization. These changes provide for the automatic extension of the validity of certain Employment Authorization Documents (EADs or Form I–766) for an interim period upon the timely filing of an application to renew such documents. At the same time, in light of national security and fraud concerns, DHS is removing regulations that provide a 90-day processing timeline for EAD applications and that require the issuance of interim EADs if processing extends beyond the 90-day mark.

Table 1, below, provides a more detailed summary of the provisions and their impacts.

TABLE 2—SUMMARY OF PROVISIONS AND IMPACTS

Provisions	Purpose	Expected impact of the final rule
Priority Date	Clarifies when a priority date is established for employment-based immigrant visa petitions that do not require a labor certification under INA 203(b).	Quantitative: • Not estimated. Qualitative: • Removes ambiguity and sets consistent priority dates for affected petitioners and beneficiaries.
Priority Date Retention	Explains that workers may retain priority dates and transfer those dates to new and subsequently approved Form I–140 petitions, except when USCIS revokes approval of the petition for: Material error, fraud or willful misrepresentation of a material fact, or revocation or invalidation of the labor certification accompanying the petition.	Quantitative: • Not estimated. Qualitative: • Results in administrative efficiency and predictability by explicitly listing when priority dates are lost as the approval of the petitions that are revoked under these specific grounds cannot be used as a basis for an immigrant visa. • Improves the ability of certain workers to accept promotions, change employers, or pursue other employment opportunities.
Employment-Based Immigrant Visa Petition Portability Under 204(j).	Incorporates statutory portability provisions into regulation.	Quantitative: Petitioners— • Opportunity costs of time to petitioners for 1-year range from $126,598 to $4,636,448. DHS/USCIS— • Neutral because the new supplementary form to the application for adjustment of status to permanent residence will formalize the process for USCIS requests for evidence of compliance with INA 204(j) porting. Qualitative: Applicants/Petitioners— • Replaces, through the Supplement J standardized form, the need for individuals to submit job offer and employment confirmation letters. • Provides stability and job flexibility to certain individuals with approved employment-based immigrant visa petitions. • Implements the clarifications regarding "same or similar occupational classifications" through the new Supplement J. • Allows certain foreign workers to advance and progress in their careers. • Potential increased employee replacement costs for employers. DHS/USCIS— • Administrative efficiency. • Standardized and streamlined process.
Employment Authorization for Certain Nonimmigrants Based on Compelling Circumstances.	Provisions allowing certain nonimmigrant principal beneficiaries, and their dependent spouses and children, to apply for employment authorization if the principal is a beneficiary of an approved EB–1, EB–2, or EB–3 immigrant visa petition while waiting for his or her immigrant visa to become available. Applicants must demonstrate compelling circumstances justifying an independent grant of employment authorization.	Quantitative: Total costs over 10-year period to applicants are: • $731.1 million for undiscounted costs. • $649.9 million at a 3% discounted rate. • $565.2 million at a 7% discounted rate. Qualitative: Applicants— • Provides ability for nonimmigrants who have been sponsored for LPR status to change jobs or employers when compelling circumstances arise. • Incentivizes such skilled nonimmigrant workers contributing to the economy to continue seeking LPR status. • Nonimmigrant principal workers who take advantage of the compelling circumstances EAD will lose their current nonimmigrant status and may not be able to adjust to LPR status in the United States. • Consular processing imposes potentially significant costs, risk and uncertainty for individuals and their families as well. Dependents— • Allows dependents to enter labor market earlier and contribute to household income.

TABLE 2—SUMMARY OF PROVISIONS AND IMPACTS—Continued

Provisions	Purpose	Expected impact of the final rule
90-Day Processing Time for Employment Authorization Applications.	Eliminates regulatory requirement for 90-day adjudication timeframe and issuance of interim-EADs. Adds provisions allowing for the automatic extension of EADs for up to 180 days for certain workers filing renewal requests.	Quantitative: • Not estimated. Qualitative: Applicants— • Removing a regulatory timeframe and moving to one governed by processing goals could potentially lead to longer processing times whenever USCIS is faced with higher than expected filing volumes. If such a situation were to occur, this could lead to potential delays in work employment start dates for first-time EAD applicants until approval is obtained. However, USCIS believes such scenarios will be rare and mitigated by the automatic extension provision for renewal applications which will allow the movement of resources in such situations. • Providing the automatic continuing authorization for up to 180 days for certain renewal applicants could lead to less turnover costs for U.S. employers. In addition, the automatic extension provision minimizes the applicants' risk of any gaps in employment authorization. DHS/USCIS— • Streamlines the application and card issuance processes. • Enhances the ability to ensure all national security verification checks are completed. • Reduces duplication efforts. • Reduces opportunities for fraud and better accommodates increased security measures.
Automatic Revocation With Respect to Approved Employment-Based Immigrant Visa Petitions.	Revises regulations so that a petition may remain valid despite withdrawal by the employer or termination of the employer's business after 180 days or more of approval, or 180 days or more after the associated application for adjustment of status has been filed.	Quantitative: • Not estimated. Qualitative: • Allows beneficiary to retain priority date unless the petition is revoked for one of the reasons specified in final 8 CFR 204.5(e)(2). • Affords porting ability under INA 204(j) and extension of H–1B status pursuant to AC21 sections 104(c) and 106(a) and (b), as well as potential eligibility for the new compelling circumstances EAD.
Period of Admission for Certain Nonimmigrant Classifications.	Nonimmigrants in certain high-skilled, nonimmigrant classifications may be granted grace periods of up to 10 days before and after their validity period, and a grace period upon cessation of employment on which the foreign national's classification was based, for up to 60 days or until the end of their authorized validity period, whichever is shorter, during each authorized validity period.	Quantitative: • Not estimated. Qualitative: Nonimmigrant Visa Holders— • Assists the beneficiary in getting sufficiently settled such that he or she is immediately able to begin working upon the start of the petition validity period. • Provides time necessary to wrap up affairs to depart the country. • Allows the beneficiary to maintain nonimmigrant status when faced with a termination of employment to wrap up affairs, find new employment, or change to a different nonimmigrant classification.
Portability of H–1B Status Calculating the H–1B Admission Period Exemptions Due to Lengthy Adjudication Delays per Country Limitation Exemptions, Employer Debarment and H–1B Whistleblower Provisions.	Updates, improves, and clarifies DHS regulations consistent with policy guidance.	Quantitative: • Not estimated. Qualitative: • Formalizes existing DHS policy in the regulations, which will give the public access to existing policy in one location. • Clarifies current DHS policy that there is no temporal limit on recapturing time.

TABLE 2—SUMMARY OF PROVISIONS AND IMPACTS—Continued

Provisions	Purpose	Expected impact of the final rule
H–1B Licensing Requirements.	Expands the evidence USCIS will examine in cases where a state allows an individual without licensure to fully practice the relevant occupation under the supervision of licensed senior or supervisory personnel in that occupation to include evidence of compliance with state requirements. Additionally, USCIS is expanding the possible situations in which it may approve an H–1B petition even though the beneficiary cannot obtain a license for certain technical reasons.	Quantitative: • Not estimated. Qualitative: • Provides additional flexibilities in obtaining necessary licensure while still permitting H–1B employment during the pendency of state or local license applications. • Helps to relieve the circular predicament an H–1B beneficiary may encounter. • May minimally increase time burden for the petitioner to gather information and send it to USCIS. However, DHS anticipates that the benefits to the petitioner and beneficiary exceed the opportunity costs of time. • May increase opportunity costs of time for USCIS adjudicators to evaluate additional evidence in such types of cases. However, DHS does not anticipate that the opportunity costs of time will be so substantial as to warrant additional hiring of staff or cause significant adjudication delays.
Exemptions to the H–1B Numerical Cap, Revised Definition of "Related or Affiliated Nonprofit Entity" in the ACWIA Fee Context, and Expanded Interpretation of "Governmental Research Organizations."	Codifies definition of "institution of higher education" and adds a broader definition of "related or affiliated nonprofit entity." Also, revises the definition of "related or affiliated nonprofit entity" for purposes of the ACWIA fee to conform it to the new definition of the same term for H–1B numerical cap exemption. Expands the interpretation of "governmental research organizations" for purposes of the ACWIA fee and aligns definitions for H–1B cap and fee exemptions.	Quantitative: • Not estimated. Qualitative: • Clarifies the requirements for a nonprofit entity to establish that it is related to or affiliated with an institution of higher education. • Better reflects current operational realities for institutions of higher education and how they interact with, and sometimes rely on, nonprofit entities. • Clarifies the interpretation of governmental research organizations to include federal, state, and local governmental organizations. • May expand the numbers of petitioners that are cap exempt and thus allow certain employers greater access to H–1B workers.

As required by OMB Circular A–4, Table 2 presents the prepared accounting statement showing the expenditures associated with this regulation.[161] These updated expenditures take into account all of the changes made to the regulation in addition to the updated cost estimates since publication of the proposed rule. The main benefits of the regulation remain the same: To improve processes for U.S. employers seeking to sponsor and retain immigrant and nonimmigrant workers, provide greater stability and job flexibility for such workers, and increase transparency and consistency in the application of DHS policy related to affected classifications.

TABLE 2—OMB A–4 ACCOUNTING STATEMENT

[$ millions, 2015]

Category	Primary estimate	Minimum estimate	Maximum estimate	Source citation (RIA, preamble, etc.)
Benefits				
Monetized Benefits	Not estimated	Not estimated	Not estimated	RIA.
Annualized quantified, but unmonetized, benefits	0	0	0	RIA.
Unquantified Benefits	Improves processes for U.S. employers seeking to sponsor and retain immigrant and nonimmigrant workers, provides greater stability and job flexibility for such workers, and increases transparency and consistency in the application of DHS policy related to affected classifications			RIA.
Costs				
Annualized monetized costs for 10-year period starting in 2016 to 2025 (discount rate in parenthesis).	(3%) $78.5 (7%) $82.8	$76.7 $80.9	$80.9 $85.1	RIA. RIA.

[161] OMB Circular A–4 is available at *www.whitehouse.gov/sites/default/files/omb/assets/omb/circulars/a004/a-4.pdf.*

TABLE 2—OMB A–4 ACCOUNTING STATEMENT—Continued

[$ millions, 2015]

Category	Primary estimate	Minimum estimate	Maximum estimate	Source citation (RIA, preamble, etc.)
Annualized quantified, but unmonetized, costs	N/A	N/A	N/A	RIA.
Qualitative (unquantified) costs	Potential turnover cost due to enhanced job mobility of beneficiaries of nonimmigrant and immigrant petitions			RIA.
Transfers				
Annualized monetized transfers: "on budget"	N/A	0	0	RIA.
From whom to whom?	N/A	N/A	N/A	N/A.
Annualized monetized transfers: "off-budget"	N/A	0	0	RIA.
From whom to whom?	N/A	N/A	N/A	N/A.
Miscellaneous analyses/category	Effects			Source Citation (RIA, preamble, etc.)
Effects on state, local, and/or tribal governments	None			RIA.
Effects on small businesses	No direct costs. Indirect effects only			RIA.
Effects on wages	None			None.
Effects on growth	None			None

DHS has prepared a full analysis according to Executive Orders 12866 and 13563. This analysis can be found by searching for RIN 1615–AC05 on *regulations.gov.*

B. Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996, Public Law 104–121, 5 U.S.C. 601–612 requires Federal agencies to consider the potential impact of regulations on small entities during the development of their rules. The term ''small entities'' comprises small businesses, not-for-profit organizations that are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000. An ''individual'' is not defined by the RFA as a small entity, and costs to an individual from a rule are not considered for RFA purposes. In addition, the courts have held that the RFA requires an agency to perform a regulatory flexibility analysis of small entity impacts only when a rule directly regulates small entities.[162] Consequently, any indirect impacts from a rule to a small entity are not costs for RFA purposes.

The changes made by DHS have direct effects on individual beneficiaries of employment-based nonimmigrant and immigrant visa petitions. As individual beneficiaries of employment-based immigrant visa petitions are not defined as small entities, costs to these individuals are not considered as RFA costs. However, because the petitions are filed by sponsoring employers, this rule has *indirect* effects on employers. The original sponsoring employer that files the petition on behalf of an employee will incur employee turnover related costs in cases in which that employee ports to a same or a similar occupation with another employer. Therefore, DHS has chosen to examine the indirect impact of this rule on small entities as well. The analysis of the indirect effects of these changes on small entities follows.

1. Final Regulatory Flexibility Analysis

Small entities that can incur additional indirect costs by this rule are those that file and pay fees for certain immigration benefit petitions, including Form I–140 petitions. DHS conducted a statistically valid sample analysis of these petition types to determine the number of small entities indirectly impacted by this rule. While DHS acknowledges that the changes engendered by this rule directly affect individuals who are beneficiaries of employment-based immigrant visa petitions, which are not small entities as defined by the RFA, DHS believes that the actions taken by such individuals as a result of this rule will have immediate indirect effects on U.S. employers. Employers will be indirectly affected by employee turnover-related costs as beneficiaries of employment-based immigrant visa petitions take advantage of this rule. Therefore, DHS is choosing to discuss these indirect effects in this final regulatory flexibility analysis.

i. A Statement of the Need for, and Objectives of, the Rule

The purpose of this action, in part, is to amend regulations affecting certain employment-based immigrant and nonimmigrant classifications in order to conform them to provisions of AC21 and ACWIA. The rule also seeks to provide greater job flexibility, mobility and stability to beneficiaries of employment-based nonimmigrant and immigrant visa petitions, especially when faced with long waits for immigrant visas. In many instances, the need for these individuals' employment has been demonstrated through the labor certification process. In most cases, before an employment-based immigrant visa petition can be approved, DOL has certified that there are no U.S. workers who are ready, willing and available to fill those positions in the area of intended employment. By increasing flexibility and mobility, the worker is more likely to remain in the United States and help fill the demonstrated need for his or her services.

[162] A Guide for Government Agencies How to Comply with the Regulatory Flexibility Act, May 2012 page 22. *See* Direct versus indirect impact discussion, *https://www.sba.gov/sites/default/files/advocacy/rfaguide_0512_0.pdf.*

ii. A Statement of the Significant Issues Raised by the Public Comments in Response to the Initial Regulatory Flexibility Analysis, a Statement of the Assessment of the Agency of Such Issues, and a Statement of Any Changes Made in the Proposed Rule as a Result of Such Comments

DHS published the NPRM along with the Initial Regulatory Flexibility Analysis (IRFA) on December 31, 2015 (80 FR 81899) with the comment period ending February 29, 2016. During the 60-day comment period, DHS received 27,979 comments from interested individuals and organizations. DHS received numerous comments that referred to aspects of the economic analysis presented with the NPRM. The comments, however, did not result in revisions to the economic analysis in the final rule that are relevant to the analysis of effects on small businesses, small organizations, and small governmental jurisdictions presented in this FRFA. DHS received few comments that referred specifically to the IRFA. DHS addresses these comments below.

Commenters only indirectly mentioned the IRFA by mentioning the impact of the form, Supplement J, on potential employers who may be small start-ups or small businesses. Commenters suggested that many of these small start-ups hire high-skilled foreign workers to stay competitive in high-technology industries in order to compete globally, and they believed that such hiring increased job opportunities for native-born U.S. citizens as well. Commenters expressed concern that Supplement J is an unnecessary burden, especially for small business owners and startups, and commented that it will not help to increase job portability.

DHS appreciates these viewpoints and carefully considered the impact of Supplement J throughout this rulemaking, especially to small entities. DHS reaffirms its belief expressed in the RIA for the NPRM and again in the RIA for the final rule that Supplement J will clarify the process to port to another job and increase flexibility to high-skilled workers so they can advance in their careers and progress in their occupations. As explained in the PRA, completing the Supplement J requires approximately 60 minutes. In the Initial Regulatory Flexibility Analysis, DHS examined the indirect impact of this rule on small entities as this rule does not directly impose costs on small entities. DHS recognizes that this rule imposes indirect costs on small entities because these provisions would affect beneficiaries of employment-based immigrant visa petitions. If those beneficiaries take certain actions in line with the rule that provide greater flexibility and job mobility, then there would be an immediate indirect impact on the current sponsoring U.S. employers. DHS reaffirms that the addition of Supplement J may negatively impact employers in the form of employee turnover costs and some additional burden.

iii. The Response of the Agency to Any Comments Filed by the Chief Counsel for Advocacy of the Small Business Administration in Response to the Proposed Rule, and a Detailed Statement of Any Change Made to the Proposed Rule in the Final Rule as a Result of the Comments

No comments were filed by the Chief Counsel for Advocacy of the Small Business Administration.

iv. A Description of and an Estimate of the Number of Small Entities to Which the Rule Will Apply or an Explanation of Why No Such Estimate Is Available

DHS conducted a statistically valid sample analysis of employment-based immigrant visa petitions to determine the maximum potential number of small entities indirectly affected by this rule when a high-skilled worker who has an approved employment-based immigrant visa petition, and an application for adjustment of status that has been pending for 180 days or more, ports to another employer. DHS utilized a subscription-based online database of U.S. entities, Hoovers Online, as well as three other open-access, free databases of public and private entities—Manta, Cortera, and Guidestar—to determine the North American Industry Classification System (NAICS) code, revenue, and employee count for each entity.[163] In order to determine the size of a business, DHS first classified each entity by its NAICS code, and then used SBA guidelines to note the requisite revenue or employee count threshold for each entity. Some entities were classified as small based on their annual revenue and some by number of employees.

Using a 12-month period, from September 2014 to August 2015, of data on actual filings of employment-based immigrant visa petitions, DHS collected internal data for each filing organization. Each entity may make multiple filings. For instance, there were 101,245 employment-based immigrant visa petitions filed, but only 23,284 unique entities that filed petitions. DHS devised a methodology to conduct the small entity analysis based on a representative, random sample of the potentially impacted population. To achieve a 95 percent confidence level and a 5 percent confidence interval on a population of 23,284 entities, DHS used the standard statistical formula to determine that a minimum sample size of 378 entities was necessary. DHS created a sample size greater than the 378 minimum necessary in order to increase the likelihood that our matches would meet or exceed the minimum required sample. Of the 514 entities sampled, 393 instances resulted in entities defined as small. Of the 393 small entities, 290 entities were classified as small by revenue or number of employees. The remaining 103 entities were classified as small because information was not found (either no petitioner name was found or no information was found in the databases). Table 3 shows the summary statistics and results of the small entity analysis of Form I–140 petitions.

TABLE 3—SUMMARY STATISTICS AND RESULTS OF SMALL ENTITY ANALYSIS OF FORM I–140 PETITIONS

Parameter	Quantity	Proportion of sample (%)
Population—petitions	101,245	
Population—unique entities	23,284	
Minimum Required Sample	378	
Selected Sample	514	100.0
Entities Classified as "Not Small":		
by revenue	99	19.2

[163] The Hoovers Web site can be found at *http://www.hoovers.com/;* The Manta Web site can be found at *http://www.manta.com/;* and the Cortera Web site can be found at *https://www.cortera.com/.*

TABLE 3—SUMMARY STATISTICS AND RESULTS OF SMALL ENTITY ANALYSIS OF FORM I–140 PETITIONS—Continued

Parameter	Quantity	Proportion of sample (%)
by number of employees	22	4.3
Entities Classified as "Small":		
by revenue	287	55.9
by number of employees	3	0.6
because no petitioner name found	84	16.3
because no information found in databases	19	3.7
Total Number of Small Entities	393	76.5

Source: USCIS analysis.

v. A Description of the Projected Reporting, Recordkeeping and Other Compliance Requirements of the Rule, Including an Estimate of the Classes of Small Entities Which Will Be Subject to the Requirement and the Type of Professional Skills Necessary for Preparation of the Report or Record

The amendments in this rule do not place direct requirements on small entities that petition for workers. However, if the principal beneficiaries of employment-based immigrant visa petitions take advantage of certain flexibility provisions herein (including porting to new sponsoring employers or pursuing employment authorization in cases involving compelling circumstances), there could be increased turnover costs (employee replacement costs) for U.S. entities sponsoring the employment of those beneficiaries, including costs of petitioning for new employees. While DHS has estimated 28,309 individuals who are eligible to port to new employment under section 204(j) of the INA, the Department was unable to predict how many will actually do so. As mentioned earlier in the Executive Orders 12866 and 13563 analysis, a range of opportunity costs of time to petitioners that prepare Supplement J ($43.93 for a human resources specialist, $93.69 for an in-house lawyer, or $160.43 for an outsourced lawyer) are anticipated depending on the total numbers of individuals who port. However, DHS is currently unable to determine the numbers of small entities who take on immigrant sponsorship of high-skilled workers waiting to adjust status based on petitions filed by original sponsoring employers. The estimates presented also do not represent employee turnover costs to original sponsoring employers, but only represent paperwork costs. Similarly, DHS is unable to predict the volume of principal beneficiaries of employment-based immigrant visa petitions who will pursue the option for employment authorization based on compelling circumstances.

The amendments relating to the H–1B numerical cap exemptions may impact some small entities by allowing them to qualify for exemptions of the ACWIA fee when petitioning for H–1B nonimmigrant workers. As DHS cannot predict the numbers of entities these amendments will affect at this time, the exact effect on small entities is not clear, though some positive effect should be anticipated.

vi. A Description of the Steps the Agency Has Taken To Minimize the Significant Economic Impact on Small Entities Consistent With the Stated Objectives of Applicable Statutes, Including a Statement of the Factual, Policy, and Legal Reasons for Selecting the Alternative Adopted in the Final Rule and Why Each One of the Other Significant Alternatives to the Rule Considered by the Agency Which Affect the Impact on Small Entities Was Rejected

This rule does not impose direct costs on small entities. Therefore, DHS has not proposed any measures to minimize direct effects on small entities. The final rule may indirectly affect small entities because the provisions would affect beneficiaries of employment-based immigrant visa petitions. If those beneficiaries take actions in line with certain proposals that provide greater flexibility and job mobility, then there is an immediate indirect impact—an externality—to the current sponsoring U.S. employers. DHS considered whether to exclude from the flexibility and job mobility provisions those beneficiaries who were sponsored by U.S. employers that were considered small. However, because DHS limited the eligibility for employment authorization to beneficiaries who are able to demonstrate compelling circumstances, and restricted the 204(j) portability provisions to those seeking employment within the same or a similar occupational classification, DHS did not believe it was necessary to pursue this alternative proposal. There are no other alternatives that DHS considered that would further limit or shield small entities from the potential of negative externalities and that would still accomplish the goals of this regulation. To reiterate, the goals of this regulation include providing increased flexibility and normal job progression for beneficiaries of approved employment-based immigrant visa petitions. To incorporate alternatives that would limit such mobility for beneficiaries that are employed or sponsored by small entities would be counterproductive to the goals of this rule.

C. Unfunded Mandates Reform Act of 1995

The Unfunded Mandate Reform Act of 1995 (UMRA) is intended, among other things, to curb the practice of imposing unfunded Federal mandates on state, local, and tribal governments. Title II of UMRA requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in a $100 million or more expenditure (adjusted annually for inflation) in any one year by state, local, and tribal governments, in the aggregate, or by the private sector. The value equivalent of $100 million in 1995 adjusted for inflation to 2014 levels by the Consumer Price Index for All Urban Consumers is $155 million. This rule exceeds the $100 million expenditure threshold in the first year of implementation (adjusted for inflation) and therefore DHS is providing this UMRA analysis.

1. An Identification of the Provision of Federal Law Under Which the Rule Is Being Promulgated

The authority of the Secretary of Homeland Security (Secretary) for these regulatory amendments is found in various sections of the INA, 8 U.S.C. 1101 *et seq.,* ACWIA, AC21, and the Homeland Security Act of 2002 (HSA), Public Law 107–296, 116 Stat. 2135, 6 U.S.C. 101 *et seq.* General authority for issuing the final rule is found in section 103(a) of the INA, 8 U.S.C. 1103(a), which authorizes the Secretary to administer and enforce the immigration and nationality laws, as well as section 102 of the HSA, 6 U.S.C. 112, which vests all of the functions of DHS in the Secretary and authorizes the Secretary to issue regulations. Further authority for the regulatory amendments in the final rule is found in Section II, Subpart B.

2. A Qualitative and Quantitative Assessment of the Anticipated Costs and Benefits of the Federal Mandate, Including the Costs and Benefits to State, Local, and Tribal Governments or the Private Sector, as Well as the Effect of the Federal Mandate on Health, Safety, and the Natural Environment

The two major provisions of this rule for economic analysis purposes provide job flexibility through INA 204(j) portability and job flexibility through employment authorization to a limited number of employment-authorized nonimmigrants in compelling circumstances. These provisions do not directly impose any additional Federal mandates on state, local, and tribal governments, in the aggregate, or by the private sector. However, employers who petition on behalf of applicants could potentially experience some employee turnover costs should these applicants choose to obtain the compelling circumstances EAD or choose to port to another employer. DHS recognizes that these provisions could place additional burdens on the state and private sector in these circumstances. DHS specifically considered the situation where a public institution of higher education filed a petition on behalf of a high skilled worker and that high skilled worker utilized porting under section 204(j) of the INA to move to another employer. The flexibilities provided as a result of this rule would place additional costs and burdens on the states in this scenario and other similar scenarios. However, DHS reiterates that these are not required immigration benefits. State and private sector employers make the cost-benefit decisions of whether to expend finances to petition for foreign workers. DHS presents the impacts of these provisions more fully in the RIA found with this final rule on *www.regulations.gov.*

DHS does not believe that this rule will have any impact on health or safety. The impact of this rule on environmental issues is discussed more fully in Review under the National Environmental Policy Act (NEPA), Section Q, subpart 6 of this final rule.

3. Estimates by the Agency, if and to the Extent That the Agency Determines That Accurate Estimates Are Reasonably Feasible of Future Compliance Costs of the Federal Mandate and Any Disproportionate Budgetary Effects of the Federal Mandate Upon Any Particular Regions of the Nation or Particular State, Local, or Tribal Governments, Urban or Rural or Other Types of Communities, or Particular Segments of the Private Sector

DHS has provided compliance costs of the main provisions that may indirectly trigger Federal mandates in the full RIA discussion of each provision published with this final rule as well as in the FRFA. DHS reiterates that state and private sector employers make the cost-benefit decisions of whether to expend finances to petition for foreign workers and that these provisions are not mandatory requirements.

4. Estimates by the Agency of the Effect on the National Economy, Such as the Effect on Productivity, Economic Growth, Full Employment, Creation of Productive Jobs, and International Competitiveness of United States Goods and Services, if and to the Extent That the Agency in Its Sole Discretion Determines That Accurate Estimates Are Reasonably Feasible and That Such Effect Is Relevant and Material

DHS has provided discussions of the effect of this rule on the economy in Section Q of this final rule.

5. A Description of the Extent of the Agency's Prior Consultation With Elected Representatives (Under Section 204) of the Affected State, Local, and Tribal Governments

DHS has not consulted with elected representatives of the affected State, local, and tribal governments as the Federal mandates imposed by this rule are voluntary and DHS cannot predict which States or private sector entities will apply for these benefits in the future.

D. Small Business Regulatory Enforcement Fairness Act of 1996

This final rule is a major rule as defined by section 804 of the Small Business Regulatory Enforcement Act of 1996. This rule will result in an annual effect on the economy of more than $100 million in the first year only. For each subsequent year, the annual effect on the economy will remain under $100 million. As small businesses may be impacted under this regulation, DHS has prepared a Final Regulatory Flexibility analysis. The RFA analysis can be found with the analysis prepared under Executive Orders 12866 and 13563 on *regulations.gov*.

E. Executive Order 13132 (Federalism)

This rule does not have substantial direct effects on the states, on the relationship between the National Government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with section 6 of Executive Order 13132, it is determined that this rule does not have sufficient federalism implications to warrant the preparation of a federalism summary impact statement.

F. Executive Order 12988 (Civil Justice Reform)

This rule meets the applicable standards set forth in sections 3(a) and 3(b)(2) of Executive Order 12988.

G. Paperwork Reduction Act

Under the Paperwork Reduction Act (PRA) of 1995, Public Law 104–13, Departments are required to submit to the Office of Management and Budget (OMB), for review and approval, any reporting requirements inherent in a rule. This final rule makes revisions to the following information collections:

1. The Application for Employment Authorization, Form I–765; and Form I–765 Work Sheet, Form I–765WS, OMB Control Number 1615–0040. Specifically, USCIS revises this collection by revising the instructions to Form I–765 to include information for the newly amended group of applicants (beneficiaries of approved Form I–140 petitions who are in the United States in E–3, H–1B, H–1B1, O–1, or L–1 nonimmigrant status, who do not have immigrant visas immediately available to them, and who demonstrate compelling circumstances justifying a grant of employment authorization) eligible to apply for employment authorization under final 8 CFR 274a.12(c)(35). Their dependent spouses and children who are present in the United States in nonimmigrant status are also eligible to obtain employment authorization under 8 CFR 274a.12(c)(36), provided that the principal foreign national has been granted employment authorization. USCIS is also amending Form I–765 to include Yes/No questions requiring these applicants to disclose certain criminal convictions. USCIS estimates an upper-bound average of 213,164 respondents will request employment authorization as a result of the changes in this rule in the first 2 years. This average estimate is derived from a maximum estimate of 361,766 new

respondents who may file applications for employment authorization documents in year 1 and a maximum estimate of 64,561 respondents in year 2. USCIS averaged this estimate for new I–765 respondents over a 2-year period of time based on its request seeking a 2-year approval of the form and its instructions from OMB.

2. USCIS is revising the form and its instructions and the estimate of total burden hours has increased due to the addition of this new population of Form I–765 filers, and the increase of burden hours associated with the collection of biometrics from these applicants.

3. The Immigrant Petition for Alien Worker, Form I–140; OMB Control Number 1615–0015. Specifically, USCIS is revising this information collection to remove ambiguity regarding whether information about the principal beneficiary's dependent family members should be entered on the Form I–140 petition, by revising the word ''requests'' to ''requires'' for clarification in the form instructions. USCIS is also revising the instructions to remove the terms ''in duplicate'' in the second paragraph under the labor certification section of the instructions because USCIS no longer requires uncertified Employment and Training Administration (ETA) Forms 9089 to be submitted in duplicate. There is no change in the data being captured on the information collection instrument, but there is a change to the estimated annual burden hours as a result of USCIS's revised estimate of the number of respondents for this collection of information.

4. The Petition for a Nonimmigrant Worker, Form I–129, OMB Control Number 1615–0009. USCIS is making revisions to Form I–129, specifically the H–1B Data Collection and Filing Fee Exemption Supplement and the accompanying instructions, to correspond with revisions to the regulatory definition of ''related or affiliated nonprofit entities'' for the purposes of determining whether the petitioner is exempt from: (1) Payment of the $750/$1,500 fee associated with the American Competitiveness and Workforce Improvement Act (ACWIA) and (2) the statutory numerical limitation on H–1B visas (also known as the H–1B cap). USCIS cannot predict the number of new respondents that would file petitions for foreign workers as a result of the changes in this rule.

5. The Application to Register Permanent Residence or Adjust Status, Form I–485, including new Supplement J, ''Confirmation of Bona Fide Job Offer or Request for Job Portability under INA Section 204(J),'' OMB Control Number 1615–0023. Specifically, USCIS is creating a new Supplement J to Form I–485 to allow the applicant for adjustment of status requesting portability under section 204(j) of the INA, and the U.S. employer offering the applicant a new permanent job offer, to provide formal attestations regarding important aspects of the job offer. Providing such attestations is an essential step to establish eligibility for adjustment of status in any employment-based immigrant visa classification requiring a job offer, regardless of whether the applicant is making a portability request under section 204(j) or is seeking to adjust status based upon the same job that was offered in the underlying immigrant visa petition. Through this new supplement, USCIS will collect required information from U.S. employers offering a new permanent job offer to a specific worker under section 204(j). Moreover, Supplement J will also be used by applicants who are not porting pursuant to section 204(j) to confirm that the original job offer described in the Form I–140 petition is still bona fide and available to the applicant at the time the applicant files the Form I–485 application. Supplement J replaces the current Form I–485 initial evidence requirement that an applicant must submit a letter on the letterhead of the petitioning U.S. employer that confirms that the job offer on which the Form I–140 petition is based is still available to the applicant.

This supplement also serves as an important anti-fraud measure, and it allows USCIS to validate employers extending new permanent job offers to individuals under section 204(j). USCIS estimates that approximately 28,309 new respondents will file Supplement J as a result of the changes made by the rule.

Additionally, USCIS is revising the instructions to Form I–485 to reflect the implementation of Supplement J. The Form I–485 instructions are also being revised to clarify that eligible applicants need to file Supplement J to request job portability under section 204(j). There is no change to the estimated annual burden hours as a result of this revision as a result of the changes in this rule.

Overview of This Information Collection

(1) Type of Information Collection: Revision of a Currently Approved Collection.

(2) Title of the Forms/Collections

- Application for Employment Authorization Document;
- Form I–765 Work Sheet;
- Immigrant Petition for Alien Worker;
- Petition for Nonimmigrant Worker;
- Application to Register Permanent Residence or Adjust Status.

(3) Agency form number, if any, and the applicable component of the DHS sponsoring the collection: Forms I–765/I–765WS, I–140, I–129 and I–485; USCIS.

(4) Affected public who will be asked or required to respond, as well as a brief abstract:

Form I–765: Primary: Individuals or households: This form was developed for individuals to request employment authorization and evidence of that employment authorization. USCIS is revising this form to add a new class of workers eligible to apply for employment authorization as the beneficiary of a valid immigrant visa petition for classification under sections 203(b)(1), 203(b)(2) or 203(b)(3) of the INA. Eligible applicants must be physically present in the United States in E–3, H–1B, H–1B1, O–1, or L–1 nonimmigrant status, and must demonstrate that they face compelling circumstances while they wait for their immigrant visas to become available. Dependent spouses and children who are present in the United States in nonimmigrant status are also eligible to apply provided that the principal has been granted employment authorization. Supporting documentation demonstrating eligibility must be filed with the application. The form instructions list examples of relevant documentation.

Form I–140: Primary: Business or other for-profit organizations, as well as not-for profit organizations. USCIS will use the information furnished on this information collection to classify individuals under sections 203(b)(1), 203(b)(2) or 203(b)(3) of the INA.

Form I–129: Primary: Business: This form is used by employers to petition for workers to come to the United States temporarily to perform services, labor, and training or to request extensions of stay or changes in nonimmigrant status for nonimmigrant workers. USCIS is revising Form I–129, specifically the H–1B Data Collection and Filing Fee Exemption Supplement, and the accompanying instructions, to correspond with revisions to the regulatory definition of ''related or affiliated nonprofit entities'' for the purposes of determining whether the petitioner is exempt from: (1) Payment of the $750/$1,500 fee associated with the American Competitiveness and Workforce Improvement Act (ACWIA), and (2) the statutory numerical limitation on H–1B visas (also known as the cap).

Form I–485: Primary: Individuals or households: The information collected is used to determine eligibility to adjust status under section 245 of the INA. The instructions to Form I–485, Application to Register Permanent Residence or Adjust Status, are being revised to reflect the implementation of Form I–485 Supplement J, Confirmation of Bona Fide Job Offer or Request for Job Portability under INA Section 204(j) (Supplement J). Supplement J will be used by individuals applying for adjustment of status to lawful permanent resident on the basis of being the principal beneficiary of an approved Form I–140, Immigrant Petition for Alien Worker. Applicants will use Supplement J to confirm that the job offer described in the Form I–140 petition is still bona fide and available to the applicant at the time the applicant files the Form I–485 application. Supplement J is replacing the current Form I–485 initial evidence requirement that an applicant must submit a letter on the letterhead of the petitioning employer which confirms that the job offer on which the Form I–140 petition is based is still available to the applicant. Applicants will also use Supplement J when requesting job portability pursuant to section 204(j) of the INA. Supplement J will provide a standardized procedure to confirm that the job offer described in the Form I–140 petition is still bona fide, or if applicable to request job portability pursuant to section 204(j) of the INA.

(5) An estimate of the total annual number of respondents and the amount of time estimated for an average respondent to respond:

- Form I–765/I–765WS:
  - 2,136,583 responses related to Form I–765 at 3.42 hours per response;
  - 250,000 responses related to Form I–765WS at .50 hours per response;
  - 405,067 responses related to Biometrics services at 1.17 hours; and
  - 2,136,583 responses related to Passport-Style Photographs at .50 hours per response.
- Form I–140:
  - 213,164 respondents at 1.08 hours per response.
- Form I–129:
  - Form I–129—333,891 respondents at 2.34 hours;
  - E–1/E–2 Classification to Form I–129—4,760 respondents at .67 hours;
  - Trade Agreement Supplement to Form I–129—3,057 respondents at .67 hours;
  - H Classification Supplement to Form I–129—255,872 respondents at 2 hours;
  - H–1B and H–1B1 Data Collection and Filing Fee Exemption Supplement—243,965 respondents at 1 hour;
  - L Classification Supplement to Form I–129—37,831 respondents at 1.34 hours;
  - and P Classifications Supplement to Form I–129—22,710 respondents at 1 hour;
  - Q–1 Classification Supplement to Form I–129—155 respondents at .34 hours; and
  - R–1 Classification Supplement to Form I–129—6,635 respondents at 2.34 hours.
- Form I–485:
  - 697,811 respondents at 6.25 hours per response;
  - 697,811 respondents related to Biometrics services at 1.17 hours.

(6) An estimate of the total annual public burden (in hours) associated with these collections:

- *Form I–765/I–765WS:* 8,974,364 hours.
- *Form I–140:* 230,217 hours.
- *Form I–129:* 1,631,400 hours.
- *Form I–485:* 5,238,100 hours.

(7) An estimate of the annual public burden (monetized) associated with these collections:

- *Form I–765/I–765WS:* $649,521,330.
- *Form I–140:* $123,642,620.
- *Form I–129:* $73,751,280.
- *Form I–485:* $239,349,173.

DHS has considered the public comments received in response to the NPRM, published in the **Federal Register** at 80 FR 81899 on December 31, 2015. DHS's responses to these comments appear in this final rule and in appendix to the supporting statements that accompany this rule and can be found in the docket. USCIS has submitted the supporting statements to OMB as part of its request for the approval of the revised information collection instruments.

List of Subjects

8 CFR Part 204

Administrative practice and procedure, Adoption and foster care, Immigration, Reporting and recordkeeping requirements.

8 CFR Part 205

Administrative practice and procedure, Immigration.

8 CFR Part 214

Administrative practice and procedure, Aliens, Cultural exchange programs, Employment, Foreign officials, Health professions, Reporting and recordkeeping requirements, Students.

8 CFR Part 245

Aliens, Immigration, Reporting and recordkeeping requirements.

8 CFR Part 274a

Administrative practice and procedure, Aliens, Employment, Penalties, Reporting and recordkeeping requirements.

Accordingly, DHS amends chapter I of title 8 of the Code of Federal Regulations as follows:

PART 204—IMMIGRANT PETITIONS

■ 1. The authority citation for part 204 is revised to read as follows:

Authority: 8 U.S.C. 1101, 1103, 1151, 1153, 1154, 1182, 1184, 1186a, 1255, 1324a, 1641; 8 CFR part 2.

■ 2. Section 204.5 is amended by:
■ a. Revising paragraphs (d), (e), and (n)(3); and
■ b. Adding paragraph (p).

The revisions and addition read as follows:

§ 204.5 Petitions for employment-based immigrants.

* * * * *

(d) *Priority date.* The priority date of any petition filed for classification under section 203(b) of the Act which is accompanied by an individual labor certification from the Department of Labor shall be the date the labor certification application was accepted for processing by any office of the Department of Labor. The priority date of any petition filed for a classification under section 203(b) of the Act which does not require a labor certification from the Department of Labor shall be the date the completed, signed petition (including all initial evidence and the correct fee) is properly filed with USCIS. The priority date of any petition filed for classification under section 203(b) of the Act which is accompanied by an application for Schedule A designation shall be the date the completed, signed petition (including all initial evidence and the correct fee) is properly filed with USCIS. The priority date of an alien who filed for classification as a special immigrant under section 203(b)(4) of the Act prior to October 1, 1991, and who is the beneficiary of an approved petition for special immigrant status after October 1, 1991, shall be the date the alien applied for an immigrant visa or adjustment of status.

(e) *Retention of section 203(b)(1), (2), or (3) priority date.* (1) A petition approved on behalf of an alien under sections 203(b)(1), (2), or (3) of the Act accords the alien the priority date of the approved petition for any subsequently filed petition for any classification under section 203(b)(1), (2), or (3) of the Act for which the alien may qualify. In the event that the alien is the beneficiary of multiple approved petitions under section 203(b)(1), (2), or (3) of the Act, the alien shall be entitled to the earliest priority date.

(2) The priority date of a petition may not be retained under paragraph (e)(1) of this section if at any time USCIS revokes the approval of the petition because of:

(i) Fraud, or a willful misrepresentation of a material fact;

(ii) Revocation by the Department of Labor of the approved permanent labor certification that accompanied the petition;

(iii) Invalidation by USCIS or the Department of State of the permanent labor certification that accompanied the petition; or

(iv) A determination by USCIS that petition approval was based on a material error.

(3) A denied petition will not establish a priority date.

(4) A priority date is not transferable to another alien.

(5) A petition filed under section 204(a)(1)(F) of the Act for an alien shall remain valid with respect to a new employment offer as determined by USCIS under section 204(j) of the Act and 8 CFR 245.25. An alien will continue to be afforded the priority date of such petition, if the requirements of paragraph (e) of this section are met.

* * * * *

(n) * * *

(3) *Validity of approved petitions.* Unless approval is revoked under section 203(g) or 205 of the Act, an employment-based petition is valid indefinitely.

* * * * *

(p) *Eligibility for employment authorization in compelling circumstances*—(1) *Eligibility of principal alien.* An individual who is the principal beneficiary of an approved immigrant petition for classification under sections 203(b)(1), 203(b)(2) or 203(b)(3) of the Act may be eligible to receive employment authorization, upon application, if:

(i) In the case of an initial request for employment authorization, the individual is in E–3, H–1B, H–1B1, O–1, or L–1 nonimmigrant status, including the periods authorized by § 214.1(l)(l) and (2), as well as any other periods of admission authorized by this chapter before a validity period begins or after the expiration of a validity period, on the date the application for employment authorization (Form I–765) is filed;

(ii) An immigrant visa is not authorized for issuance to the principal beneficiary based on his or her priority date on the date the application for employment authorization is filed; and

(iii) USCIS determines, as a matter of discretion, that the principal beneficiary demonstrates compelling circumstances that justify the issuance of employment authorization.

(2) *Eligibility of spouses and children.* The family members, as described in section 203(d) of the Act, of a principal beneficiary, who are in nonimmigrant status at the time the principal beneficiary applies for employment authorization under paragraph (p)(1) of this section, are eligible to apply for employment authorization provided that the principal beneficiary has been granted employment authorization under paragraph (p) of this section and such employment authorization has not been terminated or revoked. Such family members may apply for employment authorization concurrently with the principal beneficiary, but cannot be granted employment authorization until the principal beneficiary is so authorized. The validity period of employment authorization granted to family members may not extend beyond the validity period of employment authorization granted to the principal beneficiary.

(3) *Eligibility for renewal of employment authorization.* An alien may be eligible to renew employment authorization granted under paragraph (p) of this section, upon submission of a new application before the expiration of such employment authorization, if:

(i) He or she is the principal beneficiary of an approved immigrant petition for classification under section 203(b)(1), 203(b)(2) or 203(b)(3) of the Act and either:

(A) An immigrant visa is not authorized for issuance to the principal beneficiary based on his or her priority date on the date the application for employment authorization, (Form I–765) is filed; and USCIS determines, as a matter of discretion that the principal beneficiary demonstrates compelling circumstances that justify the issuance of employment authorization; or

(B) The difference between the principal beneficiary's priority date and the date upon which immigrant visas are authorized for issuance for the principal beneficiary's preference category and country of chargeability is 1 year or less according to the Department of State Visa Bulletin in effect on the date the application for employment authorization (Form I–765), is filed. For example, if the Department of State Visa Bulletin in effect on the date the renewal application is filed indicates immigrant visas are authorized for issuance for the applicable preference category and country of chargeability to individuals with priority dates earlier than November 1, 2000, USCIS may grant a renewal to a principal beneficiary whose priority date is on or between October 31, 1999 and October 31, 2001; or

(ii) He or she is a family member, as described under paragraph (p)(2) of this section, of a principal beneficiary granted a renewal of employment authorization under paragraph (p)(3)(i) that remains valid, except that the family member need not be maintaining nonimmigrant status at the time the principal beneficiary applies for renewal of employment authorization under paragraph (p) of this section. A family member may file an application to renew employment authorization concurrently with an application to renew employment authorization filed by the principal beneficiary or while such application by the principal beneficiary is pending, but the family member's renewal application cannot be approved unless the principal beneficiary's application is granted. The validity period of a renewal of employment authorization granted to family members may not extend beyond the validity period of the renewal of employment authorization granted to the principal beneficiary.

(4) *Application for employment authorization.* To request employment authorization, an eligible applicant described in paragraph (p)(1), (2), or (3) of this section must file an application for employment authorization (Form I–765), with USCIS, in accordance with 8 CFR 274a.13(a) and the form instructions. Such applicant is subject to the collection of his or her biometric information and the payment of any biometric services fee as provided in the form instructions. Employment authorization under this paragraph may be granted solely in 1-year increments.

(5) *Ineligibility for employment authorization.* An alien is not eligible for employment authorization, including renewal of employment authorization, under this paragraph if the alien has been convicted of any felony or two or more misdemeanors.

PART 205—REVOCATION OF APPROVAL OF PETITIONS

■ 3. The authority citation for part 205 is revised to read as follows:

Authority: 8 U.S.C. 1101, 1103, 1151, 1153, 1154, 1155, 1182, 1324a, and 1186a.

■ 4. Section 205.1 is amended by revising paragraphs (a)(3)(iii)(C) and (D) to read as follows:

§ 205.1 Automatic revocation.

(a) * * *

(3) * * *

(iii) * * *

(C) In employment-based preference cases, upon written notice of withdrawal filed by the petitioner to any officer of USCIS who is authorized to grant or deny petitions, where the withdrawal is filed less than 180 days after approval of the employment-based preference petition, unless an associated adjustment of status application has been pending for 180 days or more. A petition that is withdrawn 180 days or more after its approval, or 180 days or more after the associated adjustment of status application has been filed, remains approved unless its approval is revoked on other grounds. If an employment-based petition on behalf of an alien is withdrawn, the job offer of the petitioning employer is rescinded and the alien must obtain a new employment-based preference petition in order to seek adjustment of status or issuance of an immigrant visa as an employment-based immigrant, unless eligible for adjustment of status under section 204(j) of the Act and in accordance with 8 CFR 245.25.

(D) Upon termination of the petitioning employer's business less than 180 days after petition approval under section 203(b)(1)(B), 203(b)(1)(C), 203(b)(2), or 203(b)(3) of the Act, unless an associated adjustment of status application has been pending for 180 days or more. If a petitioning employer's business terminates 180 days or more after petition approval, or 180 days or more after an associated adjustment of status application has been filed, the petition remains approved unless its approval is revoked on other grounds. If a petitioning employer's business terminates the job offer of the petitioning employer is rescinded and the beneficiary must obtain a new employment-based preference petition on his or her behalf in order to seek adjustment of status or issuance of an immigrant visa as an employment-based immigrant, unless eligible for adjustment of status under section 204(j) of the Act and in accordance with 8 CFR 245.25.

* * * * *

PART 214—NONIMMIGRANT CLASSES

■ 5. The authority citation for part 214 continues to read as follows:

Authority: 8 U.S.C. 1101, 1102, 1103, 1182, 1184, 1186a, 1187, 1221, 1281, 1282, 1301–1305 and 1372; sec. 643, Pub. L. 104–208, 110 Stat. 3009–708; Pub. L. 105–277, 112 Stat. 2681–641; Pub. L. 106–313, 114 Stat. 1251–1255; Pub. L. 106–386, 114 Stat. 1477–1480; section 141 of the Compacts of Free Association with the Federated States of Micronesia and the Republic of the Marshall Islands, and with the Government of Palau, 48 U.S.C. 1901 note, and 1931 note, respectively; 48 U.S.C. 1806; 8 CFR part 2.

■ 6. Section 214.1 is amended by adding paragraph (l) to read as follows:

§ 214.1 Requirements for admission, extension, and maintenance of status.

* * * * *

(l) *Period of stay.* (1) An alien admissible in E–1, E–2, E–3, H–1B, L–1, or TN classification and his or her dependents may be admitted to the United States or otherwise provided such status for the validity period of the petition, or for a validity period otherwise authorized for the E–1, E–2, E–3, and TN classifications, plus an additional period of up to 10 days before the validity period begins and 10 days after the validity period ends. Unless authorized under 8 CFR 274a.12, the alien may not work except during the validity period.

(2) An alien admitted or otherwise provided status in E–1, E–2, E–3, H–1B, H–1B1, L–1, O–1 or TN classification and his or her dependents shall not be considered to have failed to maintain nonimmigrant status solely on the basis of a cessation of the employment on which the alien's classification was based, for up to 60 consecutive days or until the end of the authorized validity period, whichever is shorter, once during each authorized validity period. DHS may eliminate or shorten this 60-day period as a matter of discretion. Unless otherwise authorized under 8 CFR 274a.12, the alien may not work during such a period.

(3) An alien in any authorized period described in paragraph (l) of this section may apply for and be granted an extension of stay under paragraph (c)(4) of this section or change of status under 8 CFR 248.1, if otherwise eligible.

■ 7. Section 214.2 is amended by:

■ a. Adding paragraph (h)(2)(i)(H);

■ b. Revising paragraph (h)(4)(v)(C);

■ c. Adding paragraph (h)(8)(ii)(F);

■ d. Removing the fifth sentence from paragraph (h)(9)(iv);

■ e. Revising paragraph (h)(13)(i)(A);

■ f. Adding paragraphs (h)(13)(iii)(C) through (E);

■ g. Revising paragraphs (h)(19)(i) introductory text, (h)(19)(ii), and (h)(19)(iii)(B).

■ h. In paragraph (h)(19)(iii)(C):

■ i. Revising the second sentence; and

■ ii. Removing the period at the end of the paragraph and adding a semicolon in its place;

■ i. Adding paragraphs (h)(19)(iii)(D) and (E);

■ j. Revising paragraph (h)(19)(v);

■ k. Removing paragraph (h)(19)(vi);

■ l. Redesignating paragraph (h)(19)(vii) as paragraph (h)(19)(vi) and revising newly redesignated paragraph (h)(19)(vi); and

■ m. Adding paragraph (h)(20).

The revisions and additions read as follows:

§ 214.2 Special requirements for admission, extension, and maintenance of status.

* * * * *

(h) * * *

(2) * * *

(i) * * *

(H) *H–1B portability.* An eligible H–1B nonimmigrant is authorized to start concurrent or new employment under section 214(n) of the Act upon the filing, in accordance with 8 CFR 103.2(a), of a nonfrivolous H–1B petition on behalf of such alien, or as of the requested start date, whichever is later.

(*1*) *Eligible H–1B nonimmigrant.* For H–1B portability purposes, an eligible H–1B nonimmigrant is defined as an alien:

(*i*) Who has been lawfully admitted into the United States in, or otherwise provided, H–1B nonimmigrant status;

(*ii*) On whose behalf a nonfrivolous H–1B petition for new employment has been filed, including a petition for new employment with the same employer, with a request to amend or extend the H–1B nonimmigrant's stay, before the H–1B nonimmigrant's period of stay authorized by the Secretary of Homeland Security expires; and

(*iii*) Who has not been employed without authorization in the United States from the time of last admission through the filing of the petition for new employment.

(*2*) *Length of employment.* Employment authorized under paragraph (h)(2)(i)(H) of this section automatically ceases upon the adjudication of the H–1B petition described in paragraph (h)(2)(i)(H)(*1*)(*ii*) of this section.

(*3*) *Successive H–1B portability petitions.* (*i*) An alien maintaining authorization for employment under paragraph (h)(2)(i)(H) of this section, whose status, as indicated on the Arrival-Departure Record (Form I–94), has expired, shall be considered to be in a period of stay authorized by the Secretary of Homeland Security for purposes of paragraph (h)(2)(i)(H)(*1*)(*ii*) of this section. If otherwise eligible under paragraph (h)(2)(i)(H) of this section, such alien may begin working in a subsequent position upon the filing of another H–1B petition or from the requested start date, whichever is later, notwithstanding that the previous H–1B petition upon which employment is authorized under paragraph (h)(2)(i)(H) of this section remains pending and regardless of whether the validity period of an approved H–1B petition filed on the alien's behalf expired during such pendency.

(*ii*) A request to amend the petition or for an extension of stay in any successive H–1B portability petition cannot be approved if a request to amend the petition or for an extension of stay in any preceding H–1B portability petition in the succession is denied, unless the beneficiary's previously approved period of H–1B status remains valid.

(*iii*) Denial of a successive portability petition does not affect the ability of the H–1B beneficiary to continue or resume working in accordance with the terms of an H–1B petition previously approved on behalf of the beneficiary if that petition approval remains valid and the beneficiary has maintained H–1B status or been in a period of authorized stay and has not been employed in the United States without authorization.

* * * * *

(4) * * *

(v) * * *

(C) *Duties without licensure.* (*1*) In certain occupations which generally require licensure, a state may allow an individual without licensure to fully practice the occupation under the supervision of licensed senior or supervisory personnel in that occupation. In such cases, USCIS shall examine the nature of the duties and the level at which they are performed, as well as evidence provided by the petitioner as to the identity, physical location, and credentials of the individual(s) who will supervise the alien, and evidence that the petitioner is complying with state requirements. If the facts demonstrate that the alien under supervision will fully perform the duties of the occupation, H classification may be granted.

(*2*) An H–1B petition filed on behalf of an alien who does not have a valid state or local license, where a license is otherwise required to fully perform the duties in that occupation, may be approved for a period of up to 1 year if:

(*i*) The license would otherwise be issued provided the alien was in possession of a valid Social Security number, was authorized for employment in the United States, or met a similar technical requirement; and

(*ii*) The petitioner demonstrates, through evidence from the state or local licensing authority, that the only obstacle to the issuance of a license to the beneficiary is the lack of a Social Security number, a lack of employment authorization in the United States, or a failure to meet a similar technical requirement that precludes the issuance of the license to an individual who is not yet in H–1B status. The petitioner must demonstrate that the alien is fully qualified to receive the state or local license in all other respects, meaning that all educational, training, experience, and other substantive requirements have been met. The alien must have filed an application for the license in accordance with applicable state and local rules and procedures, provided that state or local rules or procedures do not prohibit the alien from filing the license application without provision of a Social Security number or proof of employment authorization or without meeting a similar technical requirement.

(*3*) An H–1B petition filed on behalf of an alien who has been previously accorded H–1B classification under paragraph (h)(4)(v)(C)(*2*) of this section may not be approved unless the petitioner demonstrates that the alien has obtained the required license, is seeking to employ the alien in a position requiring a different license, or the alien will be employed in that occupation in a different location which does not require a state or local license to fully perform the duties of the occupation.

* * * * *

(8) * * *

(ii) * * *

(F) *Cap exemptions under sections 214(g)(5)(A) and (B) of the Act.* An alien is not subject to the numerical limitations identified in section 214(g)(1)(A) of the Act if the alien qualifies for an exemption under section 214(g)(5) of the Act. For purposes of section 214(g)(5)(A) and (B) of the Act:

(*1*) ''Institution of higher education'' has the same definition as described at section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(*2*) A nonprofit entity shall be considered to be related to or affiliated with an institution of higher education if it satisfies any one of the following conditions:

(*i*) The nonprofit entity is connected to or associated with an institution of higher education through shared ownership or control by the same board or federation;

(*ii*) The nonprofit entity is operated by an institution of higher education;

(*iii*) The nonprofit entity is attached to an institution of higher education as a member, branch, cooperative, or subsidiary; or

(*iv*) The nonprofit entity has entered into a formal written affiliation agreement with an institution of higher education that establishes an active working relationship between the nonprofit entity and the institution of higher education for the purposes of research or education, and a fundamental activity of the nonprofit entity is to directly contribute to the research or education mission of the institution of higher education.

(*3*) An entity is considered a ''nonprofit entity'' if it meets the definition described at paragraph (h)(19)(iv) of this section. ''Nonprofit research organization'' and ''governmental research organization'' have the same definitions as described at paragraph (h)(19)(iii)(C) of this section.

(*4*) An H–1B beneficiary who is not directly employed by a qualifying institution, organization or entity identified in section 214(g)(5)(A) or (B) of the Act shall qualify for an exemption under such section if the H–1B beneficiary will spend the majority of his or her work time performing job duties at a qualifying institution, organization or entity and those job duties directly and predominately further the essential purpose, mission, objectives or functions of the qualifying institution, organization or entity, namely, either higher education, nonprofit research or government research. The burden is on the H–1B petitioner to establish that there is a nexus between the duties to be performed by the H–1B beneficiary and the essential purpose, mission, objectives or functions of the qualifying institution, organization or entity.

(*5*) If cap-exempt employment ceases, and if the alien is not the beneficiary of a new cap-exempt petition, then the alien will be subject to the cap if not previously counted within the 6-year period of authorized admission to which the cap-exempt employment applied. If cap-exempt employment converts to cap-subject employment subject to the numerical limitations in section 214(g)(1)(A) of the Act, USCIS may revoke the petition authorizing such employment consistent with paragraph (h)(11)(iii) of this section.

(*6*) Concurrent H–1B employment in a cap-subject position of an alien that qualifies for an exemption under section 214(g)(5)(A) or (B) of the Act shall not subject the alien to the numerical limitations in section 214(g)(1)(A) of the Act. When petitioning for concurrent cap-subject H–1B employment, the petitioner must demonstrate that the H–

1B beneficiary is employed in valid H–1B status under a cap exemption under section 214(g)(5)(A) or (B) of the Act, the beneficiary's employment with the cap-exempt employer is expected to continue after the new cap-subject petition is approved, and the beneficiary can reasonably and concurrently perform the work described in each employer's respective positions.

(*i*) Validity of a petition for concurrent cap-subject H–1B employment approved under paragraph (h)(8)(ii)(F)(*6*) of this section cannot extend beyond the period of validity specified for the cap-exempt H–1B employment.

(*ii*) If H–1B employment subject to a cap exemption under section 214(g)(5)(A) or (B) of the Act is terminated by a petitioner, or otherwise ends before the end of the validity period listed on the approved petition filed on the alien's behalf, the alien who is concurrently employed in a cap-subject position becomes subject to the numerical limitations in section 214(g)(1)(A) of the Act, unless the alien was previously counted with respect to the 6-year period of authorized H–1B admission to which the petition applies or another exemption applies. If such an alien becomes subject to the numerical limitations in section 214(g)(1)(A) of the Act, USCIS may revoke the cap-subject petition described in paragraph (h)(8)(ii)(F)(*6*) of this section consistent with paragraph (h)(11)(iii) of this section.

* * * * *

(13) * * *

(i) * * *

(A) Except as set forth in 8 CFR 214.1(l) with respect to H–1B beneficiaries and their dependents and paragraph (h)(5)(viii)(B) of this section with respect to H–2A beneficiaries, a beneficiary shall be admitted to the United States for the validity period of the petition, plus a period of up to 10 days before the validity period begins and 10 days after the validity period ends. The beneficiary may not work except during the validity period of the petition.

* * * * *

(iii) * * *

(C) *Calculating the maximum H–1B admission period.* Time spent physically outside the United States exceeding 24 hours by an alien during the validity of an H–1B petition that was approved on the alien's behalf shall not be considered for purposes of calculating the alien's total period of authorized admission under section 214(g)(4) of the Act, regardless of whether such time meaningfully interrupts the alien's stay in H–1B status and the reason for the alien's absence. Accordingly, such remaining time may be recaptured in a subsequent H–1B petition on behalf of the alien, at any time before the alien uses the full period of H–1B admission described in section 214(g)(4) of the Act.

(*1*) It is the H–1B petitioner's burden to request and demonstrate the specific amount of time for recapture on behalf of the beneficiary. The beneficiary may provide appropriate evidence, such as copies of passport stamps, Arrival-Departure Records (Form I–94), or airline tickets, together with a chart, indicating the dates spent outside of the United States, and referencing the relevant independent documentary evidence, when seeking to recapture the alien's time spent outside the United States. Based on the evidence provided, USCIS may grant all, part, or none of the recapture period requested.

(*2*) If the beneficiary was previously counted toward the H–1B numerical cap under section 214(g)(1) of the Act with respect to the 6-year maximum period of H–1B admission from which recapture is sought, the H–1B petition seeking to recapture a period of stay as an H–1B nonimmigrant will not subject the beneficiary to the H–1B numerical cap, whether or not the alien has been physically outside the United States for 1 year or more and would be otherwise eligible for a new period of admission under such section of the Act. An H–1B petitioner may either seek such recapture on behalf of the alien or, consistent with paragraph (h)(13)(iii) of this section, seek a new period of admission on behalf of the alien under section 214(g)(1) of the Act.

(D) *Lengthy adjudication delay exemption from 214(g)(4) of the Act.* (*1*) An alien who is in H–1B status or has previously held H–1B status is eligible for H–1B status beyond the 6-year limitation under section 214(g)(4) of the Act, if at least 365 days have elapsed since:

(*i*) The filing of a labor certification with the Department of Labor on the alien's behalf, if such certification is required for the alien to obtain status under section 203(b) of the Act; or

(*ii*) The filing of an immigrant visa petition with USCIS on the alien's behalf to accord classification under section 203(b) of the Act.

(*2*) H–1B approvals under paragraph (h)(13)(iii)(D) of this section may be granted in up to 1-year increments until either the approved permanent labor certification expires or a final decision has been made to:

(*i*) Deny the application for permanent labor certification, or, if approved, to revoke or invalidate such approval;

(*ii*) Deny the immigrant visa petition, or, if approved, revoke such approval;

(*iii*) Deny or approve the alien's application for an immigrant visa or application to adjust status to lawful permanent residence; or

(*iv*) Administratively or otherwise close the application for permanent labor certification, immigrant visa petition, or application to adjust status.

(*3*) *No final decision while appeal available or pending.* A decision to deny or revoke an application for labor certification, or to deny or revoke the approval of an immigrant visa petition, will not be considered final under paragraph (h)(13)(iii)(D)(*2*)(*i*) or (*ii*) of this section during the period authorized for filing an appeal of the decision, or while an appeal is pending.

(*4*) *Substitution of beneficiaries.* An alien who has been replaced by another alien, on or before July 16, 2007, as the beneficiary of an approved permanent labor certification may not rely on that permanent labor certification to establish eligibility for H–1B status based on this lengthy adjudication delay exemption. Except for a substitution of a beneficiary that occurred on or before July 16, 2007, an alien establishing eligibility for this lengthy adjudication delay exemption based on a pending or approved labor certification must be the named beneficiary listed on the permanent labor certification.

(*5*) *Advance filing.* A petitioner may file an H–1B petition seeking a lengthy adjudication delay exemption under paragraph (h)(13)(iii)(D) of this section within 6 months of the requested H–1B start date. The petition may be filed before 365 days have elapsed since the labor certification application or immigrant visa petition was filed with the Department of Labor or USCIS, respectively, provided that the application for labor certification or immigrant visa petition must have been filed at least 365 days prior to the date the period of admission authorized under this exemption will take effect. The petitioner may request any time remaining to the beneficiary under the maximum period of admission described at section 214(g)(4) of the Act along with the exemption request, but in no case may the approved H–1B period of validity exceed the limits specified by paragraph (h)(9)(iii) of this section. Time remaining to the beneficiary under the maximum period of admission described at section 214(g)(4) of the Act may include any request to recapture unused H–1B, L–1A, or L–1B time spent outside of the United States.

(*6*) *Petitioners seeking exemption.* The H–1B petitioner need not be the employer that filed the application for labor certification or immigrant visa petition that is used to qualify for this exemption.

(*7*) *Subsequent exemption approvals after the 7th year.* The qualifying labor certification or immigrant visa petition need not be the same as that used to qualify for the initial exemption under paragraph (h)(13)(iii)(D) of this section.

(*8*) *Aggregation of time not permitted.* A petitioner may not aggregate the number of days that have elapsed since the filing of one labor certification or immigrant visa petition with the number of days that have elapsed since the filing of another such application or petition to meet the 365-day requirement.

(*9*) *Exemption eligibility.* Only a principal beneficiary of a nonfrivolous labor certification application or immigrant visa petition filed on his or her behalf may be eligible under paragraph (h)(13)(iii)(D) of this section for an exemption to the maximum period of admission under section 214(g)(4) of the Act.

(*10*) *Limits on future exemptions from the lengthy adjudication delay.* An alien is ineligible for the lengthy adjudication delay exemption under paragraph (h)(13)(iii)(D) of this section if the alien is the beneficiary of an approved petition under section 203(b) of the Act and fails to file an adjustment of status application or apply for an immigrant visa within 1 year of an immigrant visa being authorized for issuance based on his or her preference category and country of chargeability. If the accrual of such 1-year period is interrupted by the unavailability of an immigrant visa, a new 1-year period shall be afforded when an immigrant visa again becomes immediately available. USCIS may excuse a failure to file in its discretion if the alien establishes that the failure to apply was due to circumstances beyond his or her control. The limitations described in this paragraph apply to any approved immigrant visa petition under section 203(b) of the Act, including petitions withdrawn by the petitioner or those filed by a petitioner whose business terminates 180 days or more after approval.

(E) *Per-country limitation exemption from section 214(g)(4) of the Act.* An alien who currently maintains or previously held H–1B status, who is the beneficiary of an approved immigrant visa petition for classification under section 203(b)(1), (2), or (3) of the Act, and who is eligible to be granted that immigrant status but for application of the per country limitation, is eligible for H–1B status beyond the 6-year limitation under section 214(g)(4) of the Act. The petitioner must demonstrate such visa unavailability as of the date the H–1B petition is filed with USCIS.

(*1*) *Validity periods.* USCIS may grant validity periods for petitions approved under this paragraph in increments of up to 3 years for as long as the alien remains eligible for this exemption.

(*2*) H–1B approvals under paragraph (h)(13)(iii)(E) of this section may be granted until a final decision has been made to:

(*i*) Revoke the approval of the immigrant visa petition; or

(*ii*) Approve or deny the alien's application for an immigrant visa or application to adjust status to lawful permanent residence.

(*3*) *Current H–1B status not required.* An alien who is not in H–1B status at the time the H–1B petition on his or her behalf is filed, including an alien who is not in the United States, may seek an exemption of the 6-year limitation under 214(g)(4) of the Act under this clause, if otherwise eligible.

(*4*) *Subsequent petitioners may seek exemptions.* The H–1B petitioner need not be the employer that filed the immigrant visa petition that is used to qualify for this exemption. An H–1B petition may be approved under paragraph (h)(13)(iii)(E) of this section with respect to any approved immigrant visa petition, and a subsequent H–1B petition may be approved with respect to a different approved immigrant visa petition on behalf of the same alien.

(*5*) *Advance filing.* A petitioner may file an H–1B petition seeking a per-country limitation exemption under paragraph (h)(13)(iii)(E) of this section within 6 months of the requested H–1B start date. The petitioner may request any time remaining to the beneficiary under the maximum period of admission described in section 214(g)(4) of the Act along with the exemption request, but in no case may the H–1B approval period exceed the limits specified by paragraph (h)(9)(iii) of this section.

(*6*) *Exemption eligibility.* Only the principal beneficiary of an approved immigrant visa petition for classification under section 203(b)(1), (2), or (3) of the Act may be eligible under paragraph (h)(13)(iii)(E) of this section for an exemption to the maximum period of admission under section 214(g)(4) of the Act.

* * * * *

(19) * * *

(i) A United States employer (other than an exempt employer defined in paragraph (h)(19)(iii) of this section, or an employer filing a petition described in paragraph (h)(19)(v) of this section) who files a Petition for Nonimmigrant Worker (Form I–129) must include the additional American Competitiveness and Workforce Improvement Act (ACWIA) fee referenced in § 103.7(b)(1) of this chapter, if the petition is filed for any of the following purposes:

* * * * *

(ii) A petitioner must submit with the petition the ACWIA fee, and any other applicable fees, in accordance with § 103.7 of this chapter, and form instructions. Payment of all applicable fees must be made at the same time, but the petitioner may submit separate checks. USCIS will accept payment of the ACWIA fee only from the United States employer or its representative of record, as defined in 8 CFR 103.2(a) and 8 CFR part 292.

(iii) * * *

(B) *An affiliated or related nonprofit entity.* A nonprofit entity shall be considered to be related to or affiliated with an institution of higher education if it satisfies any one of the following conditions:

(*1*) The nonprofit entity is connected to or associated with an institution of higher education through shared ownership or control by the same board or federation;

(*2*) The nonprofit entity is operated by an institution of higher education;

(*3*) The nonprofit entity is attached to an institution of higher education as a member, branch, cooperative, or subsidiary; or

(*4*) The nonprofit entity has entered into a formal written affiliation agreement with an institution of higher education that establishes an active working relationship between the nonprofit entity and the institution of higher education for the purposes of research or education, and a fundamental activity of the nonprofit entity is to directly contribute to the research or education mission of the institution of higher education;

(C) * * * A governmental research organization is a federal, state, or local entity whose primary mission is the performance or promotion of basic research and/or applied research. * * *

(D) A primary or secondary education institution; or

(E) A nonprofit entity which engages in an established curriculum-related clinical training of students registered at an institution of higher education.

* * * * *

(v) *Filing situations where the* American Competitiveness and Workforce Improvement Act of 1998 (*ACWIA) fee is not required.* The ACWIA fee is not required if:

(A) The petition is an amended H–1B petition that does not contain any requests for an extension of stay;

(B) The petition is an H–1B petition filed for the sole purpose of correcting a Service error; or

(C) The petition is the second or subsequent request for an extension of stay filed by the employer regardless of when the first extension of stay was filed or whether the ACWIA fee was paid on the initial petition or the first extension of stay.

(vi) *ACWIA fee exemption evidence.* (A) Employer claiming to be exempt. An employer claiming to be exempt from the ACWIA fee must file a Petition for Nonimmigrant Worker (Form I–129), in accordance with the form instructions, including supporting evidence establishing that it meets one of the exemptions described at paragraph (h)(19)(iii) of this section. A United States employer claiming an exemption from the ACWIA fee on the basis that it is a non-profit research organization must submit evidence that it has tax exempt status under the Internal Revenue Code of 1986, section 501(c)(3), (c)(4) or (c)(6), 26 U.S.C. 501(c)(3), (c)(4) or (c)(6). All other employers claiming an exemption must submit a statement describing why the organization or entity is exempt.

(B) Exempt filing situations. Any non-exempt employer who claims that the ACWIA fee does not apply with respect to a particular filing for one of the reasons described in paragraph (h)(19)(v) of this section must indicate why the ACWIA fee is not required.

(20) *Retaliatory action claims.* If credible documentary evidence is provided in support of a petition seeking an extension of H–1B stay in or change of status to another classification indicating that the beneficiary faced retaliatory action from his or her employer based on a report regarding a violation of that employer's labor condition application obligations under section 212(n)(2)(C)(iv) of the Act, USCIS may consider a loss or failure to maintain H–1B status by the beneficiary related to such violation as due to, and commensurate with, ''extraordinary circumstances'' as defined by § 214.1(c)(4) and 8 CFR 248.1(b).

* * * * *

PART 245—ADJUSTMENT OF STATUS TO THAT OF PERSON ADMITTED FOR PERMANENT RESIDENCE

■ 8. The authority citation for part 245 continues to read as follows:

Authority: 8 U.S.C. 1101, 1103, 1182, 1255; Pub. L. 105–100, section 202, 111 Stat. 2160, 2193; Pub. L. 105–277, section 902, 112 Stat. 2681; Pub. L. 110–229, tit. VII, 122 Stat. 754; 8 CFR part 2.

■ 9. Revise § 245.15(n)(2) to read as follows:

§ 245.15 Adjustment of status of certain Haitian nationals under the Haitian Refugee Immigrant Fairness Act of 1998 (HRIFA).

* * * * *

(n) * * *

(2) *Adjudication and issuance.* Employment authorization may not be issued to an applicant for adjustment of status under section 902 of HRIFA until the adjustment application has been pending for 180 days, unless USCIS verifies that DHS records contain evidence that the applicant meets the criteria set forth in section 902(b) or 902(d) of HRIFA, and determines that there is no indication that the applicant is clearly ineligible for adjustment of status under section 902 of HRIFA, in which case USCIS may approve the application for employment authorization, and issue the resulting document, immediately upon such verification. If USCIS fails to adjudicate the application for employment authorization upon the expiration of the 180-day waiting period, or within 90 days of the filing of application for employment authorization, whichever comes later, the applicant shall be eligible for an employment authorization document. Nothing in this section shall preclude an applicant for adjustment of status under HRIFA from being granted an initial employment authorization or an extension of employment authorization under any other provision of law or regulation for which the applicant may be eligible.

* * * * *

■ 10. Add § 245.25 to read as follows:

§ 245.25 Adjustment of status of aliens with approved employment-based immigrant visa petitions; validity of petition and offer of employment.

(a) *Validity of petition for continued eligibility for adjustment of status.* An alien who has a pending application to adjust status to that of a lawful permanent resident based on an approved employment-based immigrant visa petition filed under section 204(a)(1)(F) of the Act on the applicant's behalf must have a valid offer of employment based on a valid petition at the time the application to adjust status is filed and at the time the alien's application to adjust status is adjudicated, and the applicant must intend to accept such offer of employment. Prior to a final administrative decision on an application to adjust status, USCIS may require that the applicant demonstrate, or the applicant may affirmatively demonstrate to USCIS, on Form I–485 Supplement J, with any supporting material and credible documentary evidence, in accordance with the form instructions that:

(1) The employment offer by the petitioning employer is continuing; or

(2) Under section 204(j) of the Act, the applicant has a new offer of employment from the petitioning employer or a different U.S. employer, or a new offer based on self-employment, in the same or a similar occupational classification as the employment offered under the qualifying petition, provided that:

(i) The alien's application to adjust status based on a qualifying petition has been pending for 180 days or more; and

(ii) The qualifying immigrant visa petition:

(A) Has already been approved; or

(B) Is pending when the beneficiary notifies USCIS of a new job offer 180 days or more after the date the alien's adjustment of status application was filed, and the petition is subsequently approved:

(*1*) Adjudication of the pending petition shall be without regard to the requirement in 8 CFR 204.5(g)(2) to continuously establish the ability to pay the proffered wage after filing and until the beneficiary obtains lawful permanent residence; and

(*2*) The pending petition will be approved if it was eligible for approval at the time of filing and until the alien's adjustment of status application has been pending for 180 days, unless approval of the qualifying immigrant visa petition at the time of adjudication is inconsistent with a requirement of the Act or another applicable statute; and

(iii) The approval of the qualifying petition has not been revoked.

(3) In all cases, the applicant and his or her intended employer must demonstrate the intention for the applicant to be employed under the continuing or new employment offer (including self-employment) described in paragraphs (a)(1) and (2) of this section, as applicable, within a reasonable period upon the applicant's grant of lawful permanent resident status.

(b) *Definition of same or similar occupational classification.* The term ''same occupational classification'' means an occupation that resembles in every relevant respect the occupation for which the underlying employment-based immigrant visa petition was approved. The term ''similar occupational classification'' means an occupation that shares essential qualities or has a marked resemblance or likeness with the occupation for which the underlying employment-based immigrant visa petition was approved.

PART 274a—CONTROL OF EMPLOYMENT OF ALIENS

■ 11. The authority citation for part 274a continues to read as follows:

Authority: 8 U.S.C. 1101, 1103, 1324a; 48 U.S.C. 1806; 8 CFR part 2.

■ 12. Amend § 274a.2 by revising paragraph (b)(1)(vii) to read as follows:

§ 274a.2 Verification of identity and employment authorization.

* * * * *

(b) * * *

(1) * * *

(vii) If an individual's employment authorization expires, the employer, recruiter or referrer for a fee must reverify on the Form I–9 to reflect that the individual is still authorized to work in the United States; otherwise, the individual may no longer be employed, recruited, or referred. Reverification on the Form I–9 must occur not later than the date work authorization expires. If an Employment Authorization Document (Form I–766) as described in § 274a.13(d) was presented for completion of the Form I–9 in combination with a Notice of Action (Form I–797C), stating that the original Employment Authorization Document has been automatically extended for up to 180 days, reverification applies upon the expiration of the automatically extended validity period under § 274a.13(d) and not upon the expiration date indicated on the face of the individual's Employment Authorization Document. In order to reverify on the Form I–9, the employee or referred individual must present a document that either shows continuing employment eligibility or is a new grant of work authorization. The employer or the recruiter or referrer for a fee must review this document, and if it appears to be genuine and relate to the individual, reverify by noting the document's identification number and expiration date, if any, on the Form I–9 and signing the attestation by a handwritten signature or electronic signature in accordance with paragraph (i) of this section.

* * * * *

■ 13. Amend § 274a.12 by:

■ a. Adding a sentence to the end of paragraph (b)(9);

■ b. Adding and reserving paragraphs (c)(27) through (34); and

■ c. Adding paragraphs (c)(35) and (36).

The additions read as follows:

§ 274a.12 Classes of aliens authorized to accept employment.

* * * * *

(b) * * *

(9) * * * In the case of a nonimmigrant with H–1B status, employment authorization will automatically continue upon the filing of a qualifying petition under 8 CFR 214.2(h)(2)(i)(H) until such petition is adjudicated, in accordance with section 214(n) of the Act and 8 CFR 214.2(h)(2)(i)(H);

* * * * *

(c) * * *

(35) An alien who is the principal beneficiary of a valid immigrant petition under section 203(b)(1), 203(b)(2) or 203(b)(3) of the Act described as eligible for employment authorization in 8 CFR 204.5(p).

(36) A spouse or child of a principal beneficiary of a valid immigrant petition under section 203(b)(1), 203(b)(2) or 203(b)(3) of the Act described as eligible for employment authorization in 8 CFR 204.5(p).

■ 14. Amend § 274a.13 by:

■ a. Revising paragraph (a) introductory text;

■ b. Removing the first sentence of paragraph (a)(1); and

■ c. Revising paragraph (d).

The revisions read as follows:

§ 274a.13 Application for employment authorization.

(a) *Application.* An alien requesting employment authorization or an Employment Authorization Document (Form I–766), or both, may be required to apply on a form designated by USCIS with any prescribed fee(s) in accordance with the form instructions. An alien may file such request concurrently with a related benefit request that, if granted, would form the basis for eligibility for employment authorization, only to the extent permitted by the form instructions or as announced by USCIS on its Web site.

* * * * *

(d) *Renewal application*—(1) *Automatic extension of Employment Authorization Documents.* Except as otherwise provided in this chapter or by law, notwithstanding 8 CFR 274a.14(a)(1)(i), the validity period of an expiring Employment Authorization Document (Form I–766) and, for aliens who are not employment authorized incident to status, also the attendant employment authorization, will be automatically extended for an additional period not to exceed 180 days from the date of such document's and such employment authorization's expiration if a request for renewal on a form designated by USCIS is:

(i) Properly filed as provided by form instructions before the expiration date shown on the face of the Employment Authorization Document, or during the filing period described in the applicable **Federal Register** notice regarding procedures for obtaining Temporary Protected Status-related EADs;

(ii) Based on the same employment authorization category as shown on the face of the expiring Employment Authorization Document or is for an individual approved for Temporary Protected Status whose EAD was issued pursuant to 8 CFR 274a.12(c)(19); and

(iii) Based on a class of aliens whose eligibility to apply for employment authorization continues notwithstanding expiration of the Employment Authorization Document and is based on an employment authorization category that does not require adjudication of an underlying application or petition before adjudication of the renewal application, including aliens described in 8 CFR 274a.12(a)(12) granted Temporary Protected Status and pending applicants for Temporary Protected Status who are issued an EAD under 8 CFR 274a.12(c)(19), as may be announced on the USCIS Web site.

(2) *Terms and conditions.* Any extension authorized under this paragraph (d) shall be subject to any conditions and limitations noted in the immediately preceding employment authorization.

(3) *Termination.* The period authorized by paragraph (d)(1) of this section will automatically terminate the earlier of up to 180 days after the expiration date of the Employment Authorization Document (Form I–766), or upon issuance of notification of a decision denying the renewal request. Nothing in paragraph (d) of this section will affect DHS's ability to otherwise terminate any employment authorization or Employment Authorization Document, or extension period for such employment or document, by written notice to the applicant, by notice to a class of aliens published in the **Federal Register**, or as provided by statute or regulation including 8 CFR 274a.14.

(4) *Unexpired Employment Authorization Documents.* An Employment Authorization Document (Form I–766) that has expired on its face is considered unexpired when combined with a Notice of Action (Form I–797C), which demonstrates that the requirements of paragraph (d)(1) of this section have been met.

Jeh Charles Johnson,

Secretary.

[FR Doc. 2016–27540 Filed 11–17–16; 8:45 am]

BILLING CODE 9111–97–P

FEDERAL REGISTER

Vol. 81 Friday,

No. 223 November 18, 2016

Book 3 of 3 Books

Pages 82493–83106

Part VII

Department of Labor

Occupational Safety and Health Administration

29 CFR Part 1910

Walking-Working Surfaces and Personal Protective Equipment (Fall Protection Systems); Final Rule

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1910

[Docket No. OSHA–2007–0072]

RIN 1218-AB80

Walking-Working Surfaces and Personal Protective Equipment (Fall Protection Systems)

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Final rule.

SUMMARY: OSHA is revising and updating its general industry standards on walking-working surfaces to prevent and reduce workplace slips, trips, and falls, as well as other injuries and fatalities associated with walking-working surface hazards. The final rule includes revised and new provisions addressing, for example, fixed ladders; rope descent systems; fall protection systems and criteria, including personal fall protection systems; and training on fall hazards and fall protection systems. In addition, the final rule adds requirements on the design, performance, and use of personal fall protection systems.

The final rule increases consistency between the general industry and construction standards, which will make compliance easier for employers who conduct operations in both industry sectors. Similarly, the final rule updates requirements to reflect advances in technology and to make them consistent with more recent OSHA standards and national consensus standards. OSHA has also reorganized the requirements and incorporated plain language in order to make the final rule easier to understand and follow. The final rule also uses performance-based language whenever possible to give employers greater compliance flexibility.

DATES: *Effective date:* This final rule becomes effective on January 17, 2017. Some requirements in the final rule have compliance dates after the effective date. For further information on those compliance dates, see Section XI of the **SUPPLEMENTARY INFORMATION** section. In addition, this final rule contains information collections subject to the Office of Management and Budget (OMB) approval under the Paperwork Reduction Act, and the Department is submitting requests to OMB to obtain that approval. The information collections will not take effect until the date OMB approves the information collection request or the date the requirement would take effect as explained elsewhere in this document. The Department will publish a document in the **Federal Register** to announce OMB's disposition of the information collection requests.

ADDRESSES: In accordance with 28 U.S.C. 2112(a)(2), OSHA designates Ms. Ann Rosenthal, Associate Solicitor of Labor for Occupational Safety and Health, Office of the Solicitor, U.S. Department of Labor, Room S–4004, 200 Constitution Avenue NW., Washington, DC 20210, to receive petitions for review of the final rule.

FOR FURTHER INFORMATION CONTACT:

Press inquiries: Mr. Frank Meilinger, Director, Office of Communications, OSHA, U.S. Department of Labor, Room N–3647, 200 Constitution Avenue NW., Washington, DC 20210; telephone (202) 693–1999; email *meilinger.francis2@dol.gov*.

General information and technical inquiries: Mr. Mark Hagemann, Director, Office of Safety Systems, Directorate of Standards and Guidance, OSHA, U.S. Department of Labor, Room N–3609, 200 Constitution Avenue NW., Washington, DC 20210; telephone (202) 693–2255, email *hagemann.mark@dol.gov*.

Copies of this ***Federal Register*** *document:* Copies of this **Federal Register** document are available at *http://www.regulations.gov*, the Federal eRulemaking Portal. Copies also are available at OSHA Office of Publications, U.S. Department of Labor, Room N–3101, 200 Constitution Avenue NW., Washington, DC 20210; telephone (202) 693–1888 (OSHA's TTY (887) 889–5627). This document, as well as news releases and other relevant documents, are available on OSHA's website at *http://www.osha.gov*.

SUPPLEMENTARY INFORMATION:

Table of Contents

The following table of contents identifies the major sections of the preamble to the final rule:

I. Background

A. References and Exhibits

This **Federal Register** document references materials in Docket No. OSHA–2007–0072, which is the docket for this rulemaking. OSHA also references documents in the following dockets, which the Agency incorporates by reference into this rulemaking:

• 1990 proposed rule on Walking and Working Surfaces (29 CFR 1910, subpart D)—Docket No. OSHA–S041–2006–0666 (formerly Docket No. S–041);
• 1990 proposed rule on Personal Protective Equipment—Fall Protection—Docket No. OSHA–S057–2006–0680 (formerly Docket No. S–057);
• 2003 reopening of the rulemaking record—Docket No. OSHA–S029–2006–0662 (formerly Docket No. S–029);
• 1994 final rule on Fall Protection in the Construction Industry—Docket No. OSHA–S206–2006–0699 (formerly Docket No. S–206);
• 1983 and 1985 proposed rules on Powered Platforms for Building Maintenance—Docket Nos. OSHA–S700–2006–0722 and OSHA–S700A–2006–0723 (formerly Dockets Nos. S–700 and S–700A, respectively); and
• 2014 final rule on Electric Power Generation, Transmission, and Distribution; Electrical Protective Equipment—Docket No. OSHA–S215–2006–0063 (Formerly Docket No. S–215).

All of these dockets are available for viewing at *http://www.regulations.gov*, the Federal eRulemaking Portal.

Citations to documents in Docket No. OSHA–2007–0072: This document references exhibits in this rulemaking record, Docket No. OSHA–2007–0072, as ''Ex.,'' followed by the last sequence of numbers in the document identification (ID) number. For example, ''Ex. 44'' is a reference to document ID number OSHA–2007–0072–0044 in this rulemaking docket.

Citations to the transcripts of the rulemaking hearing: This document includes citations to the informal public hearing on the proposed rule. All of the hearing transcripts are included in exhibit 329. Thus, ''Ex. 329 (1/19/2011, p. 75)'' refers to page 75 of the January 19, 2011, hearing transcript.

Citations to other dockets: This document also references other OSHA dockets. Documents in those dockets are cited as the docket number followed by the last sequence of numbers in the document ID number. For example, ''Ex. OSHA–S029–2006–0662–0014'' refers to ''Docket No. OSHA–S029–2006–0662, Ex. 14'' in the 2003 reopening of the rulemaking record on subparts D and I (formerly Docket No. S–029).

Docket: The exhibits in this rulemaking docket (Docket No. OSHA–2007–0072), as well as the dockets OSHA incorporated by reference in this rulemaking, are available to read and download by searching the docket number or document ID number at *http://www.regulations.gov*. Each docket index lists all documents and exhibits in that docket, including public comments, supporting materials, hearing transcripts, and other documents. However, some documents (*e.g.,* copyrighted material) in those dockets are not available to read or download from that website. All documents are available for inspection and copying at the OSHA Docket Office, Room N–2625, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210; telephone number (202) 693–2350 (OSHA TTY (887) 889–5627).

B. Introduction and Basis for Agency Action

Workers in many diverse general industry workplaces are exposed to walking-working surface hazards that can result in slips, trips, falls and other injuries or fatalities. According to the Bureau of Labor Statistics (BLS) data, slips, trips, and falls are a leading cause of workplace fatalities and injuries in general industry, which indicates that workers regularly encounter these hazards (see Section II below).

The final rule covers all general industry walking-working surfaces, including but not limited to, floors, ladders, stairways, runways, dockboards, roofs, scaffolds, and elevated work surfaces and walkways. To protect workers from hazards associated with those surfaces, particularly hazards related to falls from elevations, the final rule updates and revises the general industry Walking-Working Surfaces standards (29 CFR part 1910, subpart D). The final rule includes revised and new provisions that address, for example, fixed ladders; rope descent systems; fall protection systems and criteria, including personal fall protection systems; and training on fall hazards and fall protection systems. In addition, the final rule adds new requirements on the design, performance, and use of personal fall protection systems to the general industry Personal Protective Equipment (PPE) standards (29 CFR part 1910, subpart I). These and other measures the final rule incorporates reflect advances in technology and industry best practices that have been developed since OSHA adopted subpart D in 1971.

The final rule also gives employers greater flexibility to prevent and eliminate walking-working surface hazards. For example, the final rule, like the construction Fall Protection Standards (29 CFR part 1926, subpart M), gives employers flexibility to protect workers from falling to a lower level by using personal fall protection systems, including personal fall arrest, travel restraint, and work positioning systems; instead of requiring the use of guardrail systems, which the existing rule mandates. In addition, consistent with section 6(b)(5) of the Occupational Safety and Health Act of 1970 (OSH Act) (29 U.S.C. 651, 655(b)(5)) the final rule uses performance-based language in place of specification language, where possible, to increase compliance flexibility for employers. OSHA believes the flexibility the final rule provides will allow employers to select and provide the controls they determine will be most effective in the particular workplace operation or situation to protect their workers and prevent injuries and fatalities from occurring.

The final rule also increases harmonization between OSHA standards, which many stakeholders requested. Of particular importance, OSHA increased consistency between the final rule and OSHA's construction Scaffolds, Fall Protection, and Stairway and Ladder standards (29 CFR part 1926, subparts L, M, and X), which makes compliance easier for employers who conduct operations in both industry sectors. The revisions in and additions to the final rule will allow employers to use the same fall protection systems and equipment and follow the same practices when they perform either general industry or construction activities.

The final rule also increases consistency by incorporating provisions from other standards OSHA adopted more recently, including Powered Platforms for Building Maintenance (29 CFR 1910.66) and Scaffolds, Ladders and Other Working Surfaces in Shipyard Employment (29 CFR part 1915, subpart E).[1] In particular, § 1910.140 drew personal fall arrest system requirements from Appendix C (Mandatory) of the Powered Platform standard (§ 1910.66). The experience OSHA gained on that standard shows that those requirements are effective in protecting workers from fall hazards.

OSHA also drew many provisions in the final rule from national consensus standards, including ANSI/ASSE A1264.1–2007, Safety Requirements for Workplace Walking/Working Surfaces and Their Access; Workplace, Floor, Wall and Roof Openings; Stairs and Guardrail Systems; ANSI/ASSE Z359.1–2007, Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components; and ANSI/IWCA I–14.1–2001, Window Cleaning Safety Standard. Many stakeholders recommended that OSHA incorporate the requirements in those standards into the final rule. OSHA agrees with stakeholders that national consensus standards represent industry best practices and reflect advancements in technology, methods, and practices developed in the years since the Agency adopted the existing rule.

OSHA also has made the final rule easier to understand and follow by reorganizing and consolidating provisions, using plain language, and adding informational tables, illustrations, and appendices. For example, the final rule adds two non-mandatory appendices to final § 1910.140 that address planning for, selecting, using, and inspecting personal fall protection systems (appendix C) and test methods and procedures for personal fall arrest work positioning systems (appendix D).

OSHA's efforts to revise and update the existing walking-working surfaces standards have been ongoing since 1973. Over that time, OSHA has gathered and analyzed a large body of data and information on walking-working surface hazards and methods to prevent and eliminate them. After careful examination and analysis of the rulemaking record as a whole, OSHA has determined that the requirements in this final rule will significantly reduce

[1] Where necessary, the final rule also revises provisions in some current general industry standards (*e.g.,* 29 CFR part 1910, subparts F, N, and R) to ensure that they are consistent with the final rule (See Section IV(C) below).

the number of worker deaths and injuries that occur each year due to these hazards, particularly workplace slip, trip, and fall fatalities and injuries. OSHA estimates that final standard rule will prevent 29 fatalities and 5,842 injuries annually (See Sections II and V).

OSHA believes that many employers already are in compliance with many provisions in the final rule; therefore, they should not have significant problems implementing it. OSHA also has included measures to make implementation of the final rule easier for employers. The final rule provides extended compliance dates for implementing some requirements and applies other requirements only prospectively. For example, the final rule gives employers as much as 20 years to equip fixed ladders with personal fall arrest or ladder safety systems. Moreover, since the final rule incorporates requirements from national consensus standards, most equipment manufacturers already provide equipment and systems that meet the requirements of the final rule.

C. Summary of the Final Economic Analysis

The OSH Act requires OSHA to make certain findings with respect to standards. One of these findings, specified by Section 3(8) of the OSH Act, requires an OSHA standard to address a significant risk and to reduce this risk significantly. (See *Industrial Union Dep't* v. *American Petroleum Institute,* 448 U.S. 607 (1980).) As discussed in Section II of this preamble, OSHA finds that slips, trips, and falls constitute a significant risk, and estimates that the final standard will prevent 29 fatalities and 5,842 injuries annually. Section 6(b) of the OSH Act requires OSHA to determine if its standards are technologically and economically feasible. As discussed in Section V of this preamble, OSHA finds that this final standard is economically and technologically feasible. The table below summarizes OSHA's findings with respect to the estimated costs, benefits, and net benefits of this standard. The annual benefits are significantly in excess of the annual costs. However, it should be noted that under the OSH Act, OSHA does not use the magnitude of net benefits as the decision-making criterion in determining what standards to promulgate.

The Regulatory Flexibility Act (5 U.S.C. 601, as amended) requires that OSHA determine whether a standard will have a significant economic impact on a substantial number of small firms. As discussed in Section V, the Assistant Secretary examined the small firms affected by this final rule and certifies that these provisions will not have a significant impact on a substantial number of small firms.

Net Benefits of the Final Revision to OSHA's Walking-Working Standards

Annualized Costs	
§1910.22 General Requirements	$33.2
§1910.23 Ladders	$11.3
§1910.24 Step Bolts and Manhole Steps	$18.0
§1910.27 Scaffolds and Rope Descent Systems	$71.6
§1910.28 Duty to Have Fall Protection and Falling Object Protection	$55.9
§1910.29 Fall Protection Systems and Falling Object Protection – Criteria and Practices	$13.1
§1910.30 Training Requirements	$74.2
§1910.132 General Requirements	$12.7
§1910.140 Personal Fall Protection Systems	$11.0
Rule Familiarization	$4.1
Total Annual Costs	**$305.0 million**
Annual Benefits	
Number of Injuries Prevented	5,842
Number of Fatalities Prevented	29
Monetized Benefits (assuming $62,000 per injury and $8.7 million per fatality prevented)	**$614.5 million**
OSHA standards that are updated and consistent with voluntary standards.	Unquantified
Net Benefits (benefits minus costs)	**$309.5 million**

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

D. Events Leading to the Final Rule

Existing standards. In 1971, OSHA adopted the existing general industry standards on Walking-Working Surfaces (29 CFR part 1910, subpart D) and Personal Protective Equipment (PPE) (29 CFR part 1910, subpart I) pursuant to Section 6(a) of the OSH Act (29 U.S.C. 655(a)). Section 6(a) permitted OSHA, during the first two years following the effective date of the OSH Act, to adopt as occupational safety and health standards any established Federal and national consensus standards. OSHA adopted the subpart D and I standards from national consensus standards in existence at the time. Since then, those national consensus standards have been updated and revised, some several times, to incorporate advancements in technology and industry best practices. OSHA's existing walking-working surfaces standards have not kept pace with those advancements.

Early rulemaking efforts. In 1973, OSHA published a proposed rule to revise the subpart D standards (38 FR 24300 (9/6/1973)), but withdrew the proposal in 1976, saying it was outdated (41 FR 17227 (4/23/1976)). That year OSHA conducted stakeholder meetings around the country to obtain public comment on revising subpart D. After reviewing information gathered from those meetings, OSHA determined that it needed to gather additional scientific and technical data, research, and information to support effective revisions to subpart D.

From 1976 through the 1980s, OSHA gathered a large body of scientific and technical research and information, including:

• Recommendations for fall prevention, ladders, scaffolds, slip resistance, and handrails from the University of Michigan;

• Studies on guardrails, slip resistance, scaffolds, and fall prevention from the National Bureau of Standards (now the National Institute of Standards and Technology);

• Analysis of various walking-working surfaces by Texas Tech University;

• Accident, injury, and fatality data from the Bureau of Labor Statistics (BLS); and

• National consensus standards from the American National Standards Institute (ANSI), American Society of Testing and Materials (ASTM), and the American Society of Mechanical Engineers (ASME).

1990 proposed rules. The data, research, and information OSHA gathered provided the basis for OSHA's 1990 companion proposals to revise and update the walking-working surfaces standards in subpart D (55 FR 13360 (4/10/1990)) and add personal fall protection system requirements to subpart I (55 FR 13423 (4/10/1990)). The two proposals were interdependent with respect to personal fall protection systems. That is, the subpart D proposal would have established a ''duty to provide'' fall protection, including personal fall protection systems while the subpart I proposal would have established design, performance, and use criteria for personal fall protection systems.

OSHA received comments and held an informal public hearing on the two proposals (55 FR 29224), but did not finalize either.

1994 final rule revising subpart I. In 1994, OSHA published a final rule updating the general industry PPE standards (59 FR 16334 (4/6/1994)). The final rule added new general provisions requiring that employers conduct hazard assessments; select proper PPE; remove defective or damaged PPE from service; and provide worker training in the proper use, care, and disposal of PPE (§ 1910.132). It also revised design, selection, and use requirements for specific types of PPE. However, the final rule did not apply the new general provisions to personal fall protection systems or include specific requirements addressing such systems.

2003 record reopening. On May 2, 2003, OSHA published a notice reopening the record on the subpart D and I rulemakings to refresh the record, which had grown stale in the years since OSHA published the 1990 proposed rules (68 FR 23528). Based on comments and information OSHA received, including information on significant technological advances in fall protection, particularly personal fall protection systems, OSHA determined that a new proposed rule was needed.

2010 proposed rule. On May 24, 2010, OSHA published a consolidated proposed rule on subparts D and I (75 FR 28862). The Agency provided 90 days, until August 23, 2010, for stakeholders to submit comments on the proposed rule, the preliminary economic analysis, and the issues the Agency raised in the proposal. The Agency received 272 comments, including comments from workers, employers, trade associations, occupational safety and health consultants, manufacturers, labor representatives, and government agencies (Exs. 52 through 326).

Several stakeholders requested an informal public hearing on the proposed rule (Exs. 172; 178; 180; 201; 256). OSHA granted the requests for a public hearing (75 FR 69369 (11/10/2010)), and convened the hearing on January 18, 2011, in Washington, DC (Ex. 329). Administrative Law Judge John M. Vittone presided over the four-day hearing during which 39 stakeholders presented testimony (Ex. 329). At the close of the hearing on January 21, 2011, Judge Vittone ordered that the hearing record remain open for an additional 45 days, until March 7, 2011, for the submission of new factual information and data relevant to the hearing (Exs. 327; 330; 328). He also ordered that the record remain open until April 6, 2011, for the submission of final written comments, arguments, summations, and briefs (Exs. 327; 331–370). On June 13, 2011, Judge Vittone issued an order closing the hearing record and certifying it to the Assistant Secretary of Labor for Occupational Safety and Health (Ex. 373).

II. Analysis of Risk

A. Introduction

To promulgate a standard that regulates exposure to workplace hazards, OSHA must demonstrate that exposure to those hazards poses a ''significant risk'' of death or serious physical harm to workers, and that the standard will substantially reduce that risk. The Agency's burden to establish significant risk derives from the Occupational Safety and Health Act of 1970 (OSH Act) (29 U.S.C. 651 *et seq.*).

Section 3(8) of the OSH Act requires that workplace safety and health standards be ''reasonably necessary or appropriate to provide safe or healthful employment and places of employment'' (29 U.S.C. 652(8)). A standard is reasonably necessary and appropriate within the meaning of section 3(8) if it materially reduces a significant risk of harm to workers. The Supreme Court, in the ''Benzene'' decision, stated that section 3(8) ''implies that, before promulgating any standard, the Secretary must make a finding that the workplaces in question are not safe'' (*Indus. Union Dep't, AFL–CIO* v. *Am. Petroleum Inst. (Benzene),* 448 U.S. 607, 642 (1980)). Examining section 3(8) more closely, the Court described OSHA's obligation to demonstrate significant risk:

> ''[S]afe'' is not the equivalent of ''risk-free.'' . . . [A] workplace can hardly be considered ''unsafe'' unless it threatens the workers with a significant risk of harm.
>
> Therefore, before [the Secretary] can promulgate *any* permanent health or safety standard, the Secretary is required to make a threshold finding that the place of employment is unsafe—in the sense that significant risks are present and can be eliminated or lessened by a change in practices. (*Id.* (Emphasis in original)).

Relying on the U.S. Census' Statistics of U.S. Businesses for 2007, OSHA estimates that 6.9 million general industry establishments employing 112.3 million employees will be affected by the final standard. For the industries affected by the final standard, OSHA examined fatalities and lost-workday injuries for falls to a lower level.

In the proposed rule, the Agency preliminarily concluded that falls constitute a significant risk and that the proposed standards would substantially reduce the risk of falls to employees (75 FR 28861, 28865–28866 (5/24/2010)). The analysis of U.S. Bureau of Labor Statistics (BLS) data from 1992 to 2004 identified an annual average of 300 fatal falls, 213 (71 percent) of which resulted from falls to a lower level and an annual average of 299,404 non-fatal falls resulting in lost-workday injuries, 79,593 (26 percent) of which were as a result of falls to a lower level. The Agency's analysis also estimated that compliance with the proposed requirements in subparts D and I annually would prevent 20 fatal to a lower level and 3,706 lost-workday injuries due to falls to a lower level.

Based on the analysis presented in this section, which OSHA updated with more recent data, and in the Final Economic and Final Regulatory Flexibility Screening Analysis (FEA) (Section V), OSHA determines that workplace exposure to hazards associated with walking-working surfaces, particularly the hazards of falling to a lower level, poses a significant risk of serious physical harm or death to workers in general industry. BLS data from 2006–2012 show that an average of 261 fatal falls to a lower level occurred annually in general industry. In addition, BLS data for 2006–2012 indicate that an average of 48,379 lost-workday (LWD) injuries from falls to a lower level occurred annually in general industry.

OSHA also concludes, based on this section and the FEA, that the ''practices, means, methods, operations, or processes'' the final rule requires will substantially reduce that risk. Specifically, the Agency estimates that full compliance with the final rule will prevent 29 fatalities from falls to a lower level and 5,842 lost-workday injuries from falls to a lower level annually in general industry.

B. Nature of the Risk

Every year many workers in general industry experience slips, trips, falls and other injuries associated with walking-working surface hazards. These walking-working surface hazards result in worker fatalities and serious injuries, including lost-workday injuries. Slips, trips, and falls, including falls on the same level, can result in injuries such as fractures, contusions, lacerations, and sprains, and may even be fatal. Falls to lower levels can increase the severity of injuries as well as the likelihood of death. Falls on the same level can also result in strains and sprains when employees try to ''catch'' themselves to prevent falling.

There are many walking-working surface hazards that can cause slips, trips, and falls. These hazards include damaged or worn components on personal fall protection systems and rope descent systems; portable ladders used for purposes for which they were not designed; fixed ladders that are not equipped with fall protection; damaged stair treads; snow, ice, water, or grease on walking-working surfaces such as floors; and dockboards that are not properly secured or anchored.

Identifying walking-working surface hazards and deciding how best to protect employees is the first step in reducing or eliminating the hazards. To that end, the final rule requires that employers regularly inspect walking-working surfaces. It also requires that employers assess walking-working surfaces to determine if hazards are present, or likely to be, that necessitate the use of personal fall protection systems (§§ 1910.132(d); 1910.28(b)(1)(v)). In addition, employers must train employees on fall hazards and equipment plus the proper use of personal fall protection systems (§§ 1910.30, 1910.132(f)). After employers have assessed the workplace and identified fall hazards, final § 1910.28 requires employers to provide fall protection to protect their employees from falls. Final §§ 1910.29 and 1910.140 specify the criteria fall protection systems must meet, such as strength and performance requirements. Section A of the FEA provides detailed information on the incidents the final rule will prevent.

C. Fatality and Injury Data

Fatalities. The BLS Census of Fatal Occupational Injuries (CFOI) has listed falls as one of the leading causes of workplace fatalities for many years. From 1999 to 2010, falls were second only to highway incidents in terms of fatal injuries. In 2011, slips, trips, and falls were the third leading cause of fatal occupational injuries and in 2012, the fourth leading cause of these types of injuries. Many fatal falls occur in general industry. From 2006–2012, approximately one-third of all fatal falls in private industry were falls to a lower level in general industry.

OSHA examined fall fatalities for 2006 to 2012 in industries covered by the final standard using data from the BLS Census of Fatal Occupational Injuries (CFOI). Table II–1, summarizing the data in Table V–6 of the FEA, shows the total number of fatal falls to a lower level from 2006 to 2012.

Table II-1. Fatal Falls to a Lower Level – General Industry

Year	Fatal Falls to a Lower Level
2006	283
2007	279
2008	234
2009	237
2010	243
2011	278
2012	270

As described in Table V–6 of the FEA, over the seven-year period, the Professional, Scientific, and Technical Services industry and the Administrative and Support Services industry (NAICS codes 541 and 561, respectively) accounted for 27 percent of the fatal falls, while the Manufacturing (NAICS 31–33) and Transportation (NAICS 48) sectors accounted for 9.6 and 7.1 percent of the fatal falls, respectively. Among all three-digit NAICS codes affected by the standard, BLS reported the highest number of fatal falls in NAICS code 561, Administrative and Support Services. Although not shown in the table, a large majority of the fatalities for Administrative and Support Services—86 percent for the seven-year period 2006–2012—occurred in the industry concerned with services to buildings and dwellings (NAICS 5617). Based on these data, OSHA estimates that, on average, 261 deaths per year resulted from falls to a lower level and would be directly affected by the final standard.

Table V–7 of the FEA also includes data on fatal falls. That table displays the number of fatal falls by type of fall and industry sector for 2006–2010. These data indicate that during this period, there were, on average, 255 fatal falls to a lower level in general industry establishments when fatal falls are summed across all affected two-digit NAICS industries. While the annual number of fatal falls decreased and then rose since 2006, the average annual number of fatal falls to a lower level from 2006–2010 (255 fatal falls to a lower level) and 2011–2012 (274 fatal falls to a lower level) [2] remains at approximately the same level. In addition, falls remained one of the leading causes of workplace fatalities throughout this time, as discussed above.

Injuries. OSHA examined lost-workday injuries using data from BLS's *Survey of Occupational Injuries and Illnesses.* Falls have been one of the leading causes of lost-workday injuries for the last several years. From 2006–2010, falls were consistently the third leading cause of injuries and illnesses, behind overexertion and contact with objects and equipment. From 2011–2012, slips, trips, and falls were the second leading cause of injuries and illnesses, behind only overexertion.

In addition to being a major source of lost-workday injuries, falls to a lower level were also some of the most severe. Falls to a lower level had the second highest median days away from work, a key measure of the severity of an injury or illness, every year from 2006–2012, except 2010 (where it was the third highest). BLS data also demonstrate that the majority of lost-workday falls to a lower level that occurred in private industry occurred in general industry. More specifically, for 2006–2012, approximately three-quarters of the lost-workday falls to a lower level in private industry occurred in general industry.

Table V–8 of the FEA shows the average number of lost-workday injuries due to falls in general industry, by type of fall, for 2006–2012. Based on these data, OSHA estimates that, on average, approximately 48,379 serious (lost-workday) injuries per year resulted from falls to a lower level and would be directly affected by the final standard.

Table II–2, based on BLS's *Survey of Occupational Injuries and Illnesses,* provides additional information about the median number of days away from work for lost-workday falls to a lower level from 2006–2012. Table II–2 displays the median number of days away from work attributed to falls to a lower level for each industry sector and private industry as a whole. In 2012, for example, the number of median days away from work for falls to a lower level in private industry as a whole was 18, while the median days away from work for all lost-workday injuries and illnesses in private industry as a whole was 8. Similarly, in 2012, the median days away from work for falls to a lower level in nearly every general industry sector was higher, and in many cases, much higher, than the median days away from work for all lost-workday injuries and illnesses in those sectors. This suggests that falls to a lower level are among the most severe lost-workday injuries.

Table II-2. Lost-Workday Falls to a Lower Level – General Industry, 2006-2012
Median Days Away from Work, by Industry Sector

Industry Sector	2006	2007	2008	2009	2010	2011	2012
Manufacturing	14	14	16	12	16	20	20
Trade, Transportation, Utilities	14	16	17	22	25	20	21
Information	15	8	10	34	27	30	13
Financial Activities	10	10	5	5	14	25	16
Professional and Business Services	14	12	13	12	14	11	21
Educational and Health Services	8	8	7	6	6	7	13
Leisure and Hospitality	7	7	14	11	6	11	7
Other Services, except Public Administration	11	4	33	3	8	35	10
All Private Industry	14	15	15	14	16	21	18

[2] Reference year 2011 is the first year in which the Injuries, Illnesses, and Fatalities (IIF) program used the Occupational Injury and Illness Classification System (OIICS), version 2.01, when classifying Event or Exposure, Primary Source, Secondary Source, Nature, and Part of Body. Due to substantial differences between OIICS 2.01 and the original OIICS structure, which was used from 1992 to 2010, data for these case characteristics from 2011 forward should not be compared to prior years.

Based on the number of fatalities and lost-workday injuries reported by BLS for falls to a lower level, and evidence that non-fatal injuries are among the most severe work-related injuries, OSHA finds that workers exposed to fall hazards are at a significant risk of death or serious injury.

Several stakeholders agreed that fall hazards present a significant risk of injury and death (Exs. 63; 121; 158; 189; 363; OSHA–S029–2006–0662–0177; OSHA–S029–2006–0662–0350). For example, Bill Kojola of the American Federation of Labor and Congress of Industrial Organizations (AFL–CIO) asserted:

> Fall hazards remain one of the most serious problems faced by millions of workers. We are convinced that the proposed changes, when implemented as a result of promulgating a final rule, will prevent fatalities and reduce injuries from fall hazards (Ex. 363).

Similarly, in his written comments, Robert Miller of Ameren Corporation stated that the proposed rule is a positive approach towards eliminating at-risk conditions and events (Ex. 189).

Charles Lankford, of Rios and Lankford Consulting International, challenged OSHA's preliminary finding that falls present a significant risk and that revising the general industry fall protection standards is necessary to address the problem. Mr. Lankford used NIOSH and BLS data to argue, respectively, that the final rule is not necessary because the rate of fall fatalities decreased from 1980–1994 and ''held steady'' from 1992 to 1997 (Ex. 368). OSHA is not persuaded by Mr. Lankford's argument because, as discussed above, current BLS data from 2006–2012 show that an average of 261 fatal falls to a lower level occurred annually and these falls continue to be a leading cause of fatal occupational injuries in general industry. OSHA believes this shows that a significant risk of death from falls to a lower level still exists in general industry workplaces. With regard to Mr. Lankford's claim that fall fatalities held ''steady'' from 1992–1997, according to the BLS data, the number of fatal falls increased each year during that period (with the exception of 1995), and reached a 6-year high in 1997.

In addition, Mr. Lankford argued that:

> [H]istorical incident rates for non-fatal falls also do not display an increasing fall problem. The all-industries non-fatal fall incidence rate has declined every year since 2003 (the oldest year in the BLS Table I consulted), so the decline in rates is not attributable to the current recession. If we exclude 2008 and 2009 data, manufacturing did not show a change. Yet 2006 and 2007 showed lower injury incidence rates than 2003 and 2004 (Ex. 368).

A review of 2003–2009 BLS data on the incidence rates of nonfatal occupational injuries and illnesses resulting from falls could not reproduce Mr. Lankford's claims. As previously discussed, falls continue to be one of the leading causes of lost-workday injuries. Falls to a lower level are also some of the most severe lost-workday injuries. In 2012, for example, the number of median days away from work for falls to a lower level in private industry as a whole was 18, while the median days away from work for all lost-workday injuries and illnesses in private industry as a whole was 8.

Mr. Lankford also suggested that fatal falls are a greater problem in the ''goods producing sector'' than the ''service sector.'' However, this assertion is not supported by the BLS data. As described in Table V–6 of the FEA, from 2006–2012, among all three-digit NAICS codes affected by the standard, BLS reported the highest number of fatal falls in a ''service sector'' (NAICS code 561, Administrative and Support Services). Further, over the seven-year period, the Professional, Scientific, and Technical Services industry and the Administrative, and Support Services industry (NAICS codes 541 and 561, respectively) accounted for 28 percent of the fatal falls.

Based on the evidence and analysis, OSHA disagrees with Mr. Lankford's comment. As mentioned above, after examining recent BLS data (2006–2012), OSHA finds that the available evidence points to a significant risk. OSHA believes that the risk of injury, combined with the risk of fatalities constitutes a significant safety threat that needs to be addressed by rulemaking—specifically a revision to subparts D and I. OSHA believes that the revisions to subparts D and I are reasonable and necessary to protect affected employees from those risks. Based on the BLS data, the Agency estimates that full compliance with the revised walking-working surfaces standards will prevent 28 fatalities and 4,056 lost-workday injuries due to falls to a lower level annually. OSHA finds that these benefits constitute a substantial reduction of significant risk of harm from these falls.

Several commenters urged OSHA to expand its analysis to include fatalities and injuries resulting from falls on the same level (Exs. 77; 329 (1/20/2011 pp. 42, 60–61); 329 (1/21/2011, pp. 200–203); 330). However, the Agency finds that, with regard to its significant risk analysis, the data for falls to a lower level constitute the vast majority of the risk that the standard addresses, *i.e.,* falls from elevations. Analysis in the FEA (Section V) demonstrates that fatal falls on the same level made up a small portion of all fatal falls. Table V–7 of the FEA shows that, for the five-year period 2006 to 2010, falls on the same level accounted for about 24 percent of total fall fatalities. For non-fatal injuries, the Agency recognizes that falls on the same level represent a significant portion of lost-workday fall-injuries. Table V–8 of the FEA shows that, in general industry, falls on the same level accounted for 68 percent of all falls resulting in lost-workday injuries, while falls to a lower level accounted for only 24 percent.

However, as discussed in the FEA, the final rule has relatively few new provisions addressing falls on the same level, such as slips and trips from floor obstructions or wet or slippery working surfaces. The requirements expected to yield the largest benefits from preventing falls on the same level are found in final § 1910.22 General requirements. These final provisions will result in safety benefits to workers by controlling worker exposure to fall hazards on walking-working surfaces, especially on outdoor surfaces. Tables V–11 and V–13 of the FEA show that OSHA estimates only 1 percent of fatal falls on the same level and 1 percent of lost-workday falls on the same level will be prevented by these provisions.

Since falls to a lower level constitute the vast majority of the risk the final rule addresses, OSHA's significant risk analysis includes only falls to a lower level. Because of this, OSHA notes the final risk analysis may understate the risk of falls in general industry, since falls on the same level account for 68 percent of falls resulting in a lost-workday injury.

The U.S. Chamber of Commerce questioned whether OSHA's estimate of the benefits of the proposed standard justified the efforts undertaken to issue the standard:

> We note with some surprise that OSHA's analysis suggests this new regulation will have a relatively minor impact on the total number of fatalities attributed to falls from height. OSHA claims that for the years 1992–2007 there were an average of 300 fatal falls per year from height. OSHA calculates that this standard will result in 20 fewer fatal falls per year. We do not mean to diminish the significance of saving 20 lives, but OSHA seems to be projecting less impact than a standard of this scope would suggest. Indeed, OSHA even admits in the preamble that:
>
> For the purposes of this analysis, OSHA did not attempt a quantitative analysis of how many fatal falls could be prevented by full and complete compliance with the existing standard. However *a qualitative examination*

of the fatal falls to a lower level shows that a majority, and perhaps a large majority, could be prevented by full compliance with the existing regulations. (Emphasis added)

This raises questions about whether such a sweeping new standard as this one, which will create confusion and new enforcement exposures, is indeed warranted, or if OSHA would achieve the same or better results by generating more complete compliance with current requirements (Ex. 202).

First, far from creating confusion, this rulemaking assures that OSHA rules will be in much closer accord with existing consensus standards and practices and that OSHA's general industry fall protection requirements will be better aligned with its construction fall protection standard. There are many situations in which improved enforcement of existing rules would be highly cost beneficial but is not possible. On the other hand, OSHA can enforce new provisions to this rule at minimal marginal costs per inspection since the bulk of the costs of an inspection involves the time to reach the site, walk through the site looking for violations of all OSHA rules, and conduct the necessary closing and enforcement conferences.

III. Pertinent Legal Authority

The purpose of the OSH Act is to ''assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources'' (29 U.S.C. 651(b)). To achieve this goal, Congress authorized the Secretary of Labor to issue and to enforce occupational safety and health standards (see 29 U.S.C. 655(a) (authorizing summary adoption of existing consensus and Federal standards within two years of the OSH Act's effective date); 655(b) (authorizing promulgation of standards pursuant to notice and comment); and 654(a)(2) (requiring employers to comply with OSHA standards)).

A safety or health standard is a standard ''which requires conditions, or the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment or places of employment'' (29 U.S.C. 652(8)).

A standard is reasonably necessary or appropriate within the meaning of section 3(8) of the OSH Act if it materially reduces a significant risk to workers; is economically feasible; is technologically feasible; is cost effective; is consistent with prior Agency action or is a justified departure; adequately responds to any contrary evidence and argument in the rulemaking record; and effectuates the Act's purposes at least as well as any national consensus standard it supersedes (see 29 U.S.C. 652; 58 FR 16612, 16616 (3/30/1993)).

A standard is technologically feasible if the protective measures it requires already exist, can be brought into existence with available technology, or can be created with technology that can reasonably be expected to be developed (*Pub. Citizen Health Research Group* v. *U.S. Dep't of Labor,* 557 F.3d 165, 170–71 (3d Cir. 2009); *Am. Iron and Steel Inst.* v. *OSHA (Lead II),* 939 F.2d 975, 980 (D.C. Cir. 1991); *United Steelworkers of Am., AFL–CIO–CLC* v. *Marshall,* 647 F.2d 1189, 1272 (D.C. Cir. 1980)).

A standard is economically feasible if industry can absorb or pass on the cost of compliance without threatening its long-term profitability or competitive structure (*Am. Textile Mfrs. Inst.* v. *Donovan (Cotton Dust),* 452 U.S. 490, 530 n.55 (1981); *Lead II,* 939 F.2d at 980). A standard is cost effective if the protective measures it requires are the least costly of the available alternatives that achieve the same level of protection (*Int'l Union, United Auto., Aerospace & Agric. Implement Workers of Am., UAW* v. *OSHA (Lockout/Tagout II),* 37 F.3d 665, 668 (D.C. Cir 1994). *See also Cotton Dust,* 452 U.S. at 514 n.32 (suggesting that the ''reasonably necessary or appropriate'' language of Section 3(8) of the Act (29 U.S.C. 652(8)) might require OSHA to select the less expensive of two equally effective measures)).

Section 6(b)(7) of the OSH Act authorizes OSHA to include among a standard's requirements labeling, monitoring, medical testing, and other information-gathering and transmittal provisions (29 U.S.C. 655(b)(7)).

All safety standards must be highly protective (see 58 FR at 16614–16615; *Lockout/Tagout II,* 37 F.3d at 668). Finally, whenever practicable, standards shall ''be expressed in terms of objective criteria and of the performance desired'' (29 U.S.C. 655(b)(5)).

IV. Summary and Explanation of the Final Rule

The final rule revises and updates the requirements in the general industry Walking-Working Surfaces standards (29 CFR part 1910, subpart D), including requirements for ladders, stairs, dockboards, and fall and falling object protection; and it adds new requirements on the design, performance, and use of personal fall protection systems (29 CFR part 1910, subpart I). The final rule also makes conforming changes to other standards in part 1910 that reference requirements in subparts D and I.

A. Final Subpart D

This part of the preamble discusses the individual requirements in the specific sections of final subpart D; explains the need for and purposes of the requirements; and identifies the data, evidence, and reasons supporting them. This preamble section also discusses issues raised in the proposed rule and by stakeholders, significant comments and testimony submitted to the rulemaking record, and substantive changes from the proposed rule.

In accordance with section 6(b)(8) of the OSH Act, OSHA drew many of the revisions, new provisions, and technological advancements in the proposed and final rules from various national consensus standards. In the discussion of the specific sections of final subpart D, OSHA identifies the national consensus standards that section references. In the summary and explanation of the proposed rule, OSHA's references to national consensus standards are to the editions that were current at that time. In the time since OSHA published the proposed rule, many of the referenced consensus standards have been revised and updated. In the final preamble, OSHA references the most recent editions of those national consensus standards, where appropriate, after examining and verifying that they are as protective as earlier editions.

OSHA has taken a number of steps in the final rule, like the proposal, to provide greater compliance flexibility for employers and make the final rule easier to understand and follow, which stakeholders supported (*e.g.,* Exs. 155; 164; 165; 172; 191; 196; 202). For example, consistent with section 6(b)(5) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 655(b)(5)), the final rule uses performance-based language in place of specification requirements, which gives employers flexibility to select the controls that they determine to be most effective for the particular workplace situation and operation. Like the proposed rule, OSHA increases ''harmonization'' between the final rule and OSHA construction standards (29 CFR part 1926, subparts L, M, and X), which makes compliance easier for employers who perform both general industry and construction operations (*e.g.,* Exs. 164; 165; 172; 191; 202; 226).

Finally, clarifying provisions and terms, using plain language, and consolidating and reorganizing the requirements also make the final rule easier to understand, thereby, enhancing compliance. The following table lists the sections in final subpart D and the corresponding sections in the existing subpart:

Final Subpart D	Existing Subpart D
§1910.21 Scope and definitions.	§1910.21 Definitions.
§1910.22 General requirements.	§1910.22 General requirements.
§1910.23 Ladders.	§1910.23 Guarding floor and wall openings and holes.
§1910.24 Step bolts and manhole steps.	§1910.24 Fixed industrial stairs.
§1910.25 Stairways.	§1910.25 Portable wood ladders.
§1910.26 Dockboards.	§1910.26 Portable metal ladders.
§1910.27 Scaffolds and rope descent systems.	§1910.27 Fixed ladders.
§1910.28 Duty to have fall protection and falling object protection.	§1910.28 Safety requirements for scaffolding.
§1910.29 Fall protection systems and falling object protection—criteria and practices.	§1910.29 Manually propelled mobile ladder stands and scaffolds (towers).
§1910.30 Training requirements.	§1910.30 Other working surfaces.

Section 1910.21—Scope and Definitions

Final § 1910.21 establishes the scope of and defines the terms used in 29 CFR part 1910, subpart D—Walking-Working Surfaces.

Final Paragraph (a)—Scope

Final paragraph (a), like the proposed rule, specifies that the subpart applies to all general industry workplaces. It covers all walking-working surfaces unless specifically excluded by an individual section of this subpart. The final rule consolidates the scope requirements for subpart D into one provision and specifies that the final rule applies to all walking-working surfaces in general industry workplaces. The final rule defines ''walking-working surfaces'' as any surface on or through which an employee walks, works, or gains access to a work area or workplace location (§ 1910.21(b)). Walking-working surfaces include, but are not limited to, floors, ladders, stairways, steps, roofs, ramps, runways, aisles, scaffolds, dockboards, and step bolts. Walking-working surfaces include horizontal, vertical, and inclined or angled surfaces.

Final paragraph (a) also specifies that subpart D does not apply to general industry walking-working surfaces, including operations and activities occurring on those surfaces, that an individual section or provision specifically excludes. Final subpart D addresses each of these specific exclusions in the relevant individual section or provision. OSHA notes that each exclusion only applies to the specific section or provision in which it appears and not to any other final subpart D section or provision. Existing subpart D does not have a single scope provision that applies to the entire subpart. Rather, it includes separate scope requirements in various sections in the subpart (*e.g.,* § 1910.22—General requirements; § 1910.24(a)—Fixed industrial stairs; § 1910.25(a)—Portable wood ladders; § 1910.27(e)(3)—Fixed ladders; § 1910.29(a)(1)—Manually propelled mobile ladder stands and scaffolds (towers)).

OSHA believes the consolidated scope provision in final paragraph (a) is clearer and easier to understand than the existing rule. Final paragraph (a) allows employers to determine more easily whether the final rule applies to their particular operations and activities. In addition, the final rule is consistent with OSHA's interpretation and enforcement of subpart D since the Agency adopted the walking-working surfaces standards in 1971. It also is consistent with other OSHA standards, including Agency construction standards (*e.g.,* 29 CFR 1926.450(a); 1926.500(a); 1926.1050(a)).

A number of stakeholders commented on the proposed scope provision (*e.g.,* Exs. 73; 96; 109; 187; 189; 190; 198; 201; 202; 251; 254; 323; 340; 370). Some stakeholders urged OSHA to expand the scope to include agricultural operations (Exs. 201; 323; 325; 329 (1/18/2011, pgs. 206–08); 329 (1/19/2011, p. 101); 340; 370). Most commenters, however, recommended that OSHA limit the scope or exclude certain workers, work operations, or walking-working surfaces or hazards, such as inspection, investigation, and assessment activities; public safety employees; rolling stock and motor vehicles; and combustible dust (*e.g.,* Exs. 73; 96; 98; 150; 156; 158; 157; 161; 167; 173; 187; 189; 190; 202). (See separate discussions of agricultural operations and rolling stock and motor vehicles below. See final § 1910.22(a) for discussion of combustible dust.)

Verallia commented that the proposed scope, combined with the proposed definition of ''walking-working surfaces'' (§ 1910.21(b)), ''greatly expands the obligation of employers'' and makes some requirements, such as regular inspections, ''unduly burdensome'' (Ex. 171). Verallia recommended that OSHA limit the scope of the final rule by revising the walking-working surfaces definition (see discussion of the definition of walking-working surfaces in final § 1910.21(b)). OSHA disagrees with Verallia's contention. The existing rule covers all of the examples of walking-working surfaces listed in the proposed definition of walking-working surfaces (proposed § 1910.21(b)).

Several stakeholders urged that OSHA exclude inspection, investigation, and assessment operations performed before the start of work and after work is completed (*e.g.,* Exs. 109; 156; 157; 177; 254). While some of these commenters recommended excluding those operations from fall protection requirements, others said OSHA should add to final § 1910.21(a) the following language from OSHA's construction standard (29 CFR 1926.500(a)(1)):

> Exception: The provisions of this subpart do not apply when employees are making an inspection, investigation, or assessment of workplace conditions prior to the actual start of construction work or after all construction work has been completed.

Such language would have the effect of excluding these operations from the entirety of subpart D, which OSHA opposes. Although OSHA excludes these operations from the fall protection requirements in final § 1910.28 (see discussion in final § 1910.28(a)(2)), employers performing them must comply with the other requirements in this subpart. For example, those employers must ensure that ladders and stairways their workers use to get to the workplace location are safe; that is, are in compliance with the requirements in final § 1910.23 and final § 1910.25, respectively. Employers also must ensure that the workers performing those operations can safely perform those operations by ensuring they receive the training that final § 1910.30 requires.

Some stakeholders recommended that OSHA exclude public safety employees from the final rule (Exs. 167; 337; 368). The Public Risk Management Association (PRIMA) offered three reasons for excluding public safety employees from the final rule. First, they said employers do not control the walking-working surfaces where employees perform public safety and emergency response operations (Ex. 167). Second, they said it is ''unreasonable'' to require public safety employees (*e.g.,* SWAT teams) to install and use fall protection systems, since there is only a short time in which emergency response and rescue operations they perform will be effective. Finally, PRIMA said requiring that State Plan States adopt the final rule or an equivalent could result in different rules that could adversely impact interstate multidisciplinary teams and agreements.

OSHA does not believe excluding public safety employees from the entire final rule is appropriate or necessary. Many general industry employers that the final rule covers perform operations on walking-working surfaces that they do not own, thus, in this respect, public safety employers and operations are not unique. Regardless of whether general industry employers own the walking-working surfaces where their workers walk and work, they still must ensure the surfaces are safe for them to use. For example, general industry employers, including public safety employers, must ensure that the walking-working surfaces are able to support their employees as well as the equipment they use. If walking-working surfaces cannot support the maximum intended load, employees and, in the case of public safety employers, the people they are trying to assist or rescue, may be injured or killed.

OSHA does not believe stakeholders provided convincing evidence showing this and other requirements (*e.g.,* training) provisions in final subpart D are not feasible for public safety employers. However, if an employer, including public safety employers, can demonstrate that it is infeasible or creates a greater hazard to comply with the final rule in a particular situation, they may use other reasonable alternative means to protect their employees. (OSHA notes that final § 1910.23 does not apply to ladders that employers use in emergency operations such as firefighting, rescue, and tactical law enforcement operations (see discussion in final § 1910.23(a)(1))).

Agricultural operations. The final rule, like the proposal, covers walking-working surfaces in general industry workplaces. In the preamble to the proposed rule OSHA clearly specifies that the proposal does not apply to agricultural operations; 29 CFR part 1928 covers those operations (75 FR 28920 (5/24/2010)).

Although neither the proposed rule nor OSHA standards define ''agricultural operations,'' the Agency has said they generally include ''any activities involved in the growing and harvesting of crops, plants, vines, fruit trees, nut trees, ornamental plants, egg production, the raising of livestock (including poultry and fish) and livestock products'' (*e.g.,* feed for livestock on the farm) (Field Operations Manual (FOM), Chapter 10, Section B(1)). Agricultural operations include preparation of the ground, sowing, watering and feeding of plants, weeding, spraying, harvesting, raising of livestock, and ''all activity necessary for these operations'' (Memorandum from Patricia Clark, Directorate of Compliance Programs (7/22/1992)).

OSHA's Appropriations Act uses the term ''farming operations,'' which is similarly defined as ''any operation involved in the growing or harvesting of crops, the raising of livestock or poultry, or related activities conducted by a farmer on sites such as farms, ranches, orchards, dairy farms or similar farming operations'' (CPL 02–00–51; 42 FR 5356 (1/28/1977); Memorandum for Regional

Administrators (7/29/2014)).[3] Farming operations on small farms also include ''preparing the ground, sowing seeds, watering, weeding, spraying, harvesting, and all related activities necessary for these operations, such as storing, fumigating, and drying crops grown on the farm'' (Memorandum for Regional Administrators (7/29/2014)).

The Occupational Safety and Health Review Commission (OSHRC) has ruled that activities integrally related to these core agricultural operations also are agricultural operations (*Darragh Company,* 9 BNA OSHC 1205, 1208 (1980) (delivery of chicken feed to farmers that raise chickens is integrally related to agricultural operations)). Determining whether an activity is a core agricultural operation must be made on a case-by-case basis and be based on the nature and character of the specific activity rather the employer's agricultural operation as a whole (*J.C. Watson Company,* 22 BNA OSHC 1235, 1238, *aff'd.* 321 Fed. Appx. 9 (April 17, 2009)).

Under the *Darragh* test, post-harvesting activities are not integral to core agricultural operations, therefore, they are not covered by part 1928 (*J.C. Watson Company,* 22 BNA OSHC 1235 (2008)). Post-harvest activities such as receiving, cleaning, sorting, sizing, weighing, inspecting, stacking, packaging and shipping produce are not ''agricultural operations'' (*J.C. Watson Company,* 22 BNA OSHC at 1238 (employer's packaging of onions (1) grown on land employer owned, leased, or worked; (2) purchased on the ''spot market''; or (3) brought to the shed by other growers; in a shed on the employer's farm was ''not integral to the growing of onions, the true agricultural operation here'')). Post-harvesting activities not on a farm include the processing of agriculture products, which ''can be thought of as changing the character of the product (canning, making cider or sauces, etc.) or a higher degree of packaging versus field sorting in a shed for size'' (FOM, Chapter 10, Section B(4)).

In addition, activities performed on a farm that ''are not related to farming operations and are not necessary to gain economic value from products produced on the farm'' are general industry activities (Memorandum for Regional Administrators (July 29, 2014) (these activities on a small farm ''are not exempt from OSHA enforcement'' under the appropriations rider)). To illustrate, the memorandum specifies the following activities performed on a farm are general industry activities (''food manufacturing operations'') not farming operations exempt under the appropriations rider:

- Grain handling operation that stores and sells grain grown on other farms;
- Food processing facility that makes cider from apples grown on the farm or processes large carrots into ''baby carrots;'' and
- Grain milling facility and use of milled flour to make baked goods.

As mentioned, a number of stakeholders urged that OSHA include agricultural operations in the final rule for several reasons (Exs. 201; 323; 325; 340; 370). First, the stakeholders said fall hazards are present throughout agricultural operations. For instance, Farmworker Justice stated:

> Fall hazards exist in all types of farm operations in both crop and animal production, including work in vegetable fields, packing sheds, fruit orchards, tree nurseries, greenhouses, mushroom houses, dairies, poultry farms, cattle feedlots, and other livestock operations (Ex. 325).

They also said that workers are exposed to fall hazards while working on various types of walking-working surfaces, including ladders, farm machinery, and elevated farm structures (Ex. 325).

Second, stakeholders said fall hazards are a leading cause of worker fatalities and injuries in agricultural operations. Farmworker Justice said the annual number of fatal falls in agricultural operations accounted for almost 10 percent of all annual occupational fatal falls (Ex. 370). They said a NIOSH analysis of 2005 Bureau of Labor Statistics (BLS) data indicated that fall-related farmworker deaths occurred at a rate of 1.4 per 100,000, ''a rate exceeded in only two other industries: Construction . . . and mining'' (Ex. 325, referring to 2005 Census of Fatal Occupational Injury data). According to Farmworkers Justice, BLS data from 2004–2009 indicated that 157 agricultural workers died due to falls, which they said was an average of over 28 fall deaths per year (Exs. 329 (1/18/2011, pp. 228); 370). California Rural Legal Assistance Foundation (CRLAF) said BLS fatality data from 1992–1997 indicated 166 agricultural workers died as a result of falls from elevations (Ex. 201).

Farmworker Justice and CRLAF also submitted evidence on the prevalence of fall injuries in agricultural operations. CRLAF said an analysis of 1991 Florida worker compensation records in agricultural operations revealed that falls accounted for nearly 25 percent of all serious, disabling work injuries (Ex. 201). Farmworker Justice reported:

> BLS data indicates that workers in both crop and animal production had among the highest rates of non-fatal fall-related injuries requiring days away from work of all U.S. workers in 2009 (Ex. 370).

Farmworker Justice stated that fall injuries were particularly frequent among workers harvesting tree fruit and nut crops:

> According to 2009 BLS fall injury data . . . orchard workers suffered ladder-related fall injuries at the rate of 33.6 per 10,000 workers, which would be among the top 20 industry fall rates examined by OSHA (Ex. 370; *see also* Ex. 325).

CRLAF reported similar data showing ''nearly one-third (31%) of the 13,068 Workers' Compensation Claims in Washington State orchards between 1996 and 2001 involving compensation for lost work time were for ladder related injuries.''

Third, stakeholders said the fall protection standards that California, Oregon, and Washington have adopted to protect agricultural workers show that it is feasible to apply the final rule to agriculture operations (Exs. 325; 329 (1/18/2011, pgs. 207–210); 340; 370). Farmworker Justice said that government officials, agricultural orchard employers, and agricultural safety training experts in these states indicated that compliance with those standards have ''significantly reduced injuries among agricultural workers'' (Ex. 370). It also reported that a Washington study of fall injuries among orchard workers over a five-year period (1996–2001) following implementation of the state's fall protection standard found ''statistically significant annual reductions in injuries'' (Ex. 370, discussing Hofmann J, Snyder K, Keifer M. ''A descriptive study of workers claims in Washington State orchards,'' 56 Occupational Medicine 251–257 (2006)).

OSHA agrees with the stakeholders that walking-working surface hazards, particularly fall hazards, exist in agricultural operations. That said, OSHA has not included agricultural operation in the final rule. The Agency has not gathered and analyzed the type of information on agricultural operations necessary to support a rule. OSHA has not gathered and analyzed information on the number of agricultural workers and establishments the final rule would affect. In addition, OSHA has not determined what percentage of agricultural

[3] Since 1976, a Congressional appropriations rider has precluded OSHA from expending funds to conduct enforcement activities with respect to any person engaged in farming operations with 10 or fewer non-family employees that has not maintained a temporary labor camp within the preceding 12 months (Consolidated Appropriations Act, 2014, Pub. L. No. 113–76 (2014)).

establishments are farming operations with 10 or fewer non-family employees that have not maintained a temporary labor camp within the preceding 12 months and therefore exempt from enforcement of the final rule.

OSHA has not gathered and analyzed data and information on the jobs in agricultural operations where walking-working surface hazards are present and worker injuries and fatalities are occurring; the current employer practices to address these hazards; and the availability and cost of controls, such as fall protection systems, to protect workers from those hazards. In addition, OSHA has not conducted the economic and regulatory flexibility analyses necessary to make a feasibility determination. And, because the proposal clearly did not extend to agricultural operations, the public has not had a chance to comment on those issues. These and other steps are necessary before OSHA can issue a final rule that applies to agricultural operations. As such, the final rule applies to general industry and not agricultural operations. However, if an operation performed on a farm is not an ''agricultural operation'' or integrally related to an agricultural operation, such as a food manufacturing or other post-harvesting operations, then the final general industry rule applies.

Rolling stock and motor vehicles. In this rulemaking OSHA has raised issues and requested comment about whether the final rule should include specific requirements to protect workers from falling off rolling stock and motor vehicles.[4] The 2010 proposal does not include specific requirements for rolling stock and motor vehicles (75 FR 28862). Instead, in the preamble, OSHA said it would continue gathering information and evidence to determine whether there is a need to propose specific requirements for rolling stock and motor vehicles (75 FR 28867). OSHA also said it needs ''more information about what employers are presently doing and any feasibility and cost concerns associated with a requirement to provide protection'' for rolling stock and motor vehicles. OSHA said it will wait until the record is more fully developed to make a determination about requiring fall protection on rolling stock and motor vehicles. OSHA also stated that if it receives sufficient comments and evidence to warrant additional rulemaking on rolling stock and motor vehicles, the Agency will issue ''a *separate* proposed rule'' (75 FR 28867) (emphasis in original). The comments the Agency received on the need for specific requirements for rolling stock and motor vehicles are summarized below.

Many stakeholders support adding specific fall protection requirements for rolling stock and motor vehicles to the final rule (*e.g.,* Exs. 127; 130; 155; 185; 198; 257; 307; OSHA–S029–2006–0662–0195; OSHA–S029–2006–0662–0196; OSHA–S029–2006–0662–0207; OSHA–S029–2006–0662–0227; OSHA–S029–2006–0662–0234; OSHA–S029–2006–0662–0247; OSHA–S029–2006–0662–0310; OSHA–S029–2006–0662–0329), while many urge OSHA to exclude rolling stock and motor vehicles from coverage or to limit fall protection requirements to specific situations, such as when vehicles are inside or contiguous to a building (*e.g.,* Exs. 63, 121; 158; 161; 162; 181; 182; 183; 220; 238; 335; OSHA–S029–2006–0662–0202; OSHA–S029–2006–0662–0219; OSHA–S029–2006–0662–0226; OSHA–S029–2006–0662–0229; OSHA–S029–2006–0662–0244; OSHA–S029–2006–0662–0252; OSHA–S029–2006–0662–0302; OSHA–S029–2006–0662–0306; OSHA–S029–2006–0662–0314; OSHA–S029–2006–0662–0320; OSHA–S029–2006–0662–0324).

Stakeholders who support adding specific fall protection requirements said workers are exposed to fall hazards working on rolling stock and motor vehicles; falls from rolling stock and motor vehicles have resulted in death and serious injury; and feasible, effective fall protection systems exist and are in use to protect employees working on rolling stock and motor vehicles. These stakeholders include safety professional organizations (*e.g.,* American Society of Safety Engineers (ASSE)); fall protection system manufacturers, suppliers, and installers; safety engineers and consultants; and labor organizations.

Stakeholders who oppose adding specific requirements said requiring fall protection for rolling stock and motor vehicles is not necessary, creates a greater hazard, and is infeasible. Some said OSHA did not have authority to regulate rolling stock and motor vehicles, and, in any event, should leave such regulation to the Federal Railroad Administration (FRA) and Federal Motor Carrier Safety Administration (FMCSA), respectively. Some stakeholders urged OSHA that the final rule limit fall protection requirements to vehicles located inside or contiguous to a building or structure. These stakeholders include employers, small businesses, and industry associations (Exs. 182; 220; OSHA–S029–2006–0662–0226; OSHA–S029–2006–0662–0229; OSHA–S029–2006–0662–0231; OSHA–S029–2006–0662–0237; OSHA–S029–2006–0662–0252; OSHA–S029–2006–0662–0306; OSHA–S029–2006–0662–0340).

Need for fall protection. Several stakeholders asserted that fall protection on rolling stock and motor vehicles is not necessary for a variety of reasons. First, stakeholders said no or very few workers climb on rolling stock and motor vehicles (Exs. 124; 183; 187; 220; 238). For example, Minnesota Grain and Feed Association (MGFA) said members load/unload rolling stock and motor vehicles using electronic controls operated from ground-level instead (Ex. 220). Likewise, the Small Business Administration Office of Advocacy (SBA Advocacy) and American Trucking Associations (ATA) said employees load/unload truck trailers through the rear door directly to docks, ramps, and other devices (Exs. 124; 187; 190; 220). Stakeholders who said workers climb on rolling stock and motor vehicles stressed the number of workers doing so is very low. Conoco Phillips Company said, ''[T]he number of employees required to work atop rolling stock is minimal (<1%)'' (Ex. OSHA–S029–2006–0662–0320; *see also* Exs. 148 (NGFA—''At best, a small percentage of the employees . . . are exposed); 181 (American Truck Dealers/National Automobile Dealers Association (ATD/NADA)—less than 10 percent of employees)).

Other stakeholders, however, including some who oppose requiring fall protection, said a significant number/percentage of employees must climb on or access the tops of rolling stock and motor vehicles to perform a wide range of tasks, including loading/unloading, tarping, maintenance and repair, inspections, sampling, snow and ice removal, and other tasks (*e.g.,* Exs. 63; 121; 158; OSHA–S029–2006–0662–0350). For instance, Clear Channel Outdoors (CCO) said that nearly 80 percent of their field employees climb on motor vehicles (Ex. 121). Ferro Corporation estimated that almost one-half of employees at a typical plant climb onto the top of rolling stock and bulk trucks to perform tasks (Ex. OSHA–S029–2006–0662–0177).

Second, a number of stakeholders stated that fall protection is not necessary on rolling stock and motor vehicles because worker exposure to fall hazards is limited. Several stakeholders said exposure is ''infrequent,'' ''brief and sporadic'' (Exs. 124; 181; 183; 187;

[4] OSHA defines ''rolling stock'' as any locomotive, railcar, or vehicle operated exclusively on a rail or rails, or a trolley bus operated by electric power supplied from an overhead wire. ''Motor vehicle'' means any commercial bus, van, or truck, including tractor trailer, flatbed, tanker, and hopper trucks.

OSHA–S029–2006–0662–0124; OSHA–S029–2006–0662–0183; OSHA–S029–2006–0662–0237). Other stakeholders maintain exposure to fall hazards on rolling stock and motor vehicles is more frequent and widespread. For example, Dynamic Scientific Controls (DSC) said fall hazards are present ''daily in almost every plant that receives and ships'' products (Ex. OSHA–S029–2006–0662–0227; *see also* Exs. 307; 329 (1/20/2011, p. 142)).

Third, some stakeholders assert fall protection is not necessary on rolling stock and motor vehicles because the heights employees climb do not pose fall hazards. For instance, ATA said the height of most commercial vehicle trailers is no more than 49 to 50 inches (*e.g.,* ''step-downs'' and ''low boys''), which only nominally exceeds the 4-foot trigger (Ex. 187). Other stakeholders, however, reported that workers must climb significantly higher than 50 inches on motor vehicles, particularly tanker and hopper trucks, to perform tasks, some of which are the tasks they perform most frequently (*e.g.,* Exs. 130; 198; 307; OSHA–S029–2006–0662–0208). Even where workers only climb 49 to 50 inches onto a trailer or flatbed truck, some stakeholders said there is a risk of serious injury from falls (Exs. 63; 302; 329 (1/20/2011, pgs. 156–60)).

Fourth, a number of stakeholders said fall protection is not necessary because no or few injuries from falls off rolling stock and motor vehicles have occurred in their establishments or industry (Exs. 63; 121; 148; 162; 181; 237; OSHA–S029–2006–0662–0219; OSHA–S029–2006–0662–0237; OSHA–S029–2006–0662–0252; OSHA–S029–2006–0662–0320). Douglas Greenhaus, with ATD/NADA, said:

> I've spent over twenty-five years working with truck dealerships on matters involving employee health and safety. In that time, I have only rarely heard of injuries arising from falls from commercial trucks, tractors, or trailers (Ex. 181. *See also,* OSHA–S029–2006–0662–0237).

The Cargo Tank Risk Management Committee (CTRMC) stated:

> While falls from the top of tank trailers can result in serious injury, the actual frequency of such injuries is very rare. A typical large cargo tank motor vehicle fleet makes over 300 delivers per day and has averaged less than 2 falls from its tank trailers per year (Ex. 63).

Stakeholders pointed out that industry surveys also show falls from rolling stock and motor vehicles were low. McNeilus Trucking reported that a 2002 Illinois Ready Mix Concrete Association survey found only two falls from ready-mix concrete trucks occurred in over 66 million climbs (Ex. OSHA–S029–2006–0662–0219). According to an International Liquid Terminals Association's (ILTA) 2010 annual survey, six of the 221 (2.7%) injuries were falls from rolling stock and motor vehicles, which ''represent a very small proportion of the total number of recordable incidents'' (Ex. 335). A NGFA survey of 901 facilities showed that during a two-year period (2007–09), during which the facilities handled 1.5 million railcars and 1.4 million motor vehicles, no fatalities and only 12 injuries occurred (Ex. 148).

By contrast, a number of stakeholders said falls from rolling stock and motor vehicles are a serious problem that have resulted in worker deaths and serious injuries (*e.g.,* Exs. 130; 155; 257; 302; 307; 329 (1/20/2011, pgs. 142, 150,151–152, 156–57); 335; 355–11; OSHA–S029–2006–0662–0207). In the rail transportation industry, Fall Protection Systems Corp. (FPS) reported that they documented, based on site visits and speaking to customers, more than 50 falls in a 10-year period, 14 of which resulted in death and 30 in serious injuries.

Stakeholders reported a similar experience in the truck transportation industry. For example, Rick Hunter, of the Alabama Trucking Association Workers Compensation Fund, said:

> Each year drivers and shop [technicians] are injured from falls from tankers and flatbed trailers. I know of 4 deaths from this type fall in Alabama'' (Ex. 257).

Cameron Baker, with Standfast USA, testified that one truck company with more than 900 drivers, reported an average of 31 falls per year during a nine-year period (1998–2006) (Exs. 329 (1/20/2011, pgs. 151–52); 355–11). He estimated that the total cost to the company for those fall injures was $3.33 million (Ex. 355–11). Standfast also submitted information indicating that rolling stock and motor vehicle fall injuries are increasing (Ex. 355–11).

Fifth and finally, a number of stakeholders said employers already are using effective measures to protect workers on rolling stock and motor vehicles and requiring additional measures in the final rule will not increase worker safety (*e.g.,* Exs. 63; 121; 124; 142; 147; 148; 158; 162; 169; 181; 190; 335). The measures these stakeholders are using include:

- Conventional fall protection system such as cable line and retractable lifeline systems; work platforms with railings/guardrails; walkways with railings; and portable access systems with railings or safety cages; ladders with railings (Exs. 63; 124; 148; 158; 162; 169; 181; 335);
- Anti-slip surfaces on motor vehicle walkways (Ex. 158);
- Initial, periodic, and remedial training, which is the only measure some stakeholders use (*e.g.,* Exs. 63; 121; 124; 142; 148; 158; 162; 169; 181; 190);
- Work practices such as site-specific loading/unloading protocols and safe climbing techniques (*e.g.,* 3-point climbing); and loading/unloading trailers from the ground (*e.g.,* bottom-loading tankers, ground-level controls) (Ex. 148; 158; 181; 192; 326; 335; OSHA–S029–2006–0662–0314); and
- Administrative controls, including ''blue-flagging'' rail cars on isolated tracks to prevent moving while employees are on them, prohibiting workers from being on moving rolling stock, and keeping employees off railcars in unsafe weather conditions (*e.g.,* ice, sleet, high winds) (*e.g.,* Ex. 148).

However, as mentioned, other stakeholders believe requiring fall protection on rolling stock and motor vehicles is necessary because many employers have not implemented readily available controls even though their workers are exposed to fall hazards on rolling stock and motor vehicles and fall injuries and fatalities are occurring in the railroad and truck transportation industries (*e.g.,* Exs. 127; 130; 155; 185; 198; 257; 307; OSHA–S029–2006–0662–0195; OSHA–S029–2006–0662–0196; OSHA–S029–2006–0662–0207; OSHA–S029–2006–0662–0227; OSHA–S029–2006–0662–0234; OSHA–S029–2006–0662–0247; OSHA–S029–2006–0662–0310; OSHA–S029–2006–0662–0329). FPS, for instance, pointed out that the lost-workday injury rates due to falls from elevations in the rail transportation and truck transportation industries are 25.9 and 29.1 lost workdays per 10,000 employees, respectively (Ex. 130).

Greater hazard. Several stakeholders oppose requiring fall protection on rolling stock and motor vehicles because they say it would expose workers to a ''greater hazard'' than working without any protection (Exs. 121; 124; 181; OSHA–S029–2006–0662–0219; OSHA–S029–2006–0662–0232; OSHA–S029–2006–0662–0244). To establish that an OSHA standard creates a greater hazard, an employer must prove, among other things, that the hazards of complying with the standard are greater than those of not complying, and alternative means of employee protection are not available (*Bancker Construction Corp.,* v. *Reich,* 31 F.2d 32, 34 (2d Cir. 1994); *Dole* v. *Williams Enterprises, Inc.,* 876 F.2d 186, 188 (D.C. Cir. 1989)). The Occupational

Safety and Health Review Commission has held that the employer must establish that complying with a standard would be more dangerous than allowing employees to work without compliance (*Secretary of Labor* v. *Spancrete Northeast, Inc.,* 16 BNA OSHC 1616, *aff.* 40 F.3d 1237 (2d Cir. 1994)).

Stakeholders said that requiring personal fall protection systems on rolling stock and motor vehicles could create a greater risk by causing ''entanglement with moving parts'' (Ex. 124) and creating trip hazards (Exs. 181; OSHA–S029–2006–0662–0244). They also said requiring workers ''to continually tie and untie from a variety of anchorage points when the employee accesses and moves around'' rolling stock or motor vehicles also could create a greater hazard (Ex. 121; OSHA–S029–2006–0662–0244). Keller and Heckman explained:

> [T]he worker would first have to climb or otherwise travel to the anchorage location to attach and then detach from the anchorage, which might very well pose a greater hazard than simply working carefully without fall protection (Ex. OSHA–S029–2006–0662–0244).

However, these stakeholders did not identify instances in which workers were injured while using personal fall protection systems on rolling stock and motor vehicles.

Also, these stakeholders did not show that there are no alternative fall protection measures or systems available to protect workers. In fact, these and other stakeholders identified various types of fall protection systems that they and other employers are using successfully to protect employees working on rolling stock and motor vehicles (*e.g.,* Exs. 63; 124; 130; 148; 158; 162; 181; 185; 198; 307; 335; OSHA–S029–2006–0662–0207; OSHA–S029–2006–0662–0208). In point, although ATD/NADA asserted that requiring fall protection on rolling stock and motor vehicles would create a greater hazard, they also said:

> Dealerships often use railing-equipped metal stairs with lockable casters or other ladder systems to reach the sides and tops of trucks, tractors, or trailers, thereby reducing the need to climb on the vehicles themselves. When and where used, mobile work platforms and scaffolds have adjustable 'maximum' heights and are equipped with side rails and toe boards to prevent falling or tripping from the top section. . . . Paint booths often have mobile or stationary stair platforms equipped with railings and safety chains (Ex. 181).

Technological feasibility. As discussed in Pertinent Legal Authority (Section III), OSHA must prove, by substantial evidence in the rulemaking record that its standards are technologically and economically feasible, which the Supreme Court has defined as ''capable of being done, executed, or effected'' (*American Textile Mfrs. Inst.* v. *Donovan (Cotton Dust),* 452 U.S. 490, 506 n. 25 (1981)). A standard is technologically feasible if the protective measures it requires already exist, can be brought into existence with available technology, or can be created with technology that can reasonably be expected to be developed (*Cotton Dust,* 452 U.S. at 513; *United Steelworkers* v. *Marshall (Lead I),* 647 F.2d 1189, 1272 (D.C. Cir, 1980), *cert. denied,* 453 U.S. 913 (1981)). OSHA is not bound by the ''technological status quo.'' The Agency can be ''technology-forcing,'' that is, giving industry a reasonable amount of time to develop new technologies (*Lead I,* 647 F.2d at 1264).[5]

Stakeholders asserted various reasons why they believe it is not technologically feasible to require fall protection on rolling stock and motor vehicles that are not located in or contiguous to a building or other structure. First, several stakeholders contend that guardrail systems, safety net systems, and personal fall protection system are not feasible in those locations (*e.g.,* Exs. 158; 326; 329 (1/20/2011, pgs. 156–58); OSHA–S029–2006–0662–0314).

Standfast USA said safety net systems are difficult to deploy and guardrail systems either obstruct loading racks or cannot be raised when the racks are present (Ex. 329 (1/20/2011, pgs. 156–58)).

Regarding personal fall protection systems, stakeholders stated there is no place to install anchorage points when rolling stock and motor vehicles are not located in or contiguous to a building or structure (*e.g.,* Exs. 121; 124; 126; 187; 192; 326; OSHA–S029–2006–0662–0237; OSHA–S029–2006–0662–0244), and attaching them to the rolling stock and motor vehicles is not feasible because the personal fall protection system would compromise the strength or structural integrity of the vehicles, which are made of aluminum, which ''fatigues over time'' (Ex. 158; OSHA–S029–2006–0662–0219).

However, other stakeholders submitted evidence showing that controls are available and in use on rolling stock and motor vehicles regardless of location (*e.g.,* Exs. 63; 130; 158; 161; 169; 185; 307; 335; OSHA–S029–2006–0662–0207; OSHA–S029–2006–0662–0208; OSHA–S029–2006–0662–0329; OSHA–S029–2006–0662–0350; OSHA–S029–2006–0662–0373). For example, the American Feed Industry Association (AFIA) said members have found guardrail systems (*i.e.,* railed walkways and catwalks; ''pop-up''/collapsible handrails) to be ''very effective'' regardless of where rolling stock and motor vehicles are located (Ex. 158; *see also* Exs. 161; 169; 335; OSHA–S029–2006–0662–0207; OSHA–S029–2006–0662–0208; OSHA–S029–2006–0662–0350; OSHA–S029–2006–0662–0373). In addition, stakeholders submitted evidence showing that personal fall protection systems are available and in use in a broad range of industries, regardless of the location of the rolling stock and motor vehicles (*e.g.,* Exs. 130; 148; 158; 198; 307; 355; OSHA–S029–2006–0662–0208; OSHA–S029–2006–0662–0373). Some of these systems are attached to rolling stock and motor vehicles (*e.g.,* Exs. 307; 355; OSHA–S029–2006–0662–0208), while others are stand-alone or portable, wheel-mounted overhead systems that employers can use in open yards and other locations (*e.g.,* Exs. 148; 158; 198; 355–2; OSHA–S029–2006–0662–0373).

Second, several stakeholders stated that retrofitting rolling stock and motor vehicles with fall protection is not feasible (Exs. 63; 158; 190; 192; 329 (1/20/2011, pgs. 112–13); 335; OSHA–S029–2006–0662–0219). McNeilus Trucking, for instance, said retrofitting could affect the structural integrity or performance of rolling stock and motor vehicles (Ex. OSHA–S029–2006–0662–0219. *See also* Ex. 158). ILTA testified that although fall protection systems ''are very routinely part of the initial design'' in new equipment, existing rolling stock and motor vehicles ''do not have assets that would readily accept a fall protection system'':

> It's not easy to take these piping manifolds and just simply overlay a superstructure in many cases. . . . [W]hen we're looking at older installations that might require retrofitting where . . . retrofit really does require complete bulldoze and start over'' (Ex. 329 (1/20/2011, pgs. 112–13). *See also* Ex. 335).

Other stakeholders, including industry associations, commented that rolling stock and motor vehicles have been retrofitted with fall protection systems (*e.g.,* Exs. 307; 335; 355), and pointed out that there are many other types of portable and stand-alone fall protection systems (*e.g.,* overhead

[5] A determination of feasibility at the time a standard is promulgated establishes a rebuttable presumption of feasibility. Employers subject to an enforcement action can overcome this presumption by demonstrating that the controls or action the standard requires are not feasible for its operation (*Lead I,* 647 F.2d at 1272).

trolley rail systems) available and in use instead of retrofitting rolling stock and motor vehicles (*e.g.,* Exs. 130; 198; 307; 329 (1/18/2011, pgs. 90–92); 355; OSHA–S029–2006–0662–0207; OSHA–S029–2006–0662–0208; OSHA–S029–2006–0662–0373).

Third, some stakeholders asserted fall protection on rolling stock and motor vehicles is not feasible because of circumstances beyond their control (Exs. 148; 181; 326). These stakeholders said, for example, they cannot install fall protection systems because they do not own the motor vehicles (*i.e.,* leased fleet, belong to customers, are inventory for sale) or rail carriers prohibit them from modifying rolling stock without prior approval. Some stakeholders said FRA and FMCSA requirements prevent them from using fall protection (Exs. 148; 326). For instance, NGFA stated that members cannot install fall protection on rolling stock because of FRA ''clearance envelope'' requirements (Ex. 148). Similarly, Southeast Transportation Systems (STS) said FMCSA rules on motor vehicle weight, height, width, length, and accessory design (*e.g.,* ladders) ''are just some of the factors preventing the use of conventional fall protection systems'' (Ex. 326. *See also* Exs. 158; OSHA–S029–2006–0662–0226). AFIA agreed:

> Bulk feed transportation equipment must meet maximum height constraints in order to comply with Department of Transportation regulations. The maximum allowable height of trucks and trailers is 13′6″. Since the top of our equipment is approximately 13′ high, the industry is limited in positioning additional structures above this height (Ex. 158).

Other evidence in the record, however, indicates that there are many portable and stand-alone fall protection systems available and in use today in both the rail and truck transportation industries, including overhead cable line systems, moveable stairs with railings, mobile access platforms with railings and/or safety cages and overhead tarping systems (*e.g.,* Exs. 198; 302; 355; OSHA–S029–2006–0662–0350; OSHA–S029–2006–0662–0373). For example, an NGFA survey revealed that nearly 40 percent of their member facilities have installed overhead fall protection systems in railcar loading areas (Ex. 148. *See also* 63; 182; 335). The truck transportation industry has implemented a number of fall protection systems, including portable and adjustable access platforms/racks with railings or safety cages; pedestal platforms; collapsible outer rails; and walkways with collapsible railings (*e.g.,* Exs. 63; 357). Some stakeholders, including truck transportation industry companies and associations, also pointed to the increasing use of bottom-loading tanks and hoppers, which work even where there are external constraints (*e.g.,* Exs. 63; 158; 329 (1/20/2011, p. 143)).

Fall protection system manufacturers indicated that, based on their experience, ''it is feasible and practical to provide workers with active or passive means of fall protection [for working on rolling stock and motor vehicles] in nearly every work situation'' (Ex. 329 (1/18/2011, pgs. 82–83); *see also* Exs. 130; 185; 198; 307; 329 (1/18/2011, pgs. 90–92, 164–66); 329 (1/20/2011) pgs. 144, 149–75); 355–2; 355–12; OSHA–S029–2006–0662–0207; OSHA–S029–2006–0662–0208; OSHA–S029–2006–0662–0329; OSHA–S029–2006–0662–0350; OSHA–S029–2006–0662–0373). For example, FPS, which by 2003 already had provided more than 13,000 fall protection systems to the rail and trucking industries, said they have found ''no technological or economic obstacles'' to prevent employers from providing fall protection equipment for rolling stock and motor vehicles regardless of their location (Ex. 130). For many years, manufacturers have been producing rolling stock and motor vehicle fall protection systems especially designed for use in locations that are not in or contiguous to buildings or other structures (*e.g.,* Exs. 130, 307; 329 (1/18/2011, pgs. 82–83, 90–92); 329 (1/20/2011, pgs. 149–75, 188); 355; OSHA–S029–2006–0662–0208; OSHA–S029–2006–0662–0373). They also have designed, and employers are using, technological advancements that have eliminated the need for workers to climb on rolling stock and motor vehicles (Exs. 302; 329 (1/20/2011, pgs. 144–45, 149–75, 188); 355; OSHA–S029–2006–0662–0207; OSHA–S029–2006–0662–0208; OSHA–S029–2006–0662–0373). These advancements include tanker and hopper trucks that load/unload from the bottom; automated loading/unloading and tarping systems operated by ground-level controls (Exs. 63; 302; 329 (1/20/2011, pg. 143); *see also* Ex. 158). Several industry associations said member companies are increasingly purchasing these new technologies (Exs. 63; 158; 302). Safety and engineering consultants confirmed the ready availability, effectiveness, and feasibility of the new fall protection technologies for rolling stock and motor vehicles (Exs. 227; 251; OSHA–S029–2006–0662–0227; OSHA–S029–2006–0662–0350).

Employers and industry associations submitted information about effective fall protection controls that have been implemented (*e.g.,* Exs. 63; 148; 158; 162; 169; 181; 182; 220; 326; 335; 337; OSHA–S029–2006–0662–0177). For example, Ferro Corporation, which installed cable line systems over rail cars and work platforms with railings on the top of bulk trailers for loading/unloading coatings and other materials reported that they have not experienced any falls since installing the systems in 2000 (Ex. OSHA–S029–2006–0662–0177; *see also* Ex. 329 (1/20/2011, pgs. 149–75)).

As mentioned, AFIA said member companies have installed several types of fall protection systems (*e.g.,* retractable overhead lanyards and harnesses, elevated walkways, ''pop-up handrails,'' ground-level controls for loading/unloading) that ''have proven to be effective'':

> [T]he additional couple of minutes to don a full body harness and attach it to a retractable lanyard are insignificant compared to a lost-time accident (Ex. 158).

Industry associations also submitted information showing that a significant portion of their member companies already have installed fall protection systems for rolling stock and motor vehicles (Exs. 63; 148; 158; 162; 169; 181; 182; 220; 335; 357). For example, NGFA reported that nearly 40 percent of all member facilities already have installed overhead fall protection systems in railcar loading areas (Ex. 148). Even ''country elevators,'' which generally load only one- to three-railcar units, already have installed retractable safety lines and electronic systems operated from ground level (Ex. 148; *see also,* Ex. 220). CTRMC submitted photographs showing fall protection systems already in use on cargo tank trucks in their industry, including tank trucks located ''in the field'' (Ex. 63).

OSHA believes the evidence employers and industry associations submitted shows it is technologically feasible in many cases for employers to provide fall protection for rolling stock and motor vehicles regardless of their location.

Jurisdiction. Several stakeholders oppose covering rolling stock and motor vehicles in the final rule because they contend that OSHA either lacks authority to require employers to provide fall protection for employees who work on rolling stock and motor vehicles, or should allow the FRA or FMCSA to exercise complete authority for regulating rolling stock and motor vehicles, respectively (Exs. 124; 187; 326; OSHA–S029–2006–0662–0202; OSHA–S029–2006–0662–0232).

Regarding rolling stock, FRA said the Federal Railroad Safety Act (FRSA) grants them broad authority to regulate railroad safety and they have promulgated regulations to protect railroad employees from falling off of rolling stock (OSHA–S029–2006–0662–0232. *See also* OSHA–S029–2006–0662–0206). Therefore, they contend that Section 4(b)(1) of the OSH Act (29 U.S.C. 653(b)(1)) [6] ''displaces OSHA'' from regulating rolling stock. FRA also pointed out that its ''Railroad Occupational Safety and Health Standards'' Policy Statement states that FRA exercises complete authority for ''railroad operations,'' which is the movement of equipment over the rails. FRA said this authority includes design of ''rolling equipment used on a railroad, since working conditions related to such surfaces are regulated by FRA as major aspects of railroad operations'' (43 FR 10583, 10587 (3/14/1978)).

In the preamble to the proposed rule, OSHA acknowledged that FRA has authority to regulate ''railroad operations'' (75 FR 28867). At the same time, OSHA noted that the FRA Policy Statement also recognizes that OSHA has authority for certain ''occupational safety and health'' issues in the railroad industry:

> FRA recognizes that OSHA currently is not precluded from exercising jurisdiction with respect to conditions not rooted in railroad operations nor so closely related to railroad operations as to require regulation by FRA in the interest of controlling predominant operational hazards (43 FR 10587).

Consistent with the Policy Statement, OSHA has authority over working conditions that do not constitute ''railroad operations,'' such as loading/unloading rolling stock by non-railroad employees off railroad property.

The American Railroad Association (ARA) said OSHA should allow the FRA to exercise authority over rolling stock for two reasons. First, they said rolling stock presents ''special concerns, such as clearance issues in rail tunnels and the unique configuration of rolling stock.'' Second, they said FRA, not OSHA, has ''expertise to determine when regulations [on rolling stock] are necessary and the content of those regulations'' (Ex. OSHA–S029–2006–0662–0202). OSHA believes it also has the expertise to address fall hazards on rolling stock. That said, ''[i]n the past, FRA and OSHA have closely coordinated their mutual efforts to improve workplace safety in the rail industry'' and OSHA ''is committed to continuing working cooperatively'' with FRA to maintain and further develop its expertise in rail industry safety (Ex. OSHA–S029–2006–0662–0232).

With regard to commercial motor vehicles, stakeholders asserted that, under Section 4(b)(1), the Motor Carrier Safety Act (MCSA) preempts OSHA from regulating commercial motor vehicles (Exs. 124; 187; 326). The MCSA defines ''commercial motor vehicle'' as a self-propelled or towed vehicle used on the highways in interstate commerce to transport passengers or property, if the vehicle:

- Has a gross vehicle weight rating or gross vehicle weight of at least 10,001 pounds, whichever is greater;
- Is designed or used to transport more than 8 passengers (including the driver) for compensation;
- Is designed or used to transport more than 15 passengers, including the driver, and is not used to transport passengers for compensation; or
- Is used in transporting material found by the Secretary of Transportation to be hazardous under section 5103 of this title and transported in a quantity requiring placarding under regulations prescribed by the Secretary under section 5103 (49 U.S.C. 31132).

However, as interpreted by the courts and the Occupational Safety and Health Review Commission, section 4(b)(1) does not create an industry-wide exemption. Rather, it preempts OSHA regulation of a particular workplace hazard addressed by the regulation of another agency. Thus, an OSHA standard is preempted by the MCSA only to the extent that the FMCSA has adopted a regulation for commercial motor vehicles addressing the hazard. For example, FMCSA addresses fall hazards for certain commercial motor vehicles in 49 CFR part 399. Since the Agency did not propose any specific fall protection requirements for rolling stock or motor vehicles, OSHA has not included any in this final rule. However, it will continue to consider the comments it has received, and in the future the Agency may determine whether it is appropriate to pursue any action on this issue.

Construction vs. Maintenance. Some stakeholders expressed concerns that OSHA does not clearly delineate what activities are maintenance that the proposed general industry rule covers and what are construction that fall under OSHA's construction standards (Exs. 124; 150; 196; 202). For example, SBA Advocacy said participants in their small business roundtable were ''confused about which standard applies under what circumstances'':

> Participants noted that two employees could be working side by side on similar tasks, but one could be covered by the general industry standard and the other by the construction standard. Representatives expressing these concerns included residential construction and remodeling, painting, heating and air conditioning, chimney sweeping, and others (Ex. 124).

In 1994, OSHA clarified the definitions of maintenance v. construction activities:

> OSHA's regulations define construction work as ''construction, alteration, and/or repair, including painting and decorating.'' They further provide that OSHA's construction industry standards apply ''to every employment and place of employment of every employee engaged in construction work.'' . . . In order for work to be construction work, the employer need not itself be a construction company. . . . Further, construction work is not limited to new construction. It includes the repair of existing facilities. The replacement of structures and their components is also considered construction. . . .
>
> There is no specified definition for ''maintenance,'' nor is there a clear distinction between terms such as ''maintenance,'' ''repair,'' or ''refurbishment.'' ''Maintenance activities'' can be defined by OSHA as making or keeping a structure, fixture or foundation (substrates) in proper condition in a routine, scheduled, or anticipated fashion. This definition implies ''keeping equipment working in its existing state, *i.e.,* preventing its failure or decline.'' . . . [D]eterminations of whether [an employer] is engaged in maintenance operations rather than construction activities must be made on a case-by-case basis (Memorandum for Regional Administrators (8/11/1994)).[7]

In subsequent letters of interpretation, OSHA identified factors the Agency considers in determining whether the activity is maintenance or construction and applied them to specific examples (Letter to Randall Tindell (2/1/1999); [8] Letter to J. Nigel Ellis (5/11/1999)); [9] Letter to Raymond Knobbs (11/18/2003) [10]). Those factors include:

- Nature of the work. Equipment reinstalled or replaced with identical equipment is generally maintenance.

[6] Section 4(b)(1) specifies: Nothing in this chapter shall apply to working conditions of employers with respect to which other Federal agencies . . . exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety and health (29 U.S.C. 653(b)(1)).

[7] OSHA letter to Regional Administrators is available on OSHA's Web site at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=21569.*

[8] OSHA letter to Mr. Tindall is available on OSHA's Web site at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=22687.*

[9] OSHA letter to Mr. Ellis is available on OSHA's Web site at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=23328.*

[10] OSHA letter to Mr. Raymond Knobbs is available on OSHA's Web site at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24789.*

Replacement with improved equipment is construction;

• Whether the work is scheduled. Activity that is an anticipated, routine, and periodic event to keep equipment from degrading and maintain it in its existing state is suggestive of maintenance. As long as the activity continues to be a scheduled activity, the passage of time between the activity, even 10 to 20 years, normally does not alter the characterization of the activity as maintenance;

• The scale and complexity of the activity; which also takes into consideration the amount of time and material required to complete it. Although a project may not necessarily be large in terms of scale, a complex activity in terms of steps involved and tools and equipment needed to complete is likely to be construction; and

• The physical size of the object being worked on. Physical size can be a factor if, because of its size, the process of removal and replacement involves significantly altering the structure or equipment that the object is in. Significant alterations of the structure or equipment will likely be construction.

OSHA believes these factors and examples outlined in the letters of interpretation provide useful guidance to help employers determine whether a particular activity is maintenance or construction. If there is an instance where an employer may not be able to easily classify an activity as maintenance or construction, when measured against the above factors, following the more protective standard will ensure compliance.

In any event, since one of the primary goals of this rulemaking is to harmonize the general industry and construction walking-working surface standards, OSHA believes the distinction between maintenance and construction is of much less significance. As discussed in the introduction to the Summary and Explanation (Section IV), in updating and revising the walking-working surface standards in subpart D and adding new personal fall protection requirements to subpart I, OSHA made requirements consistent with construction standards, where possible. For example, in final §§ 1910.28 and 1910.140, OSHA adopts the flexible approach to providing fall protection systems that the construction standard codified in 1994. Thus, whether performing general industry or construction operations, employers may provide personal fall protection systems to protect their workers. OSHA notes that in the discussion of provisions in subparts D and I the Agency identifies the corresponding construction standards the final rule incorporates. As a result, OSHA believes that in most cases employers will be able to use the same controls, particularly fall protection systems, and follow the same work practices regardless of whether they are performing general industry or construction activities.

Paragraph (b)—Definitions

Final paragraph (b) defines terms that are applicable to all sections of final subpart D. For the most part, OSHA drew the final definitions from the existing rule (existing § 1910.21(a) through (g)), other OSHA standards (*e.g.,* 29 CFR 1926.450, 1926.500, 1926.1050), and national consensus standards. For example, the Agency adopted several definitions from the construction fall protection standard (§ 1926.500(b)) and revised the language of other definitions to make them consistent with definitions in OSHA construction standards. The Agency also drew a number of definitions from the following national consensus standards, all of which have been revised and updated or issued since OSHA adopted existing § 1910.21(b) in 1971:

• American National Standard Institute (ANSI) A14.1–2007, American National Standard for Safety Requirements for Portable Wood Ladders (ANSI A14.1–2007) (Ex. 376);

• American National Standard Institute (ANSI) A14.2–2007, American National Standard for Safety Requirements for Portable Metal Ladders (ANSI A14.2–2007) (Ex. 377);

• American National Standard Institute (ANSI) A14.3–2008, American National Standard for Ladders—Fixed—Safety Requirements (ANSI A14.3–2008) (Ex. 378);

• American National Standard Institute (ANSI) A14.5–2007, American National Standard for Safety Requirements for Portable Reinforced Plastic Ladders (ANSI A14.5–2007) (Ex. 391);

• American National Standard Institute (ANSI) A14.7–2011, Safety Requirements for Mobile Ladder Stands and Mobile Ladder Stand Platforms (ANSI A14.7–2011) (Ex. 379);

• American National Standard Institute/American Society of Safety Engineers (ANSI/ASSE) A10.18–2012, Safety Requirements for Temporary Roof and Floor Holes, Wall Openings, Stairways, and Other Unprotected Edges in Construction and Demolition Operations (ANSI/ASSE A10.18–2012) (Ex. 388);

• American National Standard Institute/American Society of Safety Engineers (ANSI/ASSE) A10.32–2012, Fall Protection Systems—American National Standard for Construction and Demolition Operations (Ex. 390);

• American National Standard Institute/American Society of Safety Engineers (ANSI/ASSE) A1264.1–2007, Safety Requirements for Workplace Walking/Working Surfaces and Their Access; Workplace, Floor, Wall and Roof Openings; Stairs and Guardrail Systems (ANSI/ASSE A1264.1–2007) (Ex. 13);

• American National Standard Institute/American Society of Safety Engineers (ANSI/ASSE) Z359.0–2012, Definitions and Nomenclature Used for Fall Protection and Fall Arrest (ANSI/ASSE Z359.0–2012) (Ex. 389);

• American National Standard Institute/International Window Cleaning Association (ANSI/IWCA) I–14.1–2001, Window Cleaning Safety (ANSI/IWCA I–14.1–2001) (Ex. 14);

• American National Standard Institute (ANSI) MH30.2–2005, Portable Dock Leveling Devices: Safety, Performance and Testing (ANSI MH30.2–2005) (Ex. 20);

• National Fire Protection Association (NFPA) 101–2012, Life Safety Code (NFPA 101–2012) (Ex. 385); and

• International Code Council (ICC) International Building Code–2012 (IBC–2012) (Ex. 386).

Final paragraph (b) differs from the existing and proposed rules in several respects. First, the final rule eliminates a number of terms the regulatory text no longer uses. The final rule does not retain the proposed definitions for the following terms because OSHA did not use these terms in final subpart D: ''qualified climber,'' ''safety factor,'' and ''single-point adjustable suspension scaffold.''

Second, in addition to the definitions in the proposed rule, final paragraph (b) adds a number of new definitions, including ''anchorage,'' ''dangerous equipment,'' ''low-slope roof,'' ''personal fall arrest system,'' ''personal fall protection system,'' ''positioning system (work-positioning system),'' ''stairway (stairs),'' ''travel restraint system,'' and ''warning line.'' Most of the definitions are commonly used terms that pertain to new control methods that the final rule allows employers to use to protect workers from falling. For example, several definitions relate to personal fall protection systems, which the final rule allows employers to use instead of guardrails, cages, and wells specified by the existing rule.

Third, final paragraph (b) revises existing definitions to make them consistent with OSHA's construction standards (*e.g.,* §§ 1926.450, 1926.500, 1926.1050). OSHA is aware that many employers and workers perform both general industry and construction activities, and the Agency believes that making the standards, including terminology, consistent will help those employers better understand and fully comply with the final rule.

Fourth, final paragraph (b), like the proposed rule, reorganizes the terms and definitions and clarifies that they are applicable to every section of subpart D. By contrast, the existing rule in § 1910.21 lists the terms and definitions for each section of subpart D separately. Consequently, because the existing rule uses some terms in more than one section of subpart D, it defines those terms multiple times. Final paragraph (b) eliminates this unnecessary repetition, thereby making the final rule easier to understand.

Fifth, and finally, in revising final paragraph (b), OSHA used plain and performance-based language. The Agency believes these types of revisions make the terms and definitions easy for employers and workers to understand, and clarifies several issues raised by stakeholders (discussed below).

The following paragraphs discuss the terms and definitions included in final paragraph (b).

Alternating tread-type stair. The final rule, similar to the proposal, defines this term as a type of stairway that consists of a series of treads usually attached to a center support in an alternating manner, such that a worker typically does not have both feet on the same level while using the stairway. The limited width of the treads makes it difficult or impossible for workers to place both feet on a single tread. OSHA does not consider alternating tread-type stairs to be ''standard stairs'' as defined in final § 1910.21(b).

The existing rule did not specifically address or define alternating tread-type stairs. The definition in the final rule is consistent with ANSI/ASSE A1264.1–2007. OSHA received no comments on the proposed definition and adopts it as discussed.

Anchorage. This is a new term added to the final rule. An anchorage is defined as a secure point of attachment for equipment such as lifelines, lanyards, deceleration devices and rope descent systems. Anchorages can also be a component of a fall protection system. An anchorage may be installed to serve such purpose or may be a fixed structural member such as a post, beam, girder, column, floor, or wall that is an integral part of a structure. An anchorage must be capable of safely supporting the impact forces applied by a fall protection system.

OSHA drew the term and definition for ''anchorage'' from the § 1910.140, Personal fall protection systems. The definition is consistent with the construction fall protection (§ 1926.500(b)), the general industry powered platforms (§§ 1910.66, appendix C, Section I(b)), and the shipyard-employment fall protection standards (§ 1915.151(b)). It also is consistent with the ''anchorage'' definition in ANSI/ASSE A10.32–2012 (Section 2.4) and ANSI/ASSE Z359.0–2012 (Section 2.5). See § 1910.140 for additional information and discussion of stakeholder comments on the definition of ''anchorage.''

Authorized. This final term, like the proposal, refers to a worker who the employer assigns to perform a specific type of duty, or be in a specific location or area in the workplace. The work that authorized employees perform and the work locations where they work often involve situations or conditions where fall hazards are present, such as the working side of teeming or slaughtering platforms, and open/unguarded repair pits.

OSHA notes that once the employer assigns an authorized employee to perform certain work tasks or to be in a certain location, the worker may continue to perform those tasks or be in such work locations without further approval. OSHA did not receive any comments on the proposed definition and adopts it as discussed.

Cage. This term in the final rule, like the proposal, means an enclosure mounted on the side rails of a fixed ladder or fastened to a structure behind the fixed ladder. The final definition also specifies that a cage surrounds the climbing space of the ladder. This will contain the worker and direct a falling worker to a lower landing. A cage may also be called a ''cage guard'' or ''basket guard.''

This definition is essentially the same as the definition for ''cage'' found in existing § 1910.21(e)(11); it also is consistent with ANSI A14.3–2008, American National Standard for Ladders—Fixed—Safety Requirements. OSHA did not receive any comments on the proposed definition and adopts it with only minor revisions for clarity.

Carrier. Final paragraph (b), similar to the proposed rule, defines a carrier as the track of a ladder safety system that consists of a flexible cable or rigid rail attached to the fixed ladder or immediately adjacent to it. The final definition is consistent with ANSI A14.3–2008 (Section 3). The final rule clarifies that fixed ladders may have carriers mounted to them, usually onto the ladder face or immediately adjacent to the ladder. OSHA received no comments on the proposed definition and adopts it with the clarifications discussed.

Combination ladder. Final paragraph (b), like the proposed rule, defines a combination ladder as a portable ladder that an employer can use as a stepladder, extension ladder, trestle ladder, or a stairway ladder. The final definition also specifies that employers may use the components of a combination ladder separately as a single ladder.

The final definition is consistent with ANSI A14.1–2007, ANSI A14.2–2007, and ANSI A14.5–2007. OSHA did not receive any comments on the proposed definition and adopts it with only minor revisions for clarity.

Dangerous equipment. The final rule adds this term and defines it as equipment, such as vats, tanks, electrical equipment, machinery, equipment or machinery with protruding parts, or other similar units that, because of their function or form, may harm an employee who falls into or onto it.

This new definition was added in response to a recommendation from Northrop Grumman Shipbuilding that OSHA define ''dangerous equipment'' in the final rule (Ex. 180). OSHA drew the new definition from the construction fall protection standard (§ 1926.500(b)).

Designated area. This term means a distinct portion of a walking-working surface delineated by a warning line in which work may be performed without additional fall protection. Examples of additional fall protection include guardrails, safety nets, and personal fall protection systems. As mentioned in the proposed rule and in the discussion of final § 1910.28(b)(13), a designated area is a non-conventional fall protection method.

The final rule allows employers to use designated areas for work on low-slope roofs (final § 1910.28(b)(13)). The concept of a designated area in the final rule is similar to controlled access zones and warning line systems in OSHA's construction fall protection standards (§§ 1926.500(b) and 1916.502(g) and (h)), which also do not require the use of conventional fall protection in specified situations.

The final definition differs from the proposal in that the proposed definition included the term ''temporary'' work, while the final does not. OSHA continues to believe that employers need to limit use of designated areas to short and brief tasks, such as equipment repair or annual maintenance, that workers perform on infrequent occasions; *i.e.,* employers are not to use designated areas for lengthy or routine jobs that involve frequent exposure to fall hazards. However, including ''temporary'' in the definition is unnecessary because final § 1910.28(b)(13)(ii) already limits the use of designated areas to work that is both temporary and infrequent. OSHA did not receive any comments on the proposed definition and adopts it as discussed.

Dockboard. In the final rule, dockboard means a portable or fixed device that spans a gap or compensates for the difference in elevation between a loading platform and a transport vehicle. The definition also specifies that dockboards include, but are not limited to, bridge plates, dock plates, and dock levelers. Examples of transport vehicles include motor vehicles, trucks, trailers, rail cars, and other vehicles.

The final rule uses the term ''transport vehicle'' in place of the proposed term ''carrier.'' OSHA believes ''transport vehicle'' is clear and familiar to employers as it is a commonly used term for a cargo-carrying vehicle. The Agency drew the term from ANSI MH30.2–2005.

The final rule adds examples of devices that OSHA includes within the definition of dockboards, including bridge plates, dock plates, and dock levelers. The Agency believes that providing these examples will help employers and workers better understand whether devices manufactured under other names are ''dockboards.'' OSHA notes that the list of dockboard examples is not exhaustive. That is, any device that employers use to span a gap or compensate for the difference in levels between a loading platform and transport vehicle is a dockboard for the purposes of final subpart D.

OSHA did not receive any comments on the proposed definition and adopts the definition with the changes discussed above.

Equivalent. In the final rule, this term means alternative designs, equipment, materials, or methods that the employer can demonstrate will provide an equal or greater degree of safety for workers compared to the designs, equipment, materials, or methods specified in this subpart.

OSHA proposed revising the definition of ''equivalent'' in existing § 1910.23(g)(6) to incorporate language from the construction standards for fall protection, stairways, and ladders standards (§§ 1926.450(b); 1926.500(b); and 1926.1050(b)). These standards specify that the employer has the burden to demonstrate that the alternate designs, materials, methods, or items will provide an equal or greater degree of safety for workers than the designs, materials, methods, or items the final rule specifies or requires. OSHA did not receive any comments on the proposed definition and finalizes the term so it is consistent with OSHA construction standards.

Extension ladder. Final paragraph (b), like the proposed rule, defines this term as a portable ladder that is non-self-supporting and is adjustable in length. The final rule consolidates into one term, and simplifies the language in, the definitions in existing § 1910.23(c)(4) and (d)(4); this existing provision states that an extension ladder ''consists of one or more sections traveling in guides or brackets so arranged as to permit length adjustment.'' OSHA believes that the concise, plain language in the final definition will enhance understanding of requirements involving extension ladders; moving the specifications currently in the existing standards to final § 1910.23 also should improve understanding of these requirements.

The final definition generally is consistent with ANSI A14.1–2007, ANSI A14.2–2007, and ANSI A14.5–2007. OSHA did not receive any comments on the proposed definition and adopts it as proposed.

Failure. Final paragraph (b), similar to the proposed rule and construction standards (§§ 1926.450(b); 1926.500(b); and 1926.1050(b)), defines ''failure'' as a load refusal, breakage, or separation of component parts. The final definition explains that a ''load refusal'' is the point at which the ultimate strength of a component or object is exceeded. To illustrate, if the load exceeds the ultimate strength of a walking-working surface, such as an elevated work platform, the platform likely will collapse.

For the purpose of this definition, load refusal includes permanent deformation of a component part, which is consistent with ANSI/ASSE A1264.1–2007 (Section 2.3). For example, elongation of a connector that causes the connector to lose its strength is the type of permanent deformation OSHA intends the final definition to cover. Similarly, damage to a guardrail system that weakens the bolts or other fasteners so the system cannot support a worker's weight is the type of permanent deformation the final definition intends to covers.

OSHA did not receive any comments on the proposed term and definition and adopts the definition with minor editorial changes for clarity.

Fall hazard. This term, in the final rule, means any condition on a walking-working surface that exposes a worker to a risk of harm from a fall on the same level or to a lower level. The final definition is almost identical to the proposal; however, the final rule uses ''risk of harm'' in place of ''injury.'' It is clear from the Analysis of Risk (Section II) section and the Final Economic Analysis (FEA) (Section V) that worker exposure to fall hazards can result in death as well as injury. OSHA believes the language in the final definition more accurately and fully captures the range of adverse outcomes that can result from falls.

In response to the proposal, OSHA received one comment from Mr. David Hoberg of DBM Corporations, recommending that OSHA add a specific height to the definition of fall hazard (Ex. 206). He said that a specific height is needed for enforcement purposes. OSHA disagrees. The risk of a fall or other harm exists at any height, including on the same level. That said, OSHA has established specific heights that trigger fall protection requirements in final § 1910.28. The final definition is adopted as proposed.

Fall protection. The final rule, like the proposed rule, defines ''fall protection'' as any equipment, device, or system that prevents a worker from falling from an elevation or that mitigates the effect of such a fall. For the purposes of the final rule, ''mitigates the effect'' means that the fall protection prevents the worker from coming into contact with a lower level if a fall occurs. As noted in the preamble to the proposed standard, examples of fall protection include guardrail systems, safety net systems, ladder safety systems, personal fall arrest systems, and similar fall protection systems. OSHA did not receive any comments on the proposed definition and adopts it with minor revisions for clarity.

Fixed ladder. The final definition of fixed ladder, which is generally consistent with existing § 1910.21(e)(2) and the proposed rule, means a ladder with rails or individual rungs that is permanently attached to a structure, building, or equipment. The definition also states that fixed ladders include individual-rung ladders, but do not include ship stairs, step bolts, or manhole steps.

The final definition differs from the existing and proposed rules by clarifying what OSHA does not consider to be fixed ladders. Accordingly, the final definition specifies that fixed ladders do not include ship stairs (ship ladders), step bolts, and manhole steps. Although these devices share some of the same characteristics of fixed ladders, such as a vertical or steep slope, the final rule clarifies that they are not fixed ladders, and therefore, are covered under separate provisions of the final rule.

While fixed ladders include ladders attached to equipment, OSHA notes ladders that are designed into or are an integral part of machines or equipment are excluded from coverage by final § 1910.23(a)(2).

The final definition, as revised, is consistent with OSHA's stairways and ladders standard for construction (§ 1926.1050(b)) and ANSI A14.3–2008 (Section 3). OSHA received no comments on the proposed definition and finalizes it with the revisions discussed.

Grab bar. This term means an individual horizontal or vertical handhold installed to provide workers with access above the height of a ladder. The final definition revises the existing and proposed rules in two respects. First, the final definition adds language indicating that employers can use grab bars installed either horizontally or vertically. OSHA received one comment about the orientation of grab bars. Nigel Ellis, of Ellis Fall Safety Solutions, recommended OSHA require employers to use only horizontal grab bars when the length of the bars exceeds six inches because it would be impossible to stop workers' hands from sliding down the vertical grab bar during a fall (Ex. 155). He also cited a University of Michigan study that recommended using only horizontally oriented grab bars (Ex. 155, discussing Young J, *et al.* ''Hand-Handhold Coupling: Effective Handle Shape, Orientation, and Friction on Breakaway Strength,'' 51 Human Factors 705–717 (2009)). OSHA is not adopting Mr. Ellis' recommendations because the customary industry practice, as specified by the ANSI fixed ladder standard (ANSI A–14.3–2008 (Section 5.3.3.1)), is to allow the use of either horizontal or vertical grab bars and not to limit the length of vertical grab bars.

Second, the final definition deletes language in existing § 1910.21(e)(14) and the proposed rule specifying that employers use only grab bars placed adjacent to a ladder or used as an extension of a ladder. The final definition revises this language to ensure that employers use only grab bars installed above the height of the ladder, not adjacent to it. When grab bars are also in a vertical orientation relative to a ladder, they are not an extension of the ladder; therefore, the final definition removed the language from the proposal referring to grab bars as an extension of a ladder.

Guardrail system. In the final rule, similar to the proposal, this term means a barrier erected along an unprotected or exposed side, edge, or other area of a walking-working surface to prevent workers from falling to a lower level. A guardrail system generally consists of vertical, horizontal, or inclined supports; top rails; midrails; screens; mesh or solid panels; intermediate vertical members; or other equivalent structural members. Guardrail systems can be either permanent or removable. The final definition generally is consistent with the scaffold and fall protection standards for construction (§§ 1926.450(b) and 1926.500(b)).

The proposed and final definition simplify the existing definitions in § 1910.21(a)(6) and (g)(7) by consolidating the terms ''guardrail'' and ''standard railing'' into the single term ''guardrail system.'' The existing definitions are similar to, and included within, the final definition. As a result, there is no need to include both terms and definitions in the final rule since the single term ''guardrail system'' adequately covers both terms.

The final rule clarifies the proposed definition by specifying that guardrails are barriers that employers may erect on a side, edge, or other area of a walking-working surface (*e.g.,* hole). The barrier may be a framework or system of individual units used together to provide protection. For example, a guardrail system may consist of several barriers surrounding a hole.

OSHA did not receive any comments on the proposed definition and, therefore, adopts it as explained.

Handrail. The final rule, like the proposed rule and the construction stairways standard (§ 1926.1050(b)), defines a handrail as a rail used to provide workers with a handhold for support. Handrails may be horizontal, vertical, or sloping. According to ANSI/ASSE A1264.1–2007 (Sections 2.6 and 2.7), handrails also may be part of a stair rail or stair rail system (*i.e.,* the top rail).

The proposed and final definition simplify and consolidate into one term the three definitions for ''handrail'' in the existing rule in §§ 1910.21(a)(3), (b)(1), and (g)(8). Specifically, the final definition deletes existing specifications for the materials (*e.g.,* pipe, bar) that employers must use for handrails, which makes the final definition consistent with final § 1910.29, Fall protection systems criteria and practices. The final definition also is consistent with ANSI/ASSE A1264.1–2007 (Section 2.7). OSHA did not receive any comments on the proposed definition and adopts the final definition as proposed.

Hoist area. In the final rule, like the proposal, a hoist area is defined as any elevated access opening to a walking-working surface through which equipment or materials are loaded or received. The final definition deletes the term ''hoisted'' before the phrase ''equipment or material'' in the proposed definition because the definition covers any means of loading, passing, or receiving equipment or materials through the hoist area. OSHA did not receive any comments on the proposed definition and finalizes it with the revisions discussed.

Hole. The final rule, similar to the proposed rule, defines a hole as a gap or open space in a floor, roof, horizontal walking-working surface, or similar surfaces that is at least two inches in its least dimension. Similar surfaces include runways, dockboards, stair treads, and other low-slope or inclined surfaces where employees walk or work. The existing rule contains four different terms for holes and openings in walking-working surfaces: Floor hole (existing § 1910.21(a)(1)), floor opening (existing § 1910.21(a)(2)), wall hole (existing § 1910.21(a)(10)), and wall opening (existing § 1910.21(a)(11)). Each of the terms has a separate definition. ANSI/ASSE A1264.1–2007 contains the same four terms and definitions.

The final definition consolidates and simplifies the existing rule in two respects. First, the final rule designates a ''hole'' as a gap or open space in ''horizontal walking-working surfaces,'' (*e.g.,* floor, roof, similar surfaces) and an ''opening'' as a gap or space in ''vertical walking-working surfaces'' (*e.g.,* wall or partition). The final definition of ''hole'' revises the proposed definition by adding ''horizontal'' and ''similar surfaces'' so employers know holes are not limited to floors or roofs.

Designating the term ''hole'' to refer to gaps in horizontal or similar walking-working surfaces allows OSHA to simplify and consolidate the existing definitions for ''floor hole'' and ''floor opening'' into a single term: ''hole.'' The existing rule in § 1910.21(a)(1) defines a ''floor hole'' as a gap that is more than one inch but less than 12 inches at its least dimension, while existing § 1910.21(a)(2) defines a ''floor opening'' as a gap that is 12 inches or more at its least dimension. Combining the two terms also makes the final definition consistent with the definition in the construction fall protection standard in § 1926.500(b). The final rule, like the proposal, also expands the term ''hole'' to cover gaps in roofs and similar horizontal walking-working surfaces, as well as floors.

Second, consistent with the Plain Writing Act of 2010, the final definition substitutes ''open space'' for ''void'' to make the term easier to understand.

OSHA received one comment on the proposed rule. Mark Damon, of Damon, Inc., questioned the need for a definition of hole in a fall protection standard, asserting that workers could not fall through a two-inch or larger gap (Ex. 251). OSHA disagrees with Mr. Damon's assertion. Although a worker cannot fall through a narrow (2-inch) hole in a walking-working surface, such holes can cause workers to trip and fall on the same level or to a lower level. Such falls can result in worker injury or death. As such, OSHA is retaining the definition with the changes discussed above.

Individual-rung ladder. This is a type of fixed ladder that has rungs individually attached to a building or structure. It does not include manhole steps. The proposed rule also excluded manhole steps.

Although manhole steps have individual rungs, they involve unique conditions, and OSHA addresses these conditions in a separate section of final subpart D (§ 1910.24). Therefore, the final definition excludes manhole steps from the individual-rung ladder definition to prevent any confusion and emphasize that final § 1910.24, not final § 1910.23 applies to manhole steps.

The proposed rule also included ladders consisting of rungs individually attached to a piece of equipment. Because final rule § 1910.23(a)(2) excludes ladders designed into or integral to a piece of equipment, there was no need to include such ladders within the definition of individual rung ladders.

OSHA did not receive any comments on the proposed definition and adopts it with the revisions discussed above.

Ladder. This term means a device with rungs, steps, or cleats used to gain access to a different elevation. The final rule simplifies and consolidates into one definition the three definitions of ''ladder'' in the existing rule in § 1910.21(c)(1), (d)(1), and (e)(1). The final definition also eliminates references to ladder specifications (*e.g.,* ''joined at regular intervals'') since they simply repeat requirements addressed by final § 1910.23.

OSHA received one comment on the proposed ''ladder'' definition. Steve Smith, of Verallia, recommended that OSHA clarify the term because he said that the phrase ''a device with steps'' is ambiguous and could include stairs as well as a ladder (Ex. 171). OSHA does not agree that stakeholders might mistakenly think the term ''ladder'' includes stairs. The proposed and final definitions of ''ladder'' are essentially the same as the one that all of the ANSI A14 ladder standards use: ''Ladder. A device incorporating or employing steps, rungs, or cleats on which a person may step to ascend or descend'' (see, *e.g.,* ANSI A14.1–2007 (Section 4); ANSI A14.2–2007 (Section 4); ANSI A14.3–2008 (Section 3); ANSI A14.5–2007 (Section 4)). The ANSI A14 ladder standards have been in place for years, and OSHA believes employers, workers, and manufacturers clearly understand the term ''ladder,'' as defined in the ANSI standards, and will not confuse the term with stairs. However, to ensure the final rule is understandable, the final rule clarifies the definitions of ''rung, step, or cleat'' and ''tread'' to specify that a ''step'' is a cross-piece of a ladder and ''tread'' refers to the horizontal part of ''stairways (stair).''

Ladder safety system. In the final rule, a ladder safety system is a system designed to eliminate or reduce the possibility of falling from a ladder. The final definition explains that a ladder safety system usually consists of a carrier; a safety sleeve, which is a moving component that travels on the carrier; a lanyard; connectors; and a body harness. The final definition also specifies that cages and wells are not ladder safety systems.

The existing rule in § 1910.21(e)(13) uses a similar term, ''ladder safety device,'' which also excludes ladder cages and wells. OSHA's construction ladder standard in § 1926.1053 uses the same term, but does not include a definition of the term. The final definition is consistent with the ANSI fixed-ladder standard (ANSI A14.3–2008; Section 3).

OSHA received one comment on the definition of ladder safety system. Darryl Hill, of the American Society of Safety Engineers (ASSE), urged OSHA to prohibit the use of body belts in ladder safety systems as the Agency did with personal fall arrest systems:

> ASSE opposes the use of body belts. There are good ''safety reasons'' . . . for supporting OSHA's decision in 1998 to ban the use of body belts as part of a personal fall arrest system. OSHA needs to take this opportunity to ban their use entirely for the same reasons it banned them in 1998. A full body harness distributes arresting forces over larger areas of the workers body and provides better suspension support, as research has repeatedly confirmed (Ex. 127).

OSHA agrees with ASSE that full-body harnesses provide better suspension support precisely because they distribute arresting/impact forces over a larger area of a worker's body than body belts. To that end, the final rule in § 1910.140(d)(3) retains OSHA's 1998 prohibition on the use of body belts as part of a personal fall arrest system. OSHA believes this requirement in final § 1910.140 addresses ASSE's concern and the Agency encourages employers to provide, and require that their workers use body harnesses when using any type of personal fall protection equipment.

Low-slope roof. This is a new term that OSHA added to the final rule. Low-slope roof is defined as a roof with a slope less than or equal to a ratio of 4 in 12. A ratio of 4 in 12 means a vertical rise of 4 units (*e.g.,* inches, feet, meters) to every 12 units of horizontal run. The final definition is almost identical to the definition of ''low-slope roof'' found in the construction fall protection standard in § 1926.500(b).

OSHA added this term to final paragraph (b) because the final rule includes a new provision on controlling fall hazards on low-slope roofs (final § 1910.28(b)(13)), which is consistent with the construction fall protection standard in § 1926.501(b)(10). OSHA is aware that low-slope roofs also are referred to as ''flat roofs.'' However, even a so-called ''flat roof'' has some slope to allow for drainage. As such, OSHA believes that the term ''low-slope roof'' more accurately represents these roofing configurations.

Lower level. The final rule, similar to the proposal, defines this term as a surface or area to which workers could fall. The final definition lists examples of lower levels including, but not limited to, ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, materials, water, equipment, and similar surfaces and structures, or portions thereof. The final rule adds to the proposed definition of lower level ''surface'' and ''structures, or portions thereof,'' which make the final definition consistent with the definition of ''lower level'' in the construction fall protection standard in § 1926.500(b). The construction standards for scaffolds, and stairways and ladders, also have similar definitions (§§ 1926.450(b); 1926.1050(b)). OSHA did not receive any comments on the proposed definition and adopts it with the changes discussed above.

Manhole steps. The final rule, similar to the proposal, defines these as steps that are individually attached to, or set into the walls of a manhole structure. Although the steps are individually set into or attached to the walls, manhole steps are not considered ''individual-rung ladders'' as stated in the final definition of ''fixed ladders.'' Manhole steps also do not include manhole entry ladders which are portable and are covered in final § 1910.23, Ladders.

OSHA did not receive any comments on the proposed definition and adopts it with minor editorial changes.

Maximum intended load. The final rule, similar to the proposal, defines this term as the total load (weight and force) of all employees, equipment, vehicles, tools, materials, and other loads the employer reasonably anticipates to be applied to a walking-working surface at any one time. The existing rule in § 1910.21(f)(19) and the construction standards for scaffolds, and stairways and ladders in §§ 1926.450(b) and 1926.1050(b) have similar definitions.

OSHA clarified the final definition in several ways. First, the proposed rule indicated that ''maximum intended load'' was also known as ''designed working load.'' OSHA is aware that ''designed working load'' is an outdated term; thus, the final definition deletes it. Second, the final definition adds language clarifying that the maximum intended load includes the combined total weight of the load, as well as the force of the load.

Third, the final definition adds ''vehicles'' to the list of potential components of a total load. Vehicles are found on many types of walking-working surfaces, and determinations of the maximum intended load must include the weight of vehicles, and the load being carried by the vehicles, applied to the walking-working surface.

Fourth, the final definition adds language clarifying that employers are responsible for determining the maximum load in terms of all equipment, vehicles, materials, workers, and other items they reasonably anticipate applying to a walking-working surface. Requiring that an employer know the maximum weight and force a walking-working surface can support and the total weight and force of the loads they reasonably anticipate applying to that surface is essential in safeguarding workers from harm, *e.g.,* falls from elevated surfaces and being struck by falling objects. OSHA believes the language added to the final definition clarifies the employers' responsibility.

Fifth and finally, the final definition adds the language ''at any time'' to make the definition consistent with other OSHA standards (*e.g.,* existing §§ 1910.21(f)(19); 1926.450(b); 1926.1050(b)).

OSHA did not receive any comments on the proposed definition and adopts it with the revisions discussed above.

Mobile. The final rule, like the proposed rule, defines ''mobile'' as being manually propelled or movable. The existing rule defines ''mobile'' as manually propelled (existing § 1910.21(g)(12)). The proposed and final definitions update the existing rule to make it consistent with ANSI A14.7–2011 (Section 3), which specifies that ''mobile'' also means ''moveable.'' OSHA believes that the final definition also clarifies the definitions of ''mobile ladder stand'' and ''mobile ladder stand platform.''

In the proposal, OSHA asked for comment on whether it is necessary to define a common term like ''mobile,'' but the Agency did not receive any comments. Therefore, OSHA adopts the proposed definition with one editorial clarification (replacing ''and/or'' with ''or'').

Mobile ladder stand. This term (also known as ''ladder stand'') means a mobile, fixed-height, self-supporting ladder usually consisting of wheels or casters on a rigid base and steps that leads to a top step. The final definition explains that a mobile ladder stand also may have handrails and is designed for use by one worker at a time. A parenthetical in the definition refers to ''ladder stand'' as another name for mobile ladder stands; ''ladder stand'' is the term used for mobile ladder stands in existing §§ 1910.21(g)(9), 1926.450(b), and 1926.1050(b), and ANSI A14.7–2011 (Section 3).

The final definition clarifies the proposed rule and OSHA's existing definition for ladder stand in several ways. First, the final definition adds language clarifying that mobile ladder stands usually consist of wheels or casters on a rigid base, in addition to steps. This addition clearly distinguishes ladder stands from other types of ladders. Second, the final rule simplifies and clarifies the definition by using the term ''steps'' in place of ''treads in the form of steps,'' which is in the existing and proposed definitions. The term ''step,'' which final paragraph (b) also defines, is clear and well understood, and does not require further elaboration.

Third, the final definition deletes the proposed term ''flat'' used to describe ladder stand steps because it is not necessary. Final § 1910.23 establishes requirements for ladder stand steps (final §§ 1910.23(b)(1) and (b)(4)). OSHA did not receive any comments on the proposed definition and adopts it with the clarifications discussed above.

Mobile ladder stand platform. The final rule defines this term as a mobile, fixed-height, self-supporting unit having one or more standing platforms that are provided with means of access or egress. Existing OSHA standards do not include or define the term ''mobile ladder stand platforms.'' [11] Frequently employers use mobile ladder stand platforms to provide elevated standing or working surfaces for one or more employees.

The final definition is consistent with ANSI A14.7–2011, although the ANSI standard, like the proposed rule, includes the definition of mobile ladder stand. OSHA did not receive any comments on the proposed definition and finalizes the definition with minor clarifications.

Open riser. The final rule, which is similar to existing § 1910.21(b)(3) and the proposed rule, defines ''open riser'' as a gap or space between treads of stairways that do not have upright (vertical) or inclined members (risers).

OSHA clarified the proposed definition slightly by adding terminology to the final definition that it used in the final definition of ''riser.'' This terminology specifies that, in addition to not having upright (vertical) members, stairways with open risers do not have inclined members. This revision makes the final definition consistent with ANSI/ASSE A1264.1–2007 (Section 2.11).

OSHA did not receive any comments on the proposed definition and adopts it with the clarifications discussed above.

Opening. The final rule, similar to the proposed rule, defines this term as a gap or open space in a wall, partition, vertical walking-working surface, or similar surface that is at least 30 inches high and at least 18 inches wide, through which a worker can fall to a lower level.

As discussed in the definition of ''hole,'' the final rule simplifies and consolidates four terms in the existing rule that distinguish between openings and holes in walking-working surfaces. As mentioned, the term ''opening'' in the final rule refers to gaps or open spaces in areas that are generally vertical, such as walls and partitions. The final definition consolidates into one term the definitions of ''wall hole'' and ''wall opening'' in existing § 1910.21(a)(10) and (a)(11). This consolidation makes the final definition of ''opening'' consistent with the construction fall protection standard

[11] OSHA notes that the existing general industry rule includes the terms ''platform ladder'' and ''mobile work platform.'' Existing § 1910.21(d)(5) defines ''platform ladder'' as a ''self-supporting ladder of fixed steps with a platform provided at the working level.'' Existing § 1910.21(g)(13) defines ''mobile work platform'' as ''a fixed work level one frame high on casters or wheels, with bracing diagonally from platform to vertical frame.'' Both terms include elements of the final definition of ''mobile ladder stand platform.'' In the proposed rule, OSHA consolidated and simplified existing terms into one term: Mobile ladder stand platform.

(§ 1926.500(b)), one of OSHA's stated goals of the final rule. OSHA believes that having consistent general industry and construction definitions will facilitate compliance with the final rule. The final definition also is nearly identical to the definition of ''opening'' in ANSI/ASSE A10.18–2012 (Section 2.9).

Consistent with the Plain Writing Act of 2010, the final definition substitutes ''open space'' for ''void'' to make the term easier to understand.

OSHA did not receive any comments on the proposed definition and adopts the term as discussed above.

Personal fall arrest system. This is a new term OSHA added to subpart D in the final rule and means a system used to arrest a worker's fall from a walking-working surface if one occurs. The final definition explains that a personal fall arrest system consists of a body harness,[12] anchorage, connector, and a means of connecting the body harness and anchorage, such as a lanyard, deceleration device, lifeline, or a suitable combination of these. A definition for personal fall arrest systems was provided in proposed subpart I in § 1910.140 (75 FR 29147). Because the term is used in final subpart D, and OSHA believes the term is integral to understanding the final rule, the Agency decided to include the same definition in subpart D.

The final definition is consistent with OSHA's construction standards for scaffolds and fall protection in §§ 1926.450(b) and 1926.500(b), respectively, and ANSI/ASSE Z359.0–2012 (Section 2.98). See the preamble to final § 1910.140 for further discussion and comments on personal fall arrest systems.

Personal fall protection system. This is a new term OSHA added to subpart D in the final rule and means a system (including all components) an employer uses to provide protection from falling or to safely arrest a worker's fall if one occurs. The final definition identifies examples of personal fall protection systems, including personal fall arrest systems, travel restraint systems, and positioning systems.

Personal fall protection systems have the following components in common: An anchorage, body support (*i.e.,* body harness or body belt), and connectors (*i.e.,* means of connecting the anchorage and body support).

A definition for personal fall protection systems was provided in the proposed rule, in proposed § 1910.140 (75 FR 29147). Because the term is used in final subpart D, and OSHA believes the term is integral to understanding the final rule, the Agency decided to include the same definition in subpart D. The requirements for, and comments on, personal fall protection systems are in final § 1910.140, Personal fall protection systems.

Platform. In the final rule, like the proposal, a platform is defined as a walking-working surface that is elevated above the surrounding area. OSHA drew the proposed and final definitions from existing § 1910.21(a)(4) and the construction scaffold standard in § 1926.450(b). The final rule is consistent with the definition in ANSI/ASSE A1264.1–2007.1–2007 (Section 2.14).

OSHA did not receive any comments on the proposed definition and adopts it as proposed with a minor editorial revision.

Portable ladder. The final rule, like the proposal, defines this term as a ladder that can readily be moved or carried, and usually consists of side rails joined at intervals by steps, rungs, or cleats. The definition in the final rule is consistent with the definition of portable ladder in ANSI A14.1–2007 (Section 4), ANSI A14.2–2007 (Section 4), and ANSI A14.5–2007 (Section 4).

The final rule clarifies the definition by deleting the language ''rear braces'' from the proposed definition to eliminate any confusion about what constitutes a portable ladder for the purposes of the final rule. Rear braces are a structural component of self-supporting portable ladders; however, as mentioned above, the final definition of portable ladder is not limited to those types of ladders.

OSHA notes that portable ladders include, but are not limited to, self-supporting, non-self-supporting, articulated, sectional, extension, special purpose, and orchard ladders. OSHA believes that the term portable ladders should be widely understood by employers.

OSHA received one comment on the proposed definition. Virginia Ruiz, representing California Rural Legal Assistance Foundation and Farmworker Justice, urged OSHA to cover agriculture operations in the final rule (Ex. 201). In her comment, Ms. Ruiz pointed out that proposed revisions to the California general industry portable-ladder standards (Title 8 CCR, Sections 3276, 3277, 3278, 3287, and 3413) cover special-purpose orchard and fruitpickers' ladders (Ex. 201). For further discussion on the inclusion of agriculture operations in subpart D, see the discussion above in final paragraph (a), Scope.

Positioning system (work-positioning system). This is a new definition OSHA added to subpart D in the final rule. It means a system of equipment and connectors that, when used with a body harness or body belt, allows an employee to be supported on an elevated vertical surface, such as a wall or window sill, and work with both hands free. Positioning systems also are called ''positioning system devices'' and ''work-positioning equipment.''

The definition is the same as the definition in § 1910.140(b). The newly revised electric power generation, transmission, and distribution standard in § 1910.269, and the construction standard for fall protection in § 1926.500(b), also contain similar terms and definitions. The final definition also is consistent with ANSI/ASSE Z359.0–2012 (Section 2.120).

Although the proposed rule for subpart D used the term work-positioning system, the proposal did not define it. The Agency believes it is important to define positioning systems in final subpart D to ensure that employers and workers understand the meaning of this term as used in this subpart, most importantly that such systems do not arrest falls from elevated walking-working surfaces.

Qualified. In the final rule, like in the proposal, ''qualified'' describes a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project. This definition is the same as the definition in the proposed rule and final § 1910.140(b), as well as several construction standards (§§ 1926.32(m); 1926.450(b)) and ANSI A10.32–2012 (Section 2.41).

The final definition, however, differs from the definition of ''qualified person'' in the general industry powered platforms standard (§ 1910.66, Appendix C, Section I(b)) and ANSI/ASSE Z359.0–2012. The § 1910.66 definition, for instance, requires that qualified persons have a degree or professional certificate, not only professional standing, plus extensive knowledge, training, and experience. OSHA explained in the proposed rule that to require qualified persons to meet the definition in the powered platforms standard would mean that the qualified person ''would most likely need to be an engineer'' (75 FR 28905).

Two stakeholders recommended that the Agency adopt the definition in

---

[12] OSHA notes the final rule prohibits the use a body belt as part of a personal fall arrest system (final § 1910.140(d)(3)).

§ 1910.66 (Exs. 155; 206). Mr. Ellis urged OSHA to adopt the § 1910.66 definition at least as it pertains to certification of anchorages. He also said:

> After investing 40 years in industrial fall protection it is important to feed back my experiences from hundreds of site visits and contacts over that time. I am strongly recommending that the word ''or'' be replaced with ''and''. Both are critically important and the anchorage must be documented with at least a sketch or engineering drawing which presently it rarely is except for 1910.66 App. C. In America, anchorages are mostly guesswork and this does not do justice to ''the personal fall arrest system'' term that OSHA is seeking to establish unless the engineering background is added. Furthermore the design of anchorages can easily be incorporated into architects and engineers drawings but is presently not because there is no requirement for an engineer. This simple change may result in saving over one half the lives lost from falls in the USA in my opinion (Ex. 155).

Mr. Hoberg, of DBM, Inc., said that defining qualified ''has been a struggle for decades'' and that the § 1910.66 definition ''is a good one'':

> Two things have become commonly accepted—a competent person is one who has enough experience and knowledge to know when to call a qualified person. A qualified person is one who knows the technical and working practice aspects of the problem.
>
> The problem we have had was how to limit the 'I know, therefore I am a qualified person' (Ex. 206).

The final rule does not adopt the definition of ''qualified person'' in § 1910.66 appendix C. The definition of ''qualified'' in the final rule has been in use for years in the referenced construction standards. OSHA believes the definition is clear and employers understand it. In addition, OSHA believes that employers understand and can distinguish between qualified and competent persons.

With regard to the certification of anchorages, OSHA believes that the anchorage requirements in final §§ 1910.27 and 1910.140, combined with the final definition of ''qualified'' person, are adequate to ensure worker safety. OSHA notes that building owners are free to have their building anchorages certified by professional engineers. Therefore, OSHA finalizes the definition of ''qualified'' as proposed.

Ramp. The final rule defines ramp as an inclined walking-working surface that is used to gain access to another level. Employers use ramps to move workers, equipment, materials, supplies, and vehicles from one level to another. Ramps also allow workers to access another level when stairs are not available or workers cannot use them (such as for workers who use wheelchairs). Ramps generally are permanent devices or structures, although some ramps may be portable, such as ramps that employers use temporarily for accessing a different level where moving equipment or materials up or down stair risers or curbs is impractical.

The proposed rule, similar to the 1990 proposal, defines ramp as an inclined surface between different elevations that is used for the passage of employees, vehicles, or both. The final rule revises the proposed definition for two reasons. First, the proposed definition only refers to the passage of employees and vehicles, but not other things that may be moved across ramps, such as materials, supplies, and equipment. The final definition does not limit the use of ramps as passageways. Second, the final rule simplifies the proposed definition to make it consistent with the definition in ANSI/ASSE A1264.1–2007 (Section 2.16).

OSHA did not receive any comments on the proposed definition and adopts it as discussed above.

Riser. In the final rule, this term means an upright (vertical) or inclined member of a stair located at the back of a stair tread or platform that connects close to the front edge of the next higher tread, platform, or landing. The final definition is consistent with ANSI/ASSE A1264.1–2007 (Section 2.17).

The final rule differs from the proposed definition in that the final definition clarifies that risers may also be inclined (nearly vertical), as well as vertical, members of a stair, and connect treads to the next higher tread, platform or landing. The height of a riser is measured as the vertical distance from the tread (horizontal surface) of one step to the top of the leading edge of the tread above it (see Figure D–8.). OSHA did not receive any comments on the proposed definition and adopts it with the clarification discussed above.

Rope descent system. In the final rule, a rope descent system (RDS) is defined as a suspension system that allows a worker to descend in a controlled manner and, as needed, to stop at any time during the descent. The final definition adds language to the proposed definition explaining that the RDS usually consists of a roof anchorage, support rope, a descent device, carabiner(s) or shackle(s), and a chair (seatboard). The final definition also states that an RDS may also be called controlled descent equipment or apparatus; and does not include industrial rope access systems. OSHA based the final definition of ''rope descent system'' on the definition of the term in ANSI/IWCA I–14.1–2001, since the existing rule does not include the term.

OSHA revised the final definition in several ways. First, the ANSI/ASSE Z359.0–2012 (Sections 2.13 and 2.100) defines both ''automatic descent control device'' and ''manual descent control device.'' However, neither definition encompasses the entire system. The Agency's final definition, like ANSI/IWCA I–14.1–2001, covers the entire system, not just the descent control device. In light of the ANSI/ASSE Z359.0–2012 definitions, OSHA believes that stating, as in the proposal, that another name for an RDS is ''controlled descent device'' may be confusing. Therefore, OSHA removed that statement in the final definition. To further clarify the final definition and distinguish it from the terms in ANSI/ASSE Z359.0–2012, OSHA added language identifying components of a typical RDS.

Second, OSHA added language to the final rule specifically excluding industrial rope-access systems from the final definition of ''rope descent system.'' OSHA received several comments recommending that the term ''rope descent system'' include industrial rope access systems, either as part of rope descent systems or as a new section (*e.g.,* Exs. 129; 205; 355–7; 347). One commenter said that rope descent systems are a type of industrial rope access system (Ex. 362). However, some commenters believe the definition of ''rope descent system'' already includes industrial rope access systems (Exs. 69; 72; 122; 168; 178). For example, the American Wind Energy Association (AWEA) said they use industrial rope access systems as rope descent systems for repair and maintenance of wind turbines (Ex. 178). AWEA recommended that the definition of, and requirements for, rope descent systems should incorporate and reference the Society of Professional Rope Access Technicians (SPRAT) and the International Rope Access Technicians Association standards, which AWEA said ''are much more developed'' than the ANSI/IWCA I–14.1–2001 standard.

In light of the comments, not only does the final definition clarify that rope descent systems do not include industrial rope access systems, but also final § 1910.27, Scaffolds and rope descent systems, explains that the final rule does not cover industrial rope access systems. OSHA agrees, as SPRAT pointed out, that while industrial rope access systems may use equipment similar to rope descent systems (*e.g.,* anchorages, body harnesses, lifelines), they are ''different in key ways'' from rope descent systems (Ex. 355–7). For example, industrial rope access systems are suspension systems that allow the worker to go up or down, while rope descent systems only go down. Also, industrial rope access systems have sit harnesses instead of seatboards or chairs.

Third, OSHA received several comments that opposed OSHA's characterization of a rope descent system in the proposal as a ''variation of the single-point adjustable suspension scaffold'' (Exs. 62; 168; 205). For example, Brian Gartner, of Weatherguard Service, Inc., said, ''A rope descent system is not a variation of the single point adjustable scaffold. The scaffold has the capability of being raised as well as being lowered, rope descent systems only travel downward, and a scaffold has an area, a platform, to store tools and supplies, stand, etc.'' (Ex. 168). OSHA agrees with the commenters and deleted that comparison from the final definition.

Rung, step, or cleat. Similar to the proposal, the final rule defines ''rung, step, or cleat'' as the cross-piece of a ladder on which a worker steps to climb up and down the ladder. OSHA notes that in the final definition, ''steps'' only refer to the cross-pieces of ladders. The final definition is consistent with ANSI A14.1–2007 (Section 4), ANSI A14.2–2007 (Section 4), and ANSI A14.5–2007 (Section 4).

The final definition consolidates and simplifies the existing definitions into one term that identifies their common characteristics and purpose (see existing § 1910.21(e)(8), (9), and (10)). The final definition also incorporates plain language (''climb up and down'') to explain that workers use rungs, steps, or cleats to ascend or descend ladders.

OSHA received one comment on the proposed definition. Nigel Ellis said OSHA should retain the separate definitions in the existing rule ''to explain a rung is designed for holding and stepping but that a step cannot be held since it is only for the feet (shoes)'' (Ex. 155). OSHA does not agree that including such language is necessary.

First, the final definition is consistent with ANSI portable ladder standards (ANSI A14.1–2007, ANSI A14.2–2007, and ANSI A14.5–2007). Rungs, steps, and cleats are all horizontal surfaces for climbing ladders, even if their specifications vary. (Rungs are circular or oval, cleats are rectangular, and steps are flat). Instead of focusing on the differences in the specification, the final rule and the ANSI standards identify, and focus on, the primary purpose of rungs, steps, and cleats; to provide a place to step to climb up and down the ladder.

Second, OSHA believes it is not accurate to say that ''a step cannot be held'' (Ex. 155). Although side rails provide handholds for climbing ladders, especially those with steps, neither the final rule nor the ANSI standards prohibit workers for holding onto steps, either while climbing or standing on a ladder. As such, OSHA believes the language Mr. Ellis suggests may cause confusion; therefore, OSHA is not adopting it.

Runway. In the final rule, similar to the proposal, this term means an elevated walking-working surface, such as a catwalk, a foot walk along shafting, or an elevated walkway between buildings. The final definition is consistent with ANSI/ASSE A1264.1–2007 (Section 2.19).

OSHA added three clarifications to the final ''runway'' definition. First, the final definition substitutes ''walking-working surface'' for ''passageway.'' This change makes the definition consistent with the definitions of other terms in final subpart D. Second, the final definition also more clearly indicates that employees use runways to perform work as well as to gain access to other areas in the workplace. Third, the final rule simplifies the definition by substituting plain language (*i.e.,* ''elevated'') in place of ''elevated above the surrounding floor or ground level'' used in the proposed definition.

OSHA did not receive any comments on the proposed definition and adopts it with the clarifications discussed above.

Scaffold. In the final rule, like the proposal and consistent with the construction scaffold standard (§ 1926.450(b)), this term means any temporary elevated or suspended platform and its supporting structure, including anchorage points, used to support workers, equipment, materials, and other items. The final rule also states that, for purposes of final subpart D, ''scaffold'' does not include crane-suspended or derrick-suspended personnel platforms or rope descent systems.

The final rule consolidates into a single term the two definitions in the existing rule in § 1910.21(f)(27) and (g)(15). The final definition also adds two clarifications to the proposed definition. First, it adds ''equipment'' to the list of items a scaffold must be capable of supporting. Second, it also clarifies that the final definition of scaffold, including suspension scaffolds, does not include rope descent systems. As discussed above, a number of commenters opposed characterizing rope descent systems as a type of single-point adjustable scaffold (Ex. 62; 168; 205). One commenter, David Hoberg, with DBM Consultants, said rope descent systems differ in many ways from scaffolds. For instance, he said the stabilization required for rope descent systems over a height of 130 feet differs from the stabilization required for scaffolds (Ex. 206). Consequently, OSHA added to the definition of scaffold that the term does not apply to rope descent systems.

Ship stair (ship ladder). In the final rule, like the proposal, a ship stair, also known as a ship ladder, is a stairway that is equipped with treads, stair rails, and open risers, and has a slope that is between 50 and 70 degrees from the horizontal. The final definition is consistent with ANSI/ASSE A1264.1–2007 (Section 2.22).

Ship stairs are not standard stairs within the meaning of this section. Generally, ship stairs are a type of stairway found in buildings and structures that have limited space, and are used for accessing special use areas, such as but not limited to, attics, roofs, mechanical equipment spaces, etc.

OSHA notes that ship stair is a term of art and use of the term in this subpart is not intended to infer applicability to the shipyard employment, marine terminal, or longshoring industries.

OSHA did not receive any comments on this definition and adopts it with minor editorial revisions for clarity.

Side-step ladder. This term means a type of fixed ladder that requires a worker to step sideways from it to reach a walking-working surface, such as a landing. The final definition is consistent with ANSI A14.3–2008 (Section 3). In the final rule, OSHA revised the proposed definition to emphasize that side-step ladders are a type of fixed ladder (see final § 1910.23(d)(4), (d)(6), and (d)(12)(ii)). The final rule also clarifies that when a worker steps off a side-step ladder onto a walking-working surface, it may be a landing or another type of surface (*e.g.,* roof). The proposed definition, on the other hand, only mentions stepping onto a landing.

OSHA did not receive any comments on the proposed definition and finalizes with the clarifications discussed above.

Spiral stairs. The final rule, similar to the proposal, defines this term as a series of treads attached to a vertical pole in a winding fashion that is usually within a cylindrical space. For clarity, the Agency substituted the language ''stairway having a helical (spiral) structure attached to a supporting pole'' in the proposal with ''treads attached to a vertical pole in a winding fashion within a cylindrical space.'' OSHA drew the definition from the construction standards for stairways and ladders (see § 1926.1050(b)); it also is consistent with the definition of the term in ANSI/ASSE A1264.1–2007 (Section 2.23).

Additionally, in the final rule, OSHA replaced the proposed term ''steps'' with ''treads.'' As noted above in the definition for rungs, steps or cleats, in the final rule, OSHA clarifies that steps are a component of ladders whereas treads are components of stairs.

Spiral stairs are not standard stairs within the meaning of this section, and the final rule limits their use in general industry workplaces (see final § 1910.25(b)(8)). Employers generally use spiral stairs generally in workplaces that have limited space.

OSHA did not receive any comments on the proposed definition and adopts it as discussed above.

Stair rail or stair rail system. This term means a barrier erected along the exposed or open side of stairways to prevent workers from falling to a lower level. Stair rail and stair rail systems include, but are not limited to, vertical, horizontal, or inclined rails; grillwork or panels, and mesh. In addition, the top rail of a stair rail system may serve as a handrail. The final definition is consistent with the construction standards for stairways and ladders (see § 1926.1050(b)). The ANSI/ASSE A1264.1–2007 (Section 2.6) standard includes a definition covering ''guardrail/railing system/stair railing system'' that is applicable to stairways, ramps, landings, portable ladders, hatchway, manholes, and floor openings; the final definition is generally consistent with this ANSI/ASSE standard.

The final definition eliminates ''vertical'' from the term barriers in order to make the definition consistent with final § 1910.29(f). That provision does not require barriers to be vertical; for example, barriers may be horizontal rails.

OSHA did not receive any comments on the proposed definitions and adopts it with the revision discussed.

Stairway (stairs). The final rule defines stairway (stairs) as risers and treads that connect one level with another. Stairways also include any landings and platforms between those levels. In addition, the final rule specifies that stairway includes standard, spiral, ship, and alternating tread-type stairs.

The existing rule defines stairways as a series of steps leading from one level or floor to another, or leading to platforms, pits, boiler rooms, crossovers, or around machinery tanks and other equipment that are used more or less continuously or routinely by employees, or only occasionally by specific individuals. A series of steps and landings having three or more risers constitutes stairs or stairway (existing § 1910.21(b)(8)). OSHA did not propose a definition of stairway; however, the Agency decided to retain and revise the existing definition.

The final definition revises the existing definition in several ways. First, the final rule simplifies the definition considerably. OSHA believes the term ''stairway'' (''stairs'') is commonly understood and does not require a long explanation. Therefore, OSHA limits the final definition to identifying the specific aspects of the stairways the final rule covers.

Second, the final rule removes language in the existing definition that limits stairways to stairs that have ''three or more risers'' (existing § 1910.28(b)(8)). The proposed rule did not retain the existing definition of stairway, which limited covered stairs to those that have three or more risers. Including a definition in the final rule clarifies the Agency's intent to cover stairways that have fewer risers.

OSHA adopted the existing definition from national consensus standards in effect in 1971 and those standards have been revised and updated. In particular, the current versions of ANSI/ASSE A1264.1–2007 (Section E6.1) and IBC–2012 (Section 202) specify that a stair has one or more risers. The revision makes the final rule consist with those national consensus standards, which OSHA believes that most employers already follow.

Finally, OSHA adds language to the final definition explaining that stairways include standard, spiral, alternating tread-type, and ship stairs (ship ladders). The existing rule did not include that language.

OSHA did not receive any comments about a definition for ''stairway (stairs)'' and adopts the definition as discussed.

Standard stairs. The final rule, like the proposal, defines standard stairs as stairways that are fixed or permanently installed. In the preamble to the proposed rule OSHA explained that ''permanently installed'' standard stairs are interchangeable with the term ''fixed'' standard stairs. To further clarify the definition, OSHA added this concept.

Existing OSHA standards do not define ''standard stairs.'' The ANSI/ASSE A1264.1–2007 (Section 6) standard uses the terms ''fixed stairs'' and ''conventional stair designs,'' but does not define either term.

Although ship stairs, spiral stairs, and alternating tread-type stairs are fixed or permanently installed stairs, the final definition specifies that they are not considered standard stairs under this subpart.

OSHA did not receive any comments on the proposed definition and finalizes it as discussed above.

Step bolt (pole step). This term means a bolt or rung attached at intervals along a structural member and used for foot placement and as a handhold when climbing or standing. The final definition, like the proposal, also refers to step bolts as ''pole steps.'' Existing subpart D does not specifically define or address step bolts.

OSHA did not receive any comments on the proposed definition and adopts it as discussed.

Stepladder. This term means a self-supporting, portable ladder that has a fixed height, flat steps, and a hinged back. The final definition consolidates into one term the two existing definitions in existing § 1910.21(c)(2) and (d)(2). The final definition also simplifies the proposed definition by incorporating plain language (fixed height) in place of ''non-adjustable in length.''

OSHA did not receive any comments on the proposed definition and adopts it with the clarification discussed above.

Stepstool. This term means a self-supporting, portable ladder that has flat steps and side rails. Similar to the proposed definition, the final rule defines the term ''stepstool'' to include only those ladders that have a fixed height, do not have a pail shelf, and do not exceed 32 inches in overall height to the top cap, although the side rails may extend above the top cap. The definition goes on to clarify that a stepstool is designed so an employee can climb and stand on all of the steps as well as the top cap. OSHA drew the definition from the construction stairways and ladders standard (§ 1926.1050(b)), ANSI A14.2–2007 (Section 4), and ANSI A14.5–2007 (Section 4), which are similar. The final definition simplifies the proposed term by incorporating plain language ''fixed height'' in place of ''non-adjustable in length,'' and reorganizing the definition to make it easier to understand.

OSHA did not receive any comments on the proposed definition and finalizes it with the revisions discussed above.

Through ladder. The final rule, similar to the proposed rule, defines a through ladder as a type of fixed ladder that allows workers to step through the side rails at the top of the ladder to reach a walking-working surface, such as a landing. The final definition is consistent with the construction standards for stairways and ladders (see § 1926.1050(b)) and ANSI A14.3–2008 (Section 3).

The final definition clarifies the existing rule in § 1910.21(e)(15) and the proposed rule by stating that, at the top of a through ladder, a worker steps off the ladder onto a ''walking-working surface,'' which may be a landing or another type of surface (*e.g.,* roof); the existing and proposed rules specify stepping onto a landing only.

OSHA did not receive any comments on the proposed definition and adopts it with the clarification discussed above.

Tieback. Similar to the proposed definition, this term means an attachment between an anchorage (*e.g.,* structural member) and a supporting device. The final definition adds language to the proposed definition clarifying that supporting devices include, but are not limited to, parapet clamps or cornice hooks.

According to the International Safety Equipment Association (ISEA), manufacturers provide a number of choices for tieback applications, such as tieback lines or lanyards, and tieback anchors (Ex. 185). ISEA said manufacturers design tieback lanyards for wrapping around a suitable anchor structure (*e.g.,* a beam or structural member), and have the advantage of eliminating a separate component for anchorage connection. ISEA explained that employers typically use tieback lanyards in personal fall arrest systems (Ex. 185).

ANSI/IWCA I–14.1–2001 (Sections 5.7.17, 17.4, and 17.6) notes that the exclusive use of tieback anchors is with tieback lines, not lifelines. The final rule requires that tieback lines and lifelines have separate anchors.

Existing OSHA standards do not define ''tieback.'' OSHA drew the definition from ANSI A10.8–2011, American National Standard for Construction and Demolition Operations—Safety Requirements for Scaffolding. OSHA believes that adding a definition for ''tieback'' clarifies the use of the term elsewhere in this subpart. Mr. Hoberg, of DBM Consultants, stated clarification is necessary because various parts of the country use the term differently, and that ''each area swears adamantly that theirs is the right one and keeps trying to change the other'' (Ex. 206).

The definition is finalized with the clarifying revisions noted above.

Toeboard. The final rule, similar to the proposal, defines this term as a low protective barrier that is designed to prevent materials, tools, and equipment from falling to a lower level, and protect workers from falling. Typically, employers erect toeboards on platforms, dockboards, catwalks, gridirons, and other elevated or exposed floor level edges. Toeboards, also are referred to as toeplates or kickplates, and may be part of a guardrail system.

The final rule consolidates into one term the three definitions in the existing rule in § 1910.21(a)(9), (f)(31), and (g)(16), all of which are consistent with the final definition. The final rule clarifies that toeboards prevent tools, as well as materials and other equipment, from falling on workers who may be below the elevated walking-working surface.

Finally, and most importantly, OSHA clarifies expressly that toeboards serve two purposes: Preventing materials, tools, and equipment from falling on and injuring workers on a lower level; and protecting workers from falling off elevated walking-working surfaces. The final definition is consistent with OSHA's construction standard for fall protection in § 1926.500(b) and ANSI/ASSE A10.18–2012 (Section 2.18).

OSHA did not receive any comments on the proposed definition and adopts it with the clarifications discussed above.

Travel restraint system. This definition is new in the final rule. This system is a combination of an anchorage, an anchorage connector, lanyard (or other means of connection), and body support that an employer uses to eliminate the possibility of a worker going over the edge of a walking-working surface.

OSHA drew the definition from final § 1910.140(b). The definition also is consistent with the definition in ANSI/ASSE Z359.0–2012 (Section 2.204), and the definition of the term ''restraint (tether) system'' in ANSI/ASSE A10.32–2012 (Sections 2.53).

OSHA did not receive any comments on the proposed definition in § 1910.140 and, therefore, adopts a definition as described above for final subpart D. For further discussion about the definition of ''travel restraint system,'' see the preamble discussion for final § 1910.140.

Tread. The final rule, similar to the proposal rule, defines this term as a horizontal member of a stair or stairway, but does not include landings or platforms. OSHA added clarifying language in the final rule, that landings and platforms, which are horizontal members of stairways, are not considered treads.

The final definition revises the existing and proposed rules by using ''stairways or stair'' in place of ''step.'' This revision clarifies that treads describe horizontal members of stairways. In the existing and proposed rules, treads and steps refer to horizontal members of both ladders and stairways, which OSHA believes may cause confusion. By limiting the term ''tread'' to stairways or stairs, and the term ''step'' to ladders, the final rule should resolve any potential confusion.

Treads are measured by their width (side to side) and depth (front to back). OSHA notes that tread depth is measured horizontally between the vertical planes of the foremost projection of adjacent treads, and at a right angle to the tread's leading edge. This method of measurement is consistent with the NFPA 101–2012 (Section 7.2.2.3.5) and the IBC–2012 (Section 1009.7.2).

The final definition is consistent with ANSI/ASSE A1264.1–2007.1 (Section 2.26). OSHA did not receive any comments on the proposed definition and adopts it as discussed.

Unprotected sides and edges. This term means any side or edge of a walking-working surface, (except at entrances and other points of access) where there is no wall, guardrail system, or stair rail system to protect workers from falling to a lower level. The final definition, which replaces the language ''open-sided floors, platforms, and runways'' in the existing rule in § 1910.23(c)(1), is consistent with the definition of the term in OSHA construction standards (see §§ 1926.500(b) and 1926.1050(b)).

The final rule revises the proposed definition in two respects. First, it states that a walking-working surface is unprotected if it does not have a stair rail system, in addition to not having a wall or guardrail system as specified in the proposed definition, to protect workers from falling.

Second, OSHA deleted the height-specification language in the proposed rule. This language is not necessary because final § 1910.29, Fall protection systems and falling object protection—criteria and practices, already addresses these height requirements.

OSHA did not receive any comments on the proposed definition and finalizes it with the revisions discussed above.

Walking-working surface. The final rule, similar to the proposal, defines this term as a horizontal or vertical surface on or through which workers walk, work, or gain access to work areas or workplace locations. Walking-working surfaces include floors, stairways, roofs, ladders, runways, ramps, walkways, dockboards, aisles, platforms, manhole steps, step bolts, equipment, trailers, and other surfaces. The existing rule does not define ''walking-working surfaces,'' but the final definition is similar to the definition for ''walking-working surface'' in the construction standard for fall protection in § 1926.500(b), ANSI/ASSE A10.18–2012 (Section 2.20), and ANSI/ASSE A1264.1–2007 (Section 2.28). OSHA notes that, unlike the construction standard for fall protection, the final definition does not exclude ''ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.''

The final rule makes two revisions to the proposed walking-working surface definition. First, the final definition adds ''work area'' as a location to which a worker may gain access. This revision means that walking-working surfaces include those areas where employees perform their job duties, as well as other locations in the workplace, such as hallways and supply and change rooms. OSHA notes that, for some work and occupations, including equipment service and repair, delivery of materials and supplies, and landscaping, the ''work area'' may be at various locations. OSHA believes that adding ''work area'' to the final definition makes it clear what the term covers. The revision also makes the final definition consistent with ANSI/ASSE A1264.1–2007 (Section 2.28).

Second, also consistent with ANSI/ASSE A1264.1–2007, the final rule deletes the list of examples of walking-working surfaces from the proposal. Accordingly, the regulated community is to broadly construe the final definition of ''walking-working surface'' to cover any surface on or through which employees walk, work, or gain access to a work area or workplace location. Since the final definition does not exclude any walking-working surface, OSHA does not believe that identifying a partial list of surfaces the final rule covers is helpful, necessary, or definitive.

OSHA received several comments addressing the scope of the definition of ''walking-working surface,'' which it discusses above in the preamble to § 1910.21(a), Scope.

Warning line. This is a new definition OSHA added to the final rule. The term describes a barrier that is erected on a roof to warn workers they are approaching an unprotected side or edge, and which designates an area in which work may take place without using other means of fall protection. The warning line is a component of a designated area, which is an alternative method for preventing falls that the final rule allows employers to use to protect workers on low-slope roofs (see final §§ 1910.28(b)(13) and 1910.29(d)). A warning line alerts workers that the space marked off by the line is an area where they may work without conventional or additional fall protection (*e.g.,* guardrail, safety net, or personal fall protection system).

Workers may enter the demarcated area only if the employer provides them with the required fall hazard training (see final § 1910.30) and assigns them to work in the demarcated area. In large part, OSHA drew the definition in the final rule from the definition of ''warning line system'' in the construction standard for fall protection (see § 1926.500(b)).

Although the proposed rule used the term ''warning line,'' the proposal did not define it. The final rule corrects this oversight. The Agency believes it is important to define the term so that employers and workers understand the new fall prevention method, and so employers may comply with the new warning line requirements.

OSHA did not receive any comments and adopts the definition as discussed above.

Well. Similar to existing § 1910.21(e)(12) and the proposed rule, this term means a permanent, complete enclosure around a fixed ladder. A well surrounding a fixed ladder must provide sufficient clearance to enable the employee to climb the ladder. The terms ''well'' and ''cage'' typically are used together because the structures serve the same purpose, *i.e.,* to enclose the climbing area of a fixed ladder. In the event of a fall, wells and cages contain workers within the enclosure and direct them to a lower landing (Ex. 198). ANSI A14.3–2008 (Section 3) also contains a similar definition.

The final rule deletes proposed language stating that ''proper clearances for a well provide the person climbing the ladder the same protection as a cage'' to prevent employers and workers from mistakenly believing that wells and cages provide fall protection. Information in the record indicates that wells and cages do not protect workers from falling (see, *e.g.,* Ex. 198); as a result, the final rule in § 1910.28(b)(9) phases out their use as fall protection systems.

OSHA did not receive any comments on the proposed definition and adopts the term with the revision discussed above.

Other issues. Two commenters suggested that OSHA include additional definitions in the final rule. First, Nigel Ellis recommended that OSHA add a definition for the term ''cover'' to the final rule, stating:

> The word Cover is not presently defined as to adequacy and walkability in the May 2010 standard proposal. A cover may be a plywood board or perhaps OSB or temporarily and more dangerously a section of drywall to keep out dust and weakens when wet. The new to America Platform Nets should be accommodated for maintenance work to allow walkable fabric covers to be used for walking across holes and open spaces.
>
> * * * * *
>
> The term cover should be defined on a structural level applicable to any unit skylight, including plastic, light transmitting pane and smoke vent and where it is either a board, fabric, fall protection net, walkable net, skylight with structural members impervious to the effects of UV sunlight, screen, grill and should be tested for impacts with humans (Ex. 155).

OSHA believes employers understand the meaning of cover; therefore, it is not necessary to add a definition to the final rule.

Second, Mercer ORC requested that OSHA define the term ''chain gate'' and identify how it differs from the term ''swinging gate'' (Ex. 254). The reference to chain gate in proposed § 1910.29(b)(10) was a typographical error that inadvertently omitted the comma between chain and gate. Given that, there is no need to add a definition for either chain gate or swinging gate.

Section 1910.22—General Requirements

Final § 1910.22 revises and updates the existing requirements that apply to surfaces in general industry. These provisions address:

- Surface conditions and housekeeping (paragraph (a));
- Application of loads on walking-working surfaces (paragraph (b));
- Access to and egress from walking-working surfaces (paragraph (c)); and
- Inspection, maintenance, and repair of walking-working surfaces (paragraph (d)).

In general, the final rule revises the existing requirements in several ways. First, final § 1910.22, as well as all other sections of final subpart D, uses the term ''walking-working surface.'' Final § 1910.21(b) defines walking-working surface as any horizontal or vertical surface on or through which an employee walks, works, or gains access to a workplace location. Walking-working surfaces include, but are not limited to, floors, stairways, roofs, ladders, runways, walkways, dockboards, aisles, and step bolts.

In final § 1910.22, as in other sections of final subpart D, OSHA revised the existing language so it is performance-based and easier to understand, consistent with the OSH Act (29 U.S.C. 655(b)(5)), and the Plain Language Act of 2010 (Pub. L. 111–274; *see also* E.O. 13568 (1/18/2011)), respectively. OSHA believes the revised language provides greater flexibility for employers, and makes it easier for them to comply with the final rule.

OSHA also moved or deleted provisions in existing § 1910.22 that address specific issues or hazards rather than general conditions. For example, OSHA moved the existing guardrail and covers requirements (existing § 1910.22(c)) to final §§ 1910.28 (Duty to have fall protection), and 1910.29 (Fall protection systems criteria and practices). OSHA believes that the existing provision, which addresses two specific types of fall protection measures, is more appropriately grouped with the other fall protection measures. In addition, OSHA deleted the requirements on mechanical-handling equipment in existing paragraph (b) because § 1910.176(a) addresses that issue.

Paragraph (a)—Walking-Working Surfaces

Final paragraph (a), like the existing and proposed rules, contains general requirements on housekeeping and walking-working surface conditions. Pursuant to section 6(a) of the OSH Act (29 U.S.C. 655(a)), OSHA adopted most of the requirements in existing paragraph (a) from the ANSI standard in effect in the early 1970s (ANSI Z4.1–1968, Requirement for Sanitation in Places of Employment (Z4.1–1968)). Although ANSI updated the Z4.1 standard several times since 1968 (see ANSI Z4.1–1986 (R2005) (Z4.1–R2005)), OSHA did not update the requirements until this rulemaking.

Final paragraph (a)(1), consistent with the existing and proposed rules, requires that employers ensure surfaces are kept in a clean, orderly, and sanitary condition in ''[a]ll places of employment, passageways, storerooms, service rooms, and walking-working surfaces.'' Final paragraph (a)(1) also is consistent with Z4.1–R2005 (Section 3.1.1). OSHA adds the term ''walking-working surfaces'' to the provision to eliminate any confusion about the surfaces the final rule is intended to cover.

In the preamble to the proposed rule, OSHA explained its longstanding position that § 1910.22(a), especially § 1910.22(a)(1), covers hazards other than slips, trips, and falls, and includes fire and explosion resulting from combustible dust accumulations (see 75 FR 28874). Prior court decisions uphold OSHA's interpretation, saying ''the housekeeping [§ 1910.22(a)] standard is not limited to tripping and falling hazards, but may be applied to significant accumulation of combustible dust'' (*Con Agra, Inc.* v. *Occupational Safety and Health Review Commission,* 672 F.2d 699, 702 (8th Cir. 1982), citing *Bunge Corp.* v. *Secretary of Labor,* 638 F.2d 831, 834 (5th Cir. 1981)). In *Pratt & Whitney Aircraft* (9 O.S.H. Cas. (BNA) 1653, 1981 O.S.H.D. (CCH) P 25359, 1981 WL 18894 (O.S.H.R.C.), the Occupational Safety and Health Review Commission (Review Commission) reached the same conclusion on a converse set of facts. Pratt & Whitney argued that § 1910.22(a)(1) only covered ''sanitation and the prevention of disease,'' not trip hazards. The Review Commission rejected that argument, saying the standard's requirement that employers keep places of employment ''in a sanitary condition'' is ''in addition to the requirement that workplaces be 'clean and orderly,' thus demonstrating that the standard is directed not merely to sanitation but to all hazards arising from poor housekeeping, including tripping hazards.'' (*See also, Farmer's Co-op,* 1982 WL 2222661 (O.S.H.R.C.); CTA *Acoustics* (KY 2003), CSB Report No. 2003–09–I–KY (February 2005); *Hayes Lemmerz International* (Indiana 2003), CSB Report No. 2004–01–I–IN (September 2005).)

As these cases show, § 1910.22(a)(1) serves as an important enforcement tool for preventing hazardous combustible dust accumulations on walking-working surfaces. Moreover, in essentially every document addressing combustible dust that OSHA released since *Bunge,* the Agency affirmed that its combustible dust enforcement strategy includes citing housekeeping violations (*i.e.,* failure to control combustible dust accumulations) under § 1910.22(a)(1). (See *e.g.,* ''Combustible Dust in Industry: Preventing and Mitigating the Effects of Fire and Explosion,'' OSHA Safety and Health Information Bulletin (SHIB) 07–31–2005, (2005, July 31) [13]; ''Hazard Alert: Combustible Dust Explosions,'' OSHA Fact Sheet (March 2008) [14]; OSHA Compliance Directive CPL–03–00–008, ''Combustible Dust National Emphasis Program,'' (March 11, 2008) (replacing CPL 03–00–006, ''Combustible Dust National Emphasis Program,'' October 18, 2007) [15]; and ''Status Report on Combustible Dust National Emphasis Program,'' (October 2009)).[16]

In the proposed rule, OSHA requested comment on whether the Agency should include a specific reference to combustible dust or other types of dust or materials in final § 1910.22(a) to clarify explicitly that the provision does, and will continue to, cover combustible dust hazards. OSHA received many comments. Two commenters, United Food and Commercial Workers (UFCW) (Ex. 159) and the American Federation of Labor and Congress of Industrial Organizations (AFL–CIO) (Exs. 172; 329 (1/20/2011, p. 219); 363) supported including a specific reference in both final § 1910.22(a)(1) and (a)(2). Bill Kojola of the AFL–CIO said: ''While agency interpretations to include combustible dust have proven useful to address this hazard, we believe an explicit referencing of combustible dust within each of these paragraphs is necessary to * * * let employers know with explicit certainty that combustible dust is covered by these provisions'' (Ex. 172). UFCW, which said it represents food plants, including sugar, corn, flour-milling, and cocoa plants, explained: ''The food dusts in these plants can be combustible. Housekeeping—keeping combustible dust from accumulating on floors and other surfaces and keeping surfaces as free from dust as possible—is a critical aspect to mitigating and preventing combustible dust explosions'' (Ex. 159).

However, most commenters, for various reasons, opposed including a specific reference to combustible dust in final § 1910.22(a) (Exs. 73; 96; 124; 148; 158; 166; 173; 186; 189; 190; 202; 207; 254). First, many commenters seemed to think that existing § 1910.22(a)(1) does not cover combustible dust, and that OSHA is aiming to add it to the final rule as part of this rulemaking (Exs. 73; 96; 124; 148; 158; 166; 202). For example, several commenters said that § 1910.22(a) and this rulemaking focus, and should focus, on preventing slips, trips, and falls, which is not the primary hazard of combustible dust (Exs. 73; 96; 124; 158; 166; 190; 207; 254). The United States Beet Sugar Association (USBSA) and National Grain and Feed Association (NGFA), citing a 1978 OSHA Memorandum, also argued that OSHA is uncertain whether § 1910.22(a) applies to combustible dust because the Agency instructed its compliance officers to cite § 1910.22(a)(1) and

[13] Combustible Dust in Industry: Preventing and Mitigating the Effects of Fire and Explosion available from OSHA's Web site at: *http://www.osha.gov/dts/shib/shib073105.html.*

[14] Hazard Alert: Combustible Dust Explosions available from OSHA's Web site at: *http://www.osha.gov/OshDoc/data_General_Facts/OSHAcombustibledust.pdf.*

[15] Combustible Dust National Emphasis Program available from OSHA's Web site at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=3830.*

[16] Status Report on Combustible Dust National Emphasis Program available from OSHA's Web site at: *http://www.osha.gov/dep/combustible_dust/combustible_dust_nep_rpt_102009.html.*

Section 5(a)(1) of the OSH Act, in the alternative, for grain-dust accumulations (Exs. 148; 166).

These commenters are mistaken. As described in detail above, OSHA has for more than 30 years interpreted § 1910.22(a)(1) as applying to combustible dust hazards, and the courts have upheld this interpretation. In the 2009 ''Status Report on Combustible Dust National Emphasis Program,'' OSHA noted that housekeeping violations (§ 1910.22(a)(1)) accounted for 20 percent of the violations involving combustible dust, second only to hazard communication violations. In the Advance Notice of Proposed Rulemaking on combustible dust, OSHA also stated that existing § 1910.22(a) covers ''accumulation of dust, including dust that may be combustible'' (74 FR 54334, 54335 (October 21, 2009)). Therefore, regardless of whether OSHA includes a specific reference to combustible dust in final § 1910.22(a)(1), OSHA's enforcement policy remains the same.

With regard to USBSA's and NGFA's ''uncertainty'' argument, the 1978 memorandum they cite has not been OSHA's policy since 1981, when the courts and the Review Commission upheld OSHA's interpretation that § 1910.22(a)(1) covers combustible dust.

Second, a number of commenters cited OSHA's ongoing combustible dust rulemaking as a reason why the Agency should not reference combustible dust in final § 1910.22(a)(1) (Exs. 73; 96; 124; 158; 189; 190; 202; 207; 254). The National Federation of Independent Business (NFIB) said that including a reference to combustible dust in final § 1910.22(a) would ''create confusion for small businesses when the combustible dust rule is finalized'' (Ex. 173). The Small Business Administration Office of Advocacy (SBA Advocacy) said that § 1910.22(a) is so vague that ''it would undo any specificity in any forthcoming combustible dust standard'' (Ex. 124). USBSA agreed, stating that including a reference to combustible dust in § 1910.22(a)(1) ''would significantly undermine the usefulness of a combustible dust rule'' and ''would swallow up and nullify whatever specificity is provided by a comprehensive combustible dust standard'' (Ex. 166).

The National Cotton Ginners' Association (NCGA), the Texas Cotton Ginners Association (TCGA), and American Feed Industry Association (AFIA) said including combustible dust in § 1910.22(a)(1) would be ''redundant and possibly conflicting'' when OSHA ''re-regulate[s] these same dusts in the future under the combustible dust rule'' (Exs. 73; 96; 158).

OSHA believes these arguments are premature since OSHA's Spring 2016 Unified Agenda of Regulatory and Deregulatory Actions (Reg Agenda) states that combustible dust is in the Prerule Stage.[17] However, as OSHA proceeds with a rulemaking on combustible dust, the Agency will evaluate carefully the relationship between § 1910.22(a)(1) and a combustible dust rule to avoid any conflicts.

Third, on a related issue, some commenters contend that OSHA must regulate combustible dust in a separate rulemaking. The United States Chamber of Commerce (USCC) said a separate rulemaking is necessary because combustible dust is a complex, multi-variable hazard that is ''not amenable to a simple characterization'' and does not have a consensus definition: ''Merely telling employers that the walking/working surfaces are not to have a level of dust that would be combustible gives them no guidance, serves no workplace safety purpose, and will only lead to OSHA having another source for citations'' (Ex. 202).

USBSA said a separate standard was necessary because § 1910.22(a)(1) and (2) do not address issues such as ''[h]ow much [combustible dust] is too much?''; ''[w]hat must an employer do at what dust level?''; and ''[s]hould all combustible dusts be treated the same?'' (Ex. 166).

NFIB also said a separate rulemaking on combustible dust is necessary because OSHA ''does not understand the implications of [final § 1910.22(a)(1)] on small businesses'' (Ex. 173). NFIB said that OSHA incorrectly certified in the proposed rule that the rulemaking would not have a significant economic impact on small businesses, thereby avoiding the requirement to convene a Small Business Advisory Review (SBAR) panel. As a result, NFIB said OSHA underestimated the proposed compliance costs, and that regulating combustible dust in a separate rulemaking would allow OSHA to hear from a SBAR panel and ''fully grasp the burden'' that a combustible dust rule will impose on small business (Ex. 173).

OSHA disagrees with the commenters. As noted above, for more than 30 years, OSHA has used § 1910.22(a)(1) as an effective enforcement tool in general industry establishments of all sizes to address fire and explosion hazards related to combustible dust accumulations. This earlier discussion also mentioned that the 2009 Status Report on the Combustible Dust NEP determined that 20 percent of all combustible dust-related violations pertained to housekeeping (§ 1910.22(a)(1)). This history indicates that combustible dust is not too complex to enforce under existing rules.

With regard to NFIB's contention that the proposed rule underestimated compliance costs, OSHA points out that § 1910.22(a)(1) already covers combustible dust. Accordingly, in the proposed economic analysis, OSHA did not have to include any costs for the combustible dust requirement or any other existing applicable requirement.

Fourth, some commenters said including a reference to combustible dust in final § 1910.22(a)(1) is invalid because the national consensus standard (ANSI Z4.1–1968) from which OSHA adopted § 1910.22(a)(1), pursuant to section 6(a) of the OSH Act, applied only to ''sanitation'' and sanitary conditions (*i.e.,* ''the physical condition of working quarters which will tend to prevent the incidence and spread of disease'' (ANSI Z4.1–1968 (Section 2)) and, therefore, did not apply to combustible dust (Exs. 124; 166; 190). USBSA pointed out that a statement in ANSI Z4.1–1968 described the purpose of the standard as follows: ''The purpose of this standard is to prescribe minimum sanitary requirements for the protection of the health of employees in establishments covered by this standard'' (ANSI Z4.1–1968 (Section 1.2)). USBSA contends that OSHA's omission of this ANSI purpose statement was ''unlawful'' (Ex. 166). As such, USBSA maintains that OSHA is bound by the scope and purpose of the 1968 ANSI standard, and the only permissible way OSHA could add combustible dust to § 1910.22(a)(1) was by notice-and-comment rulemaking. To bolster its argument, USBSA also includes in its comments a declaration from William Carroll, Executive Director of the Portable Sanitation Association International, which was the sponsoring organization for ANSI Z4.1–1968; Mr. Carrol stated that ANSI did not develop Z4.1–1968 to cover fire and explosion from combustible dust.

OSHA does not agree with USBSA's arguments. Under section 6(a), OSHA ''is not bound to adopt all provisions of national consensus standards,'' and that not adopting the scope and purpose provisions ''[does] not constitute impermissible modification'' of the requirements of a national consensus

[17] See OSHA's Spring 2016 Reg Agenda on Combustible Dust at: *http://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201604&RIN=1218-AC41.*

standard (*Secretary of Labor* v. *C.R. Burnett and Sons,* 9 O.S.H. Cas. (BNA) (O.S.H.R.C. (October 31, 1980) (the Review Commission rejected the employer's argument that OSHA was bound by the scope of another ANSI sanitation standard (ANSI Z4.4–1968, Sanitation—In Fields and Temporary Labor Camps—Minimum Requirements) adopted pursuant to section 6(a)).

Accepting USBSA's position that § 1910.22(a)(1) only addresses sanitation hazards would mean that OSHA could not use § 1910.22(a)(1) to cite slip, trip, and fall hazards because they are not sanitation hazards. USBSA does not mention that incongruous outcome in its comments, but instead selectively addresses a specific hazard it does not want OSHA to cite under the final rule.

However, previous decisions by the Review Commission and courts of appeal broadly construe § 1910.22(a)(1) (*Whirlpool Corp.* v. *Marshall,* 445 U.S. 1, 13, 100 S.Ct. 883, 891, 63 L.Ed.2d 154 (1980) (''To promote this remedial purpose of the statute, the Act and regulations must be liberally construed so as to afford workers the broadest possible protection''); *National Eng'g & Contracting Co.* v. *OSHA,* 928 F.2d 762, 767 (6th Cir. 1991)). In *Bunge* (638 F.2d at 834), the court opined: ''The type of hazard . . . is irrelevant to whether some condition or practice constitutes a violation of [§ 1910.22(a)(1)]. Unless the general standard incorporates a hazard as a violative element, the prescribed condition or practice is all that the Secretary must show.''

In *Whitney & Pratt Aircraft* (1981 W–L 18894), the Review Commission said:

> We reject Pratt & Whitney's contention that the scope of [§ 1910.22(a)(1)] is limited to disease prevention and does not encompass tripping hazards. The standard's requirement that places of employment be kept 'in a sanitary condition' is in addition to the requirement that workplaces be 'clean and orderly', thus demonstrating that the standard is directed not merely to sanitation but to all hazards arising from poor housekeeping, including tripping hazards.

OSHA notes that, contrary to Mr. Carroll's declaration, ANSI Z4.1–1968, on its face, covers hazards other than sanitation hazards. The standard contains several provisions that do not relate to sanitation, including lighting; keeping workplaces in an orderly condition; and maintaining workplaces free from protruding nails, holes, and loose boards.

Fifth, NGFA (Ex. 148) and AFIA (Ex. 158) recommended that OSHA not include a reference to combustible dust in § 1910.22(a)(1) because it would subject their industry to ''duplicative and unnecessary requirements'' that OSHA's Grain Handling Facilities standard (§ 1910.272) already addresses and, therefore, would cause confusion. They said § 1910.272, along with section 5(a)(1) (29 U.S.C. 654(a)(1)), is working effectively in controlling grain dust hazards, which obviates the need for additional regulation.

AFIA pointed out that the number of fatalities from explosions involving combustible dust declined dramatically in the industry since 1980 (Ex. 158). AFIA maintains that a number of factors contributed to reducing the frequency and severity of these occurrences, including widespread voluntary efforts by industry and trade organizations to increase awareness, research into and implementation of new engineering controls, employee training, and automation that reduces workforce exposure to explosion hazards from combustible dust. Although the Grain Handling Facilities standard issued by OSHA in 1987 (§ 1910.272) may account for some of the reduction in explosions, notably grain-mediated combustible-dust explosions, it was not in effect in the early 1980s, the initial explosion reduction timeframe AFIA cites. Only the court and the Review Commission decisions affirming OSHA's interpretation that § 1910.22(a)(1) applies to combustible dust hazards were in effect in 1981 and 1982. Given that, OSHA believes that it is reasonable to infer that § 1910.22(a)(1) contributed to reducing the number of explosions and fires involving combustible dust during the early 1980s. For all these reasons, OSHA continues to apply § 1910.22(a)(1) to grain-handling facilities.

Finally, USBSA explained that referencing combustible dust in § 1910.22(a)(1) could conflict with §§ 1910.307 (Electrical-Hazardous (classified) locations) and 1910.178 (Powered industrial trucks), stating:

> [A]pplying those provisions with a reference to combustible dust would undermine what little specificity already exists in the current standards addressing combustible dust. For example, applying them would significantly undermine the existing distinctions between unclassified, Class II, Division 1, and Class II, Division 2, areas in 29 C.F.R. 1910.307 and 1910.178, which specify where and under what circumstances approved electrical equipment and forklift trucks are required in dusty conditions. There is no point in specifying what electrical equipment and forklift trucks are required under dusty conditions if those conditions are illegal in the first place under § 1910.22(a) (Ex. 166).

In response, OSHA reiterates that § 1910.22(a)(1) already applies to combustible dust. Existing § 1910.22(a) generally addresses combustible dust hazards on walking-working surfaces, while §§ 1910.307 and 1910.178 address more specific combustible dust hazards related to electric equipment and powered industrial trucks, respectively, and OSHA finds no indication that they conflict with each other. Moreover, the Agency has not experienced any conflicts enforcing those requirements.

Final paragraph (a)(2), like the existing and proposed rules, requires that employers ensure the floor of each workroom is maintained in a clean and, to the extent feasible, in a dry condition. The final rule is similar to OSHA's housekeeping requirements in its Shipyard Employment standards (§ 1915.81(c)(3)) and Z4.1–R2005 (section 3.1.2). OSHA believes it is important for employers to maintain walking-working surfaces in a clean and dry condition to protect workers from possible injury from slips, trips, and falls and other hazards.

Final paragraph (a)(2) also requires that employers take additional action if they cannot keep workroom floors in a dry condition. OSHA notes this provision only requires employers to take additional actions when they are using ''wet processes.'' When wet processes are used, the final rule requires that drainage is maintained and, to the extent feasible, dry standing places are provided, such as false floors, platforms, and mats. Final paragraph (a)(2) provides examples of measures employers can use to provide workers with dry standing places, such as false floors, platforms, and mats, but gives employers flexibility to select other measures that are effective in providing dry standing places. OSHA believes this provision is necessary to protect workers from slips, trips, falls, and other hazards on wet surfaces.

The American Meat Institute (AMI) commented on the proposed rule:

> In the meat industry, as in several others, there is simply no possible way to maintain floors in a ''dry condition'' in areas such as slaughter departments, vat/bin washing rooms, during sanitation operations, etc. And, providing false floors, mats, platforms, etc., though done where possible, is not practical in all areas. Stated simply, there are many cases where floors in operating areas will be ''wet'' throughout the working shift. However, it should be recognized that ''wet'' is a relative term; there is significant difference between standing water of some depth as opposed to simply damp surfaces (Ex. 110).

AMI recommended that the final rule make a distinction between wet floors where there is standing water and floors that are ''continuously damp'' because of periodic cleaning or rinsing, stating:

''We . . . submit that while wet floors may pose potentially unique and specific hazards, damp floors typically pose minimal hazard and do not require additional, specific regulation'' (Ex. 110). OSHA disagrees with AMI's recommendation that the final rule should make a distinction between working in ''standing water,'' which AMI defines as greater than one inch deep, and working on wet surfaces. Accordingly, OSHA believes that both working on wet surfaces and working in standing water are hazardous and pose a risk of slips, trips, falls, or other harm (*e.g.,* electrocution, prolonged standing in water). Final paragraph (a)(2) gives employers a great deal of flexibility to tailor their control measures to the type of wet conditions present in the particular workplace, thereby making it easier for employers to comply with the requirement.

In the proposed rule, OSHA requested comment on whether final paragraph (a)(2) should include a provision, similar to that in Shipyard Employment (29 CFR 1915.81(c)(3)), requiring that, in wet processes, employers provide appropriate waterproof footwear, such as overboots, when it is not practicable to maintain drainage and dry standing areas (75 FR 28874). OSHA received three comments in response to this request, all of which opposed adding that provision to the final rule. Edison Electric Institute (EEI) (Ex. 207) and the American Wind Energy Association (AWEA) (Ex. 178) both said that employers should determine whether a hazard exists that necessitates use of personal protective equipment (PPE) and select the best method to prevent slips, trips, and falls on wet surfaces. UFCW raised concerns that allowing the use of PPE would cause employers to use PPE instead of following the hierarchy of controls:

> By specifically offering the employer the option of providing PPE, OSHA will have the unintended effect of negating the original requirement to eliminate the hazard or control it through engineering controls. We have seen a similar unfortunate dynamic in the implementation and enforcement of 1910.95(b)(1) which supposedly allows the use of PPE *only after* the implementation of feasible administrative and engineering controls. Our experience with the noise standard has been that once excessive sound levels have been determined, most employers embrace the use of hearing protection, and the implementation of engineering controls is perfunctory or ignored altogether (Ex. 159).

UFCW also noted, correctly, that it was not necessary for OSHA to reference PPE in the final rule because, under § 1910.132(a), employers already must provide PPE for hazards that they cannot eliminate or control by other methods (Ex. 159).

OSHA finds the commenters' arguments convincing and, therefore, did not add the language in § 1915.81(c)(3) to the final rule. In particular, OSHA agrees with the concerns UFCW raised about the hierarchy of controls, and reaffirms that employers must provide dry standing places, and maintain drainage using engineering controls, to the extent such controls are feasible.

Final paragraph (a)(3), which OSHA revised significantly from the proposed rule, requires employers to ensure walking-working surfaces are maintained free of hazards such as loose boards, corrosion, leaks, spills, snow, ice, and sharp or protruding objects.

In general, OSHA revised the language in final paragraph (a)(3) to more clearly and specifically reflect the type and nature of the hazards the Agency intended to address in this provision. The revisions serve two purposes. First, the revisions clarify that a major focus of final subpart D is to protect workers from walking-working surface hazards that could cause or exacerbate the severity of a slip, trip, or fall. For example, if employers do not maintain walking-working surfaces free of leaks, spills, and ice workers could slip and fall and be seriously injured. Similarly, if unused tools (*e.g.,* saws, shears), materials (*e.g.,* unused pallets, bailing wire), or solid waste or debris (*e.g.,* scrap metal) are left on surfaces where employees work or walk, workers could be seriously hurt if they fell on any of those objects. In addition, in some situations, corrosion may be so severe or significant that it may weaken the walking-working surface to the point that the surface can no longer support a worker, equipped with tools, materials, and equipment, who walks or works on it.

Second, it emphasizes OSHA's longstanding position, supported by the court decisions noted previously, that the scope of § 1910.22, and paragraph (a)(3) specifically, also covers walking-working surface hazards other than slips, trips, and falls. For example, a nail protruding from a wall may not cause a slip, trip, or fall, but could cause a serious laceration or puncture wound if a worker walks into or bumps into it. Similarly, if employers do not ensure the immediate removal of caustic chemicals or substances spilled onto a walking-working surface, workers may be at risk of adverse effects, such as chemical burns, if they accidentally touch the substance.

The existing rule, which OSHA adopted from the Z4.1–1968 standard, requires that employers, to facilitate cleaning, keep every floor, working place, and passageway free from ''protruding nails, splinters, holes, or loose boards.'' In the proposed rule, OSHA decided to revise existing paragraph (a)(3) to emphasize that the examples of the hazards listed can result in more than slips, trips, and falls, and are present in more than cleaning operations. Therefore, OSHA replaced the existing examples of specific hazards with performance-based language, stating, ''Employers must ensure that all surfaces are designed, constructed, and maintained free of recognized hazards that can result in injury or death to employees,'' and deleted the existing ''[t]o facilitate cleaning'' language.

Many commenters opposed proposed paragraph (a)(3). Most argued that the performance-based language ''free of recognized hazards'' was vague, overly broad, and appeared to duplicate the General Duty Clause of the OSH Act (Exs. 124; 150; 165; 173; 190; 196; 236). For example, the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) said: ''[P]roposed section 1910.22(a)(3) . . . appears to be a 'General Duty Clause' specific to this standard . . . and does not offer any logical means of compliance. . . . [T]he proposed requirement is open-ended and provides very little guidance to address any particular hazard'' (Ex. 165). The Mechanical Contractors Association of America (MCAA) expressed similar concerns about the language and how OSHA would enforce it:

> [T]he general duty clause-like language proposed . . . as 29 CFR 1910.22(a)(3) would allow compliance officers to issue general duty clause-like citations without having to meet the extensive and elaborate criteria established by the agency for issuing general duty clause citations. MCAA believes that this language would cause confusion, dissention and controversy without enhancing worker protection (Ex. 236).

The American Foundry Society (AFS) said the provision was ''so vague and open-ended that it could leave employers vulnerable to OSHA citations based on the subjective assessment of OSHA inspectors as to what is acceptable,'' and would place ''an impossible obligation on employers by short-circuiting the requirements'' of the General Duty Clause (Ex. 190).

NFIB raised three concerns about proposed paragraph (a)(3). First, NFIB pointed out that the proposed rule does not define ''recognized hazards,'' saying ''[t]he term may have a different meaning to a small business owner than it does to an OSHA inspector'' (Ex. 173).

Second, they said the proposed rule is ''impossible to meet'' and ''virtually meaningless for compliance purposes,'' noting:

> This standard, as written, is so broad that it could be inferred by an inspector or judge that if any injury occurs—for any reason—the employer can be cited for failure to comply. The presumption is that a small business owner should foresee all possibilities of injuries, even in the most remote of circumstances (Ex. 173).

Finally, NFIB said the proposed requirement could result in a small business being ''cited twice for the same violation—opening the business up to excessive fines and penalties'' (Ex. 173).

According to SBA Office of Advocacy, small businesses attending their forum on the proposed rule expressed concerns that OSHA would use the proposed rule to impose a '' 'de facto' Safety and Health Program (S&HP) or Injury and Illness Prevention Program (I2P2) requirement on employers'' (Ex. 124). Therefore, SBA Office of Advocacy and Associated Builders and Contractors (ABC), who raised similar concerns, recommended that OSHA clarify the regulatory language, as well as the purpose of the requirement in the final rule (Exs. 124; 196).

The commenters raise valid concerns. The purpose of the proposed requirement was not to codify the General Duty Clause as a standard or reduce OSHA's burdens in proving a General Duty Clause violation. Rather, as explained above, the purpose was to use performance-based language to point out that failure to adequately clean and maintain walking-working surfaces: (1) Can make slips, trips, and falls more severe, and (2) can result in adverse effects other than slips, trips, and falls (*e.g.,* burns from exposure to corrosive materials). The revised language in final paragraph (a)(3) ensures that stakeholders understand that the final rule covers both types of hazards. Also, adding specific examples, such as those in the existing rule, ensures stakeholders that the final rule focuses on the types of hazards associated with walking-working surfaces instead of all ''recognized hazards that can result in injury or death'' as the proposed rule specified. Therefore, the final rule stresses that employers' housekeeping efforts must take into account walking-working surface hazards other than simply those associated with slips, trips, and falls.

Mr. Lankford recommended removing the design and construction requirements in proposed paragraph (a)(3) because they would impose ''significant responsibility on employers'' in the many instances when ''[t]here is no connection between the designer/builder and the current employer'' (Ex. 368). In the hearing, Mr. Lankford said OSHA should allow employers to comply with the requirement by confirming that the walking-working surfaces ''were built according to the standard or local building code'' (Ex. 329 (1/20/2011, p. 297)). OSHA agrees, and removed the design and construction requirements in final paragraph (a)(3).

On a separate issue, Ellis Fall Safety Solutions suggested that OSHA add a requirement to § 1910.22(a) that walking-working surfaces be ''walkable from a body space point of view,'' meaning an employee in the 95th height percentile should be able to walk upright without encountering head or other obstructions (Ex. 155). OSHA believes the performance-based requirements in final paragraph (a)(3) takes this issue into account in an effective way. Paragraph (a)(3) requires that employers maintain walking-working surfaces free of protruding objects that could harm workers, regardless whether the worker is tall or large.

Michael Bell of Joneric Products, a footwear manufacturer, objected to the scope of OSHA's benefits policy:

> This Proposed Rule virtually ignores fatalities and injuries that occur not from heights. There are some easy solutions to remedy these fatalities and injuries.
>
> 1. Recognize that workers whose primary job is to wash, wax or maintain floors are at high risk of slips and falls. There are companies that manufacture specialized footwear for these activities.
>
> 2. Recognize that many workers primarily work outdoors. Most of them must work on Public Property. Even though OSHA has no authority to tell a private citizen how to maintain their properties at least admit that many injuries do occur outdoors and they are reportable to OSHA.
>
> 3. Recognize that inclement weather is the cause of a good many of these injuries.
>
> 4. Know that this is serious enough that many companies are proactive in attempting to reduce these weather related injuries. But, they do not make up for the companies that ignore the situation because there is [sic] no OSHA regulations.
>
> 5. Companies have a wide range of products to choose from many manufacturers (Ex. 77).

OSHA agrees with Mr. Bell's statement and notes that the provisions in § 1910.22(a)(1)–(3) address slips and falls to the same level. In particular, OSHA notes that these final provisions will require employers to control worker exposure to fall hazards on outdoor surfaces.

Final Paragraph (b)—Loads

Final paragraph (b) requires that employers ensure each walking-working surface can support the ''maximum intended load'' for that surface. The final rule, like the proposal defines maximum intended load as the total weight of all employees, equipment, machines, vehicles, tools, materials, and loads that employers reasonably anticipate they may be apply to that walking-working surface. The existing rule includes a similar provision requiring that employers not place on a floor or roof any load weighing more than the building official has approved for the surface (existing § 1910.22(d)(2)). The construction fall protection standard also requires that employers ''determine if walking/working surfaces on which its employees are to work have the strength and integrity to support employees safely'' and only allow employees to work on surfaces that meet the requirement (29 CFR 1926.501(a)(2)).

Final paragraph (b), like the proposal, specifies that it covers all walking-working surfaces; that is, ''any horizontal or vertical surface on or through which an employee walks, works, or gains access to a workplace location'' (see final § 1910.21(b)). Accordingly, employers must ensure that all walking-working surfaces, which include, but are not limited to, floors, roofs, stairs, ladders, and ramps; can support the maximum intended load. The existing rule specifies it applies to ''any floor or roof'' of a building or other structure (existing § 1910.22(d)(2)). Final paragraph (b) also replaces the specification requirements in existing § 1910.22(d)(1) with performance-based language. The existing rule specifies that the loads the building official approves for a specific walking-working surface ''shall be marked on plates of approved design . . . and securely affixed . . . in a conspicuous place in the space to which they relate.''

In the proposed rule, OSHA said the existing specification requirement was not necessary for two reasons: (1) Load-limit information is available in building plans, and (2) engineers take maximum loads into consideration when they design industrial surfaces. OSHA proposed to replace the existing rule with provisions requiring that employers ensure that walking-working surfaces are ''[d]esigned, constructed, and maintained to support their maximum intended load'' (proposed paragraph (b)(1)), and ''[n]ot loaded beyond their maximum intended load'' (proposed paragraph (b)(2)).

OSHA received three comments on the proposal. The first commenter, AFSCME, recommended requiring that employers ensure all walking and working surfaces have the ''structural integrity'' to support the workers, their tools and equipment. OSHA believes that requiring employers to ensure each surface is capable of supporting the maximum intended load, as defined in final § 1910.22(b), achieves the result AFSCME advocates. The definition of ''maximum intended load'' in final § 1910.21(b) includes the total weight of all employees, equipment, machines, vehicles, tools, materials, and loads that the employer reasonably anticipates may be applied to the walking-working surface.

The second commenter, Charles Lankford, objected to the proposed requirement that employers ensure walking-working surfaces are ''designed and constructed'' to support their maximum intended load (proposed paragraph (b)(1)):

> [E]mployers will be unable in most cases to ensure positively that existing or newly purchased walking and working surfaces were ''designed and constructed'' (perhaps decades earlier) to comply with this standard.
>
> Employers will for practical purposes be limited to relying on third party certification, testing, listing, and/or labeling of platforms and surfaces such as scaffold planks, floors of crane cabs, runways, etc. However, OSHA did not state in the proposed rule that reliance on third party certifications would be a method of compliance or could be a valid defense from citations (Ex. 368; *see also* Ex. 329 (1/20/2011, p. 295)).

OSHA disagrees with Mr. Lankford's contention. The existing rule makes it easy for employers to know for certain whether a walking-working surface on an existing building or structure can support the maximum intended loads employers anticipate placing on that surface. The existing rule requires that load limits for buildings and structures used for mercantile, business, industrial, or storage purposes: (1) Be approved by the building official; and (2) be posted in the area of the walking-working surface (existing § 1910.22(d)(1)). The existing rule also prohibits employers from putting any load on a walking-working surface that exceeds the weight the building official has approved. Under the final rule, employers can readily obtain information about walking-working surfaces in those buildings and structures from the plates required to be posted in accordance with the existing rule. For new buildings and structures, employers can obtain information on load limits from building plans, local codes, and third party certification or conduct their own evaluation.

Mr. Lankford is correct that the proposed rule, as well as the final rule, does not state specifically how employers must obtain information about load limits for a walking-working surface. However, OSHA believes there are many ways employers can obtain such information. Mr. Lankford provided examples of several methods employers may use, including obtaining load limits from the plates posted in the area; relying on third party certification; and testing or evaluating walking-working surfaces. Instead of codifying the methods Mr. Lankford mentioned, OSHA has used performance-based language in the final rule to give employers greater flexibility in selecting the method they want to use to identify whether the walking-working surface can support the maximum intended load employers will place on it.

Finally, the National Chimney Sweep Guild (NCSG) contended the requirement that employers ensure each walking-working surface can support the maximum intended load they will apply to it is not feasible and, as proposed, go beyond what is reasonably necessary or appropriate (Exs. 150; 240; 365; 329 (1/18/2011, p. 254–348)). First, NCSG said that chimney sweeps are not able to determine the ''maximum intended load'' [18] for a roof:

> The sweep would have no practical means of determining the maximum intended load for a roof, and no way of determining whether the roof was designed, constructed, and maintained to support the unknown maximum intended load. Only when a job would require a significant load on a roof or under other highly unusual circumstances would a sweep attempt to access the attic below a roof to check the structural integrity of the roof. We doubt most trades would be able to determine whether a roof could safely support its maximum intended load (as established by the builder and/or local code) (Ex. 150).

The final rule, like the construction fall protection standard, requires that employers are responsible for taking the steps necessary to ensure that each walking-working surface employee's access has the strength and structural integrity to safely support the maximum intended load employers will place on the surface. NCSG agreed that assessing hazards and inspecting roof surfaces is necessary before workers step on roofs to perform chimney sweep work:

> We recognize that the employer of a sweep must implement reasonable measures designed to determine whether a roof or other walking-working surface can be safely utilized by the employee to perform the pre-assigned task and any additional tasks that may be identified after the sweep arrives at the site (Ex. 150).

Where workers perform single-person jobs, which NCSG said are the majority of jobs their members perform, employers are responsible for ensuring that workers know how to assess and determine whether the walking-working surface they will access will support the loads reasonably anticipated to be placed on it. For example, employers must ensure that their employees (*e.g.,* chimney sweeps) know how to visually inspect or examine the roof for possible damage, decay, and other problems and look in attics to assess the strength and structural integrity of the roof. Employers also must ensure that workers actually do such visual assessments before they access a surface or perform a job. Finally, if there is a potential problem with the roof or if workers cannot determine whether the roof is safe for use, employers must ensure that workers know they must not step onto the roof. Although NCSG contends that it is infeasible for workers to determine if roof will support the loads they will place on it, their comments indicate that member companies and their workers already are doing this:

> Once we actually get to the job, we are making a hazard assessment . . . of . . . electrical lines, the slope of the roof, the condition of the roof, is there adequate places for our ladders, can we safely access the roof with ladders, is the roof wet, ice covered, snow covered, and ultimately we use all of that information to formulate a go or no go roof decision, whether [we] are actually going to access the roof (Ex. 329 (1/18/2011, p. 276–303)).

In addition, NCSG said member employers also periodically go to jobs sites to discuss and observe workers performing tasks, further indicating that assessments and determinations of the strength and structural of roofs are being done (Ex. 150).

Finally, not only did NCSG say it is not feasible for its members to comply with final paragraph (b), they also said:

> We doubt most trades would be able to determine whether a roof could safely support its maximum intended load (as established by the builder and/or local code) (Ex. 150).

[18] NCSG is mistaken about the meaning and use of the term ''maximum intended load.'' The term refers to the maximum weight of ''all employees, equipment, tools, materials, transmitted loads, and other loads'' the employer reasonably anticipates putting on a walking-working surface, such as a roof. It does not mean the maximum weight building codes require or the builder designed and constructed a roof to tolerate, although the maximum intended load employers place on the surface must not exceed that maximum load limit for the surface.

Since 1994, the current construction fall protection standard has required employers performing construction activities to ''determine if the walking-working surfaces on which its employees are to work have the strength and structural integrity to support employees safely'' (§ 1926.501(a)(2)). According to NCSG, 20 percent of the work chimney sweep companies perform are significant and major installations and repairs and covered by the construction fall protection standard (Ex. 150). These operations involve a substantial quantity of equipment, tools and materials being used and placed on the roof. OSHA has not received any reports that chimney sweep companies have experienced difficulty assessing whether the roof has the ''strength and structural integrity'' to support workers and the equipment, materials, and tools they are using to make those installations and repairs. Because the final rule is consistent with the construction standard, OSHA believes NCSG members will not have difficulty visually assessing whether the roof can support chimney cleaning, inspections, and minor repair work, which do not require the quantities of equipment, tools, and materials of substantial and major installations/repair jobs. For these reasons, OSHA does not find NCSG's infeasibility contention to be convincing.

Second, NCSG expressed concern that the final rule will require member companies to hire ''a structural engineer or someone with significant advanced training'' to make a ''technical determination'' that the walking-working surface has the necessary structural integrity, and that it would be infeasible for small companies to have a structural engineer or similar expert person on staff to assess the walking-working surfaces at each worksite (Ex. 150).

The final rule, like the construction fall protection standard, does not require that employers hire engineers or other experts to make a technical determination about whether a walking-working surface has the strength and structural integrity to support the maximum intended load employers reasonably anticipate placing on that surface. OSHA agrees with NCSG that employers may comply with final paragraph (b) by making ''a visual examination of the condition of the roof and the rest of the structure'' (Ex. 150). As OSHA discussed in the preamble to the proposed rule, if conditions warrant or if employers cannot confirm from the visual examination that the walking-working surface can support the load they will place on it, OSHA believes employers need to conduct a more involved or detailed inspection to ensure the surface is safe for employees (75 FR 28888). OSHA does not believe NCSG members will have difficulty complying with this requirement. NCSG said member companies already conduct visual examinations and hazard assessments to determine whether roofs can support the total load their workers will place on them (Ex. 150). Moreover, NCSG said employers periodically come to job sites to observe how workers are performing tasks, which presumably include observing tasks such as hazard assessments and visual examinations of roofs.

Final paragraph (c)—Access and Egress

Final paragraph (c), like the proposal, requires that employers provide, and ensure that each worker uses, a safe means of access and egress to and from walking-working surfaces. For purposes of the final rule, the term ''safe'' means that no condition (for example, an obstruction, lock, damage) could prevent or endanger a worker trying to access or egress a walking-working surface. Thus, employers must ensure that means of access and egress remain clear and in good repair so workers can safely move about walking-working surfaces.

Final paragraph (c), like the proposal, replaces the specifications in the existing rule (§ 1910.22(b)) with performance-based language. The existing rule requires that aisles and passageways be kept in good repair, with no obstructions across or in aisles that could create a hazard. Where mechanical handling equipment is used, the existing rule requires that sufficient safe clearances be allowed for aisles, at loading docks, through doorways, and wherever turns or passage must be made. The revision ensures that final paragraph (c) applies to all walking-working surfaces the final rule covers, which means that employers must provide safe access to and egress from ''any horizontal or vertical surface on or through which an employee walks, works, or gains access to a workplace location'' (final § 1910.21(b)). Examples of walking-working surfaces that require safe access and egress include floors, stairways, ladders, roofs, ramps, and aisles. The final rule, by using the term ''walking-working surface,'' requires that employers ensure means of access and egress are safe regardless of whether the walking-working surfaces are on the same or different levels. The final rule also applies to both temporary and permanent walking-working surfaces.

OSHA notes that the final rule does not retain the specification language in existing § 1910.22(b)(2) that requires appropriate marking of ''permanent aisles and passageways.'' The performance-based language in final paragraph (c) requires that an employer provide and ensure workers use a safe means of access and egress to and from walking-working surfaces. One way employers can meet the performance language is by appropriately marking passageways and permanent aisles as a means of identifying safe access and egress.

OSHA did not receive any comments on proposed paragraph (c) and finalizes the proposed provision, as discussed, with minor editorial changes for clarity.

Final paragraph (d)—Inspection, maintenance, and repair

Final paragraph (d), like the proposed rule, specifies general inspection, maintenance, and repair requirements for walking-working surfaces. Final paragraph (d)(1) requires that employers inspect and maintain walking-working surfaces in a safe condition. OSHA believes that inspecting walking-working surfaces is necessary to ensure they are maintained in a safe condition. To ensure they are in a safe condition, the final rule specifies that employers must inspect walking-working surfaces both (1) regularly and (2) as necessary.

The term ''regular inspection'' means that the employer has some type of schedule, formal or informal, for inspecting walking-working surfaces that is adequate enough to identify hazards and address them in a timely manner. The final rule uses a performance-based approach instead of mandating a specific frequency for regular inspections. OSHA believes that employers need to consider variables unique to each workplace that may affect the appropriate frequency for workplace inspections. Therefore, OSHA believes that employers are in the best position to evaluate those variables and determine what inspection frequency is adequate to identify and address hazards associated with walking-working surfaces. Once employers make that determination, the final rule requires that they conduct inspections of walking-working surface according to that frequency.

Adding a general requirement in the final rule for regular inspections of walking-working surfaces makes the rule consistent with OSHA's construction standards. Section 1926.20(b)(2) requires employers to have a program that ''provides for frequent and regular inspections of job sites, materials, and equipment.''

In addition to regular inspections, final paragraph (d)(1) also requires employers to conduct inspections ''as necessary.'' For purposes of final paragraph (d)(1), inspecting workplaces ''as necessary'' means that employers must conduct inspections when particular workplace conditions, circumstances, or events occur that warrant an additional check of walking-working surfaces to ensure that they are safe for workers to use (*i.e.,* that the walking-working surface does not increase the risk of a slip, trip, or fall). For example, an additional inspection may be necessary to ensure that a significant leak or spill did not create a slip, trip, or fall hazard on walking-working surfaces. Similarly, employers may need to inspect outdoor workplaces after a major storm to ensure that walking-working surfaces are free from storm debris, downed power lines, and other related hazards.

The proposed rule specified that employers conduct ''periodic'' inspections, in addition to regular inspections. The purpose of the proposed requirement to conduct periodic inspections was to address specific workplace events, conditions, or situations that trigger slip, trip, or fall hazards not addressed by regular inspections, which are conducted at fixed times. However, OSHA believes that the language ''as necessary'' more accurately describes the purpose of the proposed requirement. Moreover, OSHA believes that the revised language clarifies when employers need to check walking-working surfaces and, thus, will enable employers to use their resources efficiently. Therefore, OSHA specified in final paragraph (d)(1) that employers must conduct inspections as necessary, in addition to regular inspections. Accordingly, employers must check the workplace when events, conditions, or situations arise that could put workers at risk of harm due to slips, trips, or falls, regardless of whether the workplace is due for a regular inspection. Thus, the final rule, as revised, fulfills the interpretation given to paragraph (d) in the proposal, that the employer ''ensure that inspections are conducted frequently enough so that hazards are corrected in a timely manner'' (75 FR 28862, 28875).

AFSCME recommended that § 1910.22 also require that employers perform a hazard assessment (Ex. 226). OSHA believes that requiring employers to inspect walking-working surfaces regularly and as necessary enables employers to determine the hazards that are present in those areas; therefore, additional language is not necessary.

NCSG objected to paragraph (d)(1)'s requirement that walking-working surfaces be maintained in a ''safe'' condition as again incorporating the General Duty Clause (Ex. 150). That is not OSHA's intent, and the Agency incorporates its response to the that objection, discussed in final paragraph (a)(3), here. The same hazards are addressed by final paragraphs (a)(3) and (d)(1); (a)(3) requires that the surface be maintained free of those hazards, while (d)(1) requires inspection for and correction of those hazards when found.

Final paragraph (d)(2) requires that employers correct or repair hazardous conditions on walking-working surfaces before allowing workers to use those surfaces again. The final rule also requires that if employers cannot fix the hazard immediately, they must guard the hazard to prevent workers from using the walking-working surface until they correct or repair it. Taking immediate corrective action or guarding the hazard is important for the safety of workers; delaying either action can put workers at risk of injury or death. OSHA notes that corrective action may include removal of the hazard.

When employers cannot fix the hazard immediately and need to guard the hazard area, the final rule gives employers flexibility in selecting the type of guarding to use (*e.g.,* erecting barricades, demarcating no-entry zones). However, whatever method employers use, they must ensure it is effective in preventing workers from accessing or using the surface.

NCSG contended that proposed paragraph (d)(2) is a redundant provision, since proposed paragraph (a)(3) would already contain language requiring that walking-working surfaces be free of hazards (Ex. 150).

OSHA disagrees. First, as discussed, OSHA revised final paragraph (a)(3) so it more clearly identifies examples of walking-working surface hazards that could cause slips, trips, and falls. For example, if employers do not maintain walking-working surfaces free of leaks and spills, workers could slip and fall and be seriously injured. Corrosion can weaken walking-working surfaces and render them unable to support loads placed on them. In addition, examples of walking-working surface hazards incorporated in final paragraph (a)(3), stress that final § 1910.22, like the existing rule, covers more than slip, trip, or fall hazards.

Second, OSHA does not believe final paragraphs (a)(3) and (d)(2) are redundant because they serve different purposes and objectives. The purpose of final paragraph (a)(3) is to ensure employers have procedures or programs in place to maintain walking-working surfaces so workers are not exposed to hazards that may cause injuries such as slips, trips, and falls. OSHA believes that if employers establish good housekeeping and maintenance procedures and programs they can prevent worker exposure to such hazards. However, even when employers establish rigorous housekeeping and maintenance programs, hazardous conditions may still arise. When they occur, final paragraph (d)(2) specifies what employers must do to correct or repair those hazards before they allow workers to use the surface.

Final paragraph (d)(3) requires that when any correction or repair involves the structural integrity of the walking-working surface, a qualified person must perform or supervise that correction or repair. For purposes of the final rule, OSHA defines a qualified person as ''a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project'' (see § 1910.21(b)). The definition in the final rule is the same as other OSHA standards (*e.g.,* §§ 1910.66, appendix C, Section I; 1910.269; 1915.35; 1926.32(l)).

Structural integrity generally addresses a structure's uncompromised ability to safely resist the loads placed on it. Deficiencies in the structural integrity of a walking-working surface can be extremely hazardous. OSHA believes corrections and repairs involving the structural integrity of a walking-working surface require the skill of a qualified person to ensure that affected surfaces are safe during and after repair or correction.

OSHA received three comments that raised concerns about the requirement in proposed paragraph (d)(3). Steven Smith of Verallia stated:

> The duty to inspect, to guard, or take out of use certain areas, and to require 'qualified persons' be present for all repairs is duplicative of other OSHA requirements and adds additional layers of procedure and cost to employers that are unduly burdensome and unnecessary (Ex. 171).

Robert Miller of Ameren Corporation said:

> Oft times repairs to facility equipment is performed by contractors and their employees or supervisors would be considered qualified. As [paragraph (d)(3)] reads, this may be interpreted to mean that the employer is responsible to staff qualified employees for all structural repairs to walking and working surfaces. Clarity of expectations needs to be taken into consideration in the final version (Ex. 189).

Charles Lankford commented:

> I believe it is excessive to ask of someone assigned to sand or scrape excessive rust off the metal treads of stairways and then paint them, to possess a degree or demonstrated 'extensive knowledge training, and experience' . . . . The more appropriate option here would be to require a qualified person for those applications where he/she is specifically required, and allow for a 'competent' person to apply his/her competency for the broad scope of tasks which he/she is well-suited to perform (Ex. 368).

OSHA believes the commenters have misinterpreted proposed paragraph (d)(3) as requiring qualified persons to conduct all correction and repair tasks. To the contrary, final paragraph (d)(3) is narrowly drawn. The final rule only requires that a qualified person perform or supervise the correction or repair of a walking-working surface if the correction or repair affects the structural integrity of the walking-working surface. If the correction or repair task does not rise to that level, the final rule does not require the employer to have a qualified person perform or supervise the task. Thus, using Mr. Lankford's example, final paragraph (d)(3) does not require employers to have a qualified person, as defined in this rule, perform or supervise sanding or scraping rust off of stairway treads. However, for example, a qualified person may have to perform or supervise welding a broken rung on a metal ladder.

To ensure that employers clearly understand the limited scope of final paragraph (d)(3), OSHA revised and reorganized the provision. For example, OSHA revised the language in the final rule to clarify that it only applies to repairs and corrections that affect the structural integrity of a walking-working surface, and not to the general maintenance of walking-working surfaces.

Mr. Smith generally commented that the requirements in proposed paragraph (d) were subjective and vague; however, he did not provide any explanation or examples to substantiate these comments (Ex. 171). OSHA disagrees with these comments. Pursuant to the OSH Act (29 U.S.C. 655(b)(5)), OSHA used performance-oriented language in paragraph (d) to provide employers with greater flexibility in complying with the requirements. As discussed above, OSHA also revised the language in paragraph (d) to provide greater clarity. In addition, this preamble explains in detail what employers must do to comply with the inspection, maintenance, and repair requirements in final paragraph (d).

Section 1910.23—Ladders

Final § 1910.23 revises and consolidates into one section the existing ladder requirements in §§ 1910.25 (Portable wooden ladders), 1910.26 (Portable metal ladders), 1910.27 (Fixed ladders), and 1910.29 (Mobile ladder stands and scaffolds (tower)). The final rule retains many of the existing requirements because OSHA believes they continue to provide an appropriate level of worker safety.

The final rule also updates and revises the existing OSHA general industry ladder rules to increase safety, clarity, consistency, and flexibility. To illustrate, the final rule revises the existing ladder requirements to make them consistent with OSHA's construction ladder standard (29 CFR 1926.1053). This action will make compliance easier for employers engaged in both general industry and construction operations.

Similarly, the final rule updates existing ladder requirements to make them consistent with current national consensus standards addressing ladders, including:

- American National Standards Institute (ANSI) A14.1–2007, American National Standard for Ladders—Wooden—Safety Requirements (A14.1–2007) (Ex. 376);
- ANSI A14.2–2007, American National Standard for Ladders—Portable Metal—Safety Requirements (A14.2–2007) (Ex. 377);
- ANSI A14.3–2008, American National Standard for Ladders—Fixed—Safety Requirements (A14.3–2008) (Ex. 378);
- ANSI A14.5–2007, American National Standard for Ladders—Portable Reinforced Plastic—Safety Requirements (A14.5–2007) (Ex. 391); and
- ANSI A14.7–2011, American National Standard for Mobile Ladder Stands and Mobile Ladder Stand Platforms (A14.7–2011) (Ex. 379).

Throughout the summary and explanation of final § 1910.23, OSHA identifies which provisions are consistent with these national consensus standards. OSHA believes this is important because national consensus standards represent accepted industry practices, and thus are technologically and economically feasible. Moreover, since most of those national consensus standards have been in place for years, OSHA believes that virtually all ladders this section covers that are manufactured today meet the requirements in those standards. As such, employers should not have problems complying with the requirements in the final rule that OSHA drew from those standards.

OSHA notes that final § 1910.23 incorporates a number of revisions to make the final rule easier for employers and workers to understand and follow. First, as mentioned, OSHA has consolidated all of the general industry ladder provisions into this section. Second, within this section, OSHA has consolidated into a single paragraph the general requirements that are common to, and apply to, all types of ladders. These revisions eliminate unnecessary repetition, and make the section easier to follow. The organization of the consolidated final ladder requirements is:

- Paragraph (a) Application—This paragraph specifies the types of ladders the final rule covers or exempts;
- Paragraph (b) General requirements for all ladders—This paragraph specifies the requirements that are common to, and apply to, all types of ladders the final rule covers;
- Paragraph (c) Portable ladders—This paragraph specifies the requirements that apply to portable ladders, including wood, metal, and fiberglass or composite material portable ladders;
- Paragraph (d) Fixed ladders—This paragraph covers the provisions that apply to fixed ladders, including individual-rung ladders; and
- Paragraph (e) Mobile ladder stands and mobile ladder stand platforms—This paragraph updates existing OSHA requirements for mobile ladder stands, and adds requirements for mobile ladder stand platforms.

Third, in the final rule OSHA revises existing provisions to make them performance-based, whenever appropriate. Performance-based language gives employers maximum flexibility to comply with the requirements in the final rule by using the measures that best fit the individual workplace.

Finally, when possible, OSHA drafted final § 1910.23 in plain language, which also makes the final rule easier to understand than the existing rules. For example, the final rule uses the term ''access'' instead of ''access and egress,'' which OSHA used in the existing and proposed rules. OSHA believes this revision makes the final rule easier to understand than the existing and proposed rules. Moreover, using ''access'' alone eliminates potential confusion since the term ''egress'' is often linked, and used interchangeably with, the term ''means of egress,'' or ''exit routes,'' which 29 CFR part 1910, subpart E (Exit Routes and Emergency Planning), addresses. The purpose of that subpart is to establish requirements that provide workers with safe means of exit from workplaces, particularly in emergencies. That subpart does not address access to, and egress from, walking-working surfaces to perform normal and regular work operations. OSHA notes this rulemaking on walking-working surfaces does not affect subpart E.

OSHA believes the need for the vast majority of the provisions in final § 1910.23 is well settled. Pursuant to section 6(a) of the OSH Act (29 U.S.C. 655(a)), OSHA adopted most of them in 1971 from existing national consensus standards. Furthermore, all of the ANSI ladder standards, with the exception of A14.7–2011, Mobile Ladder Stands, derive from the original A14, American National Standard Safety Code for Construction, Care, and Use of Ladders, which ANSI first adopted in 1923. ANSI also revised and updated those standards regularly since then to incorporate generally accepted industry best practices.

With the revision of OSHA's ladder requirements for general industry, OSHA also revised the ladder requirements in other general industry standards. For example, OSHA replaced the ladder requirements in 29 CFR 1910.268 (Telecommunications) with the requirement that ladders used in telecommunications meet the requirements in 29 CFR part 1910, subpart D, including § 1910.23.

Paragraph (a)—Application

Final paragraph (a), similar to the proposal, requires that employers ensure that each ladder used in general industry, except those ladders the final rule specifically excepts, meets the requirements in final § 1910.23. Final paragraph (a) consolidates and replaces the application requirements in each of the existing OSHA ladder rules with a uniform application provision applicable to all ladders; § 1910.21(b) defines ''ladder'' as ''a device with rungs, steps, or cleats used to gain access to a different elevation.''

Final paragraph (a) includes two exceptions. First, final paragraph (a)(1) specifies that § 1910.23 excepts ladders used in emergency operations such as firefighting, rescue, and tactical law enforcement operations or training for these operations. The proposed rule limited the exception to firefighting and rescue operations, but the final rule expanded that exception to cover all emergency operations and training, including tactical law enforcement operations. OSHA believes this exception is appropriate because of the exigent conditions under which emergency responders perform those operations and training.

OSHA based the expansion of the exception for all emergency operations in part on comments from David Parker, manager of the risk-management section for the Pima County (Tucson, AZ) Sheriff's Office and Public Risk Management Association (PRIMA) board member, which represents 1,500 public-sector members, including the following comment:

> [The impact of the proposed rulemaking on public entities] is particularly important in view of the fact that some of the requirements within the proposed [rule] may well be reasonable, necessary, cost effective and [technologically] feasible in common industrial environments. But they can create significant challenges and greater hazard when extended to certain public entity activities such as police tactical operations and training (Ex. 329, 01/20/2011, p. 7).

Mr. Parker also said that applying the ladder requirements to emergency operations, specifically law enforcement tactical situations, and their training exercises, was impractical because those operations require ladders designed for fast placement and access.

Second, final paragraph (a)(2), like the proposed rule, exempts ladders that are designed into or are an integral part of machines or equipment. OSHA notes this exemption applies to vehicles that the Department of Transportation (DOT) regulates (*e.g.,* commercial motor vehicles). In particular, the Federal Motor Carrier Safety Administration (FMCSA) regulates the design of ladders on commercial motor vehicles. Section 4(b)(1) of the Occupational Safety and Health Act of 1970 (OSH Act) (29 U.S.C. 653(b)(1)) specifies that OSHA regulations do not apply where another Federal Agency ''exercise[s] statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health.''

Final paragraph (a)(2) is consistent with OSHA's ladder requirements for marine terminals (29 CFR 1917.118(a)(1)), which excepts ladders that are an integral part of transportation-carrier equipment (*e.g.,* cargo containers, highway carriers, railway cars).

The exceptions in final paragraph (a) differ from the exceptions in the existing OSHA ladder rules (*i.e.,* §§ 1910.25 (Portable wood ladders) and 1910.29 (Manually propelled mobile ladder stands and scaffold (towers))). Existing § 1910.25 notes that it does not specifically cover the following ladders: Other specialty ladders, fruitpicker's ladders, combination step and extension ladders, stockroom step ladders, aisle-way step ladders, shelf ladders, and library ladders. This final rule does not carry forward those exceptions. Thus, if an orchard ladder (formerly a fruitpicker's ladder) meets the definition of ladder in this final rule (*i.e.,* ''a device with rungs, steps, or cleats used to gain access to a different elevation'') and is used in general industry, the employer must ensure that it meets the requirements in the final rule. However, OSHA notes that the final rule does not apply to an orchard ladder used solely in agricultural activities covered by 29 CFR part 1928.

Existing § 1910.29(a) specifies that it does not cover ''aerial ladders;'' however, the existing rule does not define this term. Section 1910.67 (Vehicle-mounted elevating and rotating work platforms) defines ''aerial ladder'' as a ''device consisting of a single- or multiple-section extension ladder'' mounted on a vehicle (§ 1910.67(a)(2)). Although the final rule does not specifically except aerial ladders, OSHA believes that aerial ladders come within the exception for ladders designed into, or that are an integral part of, a machine or equipment, which includes vehicles.

OSHA did not receive any comments on paragraph (a) of the proposed rule and, therefore, adopted it as revised.

Paragraph (b)—General Requirements for All Ladders

Final paragraph (b), like the proposed rule, establishes general requirements that apply to all ladders this section covers, including wood, metal, and fiberglass or composite ladders, portable and fixed ladders, stepladders and stepstools, mobile ladder stands and mobile ladder stand platforms, and other ladders such as job-made ones. The final rule draws most of the provisions in this paragraph from the existing OSHA ladder standards for general industry and construction with the goal of making these standards consistent. OSHA also draws a number of provisions from the national consensus standards listed above.

Final paragraph (b)(1), like the proposed rule, requires that employers ensure ladder rungs, steps, and cleats are parallel, level, and uniformly spaced when the ladder is in position for use. The final provision is consistent with OSHA's other ladder requirements in general industry, marine terminals, longshoring, and construction (see §§ 1910.25(c)(2)(i)(B), 1910.27(b)(1)(ii), 1910.268(h)(2) and (6), 1917.118(d)(2)(i), 1917.119(b)(2), 1918.24(f)(2), 1926.1053(a)(2)). Final paragraph (b)(1) also is consistent with the ANSI ladder standards (A14.1–2007, Sections 6.2.1.2, 6.3.1.2, 6.4, and 6.5.4; A14.2–2007, Section 5.3; A14.3–2008, Sections 5.1.1, and 5.1.3(e); and A14.7–2011, Section 4.3.3). As mentioned, OSHA believes the need for this ladder requirement is well settled. Most of OSHA's existing ladder requirements include this provision, as do all of the ANSI ladder standards.

Final paragraph (b)(1) adds the word ''cleats,'' which is common terminology for a type of ladder cross-piece. OSHA added the term, which is interchangeable with ''rungs'' and ''steps,'' to make final paragraph (b)(1) consistent with other Agency ladder standards and national consensus standards. OSHA did not receive any comments on the proposed provision.

Final paragraphs (b)(2) and (3) establish requirements for spacing between rungs, steps, and cleats on different types of ladders. With the exception of ladders in elevator shafts, the final rule requires that employers measure spacing between the centerlines (midpoint) of the rungs, steps, or cleats. Measuring the spacing at the centerline of the rung, step, or cleat ensures that measurements are done consistently throughout the length of the ladder and variations between different steps are minimal.

Like the proposed rule, final paragraph (b)(2) requires that, except for ladders in elevator shafts and telecommunication towers, employers ensure ladder rungs, steps, and cleats are spaced not less than 10 inches and not more than 14 inches apart. OSHA drew the proposed and final requirement from its construction ladder standard (§ 1926.1053(a)(3)(i)), which OSHA updated in 1990 (55 FR 47660 (11/14/1990)). Final paragraph (b)(2) is consistent with OSHA standards that have flexible vertical-spacing requirements. For example, OSHA's Telecommunications standard at 29 CFR 1910.268 specifies that vertical spacing on fixed ladders on communication towers not exceed 18 inches (§ 1910.268(h)(2)), and vertical spacing of rungs on climbing devices be not less than 12 inches and not more than 16 inches apart (§ 1910.268(h)(6)). In addition, three maritime standards specify that rungs be spaced between 9 to 16.5 inches apart (§§ 1917.118(d)(2)(1); 1917.119(b)(2); 1918.24(f)(2)).

Final paragraph (b)(2) provides greater flexibility than ANSI's ladder standards, most of which require that vertical spacing be 12 inches (A14.1–2007, Sections 6.2.1.2 and 6.3.1.2; A14.2–2007, Section 5.3; and A14.3–2008, Section 5.1.1), but the A14.7–2011 standard incorporates flexible vertical spacing on mobile ladder stands by specifying that vertical spacing not exceed 10 inches (Section 4.3.3).

Although OSHA believes that both the final rule and existing OSHA and national consensus ladder standards provide adequate protection, the Agency also believes it is important that the final rule be consistent with the construction ladder requirements (§ 1926.1053). OSHA recognizes that some employers and workers perform both general industry and construction work. Increasing consistency between OSHA's general industry and construction standards will assist those employers and workers in complying with the OSHA requirements, and also will minimize the potential for confusion. In addition, providing greater flexibility will give employers more options to tailor ladders to specific work operations. There were no comments on the proposed provision.

The final rule, like the proposal, adds two exceptions to paragraph (b)(2). Final paragraph (b)(2)(i) specifies that employers must ensure rungs and steps on ladders in elevator shafts are spaced not less than 6 inches and not more than 16.5 inches apart, as measured along the ladder side rails.

Final paragraph (b)(2)(ii) specifies that employers ensure that vertical spacing on fixed ladder rungs and steps on telecommunication towers not exceed 18 inches, which is consistent with the existing requirement in OSHA's Telecommunications standard in § 1910.268(h)(2). Final paragraph (b)(2)(ii) also adds the phrase ''measured between the centerlines of the rungs or steps.'' This addition clarifies the provision, and makes it consistent with final paragraphs (b)(2) and (3), which also requires vertical spacing to be measured between rung or step centerlines. OSHA did not receive any comments on the proposed exceptions.

Final paragraph (b)(3), like the proposed rule, addresses vertical spacing for stepstool steps. The final rule requires that employers ensure stepstool steps are spaced not less than 8 inches, and not more than 12 inches, apart, as measured between centerlines of the steps. The final paragraph (b)(3) deleted the terms ''rungs'' and ''cleats'' from the proposal because stepstools do not have them.

OSHA proposed requirements for stepstools in recognition that employers use stepstools routinely in general industry. However, stepstools differ from stepladders and other portable ladders, and OSHA does not believe that some of the requirements applicable to stepladders are appropriate for stepstools. The final rule defines a stepstool as a self-supporting, portable ladder with flat steps and side rails that is designed so an employee can climb on all of the steps and the top cap. A stepstool is limited to those ladders that are not height adjustable, do not have a pail shelf, and do not exceed 32 inches (81 cm) in overall height to the top cap, except that side rails may continue above the top cap (§ 1910.21(b)).

Stepladders and other portable ladders, by contrast, do not have height limits, and the final rule requires that employers ensure workers do not stand on the top step or cap of those ladders.

OSHA drew final paragraph (b)(3) from its construction ladder standards (§ 1926.1053(a)(3)(ii)), and the final rule is consistent with the ANSI ladder standards that address stepstools (A14.1–2007, Section 6.5.4; and A14.2–2007, Section 6.6.4). These standards also address stepstools differently from step ladders and other portable ladders.

OSHA believes that employers should not have any difficulty complying with final paragraph (b)(3). The A14.1–2007 and A14.2–2007 standards have been available for years, so OSHA believes that almost all stepstools currently in use already meet the requirements in the final rule. OSHA did not receive any comments on proposed paragraph (b)(3).

Final paragraph (b)(4) consolidates OSHA's existing requirements on the minimum clear width for rungs, steps, and cleats on portable and fixed ladders (§§ 1910.25, 1910.26, 1910.27). The final rule requires employers to ensure that ladder rungs, steps, and cleats on portable and fixed ladders have a minimum ''clear width'' of 11.5 inches and 16 inches, respectively. ''Clear width'' is the space between ladder side rails, but does not include the width of the side rail. OSHA also incorporates as paragraph (b)(4) the proposed note informing employers that the clear width measurement on fixed ladders is done before installation of any ladder safety system.

Generally, the final rule is consistent with OSHA's existing ladder standards, notably OSHA's standards for portable wood ladders, fixed ladders, mobile ladder stands and platforms, and construction ladders (existing §§ 1910.25(c)(2)(i)(*c*)); 1910.27(b)(1)(iii); 1910.29; and current § 1926.1053(a)(4)). The final rule differs slightly from the existing rule for portable metal ladders, which required a minimum clear width of 12 inches (§ 1910.26(a)(2)(i)). However, the final rule will not require employers to take any action since the existing portable metal ladder rules already meet the minimum 11.5-inch clear-width requirement of the final rule. In addition, OSHA removed the term ''individual-rung ladder'' from final paragraph (b)(4) because these ladders are a type of fixed ladder and, therefore, do not need a separate listing.

The final rule also is consistent with the ANSI ladder standards (A14.1–2007, Sections 6.2.1.3, 6.3.2.4, 6.3.3.8, 6.3.4.3, 6.3.5.4, and 6.4.1.3; A14.2–2007, Sections 6.1.3, 6.2.1, and 6.2.2; and A14.3–2008, Section 5.1.2). Although the minimum clear widths in the ANSI standards differ depending on the type of portable or fixed ladder used, virtually all of these standards require the minimum clear width specified by the final rule.

Final paragraph (b)(4) contains four exceptions to the minimum clear-width requirement. First, final paragraph (b)(4)(i), like the proposal, includes an exception for ladders with narrow rungs that are not designed to be stepped on, such as those located on the tapered end of orchard ladders and similar ladders. This exception recognizes that manufacturers did not design the narrow rungs at the tapered end of the ladder to be foot holds, but rather designed them to allow the worker to establish the best work position. For example, tapered ladders allow workers to safely position the ladder for activities such as pruning tree branches. Since workers will not use the narrow rungs on the tapered end of orchard and other similar ladders for stepping, OSHA believes that it is not necessary to apply the clear width requirements in the final rule to the narrow rungs on these ladders. However, OSHA stresses that the exception only applies to the narrow rungs on the tapered end; the remainder of the ladder rungs where workers may step must meet the requirements in the final rule. Moreover, employers are responsible for ensuring that workers do not step on the narrow rungs.

Second, final paragraph (b)(4)(ii) retains the proposed rule's exception for portable manhole entry ladders supported by manhole openings. The final rule only requires that the rungs and steps of those ladders have a minimum clear width of 9 inches. Southern New England Telephone Co. said the revision was necessary because the ladder supported at the manhole opening reduces clearance for workers climbing through the manhole opening (Ex. OSHA–S041–2006–0666–0785). The commenter also said that using a narrower ladder provides more space for workers to negotiate the manhole opening, which makes it less likely that space restrictions could cause the worker to fall.

Third, final paragraph (b)(4)(iii), like the proposal, incorporates the exception in OSHA's Telecommunications rule (§ 1910.268(h)(5)) for rolling ladders used in telecommunications centers. That standard only requires that rungs and steps on rolling ladders used in telecommunication centers have a minimum clear width of 8 inches. OSHA notes that the final rule deletes the existing requirements in § 1910.268(h), and specifies that ladders used in telecommunications must meet the requirements in revised subpart D.

Final paragraph (b)(4)(iv) is a new requirement that addresses the minimum clear width for stepstools, which OSHA defines as a type of portable ladder (§ 1910.21(b)). The final rule specifies that stepstools must have a minimum clear width of at least 10.5 inches instead of the 11.5-inch minimum clear width that the final rule requires for other portable ladders. Although OSHA did not receive any comments on this issue, in accordance with section 6(b)(8) of the OSH Act (29 U.S.C. 655(b)(8)), the Agency added this provision to make the rule consistent with ANSI/ALI national consensus standards for wood and metal portable ladders (A14.1–2007 and A14.2–2007).

As mentioned above, final paragraph (b)(4) incorporates into this provision the language from a note in the proposal specifying the minimum clear width on fixed ladders is to be measured before installing ladder safety systems. OSHA included the information to help employers understand how OSHA measures clear width on fixed ladders for compliance purposes and has determined that the information may better serve employers in the actual provision, instead of in a note. OSHA did not receive any comments on the proposed provision.

Final paragraph (b)(5), like the proposal, adds a new requirement that employers ensure wooden ladders are not coated with any material that may obscure structural defects. Such defects, if hidden by coating or paint, could injure or kill workers if the defected ladder they step on breaks or collapses. OSHA drew the final rule from its construction ladder standard, which prohibits coating wood ladders with any ''opaque covering'' (§ 1926.1053(a)(12)), but adds language identifying the hazard that the provision will prevent (*i.e.,* workers using defective ladders with obscured ''structural defects''). The final rule is consistent with A14.1–2007, which specifies that wood ladders may have transparent, non-conductive finishes (*e.g.,* shellac, varnish, clear preservative) but not with opaque finishes (see A14.1–2007, Section 8.4.6.3). The A14.3–2008 standard includes the same requirement for fixed wood ladders (Section 9.3.8). OSHA believes that A14.1–2007 and A14.3–2008 provide helpful examples of the types of coatings that the final rule prohibits. OSHA did not receive any comments on the proposed provision.

Final paragraph (b)(5) does not carry forward the language in the construction and ANSI ladder standards that allows identification or warning labels to be placed on one face of the side rails. OSHA does not believe the language is necessary for two reasons. First, for purposes of final paragraph (b)(5), OSHA does not consider manufacturer-applied warning and information labels to be ''coatings,'' therefore, final paragraph (b)(5) does not prohibit placing labels on one side of side rails. Second, OSHA believes that the requirements in final paragraph (b)(9) to inspect ladders before initial use each workshift to identify defects, and the requirement in final paragraph (b)(10) to remove defective ladders from service, will ensure that employers do not use ladders with structural defects, even structural defects covered up by labels placed on the face of side rails. OSHA did not receive any comments on the proposed provision.

Final paragraph (b)(6) requires that employers ensure metal ladders are made with corrosion-resistant material or are protected against corrosion. For example, metal ladders coated or treated with material that resists corrosion will meet this requirement. Alternatively, employers may use metal ladders made with material that is inherently corrosion-resistant, such as aluminum. OSHA believes this provision is necessary to protect workers because rusty metal ladders can become weak or fragile, and can break when a worker steps on them. To illustrate, untreated metal ladders exposed to certain acids may experience chemical corrosion that could reduce the strength of the metal.

Final paragraph (b)(6) carries forward the language in OSHA's existing portable metal ladders standard (§ 1910.26(a)(1)), and is consistent with a similar provision in the existing fixed ladder standard (§ 1910.27(b)(7)(i)). The final rule also retains the language in the existing rule that employers do not have to protect metal ladders that are inherently corrosion resistant. In the proposed rule, OSHA preliminarily determined that this language was not necessary because ladders ''protected against corrosion'' included ladders made of inherently corrosion-resistant material. However, upon further analysis, OSHA believes that retaining the existing language (§ 1910.26(a)(i)) makes the final rule clearer and better reflects the purpose of this provision.

OSHA did not receive any comments on the proposed provision.

Final paragraph (b)(7), like the proposed rule, specifies that employers must ensure ladder surfaces are free of puncture and laceration hazards. Workers can suffer cuts and puncture wounds if a ladder has sharp edges or projections, splinters, or burrs. The final rule consolidates and simplifies OSHA's existing ladder requirements addressing puncture and laceration hazards (see §§ 1910.25(b)(1)(i) and (c)(2)(i)(f); 1910.26(a)(1) and (a)(3)(viii); and 1910.27(b)(1)(iv) and (b)(2)). Although final § 1910.22(a)(3) contains a similar general requirement, OSHA believes it is important to include language in final paragraph (b)(7) to emphasize the need to keep ladders free of such hazards to prevent injuries and falls. For example, a worker's instantaneous reaction to getting cut on a sharp projection could be to release his or her grip on the ladder, which could cause the worker to fall. OSHA did not receive any comments on the proposed provision.

Final paragraph (b)(8), like the proposed rule, requires that employers ensure ladders are used only for the purposes for which they were designed. OSHA believes, as the ANSI standards states, that ''[p]roper use of [ladders] will contribute significantly to safety'' (A14.1–2007, Section 8.1.5; A14.2–2007, Section 8.1.5; and A14.3–2008, Section 9.1.2). Improper use of a ladder can cause workers to fall.

Final paragraph (b)(8) revises the existing general industry ladder rules. Using performance-based language, final paragraph (b)(8) consolidates the existing general industry requirements on permitted and prohibited uses of ladders (§§ 1910.25(d)(2) and 1910.26(c)(3)(vii)). Those standards specify a number of uses that are clearly unsafe and, thus, prohibited, such as using ladders for scaffold planks, platforms, gangways, material hoists, braces, or gin poles. However, the existing rules do not, and could not, provide an exhaustive list of all unsafe uses. For example, the existing rules do not specifically prohibit self-supporting portable metal ladders to be used as a scaffold plank support system, yet such practices are clearly dangerous and an improper use of ladders. Therefore, final paragraph (b)(8) revises the existing rules to specify how employers must use ladders, instead of specifying a longer, but still incomplete, list of prohibitions. OSHA's approach to final paragraph (b)(8) is consistent with A14.3–2008, which states, ''The guidelines discussed in this section do not constitute every proper or improper procedure for the maintenance and use of ladders (Section 9.1.1.).'' Accordingly, the prohibited uses listed in the existing rules continue to be improper procedures for the use of ladders, which this final rule continues to prohibit.

Final paragraph (b)(8) is virtually identical to OSHA's construction ladder standard (§ 1926.1053(b)(4)), and is consistent with the ANSI ladder standards (A14.1–2007, Section 8.3; A14.2–2007, Section 8.3; and A14.3–2008, Section 9.1.2). Final paragraph (b)(8) does not carry forward the language in existing § 1910.26(c)(3)(vii), which prohibits employers from using ladders for certain purposes ''unless specifically recommended for use by the manufacturer.'' OSHA believes that requiring employers to use ladders ''only for the purposes for which they were *designed* [emphasis added]'' achieves the same purpose. In addition, the revised language in the final rule ensures that the revised requirement also covers job-made ladders the employer designs. OSHA did not receive any comments on the proposed provision.

Final paragraph (b)(9) requires that employers ensure ladders are inspected before initial use in each work shift, as well as more frequently as necessary. The purpose of this inspection is to identify visible defects that could affect the safe use and condition of the ladder and remove unsafe and damaged ladders from service before a worker is hurt. Employers may accomplish the visual inspection as part of the worker's regular procedures at the start of the work shift. The final rule differs in two respects from the existing and proposed standards. First, the final rule states more explicitly than the existing and proposed rules when the inspection of each ladder must be done: before using the ladder for the first time in a work shift. Two of OSHA's existing general industry rules require that employers inspect ladders ''frequently'' and ''regularly'' (§§ 1910.25(d)(1)(x) and 1910.27(f)). OSHA's construction ladder standard requires employers to inspect ladders ''on a periodic basis'' (§ 1926.1053(b)(15)).

In the proposed rule, OSHA sought to clarify the frequency of ladder inspections. OSHA drew on the language in its longshoring ladder standard (§ 1918.24(i)(2)) and A14.1–2007 and A14.2–2007. OSHA's longshoring standard requires that employers inspect ladders ''before each day's use'' (§ 1918.24(i)(2)), and the ANSI standards require that employers inspect ladders periodically, ''preferably before each use'' (A14.1–2007, Section 8.4.1.; and A14.2–2007, Section 8.4.1). Based on those standards, OSHA proposed that employers inspect ladders ''before use.'' OSHA intended the proposed language to mean that employers must ensure ladders are inspected before workers use them for the first time during a work shift. OSHA believes the language in final paragraph (b)(9) more clearly and directly states the Agency's intention.

Second, final paragraph (b)(9) adds language specifying that, in addition to inspecting ladders before they are used for the first time during the work shift, employers also must inspect ladders ''as necessary'' to identify defects or damage that may occur during a work shift after the initial check. OSHA believes that situations may arise or occur during a work shift that necessitate employers conducting additional inspections of ladders to ensure that they continue to remain safe for workers to use. For example, if a ladder tips over, falls off a structure (*e.g.,* roof) or vehicle, is struck by an object (*e.g.,* vehicle or machine), or used in a corrosive environment, it needs to be inspected to ensure damage has not occurred and the ladder is still safe to use. The final rule is consistent with the existing requirement for portable metal ladders § 1910.26(c)(2)(vi), which specifies that employers must inspect ladders ''immediately'' if they tip over or are exposed to oil or grease. Similarly, OSHA's marine terminal and longshoring standards require that employers inspect ladders ''after any occurrence, such as a fall, which could damage the ladder'' (29 CFR 1917.119(e)(2) and 1918.24(i)(2)). OSHA believes the addition to final paragraph (b)(9) will help employers implement a proactive approach that ensures ladders are safe at the start of, and throughout, each work shift. The final rule better articulates OSHA's intent in the proposal for the frequency of inspections. (See 75 FR 28876, noting that workers need not inspect ladders multiple times per shift ''unless there is a reason to believe the ladder has been damaged due to an event such as being dropped.'')

Final paragraph (b)(9) provides employers with flexibility to tailor ladder inspections to the situations requiring them. For example, inspections conducted at the start of the work shift may include checking the ladder to ensure the footing is firm and stable, engaging spreader or locking devices to see if they work, and identifying whether there are missing or damaged components. If a ladder tips over, the employer may focus the inspection on identifying whether footing problems may have caused the tip-over or examining whether rungs are still firmly attached. On the other hand, the existing rule does not provide this flexibility and requires that all inspections conducted after a tip over must include the following:

- Side rails for dents or bends;
- Rungs for excessive dents;
- All rung-to-side-rail connections;
- Hardware connections; and
- Rivets for shear (existing § 1910.26(c)(2)(vi)(a)).

OSHA believes this list of inspection procedures may be both over-inclusive and under-inclusive. For example, the existing rule does not specify that the inspection cover the ladder footing. OSHA believes that using performance-based language will allow employers to determine the scope of the inspection that may be necessary.

Finally, OSHA notes that the revisions simplifying final paragraphs (b)(8) and (9) are consistent with the goals of the Plain Language Act of 2010. OSHA did not receive any comments on these proposed provisions.

Final paragraph (b)(10), which is almost identical to the proposed rule, requires that employers immediately tag ladders with structural or other defects ''Dangerous: Do Not Use'' or similar language that is in accordance with § 1910.145. In addition, final paragraph (b)(10) requires that employers remove defective ladders from service until the employer repairs them in accordance with § 1910.22(d) or replaces them. Final § 1910.22(d)(2) contains a general requirement that employers correct, repair, or guard against ''hazardous conditions on walking-working surface surfaces,'' including ladders. However, OSHA believes it is important to also include a specific requirement in this section because falling from a defective ladder could seriously injure or kill workers. Final paragraph (b)(10) clearly instructs employers of the minimum procedures (*i.e.,* tagging, removing, and repairing or replacing) that they must take when an inspection reveals a ladder to be defective. Final paragraph (b)(10), like final § 1910.22(d)(2), is a companion, and logical extension, to the requirements that employers maintain walking-working surfaces, including ladders, in a safe and serviceable condition, and inspect them as required (§§ 1910.22(d)(1); 1910.23(b)(9)).

Final paragraph (b)(10) is a performance-based consolidation of the existing general industry, maritime, and construction requirements (§§ 1910.25(d)(1)(iii), (d)(1)(x), and (d)(2)(viii); 1910.26(c)(2)(vii); 1915.72(a)(1); 1917.119(e)(1); 1918.24(i)(1); and 1926.1053(b)(16)). Some of these standards are similar to the final rule, while other standards specify particular ladder defects that necessitate removing the ladder from service. For example, the construction ladder standard requires removal of ladders that have defects such as broken or missing rungs, cleats, or steps; broken rails; or corroded ladder components (§ 1926.1053(b)(16)), and the existing general industry portable wood ladders standard requires employers to replace frayed rope (§ 1910.25(d)(i)(iii)). The final rule simplifies the existing requirements by specifying that employers remove ladders that have ''structural or other defects.'' OSHA believes this approach will make the final rule easier to understand. As noted above, the defects listed in the existing rules in §§ 1910.25(d)(2)(viii) and 1910.26(c)(2)(vii)) continue to warrant removal of the ladder from service.

Final paragraph (b)(10) retains the key signal warning word ''Dangerous'' in existing § 1910.25(d)(1)(x). OSHA proposed to remove the word from the regulatory text and include it in guidance material. After further analysis, OSHA believes that retaining the signal word is necessary to get workers' attention to provide them with basic information that a hazard exists and they must not use the ladder. OSHA did not receive any comments on proposed paragraph (b)(10).

Final paragraphs (b)(11), (12), and (13), like the proposed rule, are companion provisions that establish safe work practices for climbing ladders. The final paragraphs are almost identical to OSHA's construction ladder standard (*see* § 1926.1053(b)(20), (21), and (22)). OSHA notes that final paragraphs (b)(11), (12), and (13) apply to all ladders this section covers, including mobile ladder stands and mobile ladder stand platforms.

Final paragraph (b)(11), like the existing (§ 1910.26(c)(3)(v)) and proposed rules, requires that employers ensure workers face the ladder when climbing up and down it. The final rule also is almost identical to OSHA's construction ladder standard (§ 1926.1053(b)(20)) and the ANSI ladder standards (A14.1–2007, Section 8.3.7; A14.2–2007, Section 8.3.7; and A14.3–2008, Section 9.2.1). Facing the ladder while climbing ensures that workers are able to maintain a firm grip on the ladder and also identify possible defects before climbing any higher. Accordingly, workers are to face the steps, not away from them, when climbing up and down mobile units.

To make final paragraph (b)(11) easier to understand, OSHA replaced the existing and proposed language ''ascending or descending'' with plain language: Climbing up and down. This revision is consistent with general comments recommending that OSHA make the final rule easier to read and understand (Exs. 53; 175). OSHA did not receive any comments on the proposed provision.

Final paragraph (b)(12), like the proposed rule, adds a new provision requiring that employers ensure workers use ''at least one hand to grasp the ladder at all times when climbing up and down it.'' [19] As stated in the proposal, the intent of this provision is for employers to ensure their workers maintain ''three-point contact'' (*i.e.,* three points of control) with the ladder at all times while climbing. The A14.3–2008 standard requires three-point contact and defines the term as consisting of ''two feet and one hand or two hands and one foot which is safely supporting users weight when ascending/descending a ladder'' (Section 9.2.1). OSHA drew final paragraph (b)(12) from its construction ladder standard (§ 1926.1053(b)(21)). The final provision also is consistent with ANSI ladder standards.

The final rule requires that employees ''grasp'' the ladder with at least one hand when climbing, which is equivalent to the requirement in A14.1–2007 and A14.2–2007 to ''maintain a firm hold on the ladder'' (A14.1–2007, Section 8.3.7.; A14.2–2007, Section 8.3.7). At the hearing, Ellis explained the importance of maintaining a firm grasp on the ladder at all times, ''[F]alls happen very suddenly and unless you have your hand on something or your foot on something that's horizontal and flat or round * * * you're going to be surprised. And once you get to a few inches away the speed of the fall is such you can't reach—you can't grab, that's why you can't stop a fall'' (Ex. 329 (1/21/2011), p.277). Many stakeholders said employers already train workers to use three-point contact when climbing ladders (*e.g.,* Exs. 148; 158; 181).

NCSG contended that an employer can comply with this requirement if its employees slide one hand along the rail of the ladder while climbing so that the other hand is free to carry an object (Ex. 150). It claimed that merely maintaining ''contact'' between the hand and the ladder at all times was sufficient (see Ex. 329 (1/18/2011), p. 289). OSHA does not agree that this technique is grasping the ladder within the meaning of paragraph (b)(12). It is important that a climber have a firm hold on the ladder

[19] OSHA notes paragraph (b)(12) pertains only to the process of climbing up and down the ladder, not working on the ladder once the worker reaches the correct level.

with at least one hand to help ensure that the climber maintains his or her balance. Moreover, as Ellis noted, when a climber starts to lose balance, the climber needs ''the grip available to stabilize the body'' (Ex. 329 (1/21/2011), p. 275–76). OSHA notes that it rejected NCSG's ''sliding hand'' technique as unsafe when it adopted the construction standard; in fact, the construction standard uses the term ''grasp'' precisely because OSHA intended to forbid the practice (55 FR 47682).

OSHA notes that the requirement that a worker maintain a firm grasp of the ladder with at least one hand at all times while climbing does not prohibit workers from carrying certain objects while they climb. However, any object a worker does carry must be of a size and shape that still allows the worker to firmly grasp the ladder with that hand while climbing.

OSHA received one comment on proposed paragraph (b)(12). Ellis Fall Safety Solutions (Ex. 344) recommended OSHA require that workers hold onto horizontal rungs and not side rails or ladder extensions. Ellis submitted a study showing that climbers cannot hold onto side rails or ladder extensions effectively if they begin to fall off the ladder. OSHA agrees with Ellis that grasping the ladder on horizontal rungs is preferable and encourages employers to follow this practice. However, OSHA also recognizes there may be times when it is necessary for employees to hold the side rails. OSHA is not aware of any reports that holding the side rails of ladders creates a problem when workers maintain three points of contact while climbing. In addition, OSHA notes that neither the construction ladder standard (§ 1926.1053(b)(21)) nor the ANSI/ALI consensus standards (A14.1–2007 and A14.2–2007) prohibit workers from holding onto ladder side rails while climbing.

Final paragraph (b)(13), like the proposed and construction ladder rules (§ 1926.1053(b)(22)), requires that employers ensure workers climbing ladders do not carry any objects or loads that could cause them to lose their balance and fall. As OSHA stated in the preamble to the construction ladder standard, the purpose of this provision is to emphasize the importance of proper and careful use of ladders when workers need to carry items to and from work spaces:

> It is OSHA's belief that the employee's focus and attention while climbing up and/or down a ladder should be on making a safe ascent or descent and not on transporting items up and down the ladder (55 FR 47682).

As explained above, neither the final rule nor the construction ladder standard prohibit workers from carrying an object while climbing a ladder. The final rule allows workers to carry an object, provided they:

- Face the ladder while climbing (final paragraph (b)(11));
- Grasp the ladder with at least one hand at all times when climbing up and down the ladder, which will ensure workers maintain at least three points of contact (final paragraph (b)(12)); and
- Do not carry an object(s) that could cause them to lose their balance and fall (final paragraph (b)(13)).

Similarly, in the preamble to the construction ladder standard, OSHA said:

> Although OSHA believes that small items such as hammers, pliers, measuring tapes, nails, paint brushes, and similar items should be carried in pouches, holsters, or belt loops, the language in the final rule would not preclude an employee from carrying such items while climbing a ladder so long as the items don't impede the employee's ability to maintain full control while climbing or descending the ladder (55 FR 47682).

Under both the final and construction rules, employers are responsible for ensuring that workers are able to maintain full control and balance while they are climbing. Employers also must ensure that carrying an object does not impede workers' control and balance, such as struggling to maintain their control or balance on the ladder. To that end, employers need to evaluate whether the weight and size of tools and other items workers use for jobs are such that workers can maintain their balance and grasp on the ladder while carrying the item in that hand or whether workers need to use other methods to get the items to the roof safely, such as using backpacks, making multiple climbs, or lifting items attached to ropes. NCSG said their members conduct evaluations (*i.e.,* hazard assessments) at each job site, which include whether workers ''can . . . safely access the roof with ladders'' (Ex. 329 (1/18/2011), p. 276).

Employers also need to ensure workers know what items they can and cannot carry while climbing ladders. NCSG agreed, saying they train workers so they ''understand what items they are permitted to carry and how they should be carried so that they maintain a stable position while ascending and descending the ladder(s)'' (Ex. 150). For example, OSHA does not believe workers can maintain the required balance and control if they must carry a heavy or bulky object in one hand while climbing.

NCSG raised several objections to proposed paragraphs (b)(12) and (13). NCSG said the requirements ''would make it technically and economically infeasible for [chimney] sweeps to perform their work'' because it would be impossible for workers to get items up to the roof if they cannot carry them in one hand and slide their other hand up the ladder rail while climbing (Ex. 150). OSHA does not believe the record supports NCSG's infeasibility contentions.

First, as stated above, final paragraphs (b)(12) and (13) do not prohibit workers from carrying an item when they climb a ladder. Workers can carry an object while climbing a ladder, provided they also can grasp the ladder with that hand during the climb. Some of the objects NCSG said their members carry are small enough that it would be possible for workers to hold them and grasp the ladder with the same hand.

Second, even if a worker cannot carry a particular object and still maintain a firm grasp on the ladder with that hand, there are a variety of other methods they can use to transport the object(s) to the roof and still allow the worker to firmly grasp the ladder with their hands. According to NCSG, member companies already use them. For example, NCSG said workers get tools and equipment, such as flashlights, mirrors, screwdrivers, wrenches, cameras, tape measures, and cleaning rods and brushes, up to the roof using backpacks, tool belts, and quivers (Ex. 150). For one story homes, NCSG said workers lean roof hook ladders against the eaves and pull the ladder up once they have climbed up on the roof (Ex. 329 (1/18/2011), p. 342).

If the job is a major repair (*e.g.,* relining or rebuilding chimneys), which according to NCSG accounts for 20 to 25 percent of chimney sweep work, employers use scaffolds or aerial lifts (Ex. 329 (1/18/2011), p. 327). According to NCSG, not only do scaffolds allow employers to get materials to the roof without carrying them on a portable ladder, they provide workers with ''a nice flat platform to stand on'' (Ex. 329 (1/18/2011), p. 325).

OSHA believes that chimney sweep companies also can use handlines and ropes to pull heavy or bulky items up on the roof. OSHA believes this method will work particularly well for getting chimney caps and roof hook ladders to the roof, both of which NCSG said do not fit into backpacks. Pulling up materials to the roof is a common practice in the construction industry. In the preamble to the construction ladder standard, OSHA said workers take ''large or heavy'' items to the roof by ''pull[ing] the object up or lower[ing] it with a handline'' (55 FR 47682). NCSG, however, said that ''it is unlikely [lifting items to the roof with a handline] can be done without risking damage to the home or [item].'' NCSG did not explain or provide any evidence to support their claim. In addition, NCSG did not provide any evidence that it is not possible to prevent damage by using appropriate techniques or padding. OSHA has not received any reports and is not aware of any problems in the construction industry using handlines to pull up items to residential or commercial roofs.

NCSG claimed that using handlines to lift items to roofs would be ''economically infeasible'' because it could not be done without the assistance of a second person, which they claim would increase job costs by about 30 percent. OSHA finds this claim unsupported by the record. NCSG did not explain or provide evidence about why a second worker would be necessary in such instances. In addition, NCSG did not provide any support for its claim that costs would increase by 30 percent.

Finally, NCSG contended that complying with final paragraphs (b)(12) and (13) would create a greater hazard for workers than allowing them to carrying objects up ladders with one hand while sliding the other hand up the ladder rails (Ex. 150). In particular, they said that attaching work tools and other items to a rope and lifting them to the roof would create a greater fall hazard because workers must be ''right at the roof's edge to keep the item in view and lift it onto the roof'' (Ex. 150). To establish that an OSHA standard creates a greater hazard an employer must prove, among other things, that the hazards of complying with the standard are greater than those of not complying, and alternative means of employee protection are not available (*Bancker Construction Corp.,* v. *Reich,* 31 F.2d 32, 34 (2d Cir. 1994); *Dole* v. *Williams Enterprises, Inc.,* 876 F.2d 186, 188 (D.C. Cir. 1989)).

NCSG has not provided any evidence to establish that complying with final paragraphs (b)(12) and (13) or using other methods to get objects up to the roof is more dangerous than allowing employees to carry objects, regardless of their weight and size, in one hand while sliding the other hand up ladder rails while they climb the ladders. In fact, an NCSG witness testified that the greatest fall hazard is the ''ladder-to-roof transition'' (Ex. 329 (1/18/2011), p. 333). The transition is made even more hazardous if workers are carrying heavy or bulky objects in one hand and trying to get onto the roof by sliding the other hand along the ladder rail.

NCSG also maintained that pulling items up to the roof with handlines would require workers to be at the roof's edge, where they will be at risk of falling. NCSG did not provide any evidence to support that claim. OSHA notes that the final rule requires workers to use fall protection while working at the edge of a roof.

Finally, although NCSG said they were ''not aware of any feasible alternatives to carrying items in one hand and sliding the other hand up the ladder rail, NCSG identified several alternatives that they currently are using. NCSG said workers put tools and other items in backpacks, tool belts, and quivers so they can climb ladders with both hands free, instead of carrying the objects in their hands (Ex. 150). With the exception of roof hook ladders and chimney caps, NCSG said they are able to get all items up to the roof in backpacks, tool belts, and quivers. OSHA also believes that handlines and ropes are feasible to safely lift chimney caps and roof hook ladders.

Paragraph (c)—Portable Ladders

Final paragraph (c), like the proposed rule, sets forth requirements for portable ladders. The requirements in final paragraph (c) are in addition to the requirements in final paragraph (b) that apply to all ladders this section covers. The final rule defines ''portable ladder'' as a ladder that can be readily moved or carried, and usually consists of side rails joined at intervals by steps, rungs, or cleats (§ 1910.21(b)).

To further OSHA's goal of making the final rule clearer and easier to read, final paragraph (c) replaces existing detailed design and construction specifications with more flexible performance-based language. By doing so, OSHA was able to make other revisions that will increase employers' and workers' understanding of the final rule. First, using performance-based language allowed OSHA to combine the existing requirements for portable wood (existing § 1910.25) and portable metal ladders (existing § 1910.26), thereby eliminating unnecessary repetition. Second, it allowed OSHA to remove the exceptions in existing § 1910.25(a) for ''special'' types of ladders, including orchard ladders, stock room step ladders, and library ladders. Final paragraph (c) covers all of those ladders to the extent that employers use them in general industry operations. Finally, it also allows OSHA to remove the separate requirements for certain types of portable ladders such as painter's stepladders, mason's ladders, and trolley and side-rolling ladders.

Final paragraph (c)(1), like the existing and proposed rules, requires that employers minimize slipping hazards on portable metal ladders. Accordingly, the final rule specifies that employers must ensure rungs and steps of portable metal ladders are corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize the possibility of slipping. Final paragraph (c)(1) is the same as OSHA's construction ladder standard (§ 1926.1053(a)(6)(ii)), and is consistent with A14.2–2007 (Section 5.5). Ellis (Ex. 155) supported skid-resistance on ladder steps. There were no opposing comments on the provision.

Final paragraph (c)(2), like the proposal, retains existing requirements (§§ 1910.25(c)(2)(i)(*f*) and 1910.26(a)(3)(viii)) that employers ensure each stepladder, or combination ladder used in a stepladder mode, is equipped with a metal spreader or locking device. The final rule also requires that the spreader or locking device securely holds the front and back sections of the ladder in an open position while the ladder is in use. The term ''stepladder mode'' as used in final paragraph (c)(2) means that the configuration of the combination ladder is such that the ladder is self-supporting and functions as stepladder.

The OSHA construction ladder standard also requires that stepladders have spreaders or locking devices (§ 1926.1053(a)(8)). In addition, the A14.1–2007 and A14.2–2007 standards require spreaders or locking devices for stepladders, and A14.2–2007 requires that combination ladders and trestle ladders also have those devices (A14.1–2007, Section 6.2.1.6; and A14.2–2007, Sections 6.1.9, 6.5.8, 6.6.8). The proposed rule would have required that stepladders be ''designed'' with spreaders or locking devices; the final rule clarifies that the stepladder must be ''equipped'' with those devices when used by an employee.

Final paragraph (c)(2) does not retain language in the existing rules requiring that employers remove or cover sharp points or edges on spreaders (§§ 1910.25(c)(2)(i)(*f*) and 1910.26(a)(3)(viii)). OSHA believes that final § 1910.23(b)(7), which requires employers to ensure ladder surfaces are free of puncture and laceration hazards adequately addresses that issue. Thus, OSHA believes that it is not necessary to repeat that requirement in final paragraph (c)(2). OSHA did not receive any comments on the proposed deletion.

Final paragraph (c)(3) requires that employers not load portable ladders beyond their maximum intended load. A note to final paragraph (c)(3) reminds employers that maximum intended load includes the weight and force of workers and the tools, equipment, and materials workers are carrying, which is consistent with the definition of ''maximum intended load'' in final § 1910.21(b).

The final rule differs from both the existing and proposed rules. The existing rule requires that portable ladders be capable of withstanding a 200-pound load. In the proposed rule, OSHA required that employers ensure that the weight on portable ladders not exceed the weight ''for which they were designed and tested, or beyond the manufacturer's rated capacity.''

After further analysis, OSHA removed the proposed language from final paragraph (c)(3) for the following reasons. First, OSHA believes that requiring employers to ensure each ladder supports its maximum intended load is comprehensive, and the additional language in the proposed rule is not necessary. OSHA believes that the language in the ''maximum intended load'' definition (*i.e.,* ''loads reasonably anticipated to be applied to a walking-working surface'') will ensure that the load on a ladder will not exceed the weight for which the ladder was designed or tested, or the manufacturer's rated capacity.

Second, removing the additional language in the proposal makes final paragraph (c)(3) consistent with final § 1910.22(b), and easier to understand. Third, OSHA believes that including the proposed language ''manufacturer's rated capacity'' in the final rule may cause confusion about whether the provision applies to both job-made ladders and manufactured ones. The language in the final standard clearly reads that the requirement applies to all types of portable ladders.

OSHA notes that, unlike the performance-based language in final paragraph (c)(3), the construction ladder standard requires that portable ladders meet specific load requirements (§ 1926.1053(a)(1)). As discussed above, one of the goals of this rulemaking is to make the final rule consistent with the construction standard. Accordingly, OSHA will consider employers who ensure their portable ladders meet the load requirements in § 1926.1053(a)(1) as being in compliance with final paragraph (c)(3). OSHA did not receive any comments on the proposed provision and finalizes the provision as discussed.

Final paragraph (c)(4), like the proposed rule, requires that employers ensure portable ladders are used only on stable and level surfaces unless they are secured or stabilized to prevent accidental displacement. When the footing of ladders is not stable or level and the ladder is not secure, the ladder can slip out of place or tip over because of workplace activities, traffic, and weather conditions (*e.g.,* high winds). According to the A14.1–2007 standard, lack of stability and sliding of the ladder are the major causes of falls from self-supporting ladders, while lateral sliding at the top of the ladder and outward sliding of the ladder at the lower base support are major causes of falls from non-self-supporting portable ladders (A14.1–2007, Section 8.1.3).

The final rule consolidates and revises the existing portable ladder rules, which requires placing portable ladders so they have ''secure footing'' (§§ 1910.25(d)(2)(iii) and 1910.26(c)(3)(iii)). The final rule further clarifies that employers can ensure secure footing for portable ladders either by (1) placing them on a stable and level surface, or (2) securing or stabilizing them.

Depending on the type of ladder and the conditions of use, securing or stabilizing portable ladders may be as simple as using swivel or rubber ladder feet, or may involve more complex procedures such as using ladder levelers to equalize side rail support. The A14.1–2007 and A14.2–2007 standards provide useful guidance about methods employers can use to secure portable ladders, including foot ladder boards and similar devices.

Final paragraph (c)(4) does not carry forward language in existing § 1910.25(d)(2)(iii) requiring that the top rest for portable ladders be reasonably rigid and have ample strength to support the supplied load. OSHA believes final paragraph (c)(10) adequately addresses the hazard, so the language in the existing rule is no longer needed. The final rule requires placing the bottom and top of ladder side rails on a stable and level surface, or securing and stabilizing the ladder. Unless the employer addresses the stability of both ends of the ladder, the ladder is not safe for workers to use.

Final paragraph (c)(4) is almost identical to OSHA's construction ladder standard (§ 1926.1053(b)(6)), and is consistent with OSHA's maritime ladder standards (§§ 1915.72(a)(3); 1917.119(f)(8); and 1918.24(j)(1) and (2)). The final rule also is consistent the A14 portable ladder standards (A14.1–2007, Section 8.3.4; and A14.2–2007, Section 8.3.4). OSHA did not receive any comments on the proposed provision.

Final paragraph (c)(5), like the existing and proposed rules, requires that employers ensure workers do not use portable single-rail ladders. OSHA's construction ladder standard (§ 1926.1053(b)(19)), which also prohibits using single-rail ladders, defines them as ''a portable ladder with rungs, cleats, or steps mounted on a single rail instead of the normal two rails used on most other ladders'' (§ 1926.1050(b)). In the preamble to the final construction ladder rule, OSHA said, ''Single-rail ladders are inherently difficult to use because of their instability'' (55 FR 47681). OSHA believes that use of single-rail ladders in general industry also poses the same hazards. OSHA notes the prohibition in the existing rule has been in place since OSHA adopted it in 1971 from national consensus standards available at the time.

Although the A14.1–2007 standard does not contain the prohibition on single-rail ladders that was in A14.1–1968, OSHA believes it is clear that A14.1–2007 and A14.2–2007 do not cover or endorse their use. The definition of portable ladder in both of these standards indicates that they consist of ''side rails, joined at intervals by rungs, steps, cleats or rear braces'' (A14.1–2007, Section 4; and A14.2–2007, Section 4). OSHA notes that A14.1–2007 and A14.2–2007 do not address single-rail ladders, which indicates that their use is not generally accepted industry practice.

Mr. Robert Miller, a senior safety supervisor with Ameren, opposed the prohibition on single-rail ladders, arguing:

> I don't feel it is necessary to eliminate what for an employer may be the safest most feasible method of accessing another level of the work area if that employer can show by training, performance and history that the single rail ladder poses no greater hazard than another method (Ex. 189).

Mr. Miller recommended that OSHA allow employers to demonstrate by training, performance, and history that the single-rail ladder poses no greater hazard than any other method (Ex. 189). However, Mr. Miller did not provide a single example of when using a single-rail ladder would be as safe, or safer, than using portable ladders with two side rails. Accordingly, Mr. Miller did not convince OSHA to remove from the final standard the prohibition on using single-rail ladders.

OSHA notes that, in an enforcement action, employers may raise the affirmative defense of greater hazard. Employers raising this defense have the burden of proving that complying with the OSHA standard poses a greater hazard to employees than complying with the standard and no alternative means of employee protection are available. OSHA observes that Ameren did not present any information or evidence that would meet this burden.

Final paragraph (c)(6), like the proposal, adds a new requirement that employers ensure a ladder is not moved, shifted, or extended while a worker is on it. Moving, shifting, or extending an occupied ladder is dangerous to workers, whether it is the worker on the ladder who moves (''hops'') it or a worker on the ground who moves the ladder while a worker is on the ladder. Moving, shifting, or extending an occupied ladder could cause the worker to fall off the ladder or cause the ladder to tip over. According to the A14.1–2007 standard, a leading factor contributing to falls from portable ladders is movement of the ladder (A14.1–2007, Section 8.1.5).

OSHA drew this provision from the construction ladder standard (§ 1926.1053(b)(11)). The A14.1–2007 and A14.2–2007 standards also prohibit ''relocating'' a ladder while a worker is on it (A14.1–2007, Section 8.3.15; and A14.2–2007, Section 8.3.15). OSHA did not receive any comments on the proposed provision.

Final paragraph (c)(7), consistent with the proposed rule, requires that employers ensure ladders placed in locations where other activities or traffic can displace them (*e.g.,* passageways, doorways, and driveways) are:

- Secured to prevent accidental displacement (final paragraph (c)(7)(i)); or
- Guarded by a temporary barricade, such as a row of traffic cones or caution tape, to keep activities or traffic away from the ladder (final paragraph (c)(7)(ii)).

Final paragraph (c)(7) is consistent with the existing rule, which requires that employers must not place ladders in front of doors unless the door is blocked, locked, or guarded (§ 1910.25(d)(2)(iv)). OSHA believes the final rule retains the flexibility of the existing rule and identifies additional measures employers can use to prevent activities and traffic from striking ladders that are near passageways, doorways, or driveways, which may cause workers located on the ladders in those areas to fall. For example, to prevent injury to workers while they work on ladders by a doorway, employers can ''secure'' the area by simply locking the door so no one can open it and strike the ladder, or ''guard'' the door using a temporary barricade of traffic cones or caution tape. If the doorway is a required exit route (see 29 CFR part 1910, subpart E) that cannot be locked or blocked, the final rule allows employers the flexibility to ''guard'' the doorway by posting a monitor to control passage through the door.

Final paragraph (c)(7) is almost identical to OSHA's construction ladder standard (§ 1926.1053(b)(8)). It also is consistent with A14.1–2007 (Section 8.3.12) and A14.2–2007 (Section 8.3.12).

Final paragraph (c)(8) requires that employers ensure that employees do not use the cap, if equipped, and the top step of a stepladder as steps. The purpose of final paragraph (c)(8) is to clarify that the existing and proposed rules, which state that employers must not use the ''top of a stepladder,'' includes both the top step of the stepladder and top cap of the stepladder. Using either surface as a step may decrease the ladder's stability and cause it to fall over, injuring the worker.

Final paragraph (c)(8) is almost identical to OSHA's construction ladder standard (§ 1926.1053(b)(13)), and is consistent with both A14.1–2007 (Section 8.3.2(1)) and A14.2–2007 (Section 8.3.2(1)). OSHA did not receive any comments on the proposed provision.

Final paragraph (c)(9) requires that employers ensure portable ladders used on slippery surfaces are secured and stabilized. For the purposes of this paragraph, slippery surfaces include, but are not limited to, environmental (*e.g.,* rain, snow, ice) and workplace conditions (*e.g.,* oil, grease, solvents). When any of these conditions make walking-working surfaces slippery, it is important that employers secure and stabilize ladders to prevent displacement, which could cause workers to fall. Final paragraph (c)(9) is a companion provision to final paragraph (c)(4), which requires that employers ensure portable ladders are used only on stable and level surfaces unless they are secured or stabilized to prevent displacement.

The final rule gives employers flexibility in selecting measures to secure or stabilize ladders that they use. Consistent with OSHA's construction ladder standard (§ 1926.1053(b)(7)), in appropriate situations employers may use ladders equipped with slip-resistant feet to secure and stabilize them on slippery surfaces. However, employers may not be able to rely on the use of ladders with slip-resistant feet in all cases where surfaces are slippery. In some conditions it may be necessary for employers to take additional or other measures, such as lashing, to secure and stabilize portable ladders. For example, the construction ladder standard specifies that slip-resistant feet shall not be used as a substitute for holding a ladder that is used upon slippery surfaces including, but not limited to, flat metal or concrete surfaces that are constructed so they cannot be prevented from becoming slippery (§ 1926.1053(b)(7)).

OSHA notes the final rule covers all portable ladders while the proposed rule only would have applied the requirement to portable ladders that are not self-supporting. OSHA revised the final rule for two reasons. First, although under final paragraph (c)(4) OSHA considers slippery surfaces to be unstable for all types of portable ladders, the Agency is expressly applying final paragraph (c)(9) to all portable ladders to make sure the hazard is clearly addressed. For example, self-supporting ladders that are not equipped with slip-resistant feet can move or slide in slippery conditions, which can cause the worker to fall off the ladder. The revision ensures that the final rule protects workers from this hazard.

Second, the revision of final paragraph (c)(9) makes the provision consistent with the construction ladder standard, which applies to all ladders (§ 1926.1053(b)(7)). Applying final paragraph (c)(9) to all portable ladders also makes the final rule consistent with A14.1–2007 (Section 8.3.4) and A14.2–2007 (Section 8.3.4), which address all wood and metal portable ladders, as well as Section 6(b)(8) of the OSH Act (29 U.S.C. 655(b)(8)). Section 6(b)(8) specifies that whenever an OSHA standard differs substantially from an existing national consensus standard, the Agency must explain why the adopted rule better effectuates the purposes of the OSH Act. OSHA believes the revised provision will protect all workers using any type of portable ladder, and therefore best effectuates the OSH Act. OSHA did not receive any comments on the proposed provision.

Final paragraph (c)(10), like both the existing and proposed rules, requires that employers ensure that employees place the top of non-self-supporting ladders so that both side rails are supported, unless the ladders are equipped with single support attachments. Final paragraph (c)(10) revises the existing rule (§ 1910.26(c)(3)(iv)) by adding the term ''non-self-supporting'' to clarify that it is non-self-supporting ladders that need to be supported before workers attempt to use them. Self-supporting ladders must not be used as non-self-supporting ladders (see final paragraph (b)(8); *see also,* A14.1–2007, Section 8.3.5)). The final rule is identical to OSHA's construction ladder standard (§ 1926.1053(b)(10)), and is consistent with both A14.1–2007 (Section 8.3.5) and A14.2–2007 (Section 8.3.5). OSHA did not receive any comments on the proposed provision.

Final paragraph (c)(11), like the existing and proposed rules, requires that employers ensure portable ladders used to gain access to an upper landing surface have side rails that extend at least 3 feet above the upper landing surface. OSHA believes that retaining the existing requirement is important because transitioning from ladders to upper landing surfaces is hazardous to workers. Requiring the ladder side rails to extend 3 feet above the upper landing surface ensures that workers have adequate support and hand holds so they can access the upper landing surface safely. OSHA's construction ladder standard (§ 1926.1053(b)(1)), A14.1–2007 (Section 8.3.10), and A14.2–2007 (Section 8.3.10) also require that portable ladders extend 3 feet above the upper landing surface.

OSHA received one comment on the proposal. Ellis Fall Safety Solutions (Ex. 329 (1/21/2011, p. 260)) said OSHA should recognize attaching extensions onto the end of side rails as an acceptable means to comply with the 3-foot extension requirement. In the proposal, OSHA noted that employers may use after-market ladder extensions to increase the length of a ladder to meet proposed paragraph (c)(11), provided:

- The after-market rail extensions ''are securely attached (that is, secured to the extent necessary to stabilize the extension and not expose the employee to a falling hazard from the extension's displacement)''; and
- The ladder to which the after-market rail extensions is attached is ''specifically designed for the application'' in accordance with proposed paragraph (c)(14).

OSHA said that side-rail extensions that meet these requirements ''would be considered part of the ladder itself'' (75 FR 28877). In 2005, OSHA permitted use of after-market rail extensions under the construction ladder standard if the ladders meet the requirements above (see letter to Mr. Bruce Clark, president of American Innovations Corporation, December 22, 2005).[20] Based on the record as a whole, OSHA concludes that employers may use after-market rail extensions to meet the requirement of final paragraph (c)(11), provided that the ladders meet these requirements.

Final paragraph (c)(12), like proposed paragraph (c)(13), requires that employers not use ladders and ladder sections tied or fastened together to provide added length unless the ladder design specifically permits such use. The purpose of the final paragraph is to prevent the use of unsafe rigging methods and to use ladders only as they were intended. Ladders gerry-rigged to provide longer lengths are not likely to be as strong and stable as ladders designed to reach such heights.

Limiting fastening together ladders and ladder sections to those ''specifically designed for such use'' means that the designer developed both the ladders and any mechanism used to connect them specifically to achieve greater length. The final rule revises existing § 1910.26(c)(3)(v), which specifies that the manufacturer must equip the ladders and ladder sections with necessary hardware fittings, if the manufacturer endorses allowing such ladder extensions, to ensure that the requirement covers both manufactured and job-made ladders and ladder sections. Therefore, under the final rule the ladder designer, regardless of whether employed by the employer, a manufacturer, or other company, must develop the ladder or ladder section specifically for the purpose of fastening them together to extend the length of the ladder or the employer must not fasten the ladder or ladder sections together. Final paragraph (c)(12) is consistent with existing § 1910.25(d)(2)(ix), A14.1–2007 (Section 8.3.11), and A14.2–2007 (Section 8.3.11).

Final paragraph (c)(13) retains the language in existing § 1910.25(d)(2)(v), which prohibits placing ladders on boxes, barrels, or other unstable bases to obtain additional height. The proposed rule (proposed paragraph (c)(14)) prohibited employers from increasing the reach of ladders and ladder sections by any means not permitted specifically by the design of the ladders. After further analysis, OSHA believes the language in the existing rule is clearer and easier to understand than the proposed language. The language also is the same as A14.1–2007 (Section 8.3.4) and A14.2–2007 (Section 8.3.4).

For the purposes of final paragraph (c)(13), unstable bases include surfaces such as vehicles, truck flatbeds, scaffolds, and stairs. OSHA received one comment on the proposed provision. Southern Company (Ex. 192) asked whether paragraph (c)(13) prohibited the use of ladder-leveling devices that extend the reach of the ladder. Final paragraph (c)(12) addresses fastening together ladders and ladders sections. However, OSHA does not consider ladder-leveling devices to be ladders or ladder sections. Rather they are devices attached to ladder side rails and allow for independent adjustment of the rails to ensure the ladder is level. Like the A14 standards, OSHA considers ladder-leveling devices to be ''ladder accessories . . . that may be installed on or used in conjunction with ladders'' (A14.1–2007, Section 1.1; and A14.2–2007, Section 1.1). Although ladder-leveling devices may be temporary or permanent attachments to the ladder, OSHA does not consider ladder-leveling devices to be ''part of the ladder itself'' (75 FR 28877). Therefore, final paragraph (c)(13) does not apply to ladder-leveling devices, even if they increase the length of the ladder.

That said, other provisions in §§ 1910.22 and 1910.23 (*e.g.,* final paragraphs (b)(8) and (c)(4)) are applicable when employers use ladder-leveling devices. For example, paragraph (b)(8) mandates that employers use ladders only for their intended purpose. OSHA believes that employers are using ladders for their intended purpose only when the design of the accessories attached to, or used in conjunction with, the ladders permit such use. OSHA notes that there are many after-market ladder devices that employers may attach to, or use in conjunction with, ladders. Many of these devices, including ladder-leveling devices, can help to make ladders safer for workers to use. OSHA is not prohibiting the use of ladder accessories that can make ladders safer for workers to use. However, after-market add-ons must meet the standard's requirements. That is, when in use, the additional device must not reduce the ladder's strength or stability, and employers must use them only for their designed purpose. Although allowed, OSHA cautions employers against using job-made devices unless a professional engineer designed and certified them. OSHA notes that the Agency does not approve or endorse specific products.

Paragraph (d)—Fixed Ladders

Final paragraph (d) establishes requirements that apply to fixed ladders, in addition to the requirements in final paragraph (b). The final rule defines ''fixed ladder'' as a ladder, with side rails or individual rungs, that is permanently attached to a structure, building or equipment (§ 1910.21(b)). Fixed ladders do not include ship stairs, stepbolts, or manhole steps.

Final paragraph (d)(1), like the proposed rule, establishes a

[20] OSHA letter to Mr. Bruce Clark available at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=25177.*

performance-based provision requiring that employers ensure any fixed ladder a worker uses is capable of supporting the maximum intended load. As discussed in § 1910.22, and above in this section, ''maximum intended load'' means ''the total load (weight and force) of all employees, equipment, vehicles, tools, materials, and loads the employer reasonably anticipates to be applied to a walking-working surface'' (§ 1910.21(b)).

The performance-based language in final (d)(1) replaces the detailed specification requirements in the existing rules (§ 1910.27(a)(1)(i) through (iv) and (a)(2)). OSHA requested comment on whether the Agency should retain the specification requirements in existing § 1910.27(a)(1), but did not receive any comments.

OSHA did not adopt proposed paragraph (d)(2) as a companion to proposed paragraph (d)(1). Proposed paragraph (d)(2) required that employers ensure fixed ladders installed on or after 150 days after issuing the final rule meet specific design, construction, and maintenance requirements, including supporting two 250-pound live loads. The existing rule requires that fixed ladders support a single concentrated 200-pound load (§ 1910.27(a)(1)). After additional analysis, OSHA decided to adopt proposed paragraph (d)(1), and not retain existing § 1910.27(a) or adopt proposed paragraph (d)(2). First, OSHA believes the maximum load requirement in final paragraph (d)(1) is as safe as, or more protective than, the existing and proposed rules. Final paragraph (d)(1) requires that employers ensure that a fixed ladder meets the maximum load that the designer specifically established for that particular fixed ladder. OSHA believes that following the load requirement established for a particular ladder is at least as safe as a general specification (200 or 250 pounds) applied to all fixed ladders.

Second, OSHA believes the performance-based approach in final paragraph (d)(1) is easier to understand and follow than the minimum weight specifications in the existing and proposed rules. In addition, the final rule gives employers greater flexibility in selecting and using fixed ladders. OSHA notes that Ameren (Ex. 189), among other commenters, supported the use of performance-based language for this and other provisions in the final rule.

Third and finally, not adopting the proposed rule, which had an effective date 150 days after publication of the final rule, addresses commenters' concerns that that OSHA failed to give adequate lead-in time to come into compliance with the new requirement (Exs. 189; 192).

Final paragraph (d)(2), like proposed paragraph (d)(3), requires that employers ensure the minimum perpendicular distance from the ladder to the nearest permanent object in back of the ladder is 7 inches. The final rule requires that this distance be measured from the centerline of the fixed ladder steps and rungs or grab bars, or both, to the object in back of the ladder (*e.g.* wall). OSHA believes the 7-inch minimum will ensure that workers have adequate space to get a safe foothold on fixed ladders. Final paragraph (d)(2) also includes an exception for elevator pit ladders. For these ladders, the employer must ensure that the minimum perpendicular distance is 4.5 inches.

Final paragraph (d)(2), like the proposal, revises the existing rule (§ 1910.27(c)(4) and (5)) in several ways. First, the final rule replaces the existing 4-inch minimum perpendicular distance for grab bars with a 7-inch minimum clearance. To ensure worker safety while they climb fixed ladders and transition to upper landing surfaces, OSHA believes that the minimum perpendicular distance for grab bars needs to be the same as the minimum perpendicular distance specified for ladder rungs and steps.

Second, final paragraph (d)(2) eliminates an exception from the 7-inch clearance requirement for ''unavoidable obstructions'' (§ 1910.27). OSHA stated in the preamble to the final construction ladder standard that ''the minimum clearance requirement is necessary, regardless of any obstructions, so that employees can get safe footholds on ladders'' (55 FR 47675).

Third, final paragraph (d)(2) adds a new exception that reduces the minimum perpendicular clearance in elevator pits to 4.5 inches. OSHA drew this exception from the construction ladder standard (§ 1926.1053(a)(13)). The exception is consistent with the ANSI/ASME A17.1–2010, Safety Code for Elevators and Escalators (Section 2.2.4.2.4) (Ex. 380). Generally, space in elevator pits is restricted, and it may not be possible to have a 7-inch clearance. In the preamble to the construction ladder standard, OSHA said the exception for elevator pit ladders was appropriate because elevator shafts generally are secure from unauthorized access (55 FR 47675). As such, only workers who have the required equipment and fall protection training would be accessing the elevator pit (55 FR 47675). Under the final rule, employers must train each worker in the proper use of equipment, including fixed ladders, before permitting any worker to use the equipment (§ 1910.30(b)(1)).

One of OSHA's goals in revising the existing rule (§ 1910.27(c)(4)) was to make the final rule consistent with OSHA's construction ladder standard, and final paragraph (d)(2) is almost the same as that rule (§ 1926.1053(a)(13)). The construction standard also contains language specifically indicating that the required 7-inch clearance also applies to obstructions. In addition, the final rule is consistent with the 7-inch minimum perpendicular distance in existing § 1910.27(c)(4) and A14.3–2008 (Section 5.4.2.1).

OSHA received one comment from Southern Company (Ex. 192). They asked to grandfather in the existing requirement because they have many fixed ladders and ''[r]edesigning or moving any of these ladders to avoid these obstructions could be expensive or in some cases infeasible.'' OSHA does not believe that grandfathering is necessary. The Agency believes the vast majority of fixed ladders currently in use comply with the final requirement because the final rule reflects requirements in place under ANSI A14.3 since 1974. In addition, OSHA's construction standard has required the same clearance since the Agency adopted it in 1994.

Final paragraphs (d)(3) through (8) establish requirements for ladder extension areas to ensure that workers are able to transition safely from the fixed ladder to the landing surface. In particular, several of the provisions apply to through and side-step ladders. The A14.3–2008 standard defines through ladders as rail ladders that require a worker getting off to step through the ladder to reach the landing (A14.3–2008, Section 3). That standard also defines side-step ladders as rail ladders that require workers getting off at the top to step sideways from the ladder to reach the landing (A14.3–2008, Section 3).

Final paragraph (d)(3), like the existing (§ 1910.27(c)(5)) and proposed rules, requires that employers ensure grab bars on the climbing side do not protrude beyond the rungs of the ladder they serve. The final rule defines grab bars as individual vertical or horizontal handholds that provide access above the ladder height (§ 1910.21(b)). Grab bars that protrude beyond the rungs of the ladder can be hazardous because they make it more difficult to climb and transition to landing surfaces. To illustrate, having the grab bars protrude further than the ladder would put the worker at an angle greater than 90 degrees and make climbing and holding on more difficult, which makes a fall more likely. OSHA did not receive any comments on the proposed provision.

Final paragraph (d)(4), like the proposed rule, establishes requirements for through and side-step ladders, including those ladders used on buildings with parapets. The final rule requires that employers ensure the side rails of through or side-step ladders extend 42 inches above the top of the access level or platform served by the ladder.

Final paragraph (d)(4) also adds language specifying what constitutes the ''access level'' for through and side-step ladders on buildings that have parapets. When a parapet has an opening that permits passage through it (*i.e.,* through ladder), the final rule specifies that the access level is the roof (final paragraph (d)(4)(i)). For parapets without such an opening (*i.e.,* side-step ladders), the final rule specifies the access level is the top of the parapet (final paragraph (d)(4)(ii)). OSHA added this language to clarify the Agency's intent that workers must have sufficient handholds at least 42 inches above the highest level on which they will step when reaching the access level, regardless of the location of the access level (*i.e.,* roof or top of parapet). The language also makes the final rule consistent with § 1926.1053(a)(24) and A14.3–2008 (Section 5.3.2.1). OSHA did not receive any comments on the proposed provision.

Final paragraph (d)(5), like the existing (§ 1910.27(d)(3)) and proposed rules, specifies that employers ensure that there are no steps or rungs on the portion of the through ladder extending above the access level. It is obvious that this requirement is necessary to allow workers to pass the ladder and step onto the upper landing surface. The final rule is the same as OSHA's construction ladder standard (§ 1926.1053(a)(25)) and A14.3–2008 (Section 5.3.2.2).

In addition, final paragraph (d)(5), like the proposed rule, also requires flared extensions of the side rails above the access level to provide clearance of not less than 24 inches and not more than 30 inches. The final rule increases the existing clearance width (from 18 to 24 inches) between the side rails. OSHA believes the additional clearance will help to ensure that workers equipped with personal fall protection systems, tools, and other items have adequate space to negotiate the pass-through area and reach the upper landing safely. The increased clearance width makes the final rule consistent with OSHA's construction standard (§ 1926.1053(a)(25)) and A14.3–2008 (Section 5.3.2.2).

Final paragraph (d)(5) adds a new clearance width requirement for through ladders equipped with ladder safety systems. In those cases, the final rule requires that employers ensure the clearance between side rails of the extensions does not exceed 36 inches. The new provision makes the final rule consistent with OSHA's construction ladder standard (§ 1926.1053(a)(25)). OSHA did not receive any comments on the proposed provision.

Final paragraph (d)(6), like the proposed rule, adopts a performance-based revision of the existing rule for side-step ladders (§ 1910.27(d)(3)). Accordingly, the final rule requires that employers ensure the side rails, rungs, and steps of side-step ladders be continuous in the extension. The existing rule, by contrast, specifies that the landings of side-step or off-set fixed ladder sections have side rails and rungs that extend to the next regular rung above or beyond the 42-inch minimum extension. OSHA believes the performance-based revision makes the final rule easier to understand and follow. The final rule is consistent with OSHA's construction standard (§ 1926.1053(a)(24)) and A14.3–2008 (Section 5.3.2.3).

Final paragraphs (d)(7) and (8) specify criteria for grab bars. Final paragraph (d)(7), like the proposed rule, requires that employers ensure grab bars extend 42 inches above the access level or landing platforms of the ladder, which is the same height required for side rails in the extension area of through and side-step ladders (see final paragraph (d)(4)). Final paragraph (d)(7) revises and clarifies the existing rule (§ 1910.27(d)(4)), which states that grab bars ''be spaced by a continuation of the rung spacing when they are located in the horizontal position,'' and have the same spacing as ladder side rails when located in the vertical position. The final rule identifies, more clearly and exactly, the required location (*i.e.,* above the access level or platform) and height (*i.e.,* 42 inches) of the grab bars. OSHA believes that employers will find the final rule easier to understand and follow.

OSHA drew the language in final paragraph (d)(7), in part, from its construction ladder standard (§ 1926.1053(a)(27)) and A14.3–2008 (Sections 5.3.3.1 and 5.3.3.2). The final rule expands application to grab bars on all fixed ladders; OSHA's construction ladder standard and A14.3–2008 only apply to individual-rung ladders. Also, the final rule does not include the exception in OSHA's construction standard and A14.3–2008 for manhole steps, covers, and hatches because manhole steps are not considered ladders in this rule and are covered in a separate section (final § 1910.24). OSHA did not receive any comments on the proposed provision.

Final paragraph (d)(8), like the existing (§ 1910.27(d)(4)) and proposed rules, requires that employers ensure the minimum size (*i.e.,* cross-section or diameter) of the grab bars are the same size as the rungs on that ladder. The final rule clarifies the existing rule by specifying that the grab bars and rungs of fixed ladders be the same size (diameter). The final rule is consistent with A14.3–2008 (Section 5.3.3.3).

OSHA received one comment about grab bars. Nigel Ellis, Ellis Safety Solutions, LLC (Ex. 155), recommended that the final rule require horizontal grab bars, especially if the length of vertical grab bar exceeds 6 inches. He pointed to a study (Young et al., ''Hand-hold Coupling: Effect of Handle Shape, Orientation, and Friction on Breakaway Strength,'' 51 Human Factors 705, October 2009) showing that breakaway strength (*i.e.,* the maximum force that can be exerted on an object before it pulls away or slips from the grasp of the hand) was greatest for fixed horizontal cylindrical-shaped bars (Ex. 344). Based on that study, Mr. Ellis said that it would be more likely that workers could arrest a fall by grabbing a horizontal, rather than a vertical, grab bar. He also said, ''It has been shown that vertical grab bars are a sliding element that prevents an adequate grip to stop a fall,'' and concluded that ''if a vertical grab bar exceeds 6 inches vertically then the hand-sliding fall is unstoppable'' (Ex. 344).

OSHA agrees that horizontal bars provide the possibility of stronger grips than vertical ones in the event of a fall from a ladder when a ladder safety system or a personal fall protection system is not taken into account. However, horizontal grab bars do not provide the level of protection from falls that ladder safety systems and personal fall protection systems provide. Given that ladder safety systems and personal fall protection systems will increasingly protect workers who climb ladders from falling, OSHA does not believe is it necessary at this point to require installation of horizontal grab bars when any vertical grab bar exceeds 6 inches.

Final paragraph (d)(9), like the proposed rule, establishes two requirements for ladders that terminate at hatch covers. First, the final rule requires that employers ensure that the hatch cover opens with sufficient clearance to provide easy access to or from the ladder (see final paragraph (d)(9)(i)). Second, the final rule requires that employers ensure counterbalanced hatch covers open at least 70 degrees from the horizontal (see final paragraph (d)(9)(ii)). In essence, this provision defines in objective terms (70 degrees) what constitutes ''sufficient clearance,'' as used in the existing rule (§ 1910.27(c)(7)).

Final paragraph (d)(9), like the proposal, revises the existing rule in two ways. First, the final rule increases to 70 degrees the angle to which counterbalanced hatch covers must open. The existing rule only requires that hatch covers open a minimum of 60 degrees, but also specifies that the minimum distance from the centerline of the top rung be at least 24 inches for ladders with ''offset wells,'' and at least 30 inches for ''straight wells.'' OSHA believes that increasing the opening to 70 degrees will ensure that the space between the top rung and hatch provides adequate clearance regardless of what type of fixed ladder is used.

Second, the final rule replaces the specification requirement in the existing rule with performance-based language. The performance-based language ensures that the final rule provides a level of worker safety that is as great as or greater than the existing rule, but gives employers the flexibility to determine how counterbalanced hatch covers will open to 70 degrees. The performance-based language also makes final paragraph (d)(9) clearer and easier to follow than the existing rule. The final rule is consistent with A14.3–2008 (Section 5.3.4.2). OSHA notes that A14.3–2008 also includes language similar to the specification language in the existing rule, but the language is only advisory. OSHA did not receive any comments on the proposed provision.

Final paragraph (d)(10), like the existing (§ 1910.27(b)(1)(v)) and proposed rules, requires that employers ensure that the construction of individual-rung ladders will prevent the worker's feet from sliding off the ends of the rungs (Figure D–4 in regulatory text illustrates). OSHA believes this requirement is essential because individual-rung ladders do not have side rails to block the worker's feet from sliding off the rung. Final paragraph (d)(10) is the same as OSHA's construction industry standard (§ 1926.1053(a)(5)). OSHA did not receive any comments on the proposed provision.

Final paragraph (d)(11), like the proposed rule, requires that employers ensure workers do not use fixed ladders that have a pitch greater than 90 degrees from the horizontal. A ladder that exceeds a pitch of 90 degrees makes the ladder dangerous to climb because pitch greater than 90 degrees would require climbers to exert considerable extra force to maintain their grip on the ladder against the gravitational force. The final rule revised the specification approach in the existing requirements (§ 1910.27(e)(1) through (4)), and replaces it with performance-based language. OSHA believes much of the language in the existing rule continues to provide useful information best included in compliance-assistance documents. OSHA did not receive any comments on the proposed paragraph.

Final paragraph (d)(12), like the proposed rule, addresses step-across distances for through and side-step ladders. Specifically, final paragraph (d)(12)(i) requires that employers ensure the step-across distance for through ladders is not less than 7 inches, and not more than 12 inches, to the nearest edge of the structure, building, or equipment accessed from the ladders, measured from the centerline of the ladder. Final paragraph (d)(12)(ii) requires that employers ensure the step-across for side-step ladders is at least 15 inches, but not more than 20 inches, measured from the centerline of the ladder to the nearest point of access on the platform edge.

The final rule, like the proposal, revises the existing rule in § 1910.27(c)(6) in several ways. First, the final rule establishes specific step-across distances for each through and side-step ladder (§ 1910.27(c)(6)). The existing rule establishes a single step-across distance applicable to all fixed ladders. Compared to the existing rule, OSHA believes the final rule more appropriately tailors the step-across distances to the type of ladder used, which improves worker safety.

Second, final paragraph (d)(12) revises the existing step-across distance (*i.e.,* not less than 2.5 inches and not more than 12 inches) to make transitioning from the ladder to the upper landing surface safer and consistent with other provisions in the final rule. OSHA believes that a 2.5-inch step-across distance could conflict with the 7-inch minimum perpendicular clearance requirement in final paragraph (d)(2). The 7-inch clearance requirement is necessary to ensure that workers will have a safe foothold on the ladder. If the existing rule inadvertently results in workers having an inadequate foothold on the top of the ladder, it could increase the worker's chance of falling.

Third, the final rule does not retain the companion provision in the existing rule (§ 1910.27(d)(1)) that requires employers to provide a landing platform if the step-across distance is greater than 12 inches. OSHA believes that the final rule already addresses this issue; therefore, it is not necessary to retain the requirement.

Final paragraph (d)(12) requires that employers measure step-across distance from the centerline of the ladder to the ''nearest edge of the structure, building, or equipment.'' Thus, in the final rule, the nearest edge of a structure may be a landing platform. Final paragraph (d)(12) is consistent with OSHA's construction ladder standard (§ 1926.1053(a)(16)) and A14.3–2008 (Section 5.4.2.2). OSHA did not receive any comments on the proposed provision.

Final paragraph (d)(13) addresses fixed ladders that do not have cages or wells. Final paragraph (d)(13)(i), like the existing (§ 1910.27(c)(2)) and proposed rules, requires that employers ensure ladders without cages or wells have a clear width of at least 15 inches on each side of the ladder centerline to the nearest object. Having at least a 15-inch minimum clearance on the ladder is necessary to provide adequate clearance to climb the ladder and prevent damage to the ladder. Figure D–2 illustrates this requirement, which is consistent with OSHA's construction ladder standard (§ 1926.1053(a)(17)) and A14.3–2008 (Section 5.4.3.1).

Final paragraph (d)(13)(ii), like the proposed rule, requires that employers ensure there is a minimum perpendicular distance of 30 inches from the centerline of the steps or rungs to the nearest object on the climbing side of the ladder. The final rule, like the proposal, revises the existing requirement in § 1910.27(c)(1) in three ways. First, the final rule replaces the existing requirement that the pitch of the ladder be the basis of the minimum perpendicular distance (*i.e.,* 36 inches for 75-degree pitch ladder and 30 inches for 90-degree pitch ladders) with a single, minimum clearance, regardless of the ladder pitch. OSHA believes that the revised rule will not pose problems for employers because the pitch of virtually all fixed ladders is 90 degrees. As such, the final rule is consistent with the existing rule. The revision in the minimum perpendicular clearance makes the final rule consistent with OSHA's construction ladder standard (§ 1926.1053(a)(14)) and A14.3–2008 (Section 5.4.1.1).

Second, the final rule provides an exception to the minimum perpendicular clearance requirement ''[w]hen unavoidable obstructions are encountered.'' The final rule allows a reduction of the minimum clearance to 24 inches in those cases, provided that employers install deflector plates. The deflectors will protect workers on fixed ladders by guiding them around unavoidable obstructions. Adding this exception makes the final rule consistent with OSHA's construction ladder standard (§ 1926.1053(a)(15)) and A14.3–2008 (Section 5.4.1.3).

Third, final paragraph (d)(13) recasts the existing rule so it is more performance-based. OSHA believes this change makes the final rule easier to understand and follow than the existing rule.

OSHA received one comment on the proposed provision. Ameren Corporation stated:

> As long as the fixed ladders in any facility comply with the current ''inches clearance per pitch'' requirements, they should be grandfathered in due to the potential financial impact and minimum difference in clearance as well as any history of no apparent difficulties with head clearance by way of reviewing incident reporting trends (Ex. 189).

OSHA does not agree with Ameren that the revisions to the minimum perpendicular clearance on the climbing side of fixed ladders will have any significant financial impact on employers who are in compliance with the existing rule. As mentioned earlier, almost all fixed ladders have a 90-degree pitch, which means that they must already meet the 30-inch clearance requirement of the existing rule. Therefore, the vast majority of employers would not have to replace their ladders since they are in compliance with the existing provision.

Final paragraph (d) includes an informational note stating that §§ 1910.28 and 1910.29 establish, respectively, the duty to provide fall protection for workers using fixed ladders and the mandatory criteria for that fall protection.

Paragraph (e)—Mobile Ladder Stands and Mobile Ladder Stand Platforms

Final paragraph (e) establishes requirements that apply to mobile ladder stands and mobile ladder stand platforms (mobile ladder stands and platforms). These requirements apply to mobile ladder stands and platforms in addition to the requirements specified by paragraph (b) of this section that cover all ladders.

Final paragraph (e) is a performance-based revision of the design and use requirements in the existing rule (§ 1910.29(a) and (f)), and consistent with the design requirements in the ANSI standard (A14.7–2011). Therefore, consistent with the requirement in the OSH Act that OSHA express standards ''in terms of objective criteria and of the performance desired,'' final paragraph (e) does not incorporate the testing requirements in either the existing OSHA rule or ANSI standard (*e.g.,* § 1910.29(f)(5); A14.7–2011 (Section 5)).

For purposes of the final rule, final § 1910.21(b) defines a ''mobile ladder stand'' as a ladder that:

- Is mobile;
- Has a fixed height;
- Is self-supporting; and
- Is designed for use by one worker at a time.

This paragraph of the final rule also specifies that mobile ladder stands generally consist of:

- Wheels or casters on a rigid base;
- Steps (treads); and
- A top step.

Mobile ladder stands also may have handrails. This definition is consistent with both the existing OSHA rule and ANSI standard (§ 1910.21(g); A14.7–2011, Section 3). Although the final rule does not identify what constitutes a ''top step,'' the ANSI standard defines the term ''top step'' as ''[t]he uppermost flat surface of a ladder stand upon which a person may stand and that has a front to back dimension of not less than 9.5 inches or more than 32 inches and does not exceed 6.7 square feet in area'' (A14.7–2011, Section 3).

A ''mobile ladder stand platform,'' as defined in the final rule (§ 1910.21(b)), is a mobile ladder stand with treads leading to one or more platforms. Unlike the definition of mobile ladder stands, some mobile ladder stand platforms may be designed for use by more than one worker at a time.

Although the existing OSHA ladder rules for general industry do not define or specifically address mobile ladder stand platforms, the final definition is consistent with the ANSI standard (A14.7–2011, Section 3). The ANSI standard also defines a ''platform'' as ''[a]n elevated surface for standing or working that is more than 6.7 square feet in area, or more than 32 inches in depth and may be occupied by more than one person'' (A14.7–2011, Section 3).

While the existing OSHA rule does not specifically address mobile ladder stand platforms, many of the provisions in the existing rule provide effective worker protection regardless of whether employees are working on mobile ladder stands or mobile ladder stand platforms. Thus, when appropriate, in the final rule OSHA applied provisions in the existing rules to mobile ladder stand platforms as well as mobile ladder stands.

One commenter raised general concerns about the design requirements for mobile ladder stands and platforms:

> Nearly all requirements are design and construction requirements over which an employer would have minimal or no control.
>
> Again, an employer would be relying primarily on third party certification without any assurance that such reliance would be recognized as a legitimate defense against OSHA citations (Ex. 368).

The commenter is correct that most of the general provisions in proposed and final paragraph (e)(1) are equipment-design requirements. This also applies to the existing OSHA rules, which have been in place since 1973. Many other OSHA standards also require that employers provide equipment designed, constructed, and maintained so it is safe for their workers to use. In the years since OSHA adopted the existing rules, no employers have raised concerns about being able to comply with the design requirements. OSHA also believes that today, more than 40 years after it adopted the existing rules, virtually all mobile ladder stands and platforms manufactured meet the design requirements of the existing rules, as well as the ANSI standard.

OSHA, however, does not agree that employers have minimal or no control over whether mobile ladder stands and platforms meet the design requirements in the final rule. Employers are free to design and construct their own equipment to the design requirements in OSHA standards, and some employers do. For example, employers may build their own mobile ladder stands and platforms if they need the units for special purposes, or if the ladders must fit into unusual locations.

Employers also have control over the equipment they purchase. They can evaluate, investigate, and even test potential equipment to ensure that it meets OSHA requirements. They also can select equipment that a recognized third party (*e.g.,* Underwriters Laboratories) tests and certifies as meeting the OSHA requirements. In addition, employers can obtain the third-party testing information or reports to reassure themselves that the equipment meets the requirements in the final rule.

Final paragraph (e)(1) establishes general design and use requirements that apply to both mobile ladder stands and mobile ladder stand platforms. OSHA drew these general requirements from two sources: (1) The existing rule (§ 1910.29); and (2) A14.7–2011.

Final paragraph (e)(1)(i), like the existing (§ 1910.29(a)(3)(ii)) and proposed rules, requires that employers ensure that the minimum width of steps on mobile ladder stands and platforms is 16 inches. This minimum-width requirement applies regardless of the length (depth) of the top step of mobile ladder stands, which, pursuant to A14.7–2011, may be up to 32 inches in depth or 6.7 square feet in area. OSHA believes that this approach is generally consistent with the ANSI standard, which requires that steps, including the top step, on mobile ladder stands have a minimum width of 16 inches (A14.7–2011, Section 4.3.1); for mobile ladder stand platforms, section 4.4.1 of A–14.7–2011 requires a minimum step width of 16 inches.

OSHA believes that employers should not have any problem complying with final paragraph (e)(1)(i). The existing OSHA and ANSI standards have been in place for many years and OSHA believes the width of steps on virtually all mobile ladder stands and platforms meet the ANSI requirements, and, therefore, are in compliance with the final rule. OSHA did not receive any comments on the proposal, and adopts the provision as discussed.

Final paragraph (e)(1)(ii), like the existing (§ 1910.29(a)(3)(iv)) and proposed rules, requires that employers ensure that steps and platforms of mobile ladder stands and platforms be slip resistant. The final rule includes language, drawn from A14.7–2011, that gives employers greater flexibility in complying with the slip-resistance requirement. Final paragraph (e)(1)(ii) provides that employers may meet the slip-resistance requirement by providing mobile ladder stands and platforms where the slip-resistant surfaces either are (1) an integral part of the design and construction of the mobile ladder stand and platform, or (2) provided by a secondary process or operation. For the purposes of this final rule, secondary processes include things such as dimpling, knurling, shotblasting, coating, spraying the walking-working surfaces, or adding durable slip-resistant tape to steps and platforms.

In addition to providing more flexibility than the existing OSHA requirements for meeting the slip-resistance requirement, OSHA believes the final paragraph will help to ensure a level of protection that is equivalent to or greater than the existing requirements. First, it allows employers to select the types of slip resistance that will provide the most effective protection for workers in the particular workplace conditions in which employers use the unit. For example, in outdoor, icy conditions, grated steps and platforms may provide better slip resistance than steps and platforms with a sprayed-on finish.

Second, the new language also indicates that employers have both an initial and continuing obligation to ensure that steps and platforms on mobile ladder stands and platforms remain slip resistant (*i.e.,* ''[t]he steps . . . are slip resistant''). Accordingly, while the manufacturer may apply the secondary slip resistance process initially, if the slip resistance on steps of stands or platforms wears down or is in need of repair, the final rule requires that employers treat those surfaces with additional processes to restore their slip resistance. For example, if slip-resistant tape comes off, the employer must replace it. OSHA believes that employers should not have problems complying with the final provision since slip-resistance processes and materials are readily available in the marketplace. OSHA did not receive any comments on the proposed provision, and adopts it as proposed.

Final paragraphs (e)(1)(iii) and (iv) establish strength and stability requirements for mobile ladder stands and platforms to ensure units are safe for workers to use. Final paragraph (e)(1)(iii), which is almost identical to proposed paragraph (e)(1)(vi), requires that employers ensure mobile ladder stands and platforms are capable of supporting at least four times their maximum intended load. The existing OSHA rule and ANSI standard also require that mobile ladder stands be capable of supporting at least four times the ''design working load'' or ''rated load,'' respectively (§ 1910.29(a)(2)(ii)(*b*); A14.7–2011, Section 4.2.1). Both standards have been in place for many years, so OSHA believes that virtually all mobile ladder stands and platforms manufactured and currently in use already comply with the final rule.

Final paragraph (e)(1)(iv), which also is almost identical to proposed paragraph (e)(1)(iii), requires that employers ensure wheels and casters of mobile ladder stands and platforms under load are capable of supporting: (1) their proportional share of four times the maximum intended load, plus (2) their proportional share of the unit's weight. OSHA believes this requirement is necessary to ensure that mobile ladder stands and platforms are safe for workers to use. Unless the wheels and casters can support both the proportional weight of the mobile ladder stand or platform and the weight of the maximum intended load placed on that unit, failure of the wheel(s) or caster(s) may occur. If that happens, the stand or platform could become unstable and the worker could fall off the unit and be injured or killed.

Final paragraph (e)(1)(iv) provides greater protection than the existing OSHA rule in § 1910.29(a)(4). The existing rule does not require that wheels or casters be capable of supporting the weight of the mobile ladder stand or mobile ladder stand platform, as well as the weight of the load (*e.g.,* worker, tools, equipment, and materials) placed on it (§ 1910.29(a)(4)(i)). However, OSHA notes that the final rule is almost identical to the ANSI standard (A14.7–2011, Sections 4.3.7 and 4.4.8). As discussed above, the ANSI standard has been in place for many years, so OSHA believes that virtually all mobile ladder stand and platform wheels and casters manufactured and currently in use already comply with the final rule.

In final paragraphs (e)(1)(iii) and (iv), OSHA replaced the term ''design working load'' in the existing OSHA rule with ''maximum intended load'' (*i.e.,* the total load of all employees, equipment, tools, materials, and other loads the employer reasonably anticipates to be applied to the mobile ladder stand or platform). While the definition of ''maximum intended load'' in this final rule (see § 1910.21(b)) is similar to the definition of ''design working load'' in the existing rule (see § 1910.21(g)(5)), using the term ''maximum intended load'' in final paragraphs (e)(1)(iii) and (iv) makes these paragraphs consistent with other provisions in the final rule that use the term.

Finally, consistent with OSHA's goal to make the final rule performance based, final paragraphs (e)(1)(iii) and (iv) do not incorporate the testing requirements in either the existing OSHA rule (§ 1910.29(f)(5)) or A14.7–2011 (Section 5). OSHA did not receive any comments on either of the proposed requirements, and adopts final paragraphs (e)(1)(iii) and (iv) as discussed above.

Final paragraph (e)(1)(v) establishes general requirements for handrails on mobile ladder stand and platform steps (except for handrails on top steps when paragraph (e)(2)(ii) applies). Final paragraph (e)(1)(v) requires that employers ensure mobile ladder stands and platforms have handrails when the height of the top step or platform is 4 feet or higher above lower levels. Where handrails are required, employers must ensure that the handrails have a vertical height of at least 29.5 inches but not more than 37 inches, as measured from the front edge of the step, unless specified elsewhere in the section.

The purpose of the final paragraph (e)(1)(v) is to protect workers from falling when they are climbing or standing on mobile ladder stands and platforms. OSHA believes handrails are necessary to assist workers as they are climbing mobile ladder stands and platforms, and also provide a handhold they can grab to steady themselves if they slip or start to fall off the unit. In addition, handrails provide a necessary barrier to prevent workers from falling off the side of steps and off the top step or platform. To ensure that the barrier provides adequate protection, OSHA notes that stands and platforms must have handrails on both sides of the steps, including the top step and platform. On mobile ladder stands, the handrail also must extend across the open back of the top step.

The existing OSHA rule requires that mobile ladder stand steps have handrails (a minimum of 29 inches high, measured vertically from the center of the step) if the height of the top step was more than 5 feet or 5 steps (§ 1910.29(f)(4)). However, the existing rule does not specify the maximum height allowed for the handrails. In addition, the existing rule does not contain a specific provision covering handrails on mobile ladder stand platforms. The proposed rule, on the other hand, included specific and separate handrails provisions for mobile ladder stands and mobile ladder stand platforms (proposed paragraphs (e)(2)(ii) and (e)(3)(ii)). In the final rule, OSHA consolidated those proposed provisions into the general requirement in paragraph (e)(1)(v) to reduce repetition and simplify the final rule.

The final rule provides greater protection than the existing OSHA rule. The final rule requires that mobile ladder stands and platforms have handrails where the top step height is at least 4 feet compared to more than 5 feet or 5 steps in the existing rule. OSHA notes that the ANSI standard (A14.7–2011, Sections 4.3.5 and 4.4.5) also requires that handrails provide the same level of protection as the final rule.

Final paragraph (e)(1)(v), like the proposal (a note to proposed paragraphs (e)(2)(ii) and (e)(3)(ii)), also allows alternatives to the handrails requirement for ''special-use applications.'' In such situations, the final rule permits employers to use removable gates or non-rigid members (such as chains) instead of handrails on the top step of mobile ladder stands and platforms. The alternative means of compliance allows employers to remove the gates or chains when a work task involves special-use application; however, employers must replace the gates or chains (*i.e.,* comply with the handrail requirement) when they complete the special-use task. In a special use application, it is important that the mobile ladder stand or platform is placed to minimize the risk of falls. For example, when a gate needs to be removed to place or remove objects from a shelf, the employer needs to ensure that the unit is placed so there is no gap between the unit and shelf that could result in a worker falling while performing the task. OSHA believes this alternative method provides flexibility for employers while reducing the exposure of workers to fall hazards under these conditions. For the purposes of this provision, a special-use application may include a situation in which permanent handrails block or impede the movement of boxes, products, or materials from the ladder stand or platform to shelves or other storage areas. The ANSI standard also includes this alternative method (A14.7–2011, Sections 4.3.5, 4.3.6, 4.4.5, and 4.4.6). OSHA did not receive any comments on the proposed provisions, and adopts them as consolidated and revised.

Final paragraph (e)(1)(vi), like the existing OSHA and proposed rules (§ 1910.29(a)(3)(i) and (f)(2); proposed paragraph (e)(1)(v)), requires that employers ensure the maximum work-surface height of mobile ladder stands and platforms does not exceed four times the shortest dimension of the base, without additional support. OSHA believes this requirement is necessary to prevent units from tipping over and injuring workers. Also consistent with the existing and proposed rules, the final rule specifies that when mobile ladder stands and platforms need to reach greater heights, the employer must provide additional support such as outriggers, counterweights, or comparable means to stabilize the base and prevent the unit from overturning. The ANSI standard includes the same requirement (A14.7–2011, Section 5.2).

Final paragraph (e)(1)(vi) differs from the existing OSHA rule in one respect: it does not incorporate the testing requirement in existing § 1910.29(f)(2) for calculating the maximum base length, opting instead to adopt a performance-based requirement. Similarly, it does not incorporate the A14.7–2011 testing provisions. OSHA did not receive any comments on the proposal, and adopts it with minor editorial clarifications.

Final paragraph (e)(1)(vii), like proposed paragraph (e)(1)(iv), requires that employers ensure wheels and casters on mobile ladder stands and platforms are equipped with a system that will impede horizontal movement when a worker is on the unit. OSHA drew the final requirement from the ANSI standard (A14.7–2011, Sections 4.3.8 and 4.4.9); the existing OSHA rule does not contain a similar provision. OSHA believes the requirement in final paragraph (e)(1)(vii) is necessary to prevent accidental or inadvertent movement of a mobile ladder stand or platform. If the stand or platform suddenly moves, it may cause the worker to fall off the unit. Sudden movement also can cause materials, equipment, and tools to fall off a mobile ladder stand or platform and hit employees working in the immediate area. The phrase ''rigid and swivel'' has been removed from the proposed language because it is unnecessary. In addition, OSHA added the phrase ''when an employee is on a stand or platform'' to the proposed text to clarify that it is acceptable that mobile ladder stands move at other times. OSHA did not receive any comments on the proposed rule, and adopts it as discussed.

Final paragraph (e)(1)(viii), like proposed paragraph (e)(1)(vii), requires that employers ensure mobile ladder stands and platforms do not move while workers are on them. The final rule will prevent workers from falling from mobile ladder stands and platforms. Working on a unit, particularly on the top step or platform, raises the unit's center of gravity, causing the unit to become less stable. If somebody moves the unit, intentionally or not, a worker on the unit could lose his or her balance and experience a serious fall. The same consequences could occur if a worker rides on a mobile ladder stand or platform when somebody moves the unit to a new location in the workplace.

OSHA also drew this requirement from A14.7–2011 (Section 6.4) because the existing rule does not contain a similar requirement. OSHA did not receive any comments on the proposed rule, and adopted it as proposed with minor editorial changes for clarity.

Final paragraph (e)(2) establishes design requirements for mobile ladder stands that apply to mobile ladder stands in addition to the general mobile ladder stand and platform requirements in final paragraph (e)(1). As with the general requirements in final paragraph (e)(1), OSHA carried forward most of the provisions in final paragraph (e)(2) from its existing rule (§ 1910.29) or from A14.7–2011.

Final paragraph (e)(2)(i), like proposed paragraph (e)(2)(i), establishes requirements for mobile ladder stand steps. The employer must ensure that these steps:

- Are uniformly spaced and arranged;
- Have a maximum rise of 10 inches; and
- Have a minimum depth of 7 inches.

The final rule also requires that the employer ensure the slope (angle) of the ''step stringer'' to which the steps are attached is not more than 60 degrees from horizontal. A step stringer (also called a ''stile'' or ''siderail'') is the inclined structural member that supports the steps (treads).

The requirements in final paragraph (e)(2)(i) are consistent with the general requirements for ladders in final paragraph (b) of this section. Final paragraph (b) also requires that ladder steps be ''parallel, level, and uniformly spaced'' (final paragraph (b)(1)) and have steps spaced ''not less than 10 inches and not more than 14 inches apart'' (final paragraph (b)(2))(see discussion of final paragraph (b) above).

Final paragraph (e)(2)(i) differs from the existing OSHA rule (§ 1910.29(f)(3)) in two respects. The final rule does not carry forward the existing requirements to have (1) a 9-inch minimum rise for mobile ladder stand steps, and (2) a minimum 55-degree slope for step stringers. OSHA believes final paragraph (e)(2)(i) simplifies the rule and provides greater compliance flexibility. Since the final rule is virtually identical to the ANSI standard (A14.7–2011, Section 4.3.3), OSHA also believes the revisions to the final rule do not compromise worker protection. OSHA did not receive any comments on the proposed rule, and adopted it with minor editorial revisions.

Final paragraph (e)(2)(ii), like proposed paragraph (e)(2)(iii) and the ANSI standard (A14.7–2011, Section 4.3.6), establishes requirements for mobile ladder stands with a top step height more than 10 feet above lower levels. Final paragraph (e)(2)(ii) requires that employers ensure these mobile ladder stands have handrails on three sides of the top step. The employer must ensure that the handrail has a vertical height of at least 36 inches. Also, top steps with a length (depth) of at least 20 inches, front to back, must have midrails and toeboards.

The requirements in final paragraph (e)(2)(ii) provide additional protection from falls and falling objects that are particularly important when employees work on taller mobile ladder stands. To protect workers from falls, final paragraph (e)(2)(ii) ensures that workers have a handhold to grab onto while they are climbing or located on the top step. In addition, final paragraph (e)(2)(ii) requires top steps that are at least 20 inches in depth to be provided with a midrail and toeboard. This protects adjacent workers from falling objects when the top step becomes large enough for the possibility of materials, tools, equipment, or other objects to be placed on the top step. OSHA drew the requirements in final paragraph (e)(2)(ii) from the ANSI standard (A14.7–2011, Section 4.3.6). The existing OSHA rule (§ 1910.29(f)(4)) does not include any of these protections.

Although final paragraph (e)(2)(ii) is similar to proposed paragraph (e)(2)(iii), it also differs in some respects. OSHA reorganized the final paragraph so it is a plain-language provision. OSHA believes that the reorganized provision in the final rule is easier for employers to understand than the proposed provision.

Also, final paragraph (e)(2)(ii) contains two clarifications of the proposed provision. First, final (e)(2)(ii) clarifies the handrail, midrail, and toeboard requirements, stating that employers must provide these protective structures on three sides of the top step. Although OSHA believes that most employers understand that locating handrails, midrails, and toeboards on three sides is necessary to provide adequate protection to their workers, the final rule expressly clarifies this requirement.

Second, a note to final paragraph (e)(2)(ii), like final paragraph (e)(1)(v), incorporates an alternative method from the handrail and midrail requirement for special-use applications. (See the explanation of the exception for special-use applications in paragraph (e)(i)(v) above.) OSHA did not receive any comments on the proposed provision, and adopts it as revised.

Final paragraph (e)(2)(iii), like proposed paragraph (e)(2)(iv), requires that employers ensure the standing areas of mobile ladder stands are within the base frame. OSHA believes this requirement is necessary to ensure the stability of mobile ladder stands. Keeping the center of gravity within the base frame increases the stability of the mobile ladder stand. This requirement reduces the potential for the mobile ladder stand to tip when a worker is using it.

OSHA drew final paragraph (e)(2)(iii) from the ANSI standard (A14.7–2011, Section 4.3.9) since the existing OSHA rule does not include this requirement. Consistent with the goal of making the final rule more performance based, OSHA did not adopt the stability-testing requirements in the ANSI rule (A14.7–2011, Section 5). OSHA did not receive any comments on the proposed provision, and adopts it as proposed.

Employers must comply with the design requirements for mobile ladder stand platforms specified by final paragraph (e)(3), as well as the general requirements for mobile ladder stands and platforms in final paragraph (e)(1). OSHA drew most of these requirements from A14.7–2011. In addition, OSHA expanded the existing requirements on mobile ladder stands in § 1910.29 that apply to mobile ladder stand platforms.

Final paragraph (e)(3)(i), like the proposed paragraph and final paragraph (e)(2)(i), requires that employers ensure the steps of mobile ladder stand platforms:

- Are uniformly spaced and arranged;
- Have a maximum rise of 10 inches; and
- Have a minimum depth of 7 inches.

The final rule also requires that the employer ensure the slope (angle) of the ''step stringer'' to which the steps are attached is not more than 60 degrees from horizontal.

Final paragraph (e)(3)(i) differs from final paragraph (e)(2)(i) in one respect. It includes an exception when the employer demonstrates that the final requirement is not feasible. In that circumstance, the employer may use mobile ladder stand platforms that have steeper slopes or vertical rung ladders, provided the employer stabilizes the alternative unit to prevent it from overturning. The final rule includes this exception because OSHA recognizes that there may be situations or locations where, for example, the slope of the step stringer on a mobile ladder stand platform may need to be greater than the 60-degree limit. To illustrate, there may be a workplace space where the employer needs to use a mobile ladder stand platform, but the unit does not fit. In that situation, OSHA believes it would be appropriate to use an alternative unit with a steeper stringer slope or a vertical rung ladder that takes up less space.

The ANSI standard also includes a similar exception for mobile ladder stand platforms (A14.7–2011, Section 4.4.3). The exception in the ANSI standard specifically permits employers to use alternative mobile ladder stand platforms that have steps with a slope of 60 to 70 degrees. OSHA notes that some alternative units consist of retractable ship's stairs which, consistent with final § 1910.25(e)(1), have a slope of 60 to 70 degrees. When employers demonstrate the final rule is not feasible, OSHA notes that employers will be in compliance with final paragraph (e)(3)(i) if they use mobile ladder stand platforms with a slope of up to 70 degrees, the limit permitted by A14.7–2011, Section 4.4.3. The exception also requires that employers properly stabilize the alternative unit to reduce the risk of workers falling off the steeper steps. OSHA did not receive any comments on the proposed provision, and adopts it as discussed above.

Final paragraphs (e)(3)(ii) and (iii) establish requirements addressing the platform area of mobile ladder stand platforms. When the height of the platform is 4 feet to 10 feet, final paragraph (e)(3)(ii) requires that employers ensure the platform areas have handrails and midrails. Employers also must ensure the handrails on the platforms in this height range have a vertical height of at least 36 inches. As discussed in final paragraph (e)(2)(ii), these requirements are necessary to protect workers from falling off walking-working surfaces that are 4 feet or more above a lower level.

Although the existing OSHA rule contains a requirement for handrails on mobile ladder stands (§ 1910.29(f)(4)), it only requires that the vertical of height of the handrails be at least 29 inches, which is not as protective as the ANSI standard. Therefore, OSHA adopted final paragraph (e)(3)(ii) from the ANSI standard (A14.7–2011, Section 4.4.4).

Final paragraph (e)(3)(ii) differs from the proposed rule in that OSHA removed the proposed requirement that mobile ladder stand platforms have handrails on the steps if the top step height is 4 feet to 10 feet. The final rule consolidated that requirement in final paragraph (e)(1)(v), which preserves the step-handrail requirement for both mobile ladder stands and platforms. (See discussion of handrails in the summary of final paragraph (e)(1)(v) above.) OSHA did not receive any comments on the proposed requirement, and adopts it as revised.

Final paragraph (e)(3)(iii), like the proposal (proposed paragraph (e)(3)(iii)), establishes requirements for mobile ladder stand platforms that are more than 10 feet above a lower level. For these units, the final rule requires that employers must ensure that the exposed sides and ends of the platforms have both guardrails and toeboards. OSHA notes that all fall protection and falling object protection requirements must meet the systems criteria in final § 1910.29.

OSHA believes it is essential that guardrails on platforms that are more than 10 feet in height comply with the criteria in final § 1910.29(b) to ensure that employers adequately protect workers from falling off the platforms. OSHA also believes that toeboards must meet the criteria in final § 1910.29(k)(1) to ensure workers on the ground are not hit by falling objects. The toeboards must, consistent with the requirements of § 1910.29:

- Have a vertical height of at least 3.5 inches;
- Not have more than a 0.25-inch clearance above the platform surface;
- Be solid or have openings that do not exceed 1-inch at the greatest dimension; and
- Be capable of withstanding a force of at least 50 pounds applied at any downward or outward direction at any point along the toeboard (see final § 1910.29(k)(1)(ii)).

Lastly, like final paragraphs (e)(1)(v) and (e)(2)(ii), final paragraph (e)(3)(iv) includes language, proposed as a note to this provision, that permits the use of removable gates or non-rigid members instead of handrails and guardrails in special-use applications (see further discussion of special-use applications in final paragraph (e)(1)(v) above). OSHA did not receive any comments on the proposed provisions, and adopts them as revised.

Section 1910.24—Step Bolts and Manhole Steps

Final § 1910.24, like the proposed rule, establishes new design, strength, and use requirements for step bolts and manhole steps. The final rule defines a step bolt as ''a bolt or rung attached at intervals along a structural member used for foot placement and as a handhold when climbing or standing'' (§ 1910.21(b)). Step bolts, often are used on metal poles or towers, and include pole-steps, commonly used on wooden poles such as utility poles.

The final rule, like the proposed rule, defines manhole steps as ''steps individually attached to, or set into, the wall of a manhole structure'' (§ 1910.21(b)). Manhole steps are cast, mortared, or attached by mechanical means into the walls of the base, riser, and conical top sections of a manhole.

Telecommunications, gas, and electric utility industries are the industries that most often use step bolts and manhole steps. Manufacturing establishments also use them instead of conventional ladders and stairs, especially in locations where it is infeasible to use ladders and stairs.

OSHA drew the step bolt and manhole step requirements in the final rule from the following six sources:

- The step bolt, pole step, and manhole ladder requirements in OSHA's Telecommunications standard (29 CFR 1910.268);
- The step bolt and manhole step provisions in OSHA's 1990 proposed Walking and Working Surfaces and Personal Protective Equipment (Fall Protection Systems) standard (55 FR 13360), which drew its requirements from proposed Electric Power Generation, Transmission, and Distribution standard (29 CFR 1910.269) (54 FR 4974 (1/31/1989));
- American National Standards Institute/Telecommunications Industry Association (ANSI/TIA) 222–G–1996, Structural Standard for Antenna Supporting Structures and Antennas (ANSI/TIA 222–G–1996) (Ex. 33);
- American National Standards Institute/Telecommunications Industry Association (ANSI/TIA) 222–G–2005, Structural Standard for Antenna Supporting Structures and Antennas (ANSI/TIA 222–G–2005) (Ex. 27);
- American Society for Testing and Materials (ASTM) C 478–13, Standard Specification for Precast Reinforced Concrete Manhole Sections (ASTM C 478–13) (Ex. 381); and
- American Society for Testing and Materials (ASTM) A 394–08, Standard Specification for Steel Transmission Tower Bolts, Zinc-Coated and Bare (ASTM A 394–08).

The requirements in final § 1910.24 replace the step bolt, pole step, and manhole step provisions in the existing Telecommunications standard (§ 1910.268(h)), and final § 1910.23 replaces the ladder requirements in § 1910.268(h). Thus, the final rule deletes those requirements from § 1910.268(h). Therefore, the telecommunications industry, as well as all other users of ladders, step bolts, and manhole steps in general industry must comply with the ladder, step bolt, and manhole step requirements in revised subpart D.

Consistent with section 6(b)(5) of the OSH Act (29 U.S.C. 655(b)(5)), the final rule is performance based to the extent possible. For example, final paragraph (a)(2) of this section requires that the employer ensure that step bolts are designed, constructed, and maintained to prevent the worker's foot from slipping off the ends, instead of mandating specific requirements on the size and shape that the step bolt heads must meet.

OSHA notes that two of the step bolt provisions (final paragraphs (a)(1) and (7)), and all but two of the manhole step requirements (final paragraph (b)(2)), apply only to those steps installed after the effective date of the final rule. OSHA recognizes that many step bolts and manhole steps already in workplaces currently comply with the requirements in final § 1910.24. This high rate of compliance, OSHA believes, is the result of the Agency issuing its Telecommunications standard in 1975 (40 FR 13341 (3/26/1975)), and because the national consensus standards addressing step bolts and manhole steps have been in place for a number of years. That said, OSHA believes the most efficient and least disruptive way to implement the final rule is to require employers to comply with the final rule when they install new step bolts and manhole steps. Employers may install new step bolts and manhole steps when they install new structures (*e.g.,* telecommunications and utility towers), or when they replace damaged step bolts and manhole steps (*e.g.,* broken, missing) that are hazardous for workers to use. Because final paragraphs (a)(8) and (b)(3) of this section require that employers inspect step bolts and manhole steps, respectively, at the start of each work shift, OSHA believes that employers will quickly and readily identify whether hazardous conditions, including damage, are present. If such conditions are present, final § 1910.22(d)(2) and (3) require that employers repair, correct, or replace the step bolts or manhole steps.

For example, if an inspection of an electric utility tower finds a corroded step bolt that cannot support the required load (final paragraphs (a)(6) and (7)), the final rule requires that the employer replace it with one made of corrosion-resistant materials or with corrosion-resistant coatings (final paragraph (a)(1)). However, if the inspection shows existing step bolts still have useful life, *i.e.,* they can support the required load and meet the other requirements in final paragraph (a), the employer can continue to use the step bolt even if it is not made with corrosion-resistant materials or coatings. OSHA believes that following this type of implementation strategy and schedule, rather than requiring employers to retrofit all existing step bolts not made with corrosion-resistant materials or coatings, will ensure that the final rule does not impose an undue burden on employers, while ensuring that the existing step bolts are safe for workers to use.

Paragraph (a)—Step Bolts

Paragraph (a) of the final rule, like the proposal, establishes requirements addressing the design, dimensions, strength, and installation of step bolts. OSHA received a comment recommending that the final rule prohibit the use of step bolts unless it requires that employers provide fall protection, such as ladder safety systems, when workers use step bolts (Ex. 155). Dr. J. Nigel Ellis, of Ellis Fall Safety Solutions, referenced a 1990 Duke Power study he said demonstrated step bolts had a high breaking frequency, and therefore, that fall protection was necessary for workers using step bolts. Dr. Ellis also said fall protection needed to be continuous, and not require the worker to manipulate or handle objects when climbing.

OSHA addressed in final § 1910.28 Dr. Ellis' concerns about protecting workers using step bolts that break unexpectedly. That section requires that employers provide fall protection for workers on any walking-working surface with an unprotected side or edge that is four feet or more above a lower level (§ 1910.28(b)). The final rule is more protective than ANSI/TIA 222–G–2005, which requires that antenna-supporting structures designed for climbing to heights greater than 10 feet must have at least one climbing facility (*e.g.,* step bolts) and a ''safety climb device'' (Section 12.3). The ANSI/TIA 222–G–2005 standard defines a ''safety climb device'' as ''a support system that may be a cable or solid rail attached to the structure'' (Section 12.2), and specifies that the device meet the requirements in the A14.3 standard (Section 12.4).

Final paragraph (a)(1), 1ike the proposed rule, requires that employers ensure step bolts installed in an environment where corrosion may occur are constructed of, or coated with, material that protects against corrosion. The final rule is consistent with 1990 proposed § 1910.24(b)(6) (55 FR 13399). The ANSI/TIA 222–G–2005 standard requires that structural steel members and components must have zinc coating (Section 5.6.1). Although the national consensus standard specifies that hot-dip galvanizing is the preferred method, employers may use other equivalent methods (Section 5.6.1).

Corrosive environments can cause damage to unprotected metals. For example, corrosion can lead to deterioration and weakening that may cause step bolts to break or fail to support the total required load. OSHA believes that corrosion-resistant materials and coatings will protect step bolts and ensure they are capable of supporting at least four times the maximum intended load.

Final paragraph (a)(1), like the proposed rule, applies the requirement prospectively to step bolts installed on or after the effective date of the final rule. As noted above, OSHA believes this is the most efficient way to implement this provision while, at the same time, ensuring worker protection. Mr. Robert Miller, of Ameren Corporation, supported OSHA's decision to make the paragraph (a)(1) prospective (Ex. 189). Accordingly, OSHA is adopting paragraph (a)(1) as discussed.

Final paragraph (a)(2), similar to the proposed rule, requires that employers ensure step bolts are designed, constructed, and maintained to prevent the worker's foot from slipping off the end of it. If a worker's foot slips off the end of the step bolt, the worker could fall or sustain an injury from slipping. Designing the head of the step bolt to prevent the worker's foot from slipping off will provide the requisite protection. Final paragraph (a)(2) also is consistent with the ANSI/TIA 222–G–2005 standard (Section 12.5(f)), as well as 1990 proposed § 1910.24(b)(5).

The proposed rule specified that step bolts be ''designed to prevent slipping or sliding off the end of the bolt,'' but the proposal also required step bolts to be ''designed, constructed, and maintained'' free of recognized hazards (proposed § 1910.22(a)(3)). Only properly designed, constructed, and maintained step bolts will be effective in preventing the worker's foot from slipping off the end, therefore the Agency added ''constructed and maintained'' to final paragraph (a)(2) to emphasize that step bolts must meet these requirements as well. OSHA did not receive any comments on the proposed provision and has adopted paragraph (a)(2) with the revisions discussed.

Final paragraph (a)(3), like the proposed rule, requires that employers ensure step bolts are uniformly spaced at a vertical distance of not less than 12 inches and not more than 18 inches apart, measured center to center. The final paragraph also notes that the spacing from the entry and exit surface to the first step bolt may differ from the spacing between other step bolts. This requirement means that the maximum uniform spacing between alternating step bolts is 18 inches, resulting in a maximum spacing between step bolts on the same side of 36 inches. OSHA believes that uniform spacing helps to ensure safe climbing when using step bolts. (Figure D–6 illustrates the vertical spacing requirements in the final rule.)

The final rule generally is consistent with the proposed rule and the existing Telecommunications standard (§ 1910.268(h)(2)), which limit the maximum vertical spacing between step bolts (alternating) to 18 inches. OSHA adopted the Telecommunications standard in 1975 based on recommendations of a voluntary committee of representatives from telephone companies and communication unions (40 FR 13341 (3/26/1975)). The 1990 proposal specified that the spacing between step bolts be between 6 and 18 inches (§ 1910.24(b)(1)). The ANSI/TIA 222–G–2005 standard requires that the spacing between step bolts be between 10 to 16 inches, with a tolerance of ± 1 inch (Section 12.5).

In the proposed rule, OSHA requested, but did not receive, comments on whether the Agency should adopt the proposed requirement or the spacing that the ANSI/TIA 222–G–2005 standard specifies. OSHA believes that adopting the maximum 18-inch uniform vertical spacing requirement in final paragraph (a)(3) is appropriate for two reasons. First, as mentioned earlier, the step bolt requirement in the Telecommunications standard has been in place for more than 35 years. During that period, the telecommunications industry constructed many towers that have step bolts spaced no more than 18 inches apart. OSHA has no data showing that the maximum 18-inch vertical step bolt spacing requirement in the Telecommunications standard poses any safety problems or resulted in any injury in that industry. Moreover, OSHA believes that most of the telecommunications industry already is in compliance with § 1910.268, and that final paragraph (a)(3) would not impose a financial burden on employers.

Second, if the ±1-inch tolerance allowed in the ANSI/TIA 222–G–2005 standard is taken into account, there is, at most, only a 1-inch difference in the maximum vertical spacing in final paragraph (a)(3) and the ANSI/TIA 222–G–2005 standard. OSHA does not consider this difference to be significant in this provision. Therefore, OSHA is adopting in the final provision, the step bolt spacing requirement (between 12 and 18 inches) that is consistent with OSHA's Telecommunications standard.

Final paragraph (a)(3), like the proposed rule, allows the spacing of step bolts at the entry and exit surface to the first step bolt to differ from the uniform spacing between the other step bolts. For example, the first step bolt on a monopole may be 10 feet above the ground. Having a higher first step bolt on a structure is not unusual; in many cases, this configuration limits unauthorized access to the structure's hazardous heights, communication devices, or electrical wiring.

OSHA's Telecommunications standard also allows the spacing of the initial step bolt to differ from the other steps, ''except where working, standing, or access steps are required'' (existing § 1910.268(h)(2)). The 1990 proposal did not specifically address spacing of the initial step bolt. Section 12.5(a) of ANSI/TIA 222–G–2005 requires that ''spacing shall remain uniform over a continuous length of climb,'' but does not address entry and exit spacing. OSHA believes that allowing a variation in spacing from the entry surface to the first step bolt or from the last step bolt to the exit surface will make it easier and safer for workers to establish their foothold. Once again, since the Telecommunication standard allows the spacing on the first and exit step bolt to differ and OSHA is not aware of any injuries or problems occurring as a result, the Agency is adopting paragraph (a)(3) as proposed, with minor editorial revisions.

Final paragraph (a)(4), like the proposed rule, requires that employers ensure step bolts have a minimum clear width of 4.5 inches. The final rule is the same as OSHA's Telecommunications standard (§ 1910.268(h)(2)); 1990 proposed § 1910.24(b)(2); and the ANSI/TIA 222–G (2005) standard (Section 12.5(f)).

OSHA believes it is necessary that workers have an adequate space on which to step and secure their foothold while climbing or they could slip and fall. OSHA believes the telecommunications industry supports the 4.5-inch minimum clear-step width in the Telecommunications and ANSI/TIA 222–G–2005 standards. In addition, since both standards have been in place for many years, OSHA believes the industry already is in compliance with the minimum clear width requirement.

Mr. Larry Halprin, of Keller and Heckman, said that OSHA should only apply the vertical spacing distance (final paragraph (a)(3)) and minimum clear width (final paragraph (a)(4)) requirements prospectively (Ex. OSHA–S029–2006–0662–0381). He stated that, in the OSHA notice reopening the rulemaking docket on subpart D, the Agency said that the 1990 proposal specified prospective application of the revised provisions, and ''would allow workplaces and equipment meeting existing subpart D requirements to be 'grandfathered in''' (68 FR 23529 (5/2/2003)). However, neither the 2010 nor the 1990 proposed rules stated that OSHA would apply the vertical spacing or minimum clear width requirements prospectively. In addition, as mentioned, the Telecommunications and ANSI/TIA 222–G–2005 standards, which have been in place more than 35 years, include both requirements. Moreover, OSHA received no comments from affected industries indicating that they could not meet the existing vertical spacing and minimum clear width requirements. Therefore, OSHA believes that most employers already are in compliance with final paragraphs (a)(3) and (4). Accordingly, OSHA does not believe it is necessary to limit the vertical spacing and minimum clear width requirements to prospective application and adopts the provisions as proposed, with minor editorial revisions.

Final paragraph (a)(5), like the 2010 and 1990 proposed rules, requires that employers ensure the minimum perpendicular distance between the centerline of each step bolt to the nearest permanent object in back of the step bolt is at least 7 inches. When employers can demonstrate that they cannot avoid an obstruction, the final rule permits them to reduce the minimum perpendicular clearance space to 4.5 inches.

The required 7-inch minimum perpendicular clearance space in final paragraph (a)(5) is consistent with the minimum perpendicular clearance for fixed ladders in final § 1910.23(d)(2), the construction ladders standard (§ 1926.1053(a)(13)), and ANSI/TIA 222–G–2005 standard (Section 12.5). However, final paragraph (a)(5), like the 2010 and 1990 proposals, provides more flexibility than those standards. When the employer demonstrates that an obstruction is not avoidable, final paragraph (a)(5) allows employers to reduce the minimum perpendicular clearance to 4.5 inches for any step bolt.

OSHA believes that a 7-inch minimum perpendicular clearance for step bolts, like fixed ladders, is necessary to ensure workers are able to maintain a secure foothold and negotiate the step bolts while they are climbing or working. Because the final rule gives employers the flexibility to reduce the minimum perpendicular clearance space for any step bolt if an obstruction cannot be avoided, the Agency believes that employers need to be able to demonstrate that they made a case-by-case evaluation and determination that the obstruction was not avoidable in the specific instance. For example, where an employer uses step bolts in an industrial setting because it is not feasible to use fixed ladders or stairs (*e.g.,* space limits), employers need to show they evaluated the specific situation and considered potential options in determining whether they could avoid or remove the obstruction. The language in the final rule clarifies the Agency's intent about the situations in which employers may reduce the minimum perpendicular clearance space on a step bolt. The Agency did not receive comments on proposed paragraph (a)(5) and adopts the requirement as discussed.

Final paragraphs (a)(6) and (7) address strength requirements for existing step bolts and for step bolts installed on or after the effective date of the final rule. The final rule establishes different strength requirements for existing and new step bolts to reduce the need for retrofitting step bolts that currently meet the maximum intended load requirements in final § 1910.22(b) and still have useful life.

Final paragraph (a)(6), like the proposed rule, requires that employers ensure each step bolt installed before the effective date of the final rule is capable of supporting the maximum intended load. The final rule defines maximum intended load as ''the total load (weight and force) of all workers, equipment, vehicles, tools, materials, and loads the employer reasonably anticipates to be applied to a walking-working surface at any one time'' (§ 1910.21(b)).

The final provision is based on the Telecommunications standard requirement that employers shall ensure that no employee nor any material or equipment may be supported or permitted to be supported on any portion of a ladder unless it is first determined, by inspections and checks conducted by a competent person that such ladder is adequately strong, and in good condition (§ 1910.268(h)(1)), and is consistent with 1990 proposed § 1910.24(c)(2). The ANSI/TIA 222–G–2005 standard establishes strength specifications:

A load factor, α_L = 1.5, shall be applied to the nominal loads specified herein:

The minimum nominal load on individual rungs or steps shall be equal to a normal concentrated load of 250 lbs [1.1 kN] applied at the worst-case location and direction.

The minimum nominal load on ladders shall be 500 lbs [2.2 kN] vertical and 100 lbs [445 N] horizontal applied simultaneously, concentrated at the worst-case location between consecutive attachment points to the structure (Section 12.4).

The general requirements in the final rule specify that employers ensure all walking-working surfaces are capable of supporting the total weight and force employers reasonably anticipate placing on that surface (§ 1910.22(b)). Final paragraph (a)(6) reinforces that this requirement applies as well to existing step bolts. OSHA believes step bolts that cannot support their maximum intended load are not safe to use, regardless of when the employer installed them.

The ANSI/TIA 222–G standard has been in place since 2005, and OSHA believes most step bolts manufactured today meet the requirements of that standard. In addition, OSHA's experience is step bolt manufacturers generally specify maximum loads that step bolts can withstand without failure. As such, OSHA believes that most existing step bolts are in compliance with final paragraph (a)(6) and § 1910.22(b). That said, employers must continue to inspect step bolts to ensure that the loads placed on the step bolts covered by this provision do not exceed the maximum intended loads and manufacturer specifications. This is because failure or deflection of step bolts can occur during use, particularly since the weight on step bolts is not static and varies as a worker climbs. OSHA did not receive any comments on proposed paragraph (a)(6), and is adopting it as discussed.

Final paragraph (a)(7), like the proposed rule, requires that employers ensure each step bolt installed on or after the effective date of the final rule is capable of supporting at least four times its maximum intended load. As discussed in the proposed rule, OSHA believes that requiring step bolts be capable of supporting four times the maximum intended load is necessary to provide a safety factor that is adequate to ensure that step bolts do not fail during use. The required safety factor (*i.e.,* 4 times the maximum intended load) will provide an additional level of assurance that step bolt are safe for workers to use. OSHA believes that common engineering practice requires manufacturers to include a safety factor in any product design to account for any unanticipated conditions that may stress the product beyond its designed capabilities.

Final paragraph (a)(7) is consistent with 1990 proposed § 1910.24(c)(1), which specified that ''[e]ach step bolt shall be capable of withstanding, without failure, at least four times the intended load calculated to be applied to the [step] bolt.'' In addition, as mentioned above, the Telecommunications standard requires any portion of a ladder to be ''adequately strong,'' while the ANSI/TIA 222–G–2005 standard establishes specification requirements.

The ASTM A 394–08 standard establishes specification for step bolts with nominal thread diameters of ½, ⅝, ¾, ⅞ and 1-inch (Ex. 383). OSHA believes that ⅝-inch diameter steel step bolts normally comply with the strength requirement in final paragraph (a)(7), and are the most commonly used step bolts in general industry. Manufacturers also produce step bolts smaller than ⅝-inch diameter, but OSHA notes that ½-inch step bolts may not comply with final paragraph (a)(7).

Final paragraph (a)(7), unlike the ANSI/TIA and ASTM standards, is a performance-based requirement. OSHA believes that giving employers flexibility in determining the maximum load they anticipate applying to any step bolt will ensure that the maximum intended load accurately reflects the particular work and workplace conditions present. By contrast, OSHA believes that the ANSI/TIA 222–G–2005 test procedures are for manufacturers, not employers, because manufacturers are in the best position to test whether step bolts meet the strength requirements. Employers are free to use the specifications and test procedures in the ANSI/TIA national consensus standard to determine whether their step bolts meet the maximum intended load requirements in final paragraph (a)(7).

OSHA received two comments on the proposed requirement. As discussed in final paragraph (a)(1), Mr. Miller, of Ameren, supported the Agency's decision to apply the new strength requirement in final paragraph (a)(7) prospectively (Ex. 189). In the second comment, Mr. Richard Willis, of Southern Company, questioned how employers would calculate the performance-based maximum intended load for step bolts in final paragraph (a)(7) (Ex. 192). He recommended:

We suggest that the methodology of National Electric Safety Code (NESC) 2007 Rule 261N be adopted. We also feel that OSHA needs to state a failure criteria for 1910.24(a)(7). . . .

Instead of using the four times the maximum intended load, OSHA should consider using the criteria of the NESC or IEEE 1307 (Ex. 192).

OSHA recognizes the methodologies in the national consensus standards that Mr. Willis recommended are methodologies employers can use to determine and ensure that step bolts are capable of supporting four times the maximum intended load. Employers are free to use the NESC and IEEE 1307 standards, which OSHA referenced in the proposed rule (75 FR 28901) in determining whether their step bolts are capable of supporting four times the total load they reasonably anticipate placing on the step bolt. In a 2003 letter of interpretation, OSHA wrote, ''We believe in most situations an employer's compliance with IEEE 1307–1996 will usually prevent or eliminate serious hazards'' (OSHA letter to Mr. Brian Lacoursiere, May 5, 2003).[21]

Under the performance based final rule, employers may use other methods to ensure step bolts comply with the strength requirement in final paragraph (a)(7). For example, employers may select step bolts that manufacturers test according to the strength requirements specified by the ANSI/TIA 222–G

[21] Available from OSHA's website at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24564.*

standard (Section 12.4), and then ensure that workers do not place a total load on the step bolts that exceeds the specified strength limits.

Mr. Willis also said that OSHA should state the failure criteria for final paragraph (a)(7) as: ''If the intent is a 15 degree deflection as referenced by the NESC and in 1910.24(a)(9), then this should be stated'' (Ex. 192). OSHA does not believe it is necessary to put additional language in final paragraph (a)(7) specifying a ''failure criteria'' for step bolt strength. First, the Agency believes that final paragraph (a)(9) makes clear that step bolts bent more than 15 degrees do not meet the requirement in paragraph (a)(7). Final paragraph (a)(9) states that employers must remove and replace those step bolts. Second, the language Mr. Willis recommended is not performance based as it does not include other failure criteria manufacturers and employers may use. Therefore, OSHA finalizes the provision as discussed.

Final paragraph (a)(8) requires that employers ensure step bolts are inspected at the start of each work shift and maintained in accordance with § 1910.22. By including the reference to § 1910.22, OSHA is emphasizing that step bolts, like all walking-working surfaces, must meet the general requirements in the final rule.

OSHA believes a visual inspection often can reveal structural and other problems with step bolts that may make them unsafe for workers to use. Employers must correct, repair, or replace step bolts with structural problems (*e.g.,* broken, fractured, loose, bent, or corroded step bolts) that indicate that the step bolts cannot support the maximum intended load (final § 1910.22(b) and (d)(2)). A visual inspection also can identify whether step bolts are dry, or likely to be slippery because of snow, ice, or rain (final § 1910.22(a)(2)). Final paragraph (a)(8) requires that employers address these conditions to maintain step bolts in accordance with § 1910.22.

As with the inspection requirements in final § 1910.22, the inspection of step bolts most often will consist of a short, visual observation of the condition of the step bolts. Final paragraph (a)(7) permits workers to perform this visual inspection as they begin to climb the structure, so long as the workers inspect the step bolts before stepping on, or grasping them, and know not to proceed if the step bolts do not pass the visual inspection. Where a worker or supervisor identifies a problem during a visual inspection, a more thorough examination may be necessary. The employer must repair, correct, or replace the damaged or hazardous step bolt before allowing workers to continue climbing the structure.

OSHA notes the proposed rule, like 1990 proposed § 1910.24(c)(4), specified that employers inspect step bolts visually ''before each use.'' The phrase ''before each use'' means before the worker climbs the step bolts for the first time at the start of the work shift. It does not mean that employers must, throughout a work shift, have workers inspect the step bolts each time they climb them. OSHA understands that workers may climb step bolts multiple times during a work shift, and believes that inspecting step bolts at the initial climb is sufficient. OSHA did not receive any comments on the inspection requirement and adopts the requirement as discussed.

Final paragraph (a)(9), like the proposed rule, requires that employers ensure any step bolt that is bent more than 15 degrees from the perpendicular, in any direction, is removed and replaced with a bolt that meets the requirements of the section, before a worker uses it. OSHA believes this provision is necessary because step bolts bent to such a degree are not safe for workers to use. Regardless of the direction of the bend, it could cause the worker to slip or fall off the step bolt. If the bend in a step bolt is more than 15 degrees below horizontal, a worker's feet may slip or slide off the end of the step bolt. If the bend in a step bolt extends upwards more than 15 degrees, it is likely to reduce the minimum clear step width (4.5 inches) necessary to ensure the worker has a secure and safe foothold (final paragraph (a)(4)).

The final rule also requires that employers ensure that step bolts used for replacement meet the all of the requirements of final paragraph (a). This requirement will ensure that replacement step bolts provide workers with the maximum level of protection afforded by paragraph (a).

OSHA drew final paragraph (a)(9) from 1990 proposed § 1910.24(c)(5). OSHA did not receive any comments on paragraph (a)(9), and adopts it as discussed.

Paragraph (b)—Manhole Steps

Final paragraph (b) addresses the design, capacity, and use of manhole steps. There are no requirements specifically addressing manhole steps in existing subpart D, although OSHA's Telecommunications standard establishes requirements to protect workers who use metal ladders in manholes (§ 1910.268(h)(8)). OSHA drew most of the manhole step requirements from the 1990 proposed Walking and Working Surfaces and Personal Protective Equipment (Fall Protection Systems) standard (55 FR 13360), which drew its requirements from a 1989 proposed rule on Electric Power Generation, Transmission, and Distribution. OSHA did not believe that it was necessary to include the manhole step requirements in the Electric Power Generation, Transmission, and Distribution final rule because the 1990 proposed rule to revise subpart D included provisions on manhole steps.

Final paragraph (b)(1), like the proposed rule, requires that employers ensure manhole steps are capable of supporting their maximum intended load, as defined in § 1910.21(b). As mentioned in the discussion of final paragraph (a)(6), final § 1910.22(b) requires that employers ensure all walking-working surfaces are able to support the maximum intended load that employers reasonably anticipate placing on them. Final paragraph (b)(1) emphasizes that the maximum intended load requirement in the final rule applies to existing manhole steps, regardless of when the employer installed them. Manhole steps that cannot support the maximum intended load without failure are not safe to use.

OSHA based the provision on 1990 proposed § 1910.24(c)(2), which also specified that existing manhole steps be capable of supporting their maximum intended load. The ASTM C 478 standard requires vertical and horizontal load testing of manhole steps in accordance with ASTM Test Methods C 497 (Section 16.6.1.3) (Ex. 382).

Final paragraph (b)(1), like final paragraph (a)(6) of this section and final § 1910.22(b), is performance based. However, employers are free to use the test procedures in ASTM C 478 and C 497 in determining whether their manhole steps can support the maximum intended load the employer anticipates placing on them. OSHA did not receive any comments on this provision, and adopted it as proposed wit minor editorial revisions.

Final paragraph (b)(2), like the proposal, establishes requirements for manhole steps installed on or after the effective date of the final rule. OSHA based most of these requirements on 1990 proposed § 1910.24, and ASTM C 478–13, with many of the manhole step requirements in 1990 proposed § 1910.24 applying only prospectively (*e.g.,* 1990 proposed § 1910.24(b)(6), (b)(7), and (c)(3)(i)–(iv))). As mentioned earlier, OSHA believes that applying the manhole step requirements when employers install new or replacement steps is the most efficient and least disruptive way to implement the requirements in final paragraph (b)(2). Manhole steps, compared to step bolts, are generally more expensive to replace, and such replacement may not be necessary when the manhole steps can support the maximum intended load, and the employer inspects them at the start of each work shift, and repairs or replaces them immediately after identifying damage or hazardous conditions.

Final paragraph (b)(2)(i), like the proposed rule, requires that employers ensure manhole steps have a corrugated, knurled, dimpled, or other surface that minimizes the possibility of a worker slipping. The final rule is consistent with the requirements for metal manhole ladders in OSHA's Telecommunications standard (§ 1910.268(h)(8)(v)). The 1990 proposed rule (proposed § 1910.24(b)(7)) specified the same requirement as final paragraph (b)(2)(i) for manhole steps.

OSHA believes this final rule is necessary to reduce workers' risk of slipping and falling. Underground manholes often have moisture and other slippery substances (*e.g.,* mud, grease) that can pose slip hazards for workers. Ensuring that workers have, and can maintain, a secure foothold when entering the manhole and climbing the manhole steps is important to protect them from injury. OSHA notes final paragraph (b)(2)(i) is performance based. Thus employers are free to use any type of surface preparation that effectively minimizes the risk of slipping. OSHA received no comments on the proposed provision and adopts the requirement as discussed.

Final paragraph (b)(2)(ii), like the proposal and final paragraph (a)(1) of this section for step bolts, requires that employers ensure manhole steps are constructed of, or coated with, material that protects against corrosion if the manhole steps are in an environment where corrosion may occur. The final rule is consistent with the Telecommunications standard (§ 1910.268(h)(8) introductory text and (h)(8)(vi)) and 1990 proposed § 1910.24(b)(6)). The Telecommunications standard also requires that employers, when selecting metal ladders, ensure that the ladder hardware must be constructed of a material that is protected against corrosion and that the metals used shall be selected as to avoid excessive galvanic action (§ 1910.268(h)(8)(vi)). The ASTM C 478 standard, however, addresses corrosion hazards using a different approach. The national consensus standard does not require that manhole steps consist of corrosion-resistant materials or have corrosion-resistant coatings. Instead, it requires that ferrous metal steps not painted or treated to resist corrosion must have a minimum cross-sectional dimension of one inch. OSHA believes that requiring all manhole steps to consist of corrosion-resistant material or have corrosion-resistant coatings is more protective, and better effectuates the purposes of the OSH Act, than ASTM C 478. OSHA's final rule protects manhole steps from becoming corroded, while the ASTM C 478 standard requires that employers make ferrous metal steps with large cross-sectional dimensions so they will hold up against corrosion longer.

Furthermore, as discussed in final paragraph (a)(1) of this section for step bolts, OSHA believes that corrosive environments can weaken and cause damage to unprotected metals, including manhole steps. Corrosion resistance will help to prevent deterioration that can lead to failure of manhole steps. OSHA did not receive any comments on the provision and adopts it as proposed with minor editorial clarifications.

Final paragraph (b)(2)(iii), like the proposed rule, requires that employers ensure manhole steps have a minimum clear step width of 10 inches. The final rule is consistent with the ASTM C 478 standard (Section 16.5.2), as well as 1990 proposed § 1910.24(b)(2). The ASTM C 478 standard has been in place for many years, so OSHA believes that most manhole steps have a step width of at least 10 inches. OSHA did not receive any comments on paragraph (b)(2)(iii) and adopts it as proposed.

Final paragraph (b)(2)(iv), like the proposal, requires that employers ensure manhole steps are uniformly spaced at a vertical distance of not more than 16 inches apart, measured center to center between steps. As mentioned above, OSHA believes that uniform spacing helps to make climbing safe. The ASTM C 478 standard specifies a maximum vertical spacing of 16 inches. The 1990 proposed provision (proposed § 1910.24(b)(1) specifies a uniform spacing of not less than six inches nor more than 18 inches apart.

Final paragraph (b)(2)(iv), like final paragraph (a)(3) of this section for step bolts, also allows spacing from the entry and exit surface to the first manhole step to be different from the spacing between the other steps. Additionally, OSHA added a standard method for measuring the distance—from center to center between steps. This measurement method and the allowance for different spacing of the first manhole step are common practices, and will provide the consistency needed to help protect workers, who will be entering, exiting, and working in different manholes. OSHA did not receive any comments on this provision and adopts it as discussed.

Final paragraph (b)(2)(v), like the proposed rule, requires that employers ensure manhole steps have a minimum perpendicular distance of at least 4.5 inches measured between the centerline of the manhole step and the nearest permanent object in back of it. The minimum clear-distance requirement is consistent with 1990 proposed § 1910.24(b)(3) and ASTM C 478, indicating that 4.5 inches is the common, accepted clearance for manhole steps. This requirement will provide adequate foot and hand holds, which are necessary for workers to safely climb manhole steps. OSHA did not receive any comments on this provision and adopts it as proposed.

Final paragraph (b)(2)(vi), like the proposal and final paragraph (a)(2) of this section for step bolts, requires that employers ensure that manhole steps are designed, constructed, and maintained to prevent the worker's foot from slipping or sliding off the end of the manhole step, which can result in a fall or slip. The final rule is the same as 1990 proposed § 1910.24(b)(5).

The proposed rule specified that manhole steps be designed to prevent workers' feet from slipping off the end of the step. For the same reasons discussed above in final paragraph (a)(2) for step bolts, OSHA added ''constructed and maintained'' to the final rule. OSHA did not receive any comments on this provision and adopted it as revised.

Final paragraph (b)(3), like the proposed rule and final paragraph (a)(8) of this section for step bolts, requires that employers ensure manhole steps are inspected at the start of the work shift, and maintained in accordance with § 1910.22. 1990 proposed § 1910.24(c)(4) specified that manhole steps be maintained in a safe condition and visually inspected prior to each use. OSHA's reasons for requiring manhole step inspections at the start of each work shift are the same reasons as those discussed above in final paragraph (a)(8) and, therefore, are not repeated here.

The proposed rule specified that manhole steps be visually inspected before each use. Mr. Miller, of Ameren, objected to the proposed language, saying: ''Manhole steps are inspected when entered. There should be no need for additional inspection which would only increase the time and have little to no impact on safety. This seems only to be a paperwork requirement and would do little to protect workers from hazards'' (Ex. 189).

OSHA is unclear what Mr. Miller means by ''additional inspection,'' specifically whether he is referring to the ''before each use'' language in the proposed rule or the requirement that employers also maintain manhole steps in accordance with final § 1910.22, which requires inspection of walking-working surfaces regularly and as necessary. The ''before each use'' language means that employers must ensure inspection of manhole steps before the first use in a work shift, and not every time a worker climbs on manhole steps. OSHA recognizes that workers may climb manhole steps multiple times during a work shift, and believes that inspecting the manhole steps when workers first use them during a work shift is sufficient. The final rule clarifies this point.

If Mr. Miller is referring to the inspections of walking-working surfaces employers must conduct in accordance with § 1910.22(d)(1), OSHA disagrees with Mr. Miller that such inspections are simply a paperwork burden that have no impact on safety. Conducting regular inspections ensures that hazards are identified and corrected in a timely manner, thereby preventing worker injury or death. Regular inspections also are important if workers do not use manhole steps daily or frequently. Inspections provide the assurances that walking-working surfaces such as manhole steps will be in a safe and useable condition when workers use them.

By contrast, the American Federation of State, County and Municipal Employees (AFSCME) recommended that OSHA strengthen the visual inspection requirement for existing manhole steps: ''Our members report that many of these steps degrade due to exposure to the elements and are difficult to inspect visually. Often manholes are not entered regularly. We suggest the Agency require inventory of manholes that use permanent step ladders and that they be inspected annually'' (Ex. 226). OSHA believes that the level of inspection the final rule requires provides far more protection than AFSCME recommends for existing manhole steps. Final paragraph (b)(3) requires that employers ensure each manhole step is inspected at the start of each work shift, which could amount to multiple inspections each workday, depending on the number of work shifts in a workday. OSHA believes that requiring inspection before initially using manhole steps in a work shift is more protective than using manhole steps that were last inspected almost a year ago.

Final paragraph (b)(3) also requires that employers maintain manhole steps in accordance with final § 1910.22. That section requires employers to inspect walking-working surfaces regularly and as necessary, and to maintain them in safe condition. ''Regular inspection'' means that the employer has some type of schedule, formal or informal, for inspecting walking-working surfaces that is adequate to identify hazards and address them in a timely manner. For purposes of the final rule, ''as necessary'' means that employers must conduct inspections when particular workplace conditions, circumstances, or events occur that warrant an additional check of walking-working surfaces to ensure that they are safe for workers to use. For example, an additional inspection may be necessary to ensure that a significant leak or spill does not create a slip, trip, or fall hazard on a walking-working surface.

OSHA believes this combination of inspection requirements will ensure that employers identify and correct hazardous conditions, such as degradation due to corrosion, on a timely basis, even if workers do not use manhole steps regularly. In addition, the requirement that manhole steps must be capable of supporting the maximum intended load (§ 1910.22(b)) will supplement visual inspections to ensure that manhole steps are safe to use.

Section 1910.25—Stairways

Section 1910.25 of the final rule establishes requirements for the design and installation of stairways. OSHA carried forward the majority of these requirements from the existing rule (§ 1910.24, Fixed industrial stairs), and also drew a number of provisions from the following national consensus standards:

- American Society of Safety Engineers/American National Standard Institute (ASSE/ANSI) A1264.1–2007, Safety Requirements for Workplace Walking/Working Surfaces and Their Access; Workplace, Floor, Wall and Roof Openings; Stairs and Guardrail Systems (A1264.1–2007) (Ex. 13);
- National Fire Protection Association (NFPA) 101–2012, Life Safety Code (NFPA 101–2012) (Ex. 385); and
- International Code Council (ICC) International Building Code-2012 (IBC–2012) (Ex. 386).

Final § 1910.25 is titled ''Stairways,'' which replaces the ''Fixed Industrial Stairs'' title in the existing rule (see discussion of ''fixed industrial stairs'' below). The final rule (§ 1910.21(b)) defines a stairway as ''risers and treads that connect one level with another, and includes any landings and platforms in between those levels.'' Final § 1910.25, like the proposed rule, covers all stairways, including standard, ship, spiral, and alternating-tread type stairs, used in general industry (§ 1910.25(a)). OSHA organized final § 1910.25 by the types of stairways that the final rule covers, and revised the format to add a separate paragraph identifying the scope and application of the section, as follows:

- Paragraph (a), Application, which specifies the stairs the final rule covers and excepts;
- Paragraph (b), now titled General Requirements, which establishes the requirements that apply to *all* covered stairways;
- Paragraph (c), Standard Stairs; and
- Paragraphs (d) through (f), which specify requirements when employers use spiral stairs, ship stairs, and alternating tread-type stairs.

OSHA believes this revised format makes final § 1910.25 easier to understand and follow.

Final § 1910.25, like the proposal, replaces the term ''fixed industrial stair'' in the existing rule with the plain-language term ''stairways.'' In addition, in final § 1910.25, OSHA uses the term, ''standard stairs,'' that § 1910.21(b) defines as ''a fixed or permanently installed stairway.'' In the proposed rule, the Agency explained that ''fixed industrial stairs'' was the term in use when OSHA adopted the existing rule in 1971 from ANSI A64.1–1968 (now A1264.1–2007). The Agency said ''standard stairs'' was easier to understand and consistent with revised and updated national consensus standards (A1264.1–2007, NFPA 101–2006) and industry codes (IBC–2003) (75 FR 28881–82). Those standards and codes used ''standard stairs,'' ''stairways,'' and ''fixed stairs'' interchangeably, and none used or defined ''fixed industrial stairs.''

OSHA requested comment about replacing the term ''fixed industrial stairs,'' particularly whether it would cause confusion or leave a gap in coverage. OSHA only received one comment from the National Fire Protection Association (NFPA), which supported the proposed change (Ex. 97). NPFA said standard stairs was consistent with NFPA 101–2009 (Sections 3.1 and 7.2.2.2.1). OSHA believes it is important to update terminology so standards are easy to understand and reflect current industry practice.

Paragraph (a)—Application

As mentioned, OSHA changed the title of final paragraph (a) to ''Application.'' OSHA believes that ''Application'' better describes the content of paragraph (a), which identifies what stairways the final rule covers and excludes. Final paragraph (a) is broad and comprehensive. The scope of the existing rule, § 1910.24(a), which covers ''interior and exteriors stairs around machinery, tanks, and other equipment, and stairs leading to or from floors, platforms, or pits,'' also is comprehensive. However, OSHA believes the language in the final rule more clearly and fully explains the Agency's objective, and ensures that the final rule does not inadvertently exclude any type of stairway used in general industry.

Final paragraph (a) also lists certain stairways that § 1910.25 does not cover, specifically:

- Stairs serving floating roof tanks;
- Stairs on scaffolds;
- Stairs designed into machines or equipment; and
- Stairs on self-propelled motorized equipment (*e.g.,* motor vehicles, powered industrial trucks).

Stairs serving floating roof tanks. As discussed in the proposed rule, these types of stairs are not covered by recognized industry standards and the Agency does not have any information or sufficient evidence on how to regulate these stairs. OSHA requested information on these types of stairs in the proposed rule and did not receive comment. Therefore, OSHA has not included stairs serving floating roof tanks in the scope of this section.

Stairs on scaffolds. Final paragraph (a) retains the proposed exemption for stairs on scaffolds. Requirements for stairs on scaffolds are provided in the construction industry standards in § 1926.451. In the preamble to the proposed rule, the Agency explained that the purpose of the proposed exemption was to have employers comply with the requirements for stairs on scaffolds contained in § 1926.451. OSHA said the proposed approach would increase consistency among its standards, assist employers who perform both general industry and construction work, and minimize potential for confusion. This exemption is consistent with OSHA's approach in final § 1910.27(a) for scaffolds used in general industry. OSHA believes that having employers who use scaffolding follow a single standard will reduce confusion and help ensure worker safety.

Stairs designed into machines or equipment and stairs on self-propelled motorized equipment. Final paragraph (a) retains the proposed exemption from final § 1910.25 for stairs designed into machines or equipment and stairs on self-propelled motorized equipment, such as motor vehicles and powered industrial trucks. However, OSHA does not intend this exemption to apply to equipment that the existing standard (§ 1910.24) currently covers. For example, the exemption does not apply to equipment such as mobile well-servicing rigs [22] that are transported to various oil and gas wells (*Delta Drilling Co.* v. *OSHC*, 91 F.3d 139 (5th Cir. 1996) (unpublished); Basic Energy Services, 25 BNA OSHC 1811 (No. 14–0542, 2015); Poole Co., Texas Ltd., 19 BNA OSHC 1317 (No. 99–0815, 2000)).

The exemption for stairs designed into machines or equipment and stairs on self-propelled motorized equipment is consistent with the scope of A1264.1–2007 and other national consensus standards, none of which address those stairs either. In the proposed rule, the Agency explained that it did not have sufficient information about such stairs, and there were no national consensus standards or industry codes to turn to for guidance or best industry practices. Although OSHA requested comment and information, only the Society of Professional Rope Access Technicians (SPRAT) responded:

> It is the recommendation of this commenter that any stairs not covered by recognized industry standards, and about which the Agency does not have sufficient information or evidence to regulate, simply be acknowledged as a potentially hazardous situation with provision for protection against falls required (Ex. 205).

SPRAT pointed out that IBC–2009 and A1264.1–2007 only cover stairs associated with buildings, and the scope and requirements of those standards do not include stairs on machines or equipment. Given that, SPRAT said it would be inappropriate for OSHA to use those standards to justify covering stairs on, or designed into, machines and equipment. SPRAT also argued that the rulemaking record did not have adequate information to support regulating such stairs. OSHA agrees with SPRAT and retains the exemption for those reasons.

Although final § 1910.25 does not apply to stairs designed into machines or equipment or stairs on self-propelled motorized equipment, OSHA notes that the OSH Act's requirement that employers provide their workers with a place of employment that is free from recognized hazards that are causing, or are likely to cause, death or serious physical harm continues to apply (see 29 U.S.C. 654(a)(1)).

Final paragraph (a) eliminates the following existing exceptions:

Stairs to construction operations at private residences, articulated stairs installed on dock facilities and stairs used for fire exit purposes. Final § 1910.25 does not include the existing exemption for stairs to construction operations in private residences, and the exemption for articulated stairs installed on dock facilities. OSHA believes that, by specifying that final § 1910.25 only applies to stairs used in general industry it is no longer necessary to retain exemptions for stairs in construction operations in private residences or articulated stairs installed on dock facilities since general industry does not use such stairs. OSHA's construction (29 CFR part 1926) and maritime (29 CFR parts 1915, 1917, and 1918) standards regulate these two types of stairs as stairs used for fire-exit purposes.

OSHA also did not include the existing exemption for stairs used for fire exit purposes in either the proposed or final rules for two reasons. First, OSHA recognizes that employers could use virtually all stairways for fire and emergency exits, which makes a special provision for fire-exit stairs unnecessary. Second, when workers use stairways to exit an area in the event of a fire, it is important that the stairways meet the safety requirements in § 1910.25 so workers are able to safely escape. The Agency notes that its Means of Egress standards (29 CFR part 1910, subpart E) supplement walking-working surfaces requirements, including those in § 1910.25, for those portions of exit routes, including stairways, that are ''generally separated from other areas to provide a protected way of travel to the exit discharge'' (29 CFR 1910.43(c)).

Paragraph (b)—General Requirements

Paragraph (b) of the final rule sets forth general requirements for all stairways covered by this section, while other provisions of § 1910.25 specify

[22] A mobile well-servicing rig, also referred to as a ''workover rig,'' consists of ''a telescoping derrick; . . . articulating platforms to allow for differences in the respective well sites to which the rig travels; as well as many other implements that aid in the maintenance and upkeep of an existing well'' (Basic Energy Services, 25 BNA OSHC 1811 (No, 14–0442, 2015)). Once the rig is placed on ''stable ground'' over the well head, the ''rig-up'' process begins (Id.). ''[T]he platforms of the mobile well servicing rig are attached to the base of a derrick, which is a part of the drilling rig itself . . . The servicing units, though mobile, are placed on stands while in use . . . [T]he sole purpose of the [well-servicing rig] is to serve as a work platform'' (Poole Co., Texas Ltd., 19 BNA OSHA 1317 (No. 99–0815, 2000)). The rigging-up process also includes installation of guardrails, stairs and other implements related to ingress/egress and safety'' (Id.).

requirements for specific types of stairways. The general requirements in the existing rule (29 CFR 1910.23 and 1910.24) only apply to fixed industrial stairs. However, OSHA believes it is necessary to apply these general requirements to all stairways used in workplaces to ensure that workers have adequate protection from fall hazards.

Final paragraph (b)(1), like proposed paragraph (a)(2), requires that employers ensure handrails, stair rail systems, and guardrail systems are provided in accordance with final § 1910.28. This provision is intended to protect workers from falling off stairways. The final rule revises the proposal in two ways. First, OSHA added ''guardrail systems'' to final paragraph (b)(1). There are places on stairways, such as a platform between two flights of stairs, where guardrails, not stair rail systems are used. This was OSHA's intent in the proposed rule and is clarified for the final rule. There is no additional burden imposed on employers because they already must provide protection on unprotected sides and edges 4 feet or more above a lower level in accordance with final § 1910.28. Section 1910.29 of the final rule details the criteria these guardrail systems must meet.

Second, the Agency did not include the note from proposed paragraph (a)(2) in final paragraph (b)(1). The note was moved to § 1910.29(f)(1)(iii) in the final rule. The proposed note specified that the top rail of a stair rail system may also serve as a handrail when installed in accordance with § 1910.29(f). The Agency determined that the note primarily addresses criteria for stair rail systems and is more appropriately placed with the criteria requirements in § 1910.29. OSHA did not receive any comments on the proposed provision and adopted the provision with the clarifications discussed above.

Final paragraph (b)(2), like proposed paragraph (a)(3), requires employers to ensure that the vertical clearance above any stair tread to any overhead obstruction is at least 6 feet, 8 inches, as measured from the leading edge of the tread. Like the proposal, spiral stairs must meet the vertical clearance requirement specified by final paragraph (d)(3), which is 6 feet, 6 inches.

The required vertical clearance in the final rule is lower than the 7-foot minimum clearance in the existing requirement (§ 1910.24(i)). However, the 6-foot, 8-inch clearance is consistent with A1264.1–2007 (Section 6.12) and NFPA 101–2012. OSHA notes that Section 6(b)(8) of the Occupational Safety and Health Act of 1970 (OSH Act) (29 U.S.C. 655(b)(8)) requires OSHA to promulgate rules that are consistent with existing national consensus standards or explain why differences better effectuate the purpose of the OSH Act. The Agency believes that the requirements in A1264.1–2007 and NFPA 101–2012 provide adequate protection and reflect accepted industry practice. OSHA also points out that stairways built in compliance with the existing clearance requirements already meet the final rule. OSHA did not receive any comments on the proposed provision.

Final paragraphs (b)(3) through (5) establish requirements for riser heights, tread depths, and stairway landing platform dimensions. The final paragraphs, which are consistent with existing subpart D, are the minimum criteria necessary to ensure worker safety when using stairs. The final provisions also contain minor non-substantive changes to increase clarity.

Final paragraph (b)(3), like proposed paragraph (a)(4), incorporates the requirement in existing § 1910.24(f) that employers ensure that stairs have uniform riser heights and tread depths between landings. OSHA believes that retaining this requirement is necessary because, in the Agency's experience, even small variations in riser height can cause trips.

OSHA, however, is not carrying forward other language in existing § 1910.24(f). For example, the existing rule requires that employers ensure stair treads and nosings are slip-resistant. OSHA does not believe this provision is necessary because final § 1910.22 already addresses this hazard. To illustrate, § 1910.22(a)(3) requires employers to maintain walking-working surfaces free of hazards such as spills, and § 1910.22(d)(1) requires employers to maintain walking-working surfaces in a safe condition. Therefore, OSHA is not repeating this requirement in final § 1910.25.

Similarly, OSHA believes it is not necessary to include in final § 1910.25(b)(3) the existing language allowing employers to use ''welded bar grating treads without nosings.'' The final rule is performance-based so employers are free to use stairways constructed of any type of material that will meet the requirements of the final rule.

OSHA received comments on the proposed provision. In particular, NFPA argued that the uniform tread and riser dimensions in final paragraph (b)(3) are not achievable because the provision does not include construction tolerances. NFPA stated, ''It is not technically possible to build stairs with consistent riser height and consistent tread depth as construction tolerances creep into the process'' (Ex. 97). To address this issue, NFPA recommended that OSHA incorporate the tolerances allowed in NFPA 101–2009, which permits an allowance of no more than 3⁄16 inches in adjacent tread depth or riser height, and a tolerance of no more than 3⁄8 inches between the largest and smallest tread or riser in any flight of stairs. NFPA stated that the recommendation would provide a ''safety net for compliance'' and would protect employers from an interpretation of ''uniform'' that does not permit any allowance for construction tolerances, or that permits tolerances that are less than the tolerances established in NFPA 101–2009 (Ex. 97).

OSHA believes that minor variations in tread depth and riser height, such as those allowed in NFPA 101–2012 and A1264.1–2007, are acceptable. OSHA understands that minor variations in tread depth and riser height due to construction tolerances are likely to occur when building stairs and these minor variations are acceptable under the final rule.

Final paragraph (b)(4), like proposed paragraph (a)(5) and existing § 1910.24(g), requires that employers ensure the size of stairway landings and platforms is not less than the stair width and not less than 30 inches in depth, as measured in the direction of travel. The final rule is consistent with A1264.1–2007 (Section 6.10). OSHA did not receive any comments on the proposed provision adopts the proposed language with only minor clarifications.

Final (b)(5), like proposed paragraph (a)(6), requires that, when a door or a gate opens directly onto a stairway, employers must provide a platform and ensure the swing of the door or gate does not reduce the effective usable depth of the platform to less than:

- 20 inches for platforms installed before the effective date of the final rule; and
- 22 inches for platforms installed on or after the effective date of the final rule.

The final and proposed rules revise the language of the existing rule (§ 1910.23(a)(10)), which requires employers to ensure that doors or gates do not reduce the effective usable depth to less than 20 inches, by increasing the effective usable platform depth by 2 inches for newly installed platforms. The final rule grandfathers in the 20-inch platform depth requirement for existing stairways. Increasing the platform depth requirement to a minimum 22 inches is consistent with the current and earlier versions of A1264.1 (1995, 2002, and 2007).

The final and proposed rules use the term ''effective usable depth.'' The term means the portion of the platform that is beyond the swing of the door or gate where a worker can stand when opening the door or gate. As Figure D–7 in the regulatory text illustrates, the effective useable depth is that portion of the platform that extends beyond the swing radius of the door or gate when it is open fully to the leading edge of the stair. OSHA believes this term expressly clarifies that the minimum platform depth must consider the portion of the platform used to accommodate the swing of the door or gate.

The Agency requested comment on the proposed provision and the amount of unobstructed space necessary for landing platforms when doors or gates open directly onto them. Ameren Corporation commented:

> The necessary landing outside the swing radius of any door is directly dependent upon the direction of the door's swing in relation to the direction of travel. If the door opens in the direction of travel, much less clearance is needed for the employee. Since no objective evidence is available for one distance for all paths of travel, the clearance of door swing should remain as is and allow the employer to determine whether or not two more inches of clearance is necessary for the safety of their personnel (Ex. 189).

OSHA believes that adopting the 22-inch effective useable platform depth for newly installed stair platforms is appropriate. As mentioned earlier, OSHA drew the requirement from the A1264.1–2007 standard. The standard reflects the considered views of employers, employees, safety professionals, and others. The 22-inch requirement also was in the 1995 and 2002 editions of the A1264.1 standard. With the requirement in A1264.1–2007 being in effect since 1995, OSHA believes it clearly represents accepted industry practice. OSHA notes the 22-inch effective-depth requirement applies to platforms installed on or after the effective date of the final rule, which is January 17, 2017. OSHA believes that the phase-in time the final rule allows is more than adequate for employers who install platforms, gates, and doors on stairways.

Ameren Corporation also raised an issue about the compliance deadline for paragraph (b)(5):

> Lead time for material orders are often quite longer than three months[,] often up to years to order material for large capital projects. Small projects with possibly only a small amount of material being required shouldn't have much of an issue of complying depending on the manufacturer capabilities and their imposed deadlines. Stipulations of ''ordered'' material should be imposed in regard to the date of the final rule because the time between ordering and placing into service is often greater than 90 days (Ex. 189).

The 22-inch platform depth requirement in the final rule is prospective: it only applies to stairways, platforms, doors, and gates installed on or after the effective date of the final rule, which is January 17, 2017. This provision gives employers a 60-day lead time after publication of the final rule to come into compliance with the requirement when they install new stairway platforms. OSHA does not believe that it is necessary to extend the compliance deadline any further, even though the Agency proposed 150 days. The Agency believes a 60-day compliance lead time is more than adequate given that the 22-inch requirement in the A1264.1 standard has been in place for more than 18 years. During this 18-year period, OSHA believes the vast majority of employers, as well as manufacturers, construction companies, and building owners, came into compliance with the 22-inch requirement. Therefore, OSHA requires employers to comply with the 22-inch effective useable platform depth requirement by the standard's effective date.

Final paragraph (b)(6), like proposed paragraph (a)(7), requires that employers ensure stairs can support at least five times the normal anticipated live load, and never less than a concentrated load of 1,000 pounds, applied at any point on the stairway. This requirement is consistent with A1264.1–2007 and earlier versions, which have been in place for many years. OSHA believes that most existing stairs have been installed in accordance with the ANSI requirements, and, therefore, already are in compliance.

OSHA requires employers to apply this safe-load requirement to spiral stairs, ship stairs, and alternating tread-type stairs, as well as standard stairs. OSHA believes the safe-load requirement is necessary to protect workers from stair collapse due to overloading, regardless of the type of stairs they are using. OSHA notes that final paragraph (b)(6), like the ANSI standard, applies to all stairs that § 1910.25 covers.

For the purposes of final paragraph (b)(6), a ''normal anticipated live load'' means a dynamic load (*e.g.,* temporary, of short duration, or moving) that an employer reasonably anticipates will or could be applied to the stairs (see letter to Mr. M. Podlovsky, May 8, 2000).[23] A ''concentrated load,'' for the purposes of final paragraph (b)(6), is the load-application point where the structure would experience maximum stress. Thus, a normal live load is spread over the whole stair tread area, while a concentrated load refers to a load applied at one point on the stair tread.

Final paragraph (b)(6) includes revisions that OSHA believes will provide an equal or greater level of protection to workers than the existing and proposed rules. For example, final paragraph (b)(6) requires that employers ensure stairways ''can support'' the required load, while the existing (at § 1910.24(c)) and proposed rules specify that stairways must ''be designed and constructed'' to support the required load. The revision ensures that, in addition to the design and construction of the stairways, the employer has an ongoing duty to maintain the stairways to ensure they can continue to support the load applied to them without collapse.

The final rule also revises the default strength language to require that stairways be capable of supporting a concentrated load of not less than 1,000 pounds ''applied at any point.'' The existing rule requires that stairways be capable of carrying not less than a ''moving'' concentrated load of 1,000 pounds. OSHA believes the final provision provides equal or greater level of safety by making the final rule applicable to any single point on the stairs, particularly the point that experiences maximum stress. These revisions are consistent with A1264.1–2007. OSHA did not receive any comments on the proposed provision and adopts paragraph (b)(6) with the changes discussed.

Final paragraphs (b)(7) through (9) specify when and where employers must provide standard stairs, and under what conditions employers may use spiral, ship, or alternating tread-type stairs. In final paragraphs (b)(7) and (8), OSHA simplified and reorganized the existing rule (§ 1910.24(b)) to make the requirements clearer and easier to understand than the existing and proposed rules.

Final paragraph (b)(7), like proposed paragraph (a)(8) and existing § 1910.24(b), requires employers to provide standard stairs to allow workers to travel from one walking-working surface to another. The existing and final rules both recognize that standard

[23] OSHA letter to Mr. Podlovsky available at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=23731.*

stairs are the principal means of providing safe access in workplaces and employers must provide them when operations necessitate ''regular and routine travel between levels,'' including accessing operating platforms to use or operate equipment. The final provision is consistent with A1264.1–2007 (Section 6.1).

For purposes of the final rule, OSHA describes ''regular and routine travel'' in much the same way as the existing rule in § 1910.24(b). The term includes, but is not limited to, access to different levels of the workplace daily or during each shift so workers can conduct regular work operations, as well as operations ''for such purposes as gauging, inspection, regular maintenance, etc.'' (existing § 1910.24(b)). ''Regular and routine'' also includes access necessary to perform routine activities or tasks performed on a scheduled or periodic, albeit not daily, basis, particularly if the tasks may expose employees to acids, caustics, gases, or other harmful substances, or require workers to manually carry heavy or bulky materials, tools, or equipment (existing § 1910.24(b)).

Final paragraph (b)(7) retains the existing provision allowing the use of winding stairways on tanks and similar round structures when the diameter of the tank or structure is at least 5 feet. OSHA notes that winding stairs on such tanks and structures still must meet the other general requirements for stairways specified in the final rule. This provision does not preclude the use of fixed ladders to access elevated tanks, towers, and similar structures, or to access overhead traveling cranes, etc., when the use of such ladders is standard or common industry practice. OSHA received no comments on the proposed requirement and adopted the provision with only minor editorial change.

Final paragraph (b)(8) allows employers to use spiral stairs, ship stairs, and alternating tread-type stairs (collectively referred to as ''non-standard stairs''), but only when employers can demonstrate that it is not feasible to provide standard stairs.

The existing rule (existing § 1910.24(b)), which OSHA adopted in 1972 from ANSI A64.1–1968 pursuant to section 6(a) of the OSH Act (29 U.S.C. 655(a)), allows employers to use spiral stairs for ''special limited usage'' or as a secondary means of access but only where it is ''not practical'' for employers to provide standard stairs. The existing rule, however does not address either ship or alternating tread-type stairs.

The 1973 proposed rule would have allowed the use of ship stairs ''in restricted spaces in which a fixed industrial stairway cannot be fitted'' (38 FR 24300, 24304 (9/6/1973)), however, OSHA withdrew that proposal (41 FR 17227 (4/23/1976)). In a 1982 letter of interpretation, though, OSHA said if employers use ship stairs in accordance with the 1973 proposal, the Agency would consider it to be a *de minimis* violation of existing § 1910.24(e) (Letter to Edward Feege, August 20, 1982 [24]).

That year OSHA issued Instruction STD 01–01–011 (April 26, 1982) allowing the use of and establishing guidelines for ''a newly developed alternating tread-type stair'' [25] (*See also,* Letter to Mr. Dale Ordoyne, December 2, 1981 [26]). To ensure worker safety, the instruction stated that alternating tread-type stairs must be designed, installed, used, and maintained in accordance with manufacturer's recommendations. In addition, OSHA said alternating tread-type stairs must meet the following requirements:

- The stairs are installed at a 70 degree angle or less;
- The stairs are capable of withstanding a minimum uniform load of 100 pounds per square foot with a design factor of 1.7 and the treads are capable of carrying a minimum concentrated load of 300 pounds at the center of any treadspan or exterior arc with a design factor of 1.7. If the alternating tread-type stairs are intended for greater loading, the employer must ensure the stairs are constructed to allow for additional loading; and
- The stairs are equipped with a handrail on each side to assist employees climbing or descending the stairs.

OSHA announced in both STD 01–01–011 and the 1982 letter of interpretation that it would include provisions on ship stairs and alternating tread-type stairs in the subpart D rulemaking. The 1990 proposal included provisions allowing employers to use spiral, ship, and alternating tread-type stairs and establishing design specifications for each type of stair (55 FR 13360, 13400 (4/10/1990)). No final rule came from that proposal either.

In 2002, in response to an Office of Management and Budget (OMB) request for comment on its Draft Report to Congress on the Costs and Benefits of Federal Regulations, the Copper and Brass Fabricators Council (CBFC) urged OSHA to revise the existing rule (§ 1910.24(b)) to allow the use of ship and spiral stairs in a broader range of situations:

> OSHA regulations under some circumstance require the use of fixed ladders when spiral stairways or ship stairs would be safer . . . [S]ection 1910.24(e) prohibits any stairs with an angle of rise greater than 50 degrees. Unfortunately, it is very common to have a tight location in industry where there is insufficient space for stairs with an angle of 50 degrees or less. Traditionally, these areas would use ship stairs that have separate handles from the stair rail but steps that are less deep than the traditional 8 inch to 12 inch step. Otherwise, a spiral stair was used which allowed a deeper tread. Under the present regulation, industries are required to use rung ladders in these locations which is less safe than spiral stairs or ship stairs (Ex. 4).

The 2010 proposed rule expanded the existing standard to allow employers to use spiral, ship, and alternating tread-type stairs. Similar to the existing rule, the proposal allowed employers to use non-standard stairs for ''special limited usage'' and ''secondary access,'' but only when the employer can demonstrate it is ''not practical'' to provide standard stairs in either situation (proposed paragraph (b)(9)). The proposed rule did not define any of these terms. Also, A1264.1–2007 did not define ''special limited use,'' but OSHA explained in the preamble to the proposed rule that the International Building Code (IBC)–2009 identified ''special limited usage'' area as a space that is no more than 250 square feet (23 m^2) and serves no more than five occupants'' (75 FR 28882). The IBC–2009 also identifies ''galleries, catwalks and gridirons'' as examples of special limited usage areas (75 FR 28882).

Final paragraph (b)(8) differs from the proposed rule in several ways. First, final paragraph (b)(8) deletes the language in the proposed rule limiting the use of non-standard stairs to ''special limited usage'' areas and as a secondary means of access. Although the existing, proposed, and A1264.1–2007 standards permit employers to use non-standard stairs in special limited usage areas and for secondary access, none of these standards defines either term. OSHA believes eliminating those undefined terms makes the final rule easier to understand.

Second, the final rule replaces the proposed language (*i.e.,* ''special limited usage and secondary access situations

[24] Letter to Mr. Feege available from OSHA's Web site at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=19042.*

[25] OSHA Instruction STD 01–01–011 is available from OSHA's Web site at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=1753.*

[26] Letter to Mr. Ordoyne available from OSHA's Web site at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=18983.*

when the employer can demonstrate it is not practical to provide a standard stairway'') with long-standing and familiar performance-based language (*i.e.,* ''can demonstrate that it is not feasible to use standard stairs''). The language in the final rule is consistent with the legal requirements of the OSH Act. In addition, OSHA believes that the language in the final rule gives employers greater flexibility. For example, there may be places other than special limited use areas and secondary access situations where an employer can demonstrate that standard stairs are infeasible. The final rule allows employers to use non-standard stairs in those situations.

Third, the Agency believes the performance-based language in the final rule does a better job of targeting the areas where it is not possible to use standard stairs and, thus, provides more protection for workers than the existing and proposed rules. The final rule limits the use of non-standard stairs to those situations in which it is not possible to use standard stairs. For example, under the final rule, employers must use standard stairs in special limited usage areas if it is possible to install them.

OSHA requested comment on proposed rule, including whether the final rule also should identify additional or specific limited usage areas where employers can use non-standard stairs (75 FR 28882). Two stakeholders said OSHA should narrow the situations in which employers may use non-standard stairs (Exs. 97; 159). For example, NFPA stated:

> [I]t appears that OSHA is proposing to allow other than Standard Stairs to be used as long as the employer shows a Standard Stair cannot be used. However, no criterion as to why a standard stair could not be used is provided. Section 1910.25(a)(9) seems to allow spiral stairs, ship stairs or alternating tread devices without any limits. NFPA suggests OSHA establish a bracket of circumstances when such devices can be used (Ex. 97).

In particular, NFPA recommended that OSHA limit the circumstances in which employers may use non-standard stairs to the following list, which are the circumstances where NFPA 101 Life Safety Code allows the use of non-standard stairs, such as alternating tread-type stairs:

- As a means to access unoccupied roof spaces;
- As a second means of egress from storage elevators;
- As a means of egress from towers and elevated platforms around machinery or similar spaces, and occupied by no more than three persons at the same time; and
- As a secondary means of egress from boiler rooms or similar spaces, and occupied by no more than three persons at the same time (NFPA 101–2009, Section 7.2.11.1).

NFPA added that incorporating the NFPA 101–2009 list would ''close the gap created by the proposed language and greatly limit the circumstances by which 'non-standard' stairs are acceptable for use'' (Ex. 97).

Similarly, Jacqueline Nowell, of the United Food and Commercial Workers Union (UFCW), recommended that OSHA adopt a definition of special limited usage that is narrower than the IBC–2009 definition:

> The Agency refers to the ICC Building Code definition [of special limited usage] as ''a space not more than 250 square feet (23m\2\) in area and serving not more than five occupants.'' Work platforms in many packaging houses would meet this definition of ''special limited usage.'' By allowing the use of spiral stairs or other non-standard stairs, OSHA would be introducing a new and unnecessary hazard to the workers who must climb up and down from these platforms multiple times a day, wearing heavy and bulky layers of personal protective equipment. I urge OSHA to develop a more restricted definition of ''special limited usage'' in order to prevent falls and other injuries to these workers (Ex. 159).

On the other hand, Southern Company (Ex. 192) said the definition of ''special limited usage'' in IBC–2009 (*i.e.,* ''a space not more than 250 square feet'') was too restrictive and urged OSHA to adopt a more flexible approach (Ex. 192). They pointed out that mezzanine storage space generally is a special limited use area, even though in many cases the space may exceed 250 square feet (Ex. 192). They recommended that OSHA follow the approach in STD 01–01–011 and its letters of interpretation and allow the use of non-standard stairs when space limitations make the use of standard stairs infeasible, regardless of whether the space is greater than 250 square feet (Ex. 192) (See Letter to Edward Feege (August 20, 1982) and Erin Flory (February 10, 2006) [27]).

OSHA believes the performance-based language in final paragraph (b)(8) addresses many of the concerns the stakeholders raised. The language in the final rule provides the increased flexibility that Southern Company supports. At the same time, the final rule limits the use of non-standard stairs to those circumstances where, based on specific case-by-case evaluations and demonstrations, it is not possible to use standard stairs. Thus, for example, if it is possible to use standard stairs in a space that is less than 250 square feet, the employer is not permitted to use non-standard stairs under the final rule. In conclusion, OSHA adopts final paragraph (b)(8) as discussed.

Final paragraph (b)(9), which is a new provision, requires employers to ensure that non-standard stairs are installed, used, and maintained in accordance with manufacturer's instructions. Since 1982, OSHA Instruction STD 01–01–011 has applied this requirement to alternating tread-type stairs. Although final § 1910.22(d) already requires that employers inspect and maintain walking-working surfaces in a safe condition, OSHA believes that specifically requiring that non-standard stairs comply with the instructions or provisions the manufacturer has issued for the installation, use, and maintenance is critical to ensure that unique aspects of these stairs are identified and addressed. OSHA also believes this requirement is necessary to minimize potential risks inherent in spiral, ship, and alternating tread-type stairs (*e.g.,* reduced tread depth, increased stair angle, improper climbing techniques) and to ensure those stairs are safe for workers to use. OSHA notes that final paragraph (b)(9), like final § 1910.22(d), applies to existing spiral, ship, and alternating tread-type stairs as well as non-standard stairs installed after the final rule is effective.

Finally, the Agency notes the requirements for spiral, ship, and alternating tread-type stairs in final paragraphs (b)(8) and (9) that employers must follow are in addition to the other general requirements in final paragraph (b) and specific requirements in final paragraphs (d), (e), and (f), which also apply to non-standard stairs.

Paragraph (c)—Standard Stairs

Paragraph (c) of the final rule, like proposed paragraph (b), establishes specific requirements for standard stairs that apply in addition to the general requirements in final paragraph (b). OSHA believes these specific requirements are the minimum criteria necessary to ensure workers can negotiate standard stairs safely. The requirements in final paragraph (c) generally are consistent with the A1264.1–2007 standard and most of the requirements are in the existing rule.

Final paragraph (c)(1), like proposed paragraph (b)(1) and existing § 1910.24(e), requires employers to install standard stairs at angles between 30 and 50 degrees from the horizontal. The final rule is consistent with

---

[27] Available from OSHA's Web site at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=25301.*

A1264.1–2007, which permits employers to install standard stairways at angles between 30 and 70 degrees from the horizontal, depending on the type of stairs. The final standard includes a diagram explaining that the slope for standard stairs is 30 to 50 degrees (see Figure D–10). OSHA received no comments on the proposal and adopted the provision as proposed.

Final paragraphs (c)(2) and (3), like proposed paragraphs (b)(2) and (3), require that employers ensure standard stairs have a maximum riser height and minimum tread depth of 9.5 inches.[28] The final rule also includes an exception (final paragraph (c)(5)) on riser heights and tread depths for standard stairs installed prior to the effective date of the final rule, which is January 17, 2017. The exception specifies that employers will be in compliance with the riser height/tread depth requirements if they meet the dimensions specified in the note to final § 1910.25(c)(2) and (3), or if they use a combination that achieves the required angle range of 30 to 50 degrees.

The existing rule (§ 1910.24(e)) does not specify a maximum riser height or minimum tread depth for fixed stairs. Instead, it requires that fixed stairs be installed at an angle of 30 to 50 degrees from horizontal and allows employers to use any combination of uniform riser and tread dimensions that achieves a stairway angle within the required range. To assist employers, the existing rule (§ 1910.24(e), Table D–1) provides examples of riser height and tread depth combinations that will achieve the required angle range. The existing rule also specifies that employers may use riser and tread combinations other than those listed in Table D–1, provided they achieve a stairway angle that is within the required slope of 30 to 50 degrees.

Like the final rule, A1264.1–2007 (Section 6.5) requires a 9.5-inch maximum riser height and minimum tread depth. And like the existing rule, A1264.1–2007 also allows employers to use any combination of riser and tread dimensions that achieve a stair angle within the permissible range. OSHA notes that A1264.1–2007 (Section E6.4) specifies that the permissible angle range for ''typical fixed stair'' is 30 to 50 degrees, which is consistent with the existing and final rules.

OSHA believes that the riser height and tread depth requirements in final paragraphs (c)(2) and (3), respectively, are simpler, clearer, and easier to understand and follow than the existing rule. The final rule also makes it easier for employers to achieve the required stair angle range of 30 to 50 degrees in final paragraph (c)(1).

OSHA received several comments on the proposed riser height and tread depth requirements. For example, Ellis Fall Safety Solutions (Ex. 155) advocated that OSHA follow the maximum riser heights and minimum tread depths of 7 and 11 inches, respectively, in IBC–2009, stating, ''If other locations in commerce are 7/11 why should we not find that at work too? Also it is less tiring for workers to climb a 7/11 stair . . . . OSHA should not be different than the IBC Building Code in this instance'' (Ex. 155).

To reduce employer burdens, Ellis also suggested that the final rule include a provision grandfathering in the riser and tread dimensions of existing stairways until employers do ''major renovation'' of the stairs (Ex. 155). Southern Company agreed that OSHA should grandfather in existing stairways that have a tread depth of less than 9.5 inches, ''[W]e have not seen data that an existing stairway with an 8 inch tread depth produces an increase in the fall exposure that would justify replacing these stairs. Absent data . . . we feel these stairs should be grandfathered'' (Ex. 192).

NFPA, on the other hand, said there was ''no technical justification'' for allowing a tread depth of less than 9.5 inches, especially since it was more lenient than the 11-inch tread depth requirement in new IBC codes (Ex. 97).

OSHA agrees with NFPA that the 9.5-inch minimum tread requirement in the proposed, final, and A1264.1–2007 standards provides stepping space that is adequate to protect workers from falling. Although A1264.1–2007 (Section 6.5) requires a 9.5 maximum riser height and minimum tread depth, an explanatory note also suggests that employers consider the riser and tread requirements in IBC codes. OSHA notes that employers who have or install standard stairs with an 11-inch tread depth, which IBC–2009 requires, are in compliance with the final rule. Moreover, as mentioned above, OSHA grandfathers in the riser heights and tread depths of existing stairs even if they are less than 9.5 inches, which addresses the concerns of Southern Company.

OSHA removed from final paragraph (c)(3) the proposed exception from the minimum tread-depth requirement for stairs with open risers. OSHA adopted the proposed exception from the 9.5-inch tread-depth requirement for open risers from A1264.1–2007. A note to that standard explained: ''Open risers are needed on certain narrow tread and steep angled stair systems and exterior structures'' (Section E6.13.).

NFPA opposed the proposed exception, saying that allowing a tread depth of less than 9.5 inches for open risers is problematic in two ways:

> (1) Where open risers are present, not only does the specific 9.5-inch not apply, but no minimum tread depth is specified. The tread depth could be as little as 3–4 inches. (2) Stairs are used for travel in the downward direction at least as much as they are used for travel in the upward direction. An open riser might help to provide some extra ''effective'' tread depth for persons using the stair for upward travel. . . . [However,] [a]n open riser does not create greater effective tread depth for persons using the stair for downward travel (Ex. 97).

In addition, NFPA maintained that there is no technical justification for permitting a tread depth of less than 9.5 inches when the riser is open, stating, ''The 9.5-inch minimum tread depth specified [in paragraph (c)(3)] is already lenient as compared to the minimum 11-inch tread depth required in new construction model codes. The exemption for open risers should be deleted'' (Ex. 97). OSHA agrees with NFPA and, therefore, removed the proposed exception for standard stairways with open risers from the final rule.

Final paragraph (c)(4), like proposed paragraph (b)(4), requires that employers ensure standard stairs have a minimum width of 22 inches between vertical barriers. Examples of vertical barriers include stair rails, guardrails, and walls. The added language makes the final provision more protective than the existing rule (§ 1910.24(d)), which also requires a tread width of 22 inches but does not specify how to measure the width. The additional language makes the final rule consistent with A1264.1–2007, which requires a minimum clear width of 22 inches. OSHA did not receive any comments on the proposed provisions and adopts the provision as proposed.

The requirements for non-standard stairs in final paragraphs (d) (spiral stairs), (e) (ship stairs), and (f) (alternating tread-type stairs) parallel most of the provisions established for standard stairs in paragraph (c). Like the requirements for standard stairs, the requirements for spiral, ship, and alternating tread-type stairs represent the minimum requirements OSHA believes are necessary to ensure that

[28] Riser height is a vertical distance that is measured from the tread (horizontal surface) of one step to the top of the leading edge of the tread above it. Tread depth is a horizontal distance that is measured from the leading edge of a tread to the point where that tread meets the riser (See § 1910.25, Figure D–8). This method of measuring riser height and tread depth is consistent with NFPA 101–2009 (Section 7.2.2.3.5) and IBC (Section 1009.7.2).

employees are able to move safely from one walking-working surface to another. OSHA adopted the requirements for non-standard stairs from A1264.1–2007, NFPA 101–2012, and IBC–2012.

Paragraph (d)—Spiral Stairs

Final paragraph (d), like proposed paragraph (c), establishes specific requirements for spiral stairs. As mentioned earlier, these requirements apply in addition to the general requirements in paragraph (a). OSHA adopted most of the requirements in final paragraph (d) from NFPA 101–2012. OSHA believes that the vast majority of spiral stairs currently in use already meet the requirements in final paragraph (d) because these spiral stairs conform to the current industry practice expressed in this NFPA standard. Therefore, OSHA believes employers will not have difficulty complying with the final rule.

Final paragraph (d)(1), like paragraph (c)(1) of the proposed rule, requires that employers ensure spiral stairs have a minimum clear width of 26 inches. The ''clear'' width requirement in final paragraph (d)(1) is similar to the approach in final paragraph (c)(4) and A1264.1–2007 (Section 6.3). That is, the width is measured from the vertical barrier on the outside of the stairway to the inner pole onto which the treads are attached. Spiral stairs need a greater width than standard stairs because only the outside portion of the stairs can be stepped on since the inner part of treads are too short in depth. OSHA did not receive any comments on the proposed provision and adopts the provision as proposed.

Final paragraph (d)(2), like proposed paragraph (c)(2) and final paragraph (c)(3), requires that employers ensure that spiral stairs have risers with a maximum height of 9.5 inches. OSHA did not receive any comments on the proposed provision, and the final rule adopts the provision as proposed.

Final paragraph (d)(3) requires that employers ensure spiral stairs have a minimum headroom above the spiral stair treads of at least 6 feet, 6 inches. The final rule also requires that employers measure the vertical clearance from the leading edge of the tread. This requirement means that, at any and every point along the leading edge, the minimum headroom must be at least 6 feet, 6 inches. The proposed rule (paragraph (c)(3)) specifies that same minimum headroom, but proposed to measure it at the center of the leading edge of the tread. OSHA believes it is necessary to revise the method for measuring the vertical clearance to prevent injury to workers when using spiral stairs. The minimum headroom the final rule requires for spiral stairs is two inches less than the headroom final paragraph (b)(2) requires for all other stairways. Because the required headroom is less, OSHA believes it is important that employers measure the required minimum headroom at all points along the leading edge. OSHA did not receive any comments on the provision and adopts the proposed provision with the change discussed.

To ensure that workers are able to maintain safe footing while using spiral stairs, final paragraph (d)(4), like proposed paragraph (c)(4), requires that employers ensure spiral stairs have a minimum tread depth of 7.5 inches. Because the tread depth on a spiral stair is not the same across the width of the tread, the final rule also requires that employers measure the minimum tread depth at a point 12 inches from the narrower edge. This requirement ensures that workers will have adequate space at the point on the tread where they are most likely to step.

Although the minimum tread depth final paragraph (d)(4) requires is less than that for standard stairs, OSHA has several reasons for concluding that the minimum 7.5-inch tread depth is adequate to provide safe footing for workers. First, spiral stairs usually have open risers that provide additional space for the foot. Second, employers use spiral stairs where space restrictions make the use of standard stairs infeasible. In restricted-space situations, there may be insufficient room for stairways with 9.5-inch tread depths. Third, final paragraph (d)(4) is consistent with NFPA 101–2012. OSHA did not receive any comments on the proposal and adopts the provision as proposed.

Final paragraph (d)(5), like proposed paragraph (c)(5), requires that employers ensure spiral stairs have a uniform tread size. As OSHA mentioned in the discussion of paragraph (b)(3), this requirement is necessary because, in the Agency's experience, even small variations in tread size and shape may cause trips and falls. OSHA did not receive any comments on the proposed rule and adopts it as proposed.

Paragraph (e)—Ship Stairs

Final paragraph (e), like proposed paragraph (d), provides specific requirements employers must follow in situations where they may use a type of stair commonly referred to as a ''ship stair'' or ''ship ladder.'' Employers often use ship stairs as a means to bypass large equipment, machinery, or barriers in tight spaces. OSHA drew some of the provisions in final paragraph (e) from the A1264.1–2007 standard.

The requirements in final paragraph (e) apply in addition to the general requirements specified in paragraph (a) above. In addition, OSHA is reorganizing some of the provisions in final paragraph (e) to make the paragraph easier to follow and understand. For example, OSHA is grouping the riser requirements into one provision (final paragraph (e)(2)).

OSHA notes that the requirements in final paragraph (e) apply only to ship stairs used in general industry. Some commenters raised concerns about whether OSHA was applying the requirements in paragraph (e) to ship stairs used on vessels. For example, Northrop Grumman Shipbuilding (NGS) said:

> OSHA has included a definition (§ 1910.21(b)) and design requirements for ship stairs. . . . [W]e wish to clarify that despite the inclusion of the term ''ship stairs'' in the standard, OSHA is not attempting to extend application of the design criteria for ladders, stairs or other walking-working surfaces to vessels, which we believe are under the regulatory authority of the United States Coast Guard (Ex. 180).

Mercer ORC Networks raised similar concerns:

> Mercer believes that OSHA intends to apply this definition to a particular stair or ladder configuration wherever it is found, whether on a ship or in a land-based facility. However, if one reads the definition literally (which should be possible with regulations), one might easily conclude that unless the stairs or ladder are actually aboard a ship, they do not fit the regulation (Ex. 254).

Using the longstanding industrial term ''ship stairs'' does not mean that this final rule applies to any industry sectors or workplaces beyond general industry, or working conditions regulated by other agencies. As mentioned in § 1910.21, OSHA considers ''ship stairs'' to be a term of art for a type of stairway used when standard stairs are not feasible. OSHA recognizes that, historically, vessels used ship stairs to access different levels in restricted spaces. Today, however, employers use these stairs in other situations, including general industry workplaces. OSHA continues to use the term in the final rule to refer to a particular stair design, and not to designate where employers install or use them (see discussion of ship stairs in § 1910.21(b)).

Final paragraph (e)(1), like paragraph (d)(1) of the proposed rule, requires that employers ensure ship stairs are installed at a slope of 50 to 70 degrees from the horizontal. As A1264.1–2007 indicates, this slope range is standard for ship stairs (see Figure 6.4 of A1264.1). OSHA did not receive any comments on the proposed provision and adopts it as proposed.

Final paragraph (e)(2), like paragraph (d)(2) of the proposed rule, addresses risers on ship stairs. First, the provision requires that employers ensure ship stairs have open risers. The final rule is consistent with A1264.1–2007 (Section 6.13), which requires that ship, spiral, and alternating tread-type stairs having a tread depth of less than 9.5 inches must have open risers. The A1264.1–2007 standard explains that open risers are necessary for stairs with narrow tread depth, such as stairs used in restricted space (Sections E6.5 and E6.13). An open riser gives workers additional space to ensure they are able to maintain safe footing on treads that have a narrow tread depth due to the limited space.

Second, final paragraph (e)(2), like proposed paragraph (d)(3), requires that employers ensure ship stairs have a vertical rise between tread surfaces of at least 6.5 inches and not more than 12 inches. For clarity, OSHA moved the proposed requirement to paragraph (e)(2) because it also addresses stair risers. OSHA did not receive any comments on the proposed ship stair requirements for open risers and acceptable riser height and adopts the provision as proposed.

Final paragraph (e)(3), like proposed paragraph (d)(3), requires that employers ensure ship stairs have a minimum tread depth of 4 inches. Employers must apply final paragraph (e)(3) in combination with paragraph (e)(2). Although the required 4-inch minimum tread depth for ship stairs is less than the 9.5-inch minimum tread depth required for standard stairs (final paragraph (c)(3)), nevertheless, OSHA believes the tread depth is adequate to ensure that workers have a safe stepping area because final paragraph (e)(2) requires that ship stairs have open risers. As discussed, open risers give workers additional space to maintain safe footing on ship stairs. Also, together the riser and tread requirements in final paragraphs (e)(2) and (3), respectively, set the necessary framework for employers to achieve the required 50- to 70-degree angle range for ship stairs. OSHA did not receive any comments on the proposed provision and adopts the provision as discussed.

Final paragraph (e)(4), like proposed paragraph (d)(3), requires that employers ensure ship stairs have a minimum tread width of 18 inches. Although the required tread width for ship stairs is 4 inches less than that specified in final paragraph (c)(4), OSHA believes this width is adequate for stairs that employers may use only in certain limited situations, such as in restricted spaces where it is not feasible to use standard stairs. OSHA notes that the final rule makes the tread-width requirement a stand-alone provision, which makes paragraph (e)(4) consistent with the other tread-width provisions in § 1910.25. The Agency did not receive any comments on the proposed tread width provision and adopted it as proposed.

Paragraph (f)—Alternating Tread-Type Stairs

Final paragraph (f), like proposed paragraph (e), establishes specific requirements for those situations in which employers may use alternating tread-type stairs. The requirements in final paragraph (f) apply in addition to the general requirements in final paragraph (b). The Agency based the requirements on OSHA Instruction STD 01–01–011 and three national consensus standards (A1264.1–2007, NFPA 101–2012, and IBC–2012).

Final paragraph (f)(1), like proposed paragraph (e)(1), requires that employers ensure the series of treads installed in alternating tread-type stairs have a slope of 50 and 70 degrees from the horizontal. As A1264.1–2007 indicates, this slope range is standard for alternating tread-type stairs (see Figure 6.4). Final (f)(1) also is consistent with OSHA Instruction STD 01–01–011, which specifies that alternating tread-type stairs must have a slope angle of 70 degrees or less. OSHA did not receive any comments on the proposed requirement and adopts the provision as proposed.

Final paragraph (f)(2), like proposed paragraph (e)(2) and proposed § 1910.28(b)(11)(iii), specifies the required horizontal distance between handrails. It requires that employers ensure the distance between the handrails on alternating tread-type stairs is not less than 17 inches and not more than 24 inches.

OSHA Instruction STD 01–01–011, which allows employers to use alternating tread-type stairs, does not specify a minimum width between handrails. The existing (§ 1910.24(d)), proposed (proposed paragraph (b)(4)), and final rules (final paragraph (c)(4)) require that employers ensure standards stairs have a minimum 22-inch tread width between vertical barriers (*i.e.,* handrails). Similarly, A1264.1–2007 (Section 6.3) requires that all fixed stairs have a minimum ''clear width'' of 22 inches, which, in other words, means that the distance between handrails must be at least 22 inches.

OSHA believes the handrail distance requirement in the final rule better effectuates the purposes of the OSH Act than A1264.1–2007. First, alternating tread-type stairs can pose unique issues. OSHA believes the 17- to 24-inch handrail distance is appropriate and provides needed flexibility to address those issues. For example, as A1264.1–2007 (Section E6.1.1) points out, some alternating tread-type stairs are built so that workers need to descend facing away from the stairs, which makes three-point contact ''a necessity.'' For those stairs, OSHA believes that the distance between handrails may need to be adjusted so workers are able to maintain critical three-point contact while they are descending the stairs.

Second, the final 17- to 24-inch handrail distance requirement is established specifically for the alternating tread-type stairs. By contrast, the 22-inch width requirement in A1264.1–2007 applies to all fixed stairs and does not take into consideration the issues and limitations involved with alternating tread-type stairs. Therefore, OSHA believes the flexibility that final paragraph (f)(2) provides, combined with its specific consideration of the issues involving alternating tread-type stairs, ensures that the final rule will provide appropriate protection.

Finally, adopting a 17- to 24-inch handrail distance is consistent with the NFPA 101–2012 requirement for alternating tread-type stairs (Section 7.2.11.2). Unlike A1264.1–2007, the NFPA 101 standard establishes handrail width requirements specific to alternating tread-type stairs and the unique issues and limitations those stairs involve. OSHA is therefore following the NFPA 101–2012 standard in accordance with section 6(b)(8) of the OSH Act (29 U.S.C. 655(b)(8)).

OSHA notes that since 1986, OSHA Instruction STD 01–01–011 has required that alternating tread-type stairs ''be equipped with a handrail on each side'' to assist workers using the stairs. Final paragraph (f)(2) (*i.e.,* ''between handrails'') is consistent with that instruction. OSHA did not receive any comments on proposed paragraph (f)(2) and adopts as discussed.

Final paragraphs (f)(3) and (f)(4) address tread depth for alternating tread-type stairs. Final paragraph (f)(3), like proposed paragraph (e)(3), requires that employers ensure alternating tread-type stairs have a tread depth of at least 8.5 inches. However, if the tread depth is less than 9.5 inches, final paragraph (f)(4), like proposed paragraph (e)(4), requires that employers ensure alternating tread-type stairs have open risers. The A1264.1–2007 standard contains the same requirement (Section 6.13), explaining that open risers are necessary on stairs with narrow treads (Section E6.13). OSHA did not receive any comments on the proposed provisions, which the final rule adopts with only minor editorial changes.

Final paragraph (f)(5), like proposed paragraph (e)(5), requires that employers ensure that each tread has a minimum width of 7 inches measured at the leading edge (nosing) of the tread. The measurement is taken at the leading edge of the tread because treads on many of these types of stairs narrow at the back of the tread. This requirement is based on a requirement in the IBC–2012 (§ 1009.13.2). OSHA did not receive any comments on the proposed requirements and adopts the provisions as proposed.

Section 1910.26—Dockboards

Section 1910.26 of the final rule establishes requirements for the design, performance, and use of dockboards. The final rule updates the existing requirements for dockboards (existing § 1910.30(a)).[29] For example, the final rule deletes the existing requirement that the design and construction of powered dockboards conform to the 1961 Department of Commerce (DOC) Industrial Lifts and Hinged Loading Ramps Commercial Standard (CS202–56). ANSI/ITSDF B56.1 (2012) and other recently updated national consensus standards supersede the DOC standard. These standards include:

- American National Standards Institute (ANSI)/Industrial Truck Standards Development Foundation (ITSDF) B56.1–2012, Trucks, Low and High Lift, Safety Standard (B56.1–2012) (Ex. 384);
- ASME/ANSI MH14.1–1987, Loading Dock Levelers and Dockboards (MH14.1–1987) (Ex. 371);
- ANSI MH30.1–2007, National Standard for the Safety Performance, and Testing of Dock Loading Devices (MH30.1–2007) (Ex. 372); and
- ANSI MH30.2–2005, Portable Dock Loading Devices: Standards, Performance, and Testing (MH30.2–2005) (Ex. 20).

Both the proposed and final rules adopted provisions that generally are consistent with these national consensus standards. Final § 1910.26 applies to all dockboards unless a provision states otherwise.

The final rule (final § 1910.12(b)) defines a dockboard as a portable or fixed device used to span a gap or compensate for a difference in height between a loading platform and a transport vehicle. Dockboards may be powered or manual, and include, but are not limited to, bridge plates, dock levelers, and dock plates.

''Loading platforms,'' as used in the definition of dockboards, include loading docks, interior floors, driveways or other walking or working surfaces. ''Transport vehicles,'' as used in the definition and in the final rule, are cargo-carrying vehicles that workers may enter or walk onto to load or unload cargo and materials. Transport vehicles include, but are not limited to, trucks, trailers, semi-trailers and rail cars. Employers primarily use transfer vehicles on dockboards in order to move cargo and materials on and off transport vehicles. ''Transfer vehicles,'' which are mechanical powered or non-powered devices to move a payload, include, but are not limited to, powered industrial trucks, powered pallet movers, manual forklifts, hand carts, hand trucks, and other types of material-handling equipment. Transfer vehicles include all mechanical handling equipment that 29 CFR part 1910, subpart N, covers.

These descriptions of transport vehicles and transfer vehicles are consistent with the definitions of those terms in the MH30.1–2007 and MH 30.2–2005 consensus standards. In proposed § 1910.26(d), OSHA used the term ''equipment'' to reference all types of transfer vehicles. OSHA believes the term ''transport vehicle'' more accurately describes the types of equipment OSHA intends to cover in final § 1910.26.

Paragraph (a) of the final rule, like proposed paragraph (a), requires that employers ensure that the dockboards are capable of supporting their maximum intended load. Section 1910.21(b) of the final rule defines ''maximum intended load'' as the total load (weight and force) of all workers, equipment, vehicles, tools, materials, and other loads that the employer ''reasonably anticipates'' to be applied to a walking-working surface at any one time. OSHA recognizes that not all dockboards are equal, and some employers may have multiple dockboards with different capacities. Some dockboards are made of lightweight materials, such as aluminum, designed to support lighter loads such as those that typically occur with manual material handling methods. Other dockboards, such as those made of steel, are typically designed to accommodate a heavier load, such as a laden powered industrial truck. Additionally, portable dockboards may be carried on transport vehicles for use at various loading platforms and subjected to a wide range of anticipated loads.

The final rule differs from existing § 1910.30(a)(1) in that the existing rule requires dockboards to be strong enough to carry the load imposed on them. As OSHA explains in the discussion of final § 1910.21(b), the term ''maximum intended load'' applies not only to total loads currently applied to a walking-working surface, such as a dockboard, but also to total loads that the employer has a reasonable anticipation will be placed on the walking-working surface.

The provision for loads in final § 1910.22(b) requires that employers ensure all walking-working surfaces are capable of supporting the maximum intended load that will be applied to that surface. OSHA believes it is important for clarity to include this performance-based requirement in § 1910.26. OSHA included the provision in final § 1910.26(a) to emphasize that the final rule revised the load criteria in the existing rule from ''load imposed'' to ''maximum intended load.'' Also, OSHA included the load requirement in this section to emphasize that it applies to all dockboards that workers use, regardless of whether the employer or some other entity owns or provides the dockboard; whether the dockboard is portable, fixed, powered, or manual; or whether the employer uses the dockboard as a bridge to a transport vehicle. Finally, OSHA included the requirement in this section to stress that, consistent with MH14.1–1987 (Section 2), the design and construction of all load-supporting parts of the dockboard must ensure that the dockboard unit as a whole, when under load, is capable of supporting the maximum intended load.

The national consensus standards also provide guidance to help employers comply with final paragraph (a). For example, MH14.1–1987 and MH30.2–2005 identify factors and circumstances employers should consider when ensuring their dockboards meet the load requirement in final paragraph (a): ''In selecting dock leveling devices, it is important [for employers/owners] to consider not only present requirements but also future plans or adverse environments'' (MH14.1–1987 (Section 3.1(j) and MH30.2–2005 (Section 6.2.9))).

The MH14.1–1987 standard requires that load-supporting parts of dockboards, including structural steels

[29] The final rule also deletes the existing requirements for forging machine areas and veneer machinery in existing § 1910.30(b) and (c), respectively. OSHA believes these requirements are not necessary because § 1910.22(b) of the final rule, as well as other general industry standards (*e.g.,* 29 CFR part 1910, subpart O (Machinery and Machine Guarding)) already address those hazards. For example, subpart O includes standards on forging machines (§ 1910.218).

and other materials, when under load, conform to American Society for Testing and Materials (ASTM) standards, and that all welded connections on dockboards comply with American Institute of Steel Construction standards (Sections 2(a) and (b)). Similarly, the MH30.1–2007 standard recommends that owners and employers never use dockboards outside the manufacturer's rated capacity (Section 5.4.10). OSHA believes the guidance these national consensus standards provide will help employers ensure that dockboards are able to carry, and do not exceed, the maximum intended load. OSHA did not receive any comments on the proposed provision and adopts it with editorial revisions.

Final paragraph (b)(1), like the proposed rule, requires employers to ensure that dockboards put into initial service on or after the effective date of the final rule, January 17, 2017, are designed, constructed, and maintained to prevent transfer vehicles from running off the dockboard edge. In other words, dockboards put into service for the first time starting on the effective date of the final rule must have run-off protection, guards, or curbs. A ''run-off guard,'' as defined in the MH14.1–1987 standard, is ''a vertical projection running parallel with the normal traffic flow at each side extremity of the dockboard. Its intent is to avoid accidental side exit'' (Section 1.3; *see also* MH30.1–2007 (Section 1.2.16) and MH30.2–2005 (Section 2.9))). For example, run-off protection on many dockboards is simply a lip on the side of the dockboard that is bent 90 degrees from the horizontal portion of the dockboard. The existing rule does not include a similar requirement.

OSHA believes this provision is necessary to protect workers. A transfer vehicle that runs off the side of a dockboard could kill or injure employees working on or near it. For example, forklifts used to load items onto a transport vehicle could seriously injure or kill the operator and nearby workers if the forklift runs off the side of the dockboard. In addition, workers using hand trucks to load and unload materials from a truck could lose their balance and fall if there is no run-off guard to prevent the hand truck from running off the side of the dockboard.

Final paragraph (b)(1) is a performance-based version of the run-off protection requirements in national consensus standards. To illustrate, the MH14.1–1987 standard specifies:

> Run-off guards shall be used for units that bridge an opening in excess of 36 in. (910 mm) from the face of the dock. The minimum run-off guard height shall be 2¾ in (70 mm) above the plate surface. Ends of run-off guards shall be contoured both horizontally and vertically to permit a smooth transition to minimize damage to the tires of handling equipment. (Section 3.2(a); *see also* Sections 3.4(c), 3.5, 3.6.)

The MH30.1–2007 and MH30.2–2005 standards also contain similar specifications (MH30.1–2007 (Sections 5.3.2, 5.3.3) and MH30.2–2005 (Section 6.1.4)) to prevent transfer equipment from accidentally running off the side of the dockboard. OSHA will deem employers that comply with the run-off protection specifications in MH14.1–1987, MH30.1–2007, or MH30.2–2005 as being in compliance with final paragraph (b)(1). OSHA also will consider employers that follow a different approach, or use dockboards with run-off guards of a different height, to be in compliance with the final rule, provided the run-off guards they use are effective in preventing transfer vehicle from running off the dockboard side.

OSHA made several revisions to proposed paragraph (b) in the final rule. First, final paragraph (b)(1) clarifies that this provision is prospective only, that is, it only applies to dockboards put into ''initial service'' on or after the effective date of the final rule. The final rule grandfathers existing dockboards (75 FR 29009–10), meaning employers do not have to replace or retrofit dockboards currently in use.

Second, OSHA revised the compliance deadline for this provision. The effective date specified by the proposed rule was 90 days after the effective date of the final rule. After reviewing the record, OSHA does not believe that the longer proposed compliance phase-in period is necessary because the national consensus standards on which OSHA based final paragraph (b) have been in place for many years. As such, OSHA believes many dockboards currently in use, and virtually all dockboards manufactured today, already have run-off guards. Therefore, OSHA does not believe the compliance date in final paragraph (b) will impose an undue burden on employers.

Third, OSHA added an exception (final paragraph (b)(2)) in response to a comment the Agency received on the proposed provision. The American Trucking Associations, Inc., (ATA) (Ex. 187) said the proposed rule was ''very broad'' and opposed the requirement that all dockboards have run-off protection:

> To load or to unload, the driver of the commercial motor vehicle backs up to the dock slowly and does not stop until contacting the dock or the installed dock bumper blocks. In most cases, the gap between the vehicle and the loading dock is no more than a few inches. Either a dock leveler or portable dockboard is used to reduce even this minimal amount of space. There is insufficient space between the terminal and the truck to permit a powered industrial truck loading or unloading freight to fall to the ground.
>
> OSHA's proposed requirement that portable dockboards and dock plates be provided with edging and curbing is ill-conceived. Moreover, there is no space between the side of the truck and the edge of dock bay opening to allow for a forklift truck to run off of the edge to cause death or injury to the employee.
>
> Further, this requirement actually would reduce safety for employees in the trucking industry, as providing curbing on dock plates would create a tripping hazard for employees walking on the plates (Ex. 187).

Accordingly, ATA recommended that OSHA revise paragraph (b) to specify:

> [C]urbing on dockplates to prevent a vehicle from running off the edge of a ramp or bridging device is not required where there is insufficient space for a vehicle using the device to run off the edge and drop to the ground. Any requirement for curbing on the edges of ramps and bridging devices should be limited to those working environments where a true fall-off hazard exists (Ex. 187).

The Agency agrees with ATA that run-off protection is not necessary when there is insufficient space for equipment to run off the side of the dockboard. Accordingly, OSHA added an exception to final paragraph (b)(1) specifying that employers do not have to use dockboards equipped with run-off guards if there is no fall hazard to guard against. This exception is consistent with MH14.1–1987, MH30.1–2007, and MH30.2–2005, which only require run-off guards when the opening the dockboard bridges exceeds 36 inches (MH14.1–1987 (Sections 3.2(a), 3.4(c), 3.5, 3.6) and MH30.2–2005 (Section 6.1.4)). Unlike the national consensus standards, final paragraph (b)(1) does not specify what size of opening on the dockboard constitutes a run-off hazard. In some circumstances, an opening of less than 36 inches may pose a fall hazard. As such, OSHA believes the most effective way to determine whether a hazard exists is for employers to evaluate whether a particular opening poses a hazard, including considering factors such as the type and size of transfer vehicle the worker is using.

Paragraph (c) of the final rule, like existing § 1910.30(a) and the proposed rule, requires employers to secure portable dockboards by anchoring them in place or using equipment or devices to prevent the dockboard from moving out of a safe position. The final rule also specifies that, when the employer can demonstrate that it is not feasible to secure the dockboard, the employer must ensure that there is sufficient contact between the dockboard and the surface to prevent the dockboard from moving out of a safe position.

OSHA believes this provision is necessary to protect workers from injury or death. If the employer does not securely anchor the dockboard or equip it with a device that prevents movement, it could slide or drop off of the loading platform or transport vehicle, and the worker could fall. Workers also could fall if the dockboard moves or slides while they are on it. In addition, failure to secure a dockboard could expose workers to crush or caught-in hazards if the dockboard moves, and pins or strikes the worker, or causes the load the worker is moving to shift or fall against the worker.

Final paragraph (c) is consistent with B56.1–2012. That standard also requires anchoring or equipping portable dockboards with devices that prevent the dockboards from slipping (Section 4.13.2). B56.1–2012 does not include any requirements for employers to follow when anchoring or equipping portable dockboards from slipping is not feasible. It does require, like final paragraph (c), dockboards of all types be designed and maintained so the ends have ''substantial contact'' with the dock and transport vehicle to prevent the dockboard from ''rocking or sliding'' (Section 4.13.5). Similarly, MH14.1–1987 (Section 3.7(b)), MH30.1–2007 (Section 5.1.7), and MH30.2–2005 (Section 6.2.2) require at least 4-inch overlap between the edge of a dockboard and the edge of the supporting surface (*e.g.,* dock, platform, trailer track bed). OSHA did not incorporate a specific minimum overlap in the final rule because it believes that what constitutes an adequate overlap may involve a number of factors that employers need to determine on a case-by-case basis. OSHA did not receive any comments on proposed paragraph (c) and finalized the paragraph as discussed.

Final paragraph (d), like the proposed rule, requires that employers provide and use measures (*e.g.,* wheel chocks, sand shoes) to prevent transport vehicles from moving while dockboards are in place and workers are using them. OSHA believes it is necessary to prevent transport vehicles from moving in order to protect workers from falling when they work on dockboards. If a transport vehicle moves when a worker is on the dockboard, the sudden movement may cause the worker to fall off the dockboard or the dockboard may be displaced and fall to the ground along with the worker.

The proposed and final rules expand the existing rule (§ 1910.30(a)(5)), which only requires that employers prevent ''rail cars'' from moving when workers are using dockboards to load/unload cargo. However, workers also are exposed to fall hazards when they use dockboards to load/unload other types of transport vehicles. As a result, OSHA expanded the existing rule to ensure that workers are protected whenever they use dockboards, regardless of the type of transport vehicle workers are loading/unloading.

The final rule gives employers flexibility in selecting measures to prevent the transport vehicle from moving. Employers must ensure whatever measures they use are effective in preventing movement, regardless of the type of transport vehicle the employer is loading/unloading. For example, for wheel chocks, which are one of the most frequently used measures to prevent transport vehicles from moving, the size of the transport vehicle wheel determines the size of the wheel chock that will be effective to prevent the vehicle from moving.

OSHA received one comment on the proposed rule. ATA said the requirement is both unnecessary and conflicts with section (4)(b)(1) of the OSH Act (29 U.S.C. 653(b)(1)):

> FMCSA's [Federal Motor Carrier Safety Administration] brake regulations address this condition and preclude OSHA's wheel chocking requirements. Jurisdiction in this matter was asserted in a 2001 letter from then FMCSA Acting Deputy Administrator Julie Cirillo to OSHA officials. The letter clearly asserts FMCSA's exclusive jurisdiction over the immobilization of parked vehicles in stating that FMCSA's parking brake regulations were ''written specifically to protect truck drivers and anyone else who might be injured by inadvertent movement of a parked commercial motor vehicle.'' . . . We believe [FMCSA] brake regulations constitute an 'exercise of statutory authority' to prescribe or enforce standards or regulations affecting occupational safety or health (Ex. 187).

Department of Transportation (DOT) regulates interstate transportation of ''commercial motor vehicles'' (CMV) traveling on public roads, thus, pursuant to section 4(b)(1) of the OSH Act, OSHA is preempted. DOT regulations define a CMV, in part, as a self-propelled or towed vehicle used on the highways in interstate commerce, if the vehicle:

- Has a gross vehicle weight rating or gross vehicle weight of at least 10,001 pounds, whichever is greater; or
- Is used in transporting materials found by the Secretary of Transportation to be hazardous as defined by DOT regulations and transported in a quantity requiring placarding under DOT regulations (49 U.S.C. 31132).

DOT regulations do not apply to transport vehicles that do not meet the definition of CMV, do not operate in interstate transportation, or are not used on public roads. OSHA continues to have authority over:

- Transport vehicles that do not meet the definition of CMV; and
- CMVs not operated in interstate commerce, which includes CMVs that transport materials on private roads or within a work establishment.

OSHA has the authority to enforce chocking requirements in these situations, which the Agency outlined in two letters of interpretation (Letter to Mr. Turner, November 8, 2005 [30] and letter to Mr. Cole, March 7, 2011 [31]). Thus, to the extent that FMCSA covers the specific vehicle, final paragraph (d) does not apply. That said, OSHA believes final paragraph (d) is necessary because not all transport vehicles are CMVs or used on public roads. Employers use transport vehicles to move material and equipment within their facilities. In addition, most transport vehicles are loaded and unloaded off public roads. Therefore, OSHA adopted proposed paragraph (d) with editorial revisions.

Final paragraph (e), like existing § 1910.30(a)(4) and the proposed rule, requires that employers equip portable dockboards with handholds or other means that permit workers to safely handle the dockboard. Handholds and other means of gripping are necessary so workers are able to move and place dockboards without injuring themselves or others. If workers cannot handle or grip a dockboard safely, they could drop it on their feet, crush their fingers while putting the dockboard into place, or fall. Handholds also make it possible to place dockboards into the proper position (*e.g.,* adequate overlap, secure position) so the dockboards will be safe for workers to use.

Final paragraph (e) is essentially the same as existing § 1910.30(a)(4) and is consistent with B56.1–2012 (Section 4.13.3), MH14.1–1987 (Section 3.2.(b)), MH30.1–2007 (Section 5.2.1), and MH30.2–2005 (Section 6.1.6). OSHA notes that these national consensus standards also specify that, when handling a portable dockboard

[30] OSHA letter to Mr. Turner available at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=25161.*

[31] OSHA letter to Mr. Cole available at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=28121.*

mechanically, employers must provide forklift loops, lugs, or other effective means to move or place the dockboard. There were no comments on the provision and OSHA adopted the provision with minor editorial revisions.

Section 1910.27—Scaffolds and Rope Descent Systems

Final § 1910.27, like the proposed rule, addresses scaffolds and rope descent systems (RDS) used in general industry. The purpose of § 1910.27 is to protect workers whose duties require them to work at elevation, whether on scaffolds or RDS. The existing standards (§§ 1910.28 and 1910.29) address scaffolds, but not RDS. Prior to the final rule, OSHA regulated the use of RDS under the general duty clause (29 U.S.C. 654(a)(1)) and through written policy statements that established minimum expectations for employers who use RDS.

For two reasons, OSHA divided the final rule into separate paragraphs for scaffolds and RDS. First, the record shows that the hazards involved in working on scaffolds are different from the hazards associated with using an RDS (Exs. 66; 122; 221). Second, based on comments received in the record, OSHA believes that the final rule should not regulate RDS as a type of suspended scaffold. Uniformly, commenters said RDS are not suspended scaffolds (Exs. 122; 163; 205). For example, Mr. Matt Adams, with Rescue Response Gear, stated: ''Rope descent systems are described in this document as representing a variation of the single-point adjustable suspension scaffold. This is a terribly antiquated view of what rope work really is, and does not adequately acknowledge the extreme versatility and safety record of rope access'' (Ex. 122). The Society of Professional Access Technicians (SPRAT) had similar concerns, noting:

> Permitting rope descent systems to be regulated as suspended scaffolds is potentially hazardous in that this does not adequately address the versatility, safety, and training required to achieve safety while working suspended on rope. The hazards associated with suspended scaffolds do not in any way emulate the hazards associated with roped access work, and as a result the mitigation measures, training, and equipment requirements also differ (Ex. 205).

For the reasons discussed above, OSHA also revised the title of this section of the final rule to ''Scaffolds and Rope Descent Systems'' from the proposed ''Scaffolds (including rope descent systems).'' OSHA agrees with commenters that the proposed title may mistakenly imply that RDS are a type of scaffold (Exs. 122; 221). The only purpose of the proposed title was to indicate that RDS, like scaffolds, involve working at elevated work locations.

OSHA notes that a number of stakeholders who commented on various provisions of proposed § 1910.27 submitted almost identical comments. OSHA does not cite to all of these comments when discussing each provision of the final rule. Instead, OSHA cites to samplings of those comments when addressing an issue.

OSHA drew the rope descent system requirements in the final rule from the following sources:

- 1991 OSHA memorandum to regional administrators allowing the use of RDS when employers follow all of the provisions outlined therein (Ex. OSHA–S029–2006–0062–0019);
- American National Standards Institute/American Society of Safety Engineers ANSI/ASSE Z359.4–2012 Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components (ANSI/ASSE Z359.4–2012) (Ex. 387); and
- American National Standards Institute/International Window Cleaning Association I–14.1–2001—Window Cleaning Safety (I–14.1–2001) (Ex. 14).[32]

Paragraph (a)—Scaffolds

Final paragraph (a), like the proposed rule, requires that employers ensure scaffolds used in general industry meet the requirements in the construction scaffold standards (29 CFR 1926, subpart L (Scaffolds)), and, as a result, the final rule deletes the existing general industry scaffold requirements (existing §§ 1910.28 and 1910.29). The construction scaffold standards, which OSHA updated on August 30, 1996 (61 FR 46104; 61 FR 46107; 61 FR 46116)), are more current than the general industry standards, which OSHA first adopted in 1974 (39 FR 23502), and last updated in 1988 (53 FR 12121 (4/12/1988)).

The final rule, similar to the proposed and construction scaffold rules, defines scaffold as a ''temporary elevated or suspended platform and its supporting structure, including anchorage points, used to support employees, equipment, materials, and other items'' (§ 1910.21(b)). For the purposes of final subpart D, scaffolds do not include crane-suspended or derrick-suspended personnel platforms or RDS. OSHA's standard on powered platforms for building maintenance (§ 1910.66) addresses personnel platforms used in general industry.

Commenters supported making OSHA's general industry and construction standards consistent. For example, Mr. Bill Kojola with the AFL–CIO, said: ''We believe that it is important to have consistent standards that address scaffolds so that all workers, regardless of the industry in which they work, have equal or equivalent protection from the hazards that are associated with scaffolds'' (Ex. 172). At the hearing on the proposed rule, Mr. Kojola added:

> OSHA is proposing that general industry comply with the construction industry's scaffold standards in 29 CFR 1926(L). . . . By requiring employers in general industry to comply with the construction scaffold standards, consistency will be achieved as well as a decrease in any confusion that . . . would likely arise if the standards were different between these two industries (Ex. 329 (1/20/2011, p. 222)).

Mr. Mark Damon, president of Damon, Inc., observed: ''My experience is that people in general industry are sometimes involved in the erection of scaffolds. I believe . . . similar protection should be afforded to workers in general industry'' (Ex. 251).

OSHA believes that the final rule will ensure consistent application of the general industry and construction standards, and increase understanding of, and compliance with, the final rule by employers who perform both general industry and construction work. The record indicates that many general industry employers who use scaffolds also perform construction work on scaffolds; therefore, they already are familiar with the construction scaffolds standards. OSHA believes that having those employers comply with a single set of requirements will facilitate

[32] After the rulemaking record was closed and certified on June 13, 2011, ANSI administratively withdrew ANSI/IWCA I–14.1–2001, Window Cleaning Safety, on October 23, 2011, because the standard had not been revised or reaffirmed by the deadline required. ANSI Essential Requirements (*www.ansi.org/essentialrequirements*) specify all that ANSI national consensus standard must be revised or reaffirmed within 10 years from their approval as an American National Standard or the standard is automatically withdrawn (Section 4.7 Maintenance of American National Standards).

SEIU Local 32BJ objected to OSHA's reliance on I–14.1–2001, arguing that the ANSI/IWCA I–14 committee did not operate by consensus and misrepresented votes (Ex. 316, 324, Ex. 329 (1/19/2011), pgs. 5–8). The Local submitted a number of documents purportedly substantiating this claim (see Ex. 316–320). However, ANSI has due process requirements that standards developers must follow. Because the I–14 committee was accredited by ANSI and the I–14.1–2001 standard was approved by ANSI, OSHA presumes those requirements were followed. ANSI's requirements include procedures for dealing with the sort of objections Local 32BJ has made, and nothing in these documents show that Local 32BJ presented its claims to ANSI, through an appeal or otherwise. OSHA is unable to ascertain from the Local's documents that the I–14 committee did not follow the ANSI rules.

compliance and, thus, provide greater worker protection. In addition, these employers will not have to change their current practices to meet the requirements of the final rule. OSHA also believes that other general industry employers should not have difficulty complying with the final rule. The construction scaffold standards include all 21 types of scaffolds the existing general industry standards regulate. Therefore, OSHA finalizes paragraph (a) as discussed.

Paragraph (b)—Rope Descent Systems

Final paragraph (b), similar to the proposed rule, establishes requirements for rope descent systems (RDS) when employers use them. The final rule defines an RDS as a ''suspension system that supports an employee in a chair (seat board) and allows the employee to descend in a controlled manner and, as needed, stop at any point during the descent'' (§ 1910.21(b)). An RDS, sometimes referred to as controlled descent equipment or apparatus, usually consists of a roof anchorage, support rope, descent device, carabiner(s) or shackle(s), and a chair (seat board) (§ 1910.21(b)). The final rule definition also expressly states that an RDS does not include industrial rope access systems.

The use of RDS is prevalent in the United States today. Employers frequently use RDS in building cleaning (including window cleaning), maintenance, and inspection operations. As far back as 1990, OSHA noted that, according to some estimates, 60 percent of all window cleaning operations used RDS (55 FR 92226). In 2010, Valcourt Building Services (Valcourt) stated that about 70 percent of all window cleaning operations in high-rise buildings in the United States used RDS (Ex. 147).

OSHA's existing general industry and construction standards do not address the use of RDS.[33] In the 1990 proposed rule, OSHA requested comments on whether OSHA should allow or prohibit the use of RDS (55 FR 29224, 29226 (7/18/1990)). Although OSHA did not finalize the 1990 proposal, in 1991 the Agency issued a memorandum allowing the use of RDS when employers follow all of the provisions outlined in that memorandum (hereafter, ''1991 RDS memorandum'') (Ex. OSHA–S029–0662–0019).[34]

The 1991 RDS memorandum specified that employers must use RDS in accordance with the instruction, warnings, and design limitations that the manufacturer or distributor sets. In addition, the 1991 RDS memorandum specified that employers must implement procedures and precautions including employee training; equipment inspection; proper rigging; separate fall arrest systems; equipment strength requirements; prompt employee rescue; padding of ropes; and stabilization. OSHA based the proposed rule on the provisions in the 1991 RDS memorandum. OSHA notes that the International Window Cleaning Association (IWCA) also based its standard, ANSI/IWCA I–14.1–2001—Window Cleaning Safety (I–14.1–2001), on the 1991 RDS memorandum. Commenters overwhelmingly supported, and already comply with, the requirements in that memorandum and I–14.1–2001 (Exs. 138; 147; 163; 184; 221; 242).

OSHA received many comments on RDS, most of which supported allowing employers to use those systems (Exs. 138; 151; 153; 205; 219; 221; 222; 227; 241; 243). First, many commenters said RDS are safe and, as a number of commenters claimed, safer than using suspended scaffolding (Exs. 163; 184; 221; 227; 242; 243; 329 (1/19/2011, pgs. 326–329)). Mr. Stephan Bright, with IWCA and chair of the I–14.1 committee, said that RDS are safe, particularly when used in accordance with the I–14.1–2001 standard, which has established ''accepted safe practices'' for using RDS (Ex. 329 (1/19/2011, p. 466)). He also indicated that OSHA must believe RDS are safe to use because the Agency ''has been referencing this standard since its publication and has used this standard as a guideline to enforce rope descent system safety in over 100 citations against window cleaning contractors in the last 10 years'' (Ex. 329 (1/19/2011, p. 466)). Mr. Bright said that the decreases in injuries and fatalities associated with RDS use since the IWCA issued the I–14.1–2001 standard ''clearly reveal that RDS is a safe and viable means to use when the eight provisions of OSHA's memorandum and the I–14 Standard are met. Enforcement of the same by OSHA only increases the level of safety'' (Ex. 329 (1/19/2011, p. 467)).

Mr. Sam Terry, owner and president of Sparkling Clean Window Company (Sparkling Clean), said his analysis of more than 350 incidents (125 involving window cleaning) showed that RDS are safer than suspended scaffolding (Exs. 163; 329 (1/19/2011, pgs. 326–329)). In particular, he said the analysis indicated that the RDS provisions of the proposed rule would prevent almost every RDS incident, while more than 80 percent of the suspended scaffolding incidents resulted from equipment failure that was ''beyond the control'' of the employer or workers using the equipment (Exs. 163; 329 (1/19/2011, pgs. 326–329)).

Commenters also said RDS are safer than suspended scaffolds because they said RDS do not involve the ''ergonomic consequences'' that suspended scaffolding does (Exs. 163; 184; 221; 242). These commenters pointed out that, in many cases, moving and assembling suspended scaffolding components requires lifting heavy weights, such as davit masts (weighing up to 160 pounds), davit bases (weighing up to 145 pounds), and davit booms (weighing up to 98 pounds).

Second, some commenters supported allowing RDS because RDS give employers greater control over the safety of workers and the public than suspended scaffolding (Exs. 163; 227; 243). With regard to worker safety, Mr. Terry said workers using RDS are able to descend to the ground or ''get themselves and their equipment out of harm's way'' more quickly than workers using suspended scaffolding (Exs. 163). Commenters said this advantage is particularly important if sudden or unexpected dangerous weather hazards appear (Exs. 138; 163; 184; 221; 242). Sparkling Clean said:

> [A] worker can stop and be on the ground in a matter of minutes . . . . [O]f the 65 incidents and 31 fatalities which occurred by users of RDS in the window cleaning industry since 1995, not one occurred as a result of . . . using the equipment during wind gusts, micro bursts or tunneling wind currents (Ex. 163).

Moreover, Sparkling Clean maintained that the adverse weather does not affect using RDS any more than using suspended scaffolding (Ex. 163).

With regard to protecting the safety of the public and other workers on the ground, commenters indicated that RDS are safer because suspended scaffolding requires assembling components, often done on narrow ledges without fall protection, and these components could fall and strike individuals below (Exs. 163; 184; 221; 242).

Third, commenters supported allowing employers to use RDS because acceptance of RDS increased over the last 20 years since OSHA issued the 1991 RDS memorandum and the IWCA adopted its I–14.1 standard, which addresses RDS (Ex. 147). As noted earlier, Mr. Bruce Lapham, of Valcourt, mentioned that, nationally, about 70 percent of all window cleaning operations in high-rise buildings use

[33] The existing general industry rule only covers boatswain's chairs (29 CFR 1910.28(j).

[34] 1991 RDS Memorandum is available from OSHA's Web site at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=22722*.

RDS (Ex. 147). IWCA also said that the use of RDS by their member companies has grown since it issued the I–14.1–2001 standard (Ex. 329 (1/19/2011, p. 483)). Mr. Lapham said that, although the IWCA standard made window cleaning safer, he had concerns that without ''clear cut regulations'' on RDS, misuse of that equipment could occur (Ex. 147).

Finally, several commenters urged OSHA to allow employers to use RDS because they are less expensive than suspended scaffolding (Exs. 163; 184; 221; 242). Some commenters said that using suspended scaffolding can cost as much as 30 percent more than using RDS (Ex. 329 (1/19/2011, pgs. 209, 314)). Other commenters said using RDS was less costly even if the building has an existing suspended scaffold system (Exs. 163; 184; 221; 242). Mr. Terry explained:

> The time involved in setting up a powered platform system and riding the scaffold up and down at 30 feet per minute is typically much slower than using [RDS]. The largest cost we incur in providing our services is labor by a significant percentage. Therefore, in many cases, it is actually less expensive to access the side of the building using [RDS] . . . (Ex. 163).

Commenters also said OSHA should allow employers to use RDS even if the design of the building or structure permits the use of other means and methods to perform window cleaning or other maintenance activities (Exs. 163; 184; 221; 242).

OSHA notes that many commenters provided support for the use of RDS, saying that OSHA should allow employers to use RDS, but only if employers follow all of the provisions in OSHA's 1991 RDS memorandum, as well as those in I–14.1–2001, including the 300-foot RDS height limit (Exs. 138; 147; 215; 245; 331).

A number of commenters, primarily workers and worker organizations, opposed allowing employers to use RDS (Exs. 311; 313; 316; 329 (1/19/2011, pgs. 5–8, 17–19)); 329 (1/20/2011, p. 222)). For example, the Service Employees International Union (SEIU) Local 32BJ members opposed allowing RDS because they said RDS were not safe (Exs. 224; 311; 313; 316; Ex. 329 (1/19/2011, pgs. 5–8)). At the hearing, Mr. John Stager, former SEIU Local 32BJ president, said:

> I wonder whether OSHA has seriously studied the hazards and evaluated the history of this rulemaking; and if so, I do not understand how OSHA could have decided that unrestricted use of RDS is compatible with OSHA's mission of adopting fully protective safety standards. I understand that OSHA's [1991 RDS memorandum] was much less than a fully protective standard; rather, it was the way that OSHA deals with hazards for which no standards exist. We disagreed with the terms of the [1991 RDS memorandum] then, and still do today . . . . But, to incorporate the terms of [the 1991 RDS memorandum], or terms like them, in a permanent standard is completely inadequate and flawed. In fact, it flies in the face of the Supreme Court's decision that OSHA must place pre-eminent value on assuring employees a safe and healthful working environment limited only by the feasibility of achieving such an environment (Ex. 329 (1/19/2011, pgs. 5–6)).

Mr. McEneaney, another SEIU Local 32BJ member, added:

> My comparisons and recommendations will ultimately show that even if these proposed safety standards are adopted, controlled descent devices cannot adequately ensure worker safety to the same extent as scaffolding. A major difference between scaffolding and rope descent systems is the type of rope used. The wire rope utilized in scaffolds is never subject to failure due to abrasions; unlike RDS ropes that are constantly at risk of abrasion once it goes past the entry point. There was also no reliable mechanism for protecting RDS rope from abrasion points between the point of entry and the ground; for example, cornices and signs, et cetera (Ex. 329 (1/19/2011, pgs. 17–19)).

Mr. Jesus Rosario, a SEIU Local 32BJ member, and window cleaner since 1989, called RDS ''a very dangerous system'' (Ex. 311). He explained his personal experience with RDS as a way to substantiate his contention:

> The protection gap [for RDS] increases with the length of the rope. The more rope, the more movement. The wind can push you around much more [when using an RDS rather than suspended scaffolding]. When I was about 10 stories, I have swayed as much as 3 windows apart from sudden wind. And I have been pushed by the wind when I was as little as 5 or 6 stories down.
>
> Once, I was working by myself, and the rope below me got caught in a fan. I had to climb down the lifeline rope to get out of the [RDS]—about three stories. . . . Entry over the side [of the roof] is very dangerous. Sometimes, I have even had to jump with my chair to the edge of the building, and then over the side, which could crack the chair (Ex. 311).

Mr. Rosario summed up:

> Please do not allow the contractors and the building owners to use RDS. Sure, sometimes there will be places where you just cannot hang a scaffold. But if there is any way to safely hang a scaffold, it is so much safer that there is no good reason to allow [RDS]. I know it's cheaper for the building owner. But so what—isn't my life worth something too (Ex. 311)?

Mr. Hector Figueroa, SEIU Local 32BJ secretary-treasurer, mentioned the New York regulation prohibiting RDS use on buildings above 75 feet as the best proof that RDS are dangerous, and that OSHA should not allow their use (Ex. 224). SEIU also urged that federal OSHA allow the New York regulation to continue without federal preemption, because they believed it is far more protective than the proposed standard. (See the discussion of the preemption issue in the Federalism section.)

OSHA disagrees with Local 32BJ, and has decided against banning all RDS use. The record shows that RDS is a useful method of accessing the sides of building and necessary, at least in certain circumstances. Further, the record shows that RDS use can be conducted safely if proper precautions are followed.

For more than 20 years OSHA has permitted employers to use RDS, provided that employers follow all of the requirements in the 1991 RDS memorandum. Stefan Bright, with IWCA, provided evidence supporting the inference that the 1991 RDS memorandum protects workers:

> A survey of IWCA membership was conducted in 1996 and it revealed the following facts: . . . that approximately 800 systems were being used on a day to day basis with an average of 8,000 descents a day and over the course of that nine-month season, which fluctuates because [in] the warmer states, it's 12 months, the states like here in the North are about nine, 800 workers performed 1,584,000 descents in 1996. In 1996, there was one fatality by a window cleaner using a rope descent system.
>
> In 1991, OSHA published the infamous eight-step RDS memorandum. In the six years prior to this publication, 1985 to 1991, there were 19 fatalities by window cleaners using RDS to perform an estimated nine million descents using the previous information. In the six years after the memorandum was published, 1991 to 1996, only 11 fatalities occurred when window cleaners were using RDS to perform the same number of descents. So that was a significant drop, almost 50 percent reduction (Ex. 329 (1/19/2011, pgs. 463–465)).

Further, as discussed in the FEA, OSHA conducted an analysis of 36 incidents in which one or more deaths were caused by a fall from an RDS between 1995 and 2001. It found that all of the 21 of these incidents caused by the mishandling or malfunction of RDS system or lifelines would be prevented by compliance with one or more provisions of the final rule. OSHA is not aware of any fatalities involving RDS that have occurred when all of the requirements of the final rule were followed.

The final rule incorporates all of the requirements in the 1991 RDS memorandum. In addition, the final rule adopts additional requirements, including anchorage requirements, a 300-foot RDS height limit, prohibition on RDS use in hazardous weather, securing equipment, and protecting ropes from hazardous exposures. OSHA believes these requirements enhance the protection of workers provided by the 1991 RDS memorandum. Moreover, OSHA believes that the additional protections address a number of the safety concerns SEIU Local 32BJ raised. Accordingly, the final rule continues to allow the use of RDS for suspended work that is not greater than 300 feet above grade.

In the final rule, OSHA added language to the definition of RDS expressly specifying that RDS do not include industrial rope access systems (IRAS) (§ 1910.21(b)). As such, final § 1910.27 does not cover or apply to IRAS. However, other sections of the final rule, including § 1910.28, do cover IRAS.

OSHA agrees with commenters who said IRAS and RDS are different (Exs. 69; 129; 205). For example, Ms. Loui McCurley, of SPRAT, said:

> I would like to point out that rope access is not the same thing as controlled descent, rope descent systems, any other big bucket that you might want to put it in. Rope access systems and rope access technicians vary greatly from just a controlled descent or a rope descent system (Ex. 329 (1/19/2011, pgs. 135–138)).

Commenters also pointed out other differences between the two systems. Global Ascent said that IRAS use a two-rope system (Ex. 129). They stated the two-rope system consists of a working line and a safety line, whereas RDS use only a working line (Ex. 129). Accordingly, Global Ascent noted that IRAS have built-in fall arrest by virtue of the dual-ropes (Ex. 129). Several commenters also said that the training requirements necessary for IRAS use and RDS use are much different (Exs. 78; 129; 205). They also said IRAS users need more training than RDS users. Based on these comments, OSHA concluded that IRAS differ significantly from RDS and did not include them in the RDS requirements in final § 1910.27(b).

Final paragraph (b)(1) adds new requirements for anchorages to secure RDS. The final rule defines anchorage as a secure point of attachment for equipment such as lifelines, lanyards, deceleration devices, and rope descent systems (final § 1910.21(b)). The proposal would have required that employers use ''sound anchorages,'' and OSHA noted that they are ''essential to the safety of RDS'' (proposed § 1910.27(b)(2)(iv); 75 FR 28886). OSHA also noted that the 1991 RDS memorandum required that employers rig RDS properly, including having ''sound anchorages'' (75 FR 28869). Although the proposed rule did not include specific requirements on anchorages for RDS, proposed § 1910.140(c)(12) contained a requirement for a separate anchorage for personal fall arrest systems. The Agency requested comment on whether its proposed approach was sufficient to ensure the safety of anchorages.

OSHA also noted in the proposed rule that the Agency raised the issue of anchorages, and also requested comments in the 1990 proposal (55 FR 29224 (7/18/1990)). At that time, IWCA and window cleaning companies told OSHA that there often were no anchorages on building rooftops (75 FR 28869; OSHA–S041–2006–0666–0543; OSHA–S041–2006–0666–1252; OSHA–S041–2006–0666–1253). Since the companies did not own or have control over the building, they had no control over whether or where building owners would place anchorages. Therefore, they urged OSHA to require building owners to install anchorages and test, inspect, maintain, and certify that the anchorages are capable of holding the RDS, worker, and all equipment. As noted, OSHA did not finalize the 1990 proposed rule.

Today, OSHA continues to believe anchorage requirements are necessary because, as the Final Economic Analysis indicates, anchorage failure is one of the primary causes of window cleaning accidents involving RDS. Data that Mr. Terry, president of Sparkling Clean, compiled and analyzed also showed that lack of sound anchorages accounted for 65 (more than 50 percent) of the 125 window cleaning incidents involving RDS (Ex. 163). Mr. Stefan Bright, with the IWCA, said their analysis of window cleaning fatalities revealed that 95 percent were due to lack of sound anchorages (Ex. 329 (1/19/2011, p. 465)). In addition, commenters uniformly supported adding specific requirements on anchorages to the final rule (Exs. 163; 184; 221; 242).

Final paragraph (b)(1)(i) requires that, before the employer uses any rope descent system, the building owner informs the employer in writing that the building owner has identified, tested, certified, and maintained each anchorage so it is capable of supporting at least 5,000 pounds in any direction, for each worker attached. The final rule also requires that the building owner base the information provided to the employer on:

- An annual inspection; and
- A certification of each anchorage, as necessary, and at least every 10 years.

The building owner must ensure that a ''qualified'' person conducts both the inspection and certification. The final rule defines qualified as a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project (§ 1910.21(b)).

For the purposes of final paragraph (b)(1)(i), the term ''as necessary'' means when the building owner knows or has reason to believe that recertification of the anchorage is needed. The final rule gives building owners flexibility in determining when anchorage recertification is necessary. Factors or conditions indicating that recertification may be necessary include, but are not limited to, an accident involving a worker using an RDS, a report of damage to the anchorage, major alteration to the building, exposure of the anchorage to destructive industrial substances, and location of the building in an area of high rainfall or exposure to sea air and humidity that might accelerate corrosion.

OSHA requested comment on adding more provisions ensuring the safety of anchorages in the final rule. In particular, the Agency asked whether it should adopt the information disclosure requirements of § 1910.66.

- Paragraph (c)(1) of § 1910.66 requires that building owners of new installations inform employers in writing that installations meet the requirements of paragraphs (e)(1) and (f)(1) of that section and additional design criteria contained in the other provisions of paragraphs (e) and (f).
- Paragraph (c)(2) of § 1910.66 requires that building owners base the information required in paragraph (c)(1) on the results of a field test of the installation before being placed into service and following any major alteration to an existing installation, and on all other relevant available information, including, but not limited to, test data, equipment specification, and verification by a registered professional engineer.
- Paragraph (c)(3) of § 1910.66 requires that building owners of all installations, new and existing, inform employers in writing that the installation has been inspected, tested, and maintained in compliance with the requirements of paragraphs (g) (inspection, tests, and certification) and (h) (maintenance) of the section and that all protection anchorages meet the requirements of paragraph (I)(c)(10) of appendix C (fall protection anchorages must be capable of supporting 5,000 pounds).

Paragraph (e) of that rule specifies that structural supports, tie-downs, tie-in guides and affected parts of the building included in the installation shall be designed by or under the direction of a registered professional engineer experienced in such design (§ 1910.66(e)(1)(i)).

In addition, the I–14.1–2001 standard requires that building owners provide window cleaning contractors with the following written information:

- The installation or structure has been inspected, tested and maintained in compliance with the requirements of I–14.1–2001;
- All equipment dedicated to the building meets the requirements in Part B (*i.e.,* equipment and building design requirements, such as the requirement that anchorages support a 5,000 pound load in any direction (9.1.11) and that certifications and re-certifications of anchorages be conducted under the supervision of a registered professional engineer (Section 9.1.10);
- Specified load ratings, intended use and limitations to fixtures permanently dedicated to buildings; and
- Manufacturer's instructions for installations, anchorages and fixtures permanently dedicated to the building (Section 1.6.2 (a)–(d)).

Overwhelmingly, commenters supported requiring that building owners identify, test, and maintain anchorages, and certify that those anchorages are capable of supporting 5,000 pounds in each direction for each attached worker.

Many commenters said the anchorage provision is necessary because the lack of ''sound anchorages'' was the leading cause of fatalities and incidents involving RDS (Exs. 138; 163; 184; 221; 222; 243). Valcourt said:

> [W]orkers that use Rope Descent Systems deserve a safe place to work. . . . There is no greater contributing factor to having a safe workplace in which to use an [RDS] than having identified and certified anchorage points in which to tie to. In its 26-year existence, Valcourt has seen both building owners and window cleaners come to a greater understanding of this fact, leading to much safer working conditions (Ex. 147).

Another commenter, 20/20 Window Cleaning of NC, said the new anchorage requirement would prevent accidents and save lives (Ex. 153). IWCA noted that, without the new provision, workers using RDS would not have an equivalent level of protection than do workers who use permanent powered platforms (Ex. 138).

Commenters also said the anchorage requirement is necessary because many building owners do not provide certified anchorages, even though IWCA issued the I–14.1–2001 standard more than 10 years ago (Exs. 147; 163; 245; 329 (1/19/2011, pgs. 218–219)). Valcourt said about 75 percent of the buildings they service do not have certified anchorages, while LWC Services said less than 5 percent of the buildings they service have them (Exs. 147; 245). LWC Services also estimated that seven percent of mid- and high-rise buildings have certified anchorages (Ex. 245). Finally, LWC Services said their most significant problem is finding anchorage points to allow suspension of equipment, and they questioned how they could install anchorages when they only work at a particular location for a couple of days per year, inferring infeasibility (Ex. 245).

Most commenters said they think permanent anchorages are the responsibility of building owners, and they urged OSHA to require that building owners provide anchorages, and to inspect, test, certify, and maintain them (Exs. 138; 147; 163; 184; 193; 221; 242; 329 (1/19/2011; pgs. 378–388)). Valcourt said OSHA needed to mandate that building owners provide anchorages because building owners will not provide and certify anchorages if it is voluntary:

> If OSHA . . . [omits] the requirement of building owners to have their roof anchorage systems initially certified . . . and inspected by a qualified person annually, many building owners will simply state that it is not a requirement of OSHA and not [do it]. This would make the marketplace more dangerous and be a regression of 20 years in window cleaning safety for both the window cleaning and building owner industries (Ex. 147; 329 (1/19/2011, pgs. 378–388)).

Commenters uniformly agreed that OSHA should require that anchorages be capable of supporting 5,000 pounds in all directions for each worker attached, which is consistent with I–14.1–2001 (Section 9.1.1) (Exs. 163; 184; 221; 242; 243). Clean & Polish suggested that OSHA require that anchorages sustain a 5,000 pound load or at least have a 4-to-1 safety factor when using an RDS (Ex. 242). They also supported applying this requirement to tie-backs (Ex. 242).

Commenters were about evenly divided on whether OSHA should codify the language in § 1910.66(c) or the I–14.1–2001 standard. Regarding his support for following the approach in § 1910.66, Mr. Terry, of Sparkling Clean, said:

> I agree that building owners should provide employers with the same information required by 1910.66; a certificate of inspection, testing, and maintenance of anchorages for rope access and suspended scaffolding used in building maintenance, and that an existing certificate for powered platform anchorages would suffice for the same anchorages to be used for rope access. This would allow for rope access to be utilized on buildings with systems or anchorages originally designed for suspended scaffold use without any new requirements or expenses on the building owner (Ex. 329 (1/19/2011, pgs. 224–226)).

Commenters provided recommendations for specific language and items the final requirement on anchorages should contain. For example, Penta Engineering said OSHA should require load testing of all anchorages and davits (Ex. 193). Martin's Window Cleaning (Martin's) said OSHA should require that employers ask for and obtain verification of anchorage certification (Ex. 65).

Several commenters recommended specific timelines for anchorage inspection and certification. Martin's recommended inspections every year, and certifications every 10 years (Ex. 65). Penta Engineering Group agreed, and recommended that OSHA also require anchorage recertification after building owners install new roof systems (Ex. 193).

One commenter urged OSHA to require that building owners ensure qualified persons conduct the annual inspections and certifications (Ex. 204). Other commenters said that professional engineers should perform those tasks (Exs. 65; 193; 329 (1/19/2011, pgs. 378–388)). LJB Inc., noted that it may be a violation of local and state building codes to have anyone other than a professional engineer certify anchorages (Ex. 204). OSHA notes that, under the final provision and the final definition of qualified, building owners are free to use professional engineers to inspect and certify anchorages.

OSHA did not receive any comments opposing an anchorage requirement. OSHA notes that the Building Owners and Managers Association (BOMA) did not submit any comments on the proposed rule or testify at the rulemaking hearing, but they did oppose the requirement in the 1990 proposed rule that building owners provide anchorages. OSHA also notes BOMA was a member of the I–14.1–2001 committee that approved the national consensus standard, which includes anchorage requirements building owners must meet. OSHA agrees with many of the comments and recommendations submitted to the record, and incorporated many of them into the final rule. For example, given that outside contractors generally perform building maintenance (such as window cleaning), and that these outside contractors usually have no control over the building anchorages and are at particular buildings for only a few days, OSHA determined that inspecting, testing, certifying, and maintaining anchorages and providing information about the anchorages must be the responsibility of building owners. Only when building owners take responsibility for anchorages and provide written information to employers and contractors, can there be adequate assurance that workers will be safe when they use RDS.

Final paragraph (b)(1)(ii) establishes a new provision that requires employers to ensure that no employee uses any anchorage before the employer obtains written information from the building owner that the anchorage meets the requirements of final paragraph (b)(1)(i). In other words, the final rule requires that employers ensure no employee uses an RDS until the employer obtains written information that the building owner identified, tested, certified, and maintained each anchorage so it is capable of supporting at least 5,000 pounds in any direction for each worker attached. The final rule also requires that the employer keep the written information from the building owner for the duration of the job.

OSHA's powered platforms standard contains a requirement similar to the final rule (§ 1910.66(c)(4)). Also, the I–14.1–2001 standard requires that employers (*i.e.,* window cleaning contractors) and building owners not allow suspended work to occur unless the building owner provides, identifies, and certifies anchorages (Section 3.9).

OSHA believes the final rule will ensure that each anchorage to which workers attach an RDS meets the inspection, testing, certification, and maintenance requirements of the final rule before workers attach to it. Under the final rule, employers are not to allow workers to attach to an anchorage and begin work if the employer did not receive written certification that the anchorage is capable of supporting 5,000 pounds. Specifically, final paragraph (b)(1)(ii) prohibits employers, when there are no certified anchorages, from ''making do'' or attaching RDS to alternative structures, making the assumption that these structures are capable of supporting 5,000 pounds.

OSHA acknowledges that employers currently attach RDS to other structures if there are no certified anchorages available. For example, Mr. Charles Adkins, of Corporate Cleaning Services (Corporate Cleaning), explained what his company does at the 30 to 40 percent of the buildings they service that don't have certified anchorages:

> They go up and they select it with the assistance of the foreman who is—we have—we've heard some mention of supervision here and we totally agree that that's a very important fact and that's why we have four salaried foremen, plus an operations manager, who focus exclusively on supervision.
>
> They go up and select them. There are a number of alternatives. They can attach them to the permanent part of the building. They can use parapet clamps if they have a way to properly attach the tieback and the safety line to it and just about every building is different. Sometimes we can use weights to keep them from—to help hold the ropes (Ex. 329 (1/19/2011, pgs. 218–219)).

Finally, OSHA believes that the written information on anchorages that building owners must provide to employers will be helpful for employers throughout the job. Employers can use the information to keep workers continuously informed about which anchorages have proper certification. The information also will be helpful if there are work shift-related changes in personnel, if the employer brings new workers to the job, or if there is a change in site supervisors. Therefore, the final rule is requiring employers to retain the written information on anchorages they obtained from building owners for the duration of the job at that building.

In final paragraph (b)(1)(iii), OSHA provides employers and building owners with additional time to implement the requirements in final paragraphs (b)(1)(i) and (ii). The final rule gives employers and building owners one year from November 18, 2016 to meet the new requirements in final paragraphs (b)(1)(i) and (ii). This means that building owners must identify, inspect, test, certify, and maintain each anchorage by the compliance date.

OSHA believes the additional compliance time is necessary because a number of commenters said most buildings where they use RDS do not have certified anchorages (Exs. 147). For example, Mr. Lapham, of Valcourt, said that their company services 3,850 buildings in 14 states (Ex. 147). Of the buildings Valcourt cleans, Mr. Lapham said almost 75 percent did not have certified anchorages, more than 20 years after OSHA issued the final Powered Platforms standard (§ 1910.66) (Ex. 147).

Mr. Charles Adkins, of Corporate Cleaning Services, the largest window cleaning company in the Chicago area, said that they perform window cleaning services on more than 1,200 buildings (Ex. 329 (1/19/2011, p. 201)). He estimates that about 60 to 70 percent of those buildings already have certified anchorages (Ex. 329 (1/19/2011, pgs. 218–219)).

In the 1990 rulemaking, BOMA objected to requiring building owners to provide anchorages, but agreed that new buildings completed two to five years after the effective date of the final rule should have anchorages (75 FR 28862, 28879; Ex. OSHA–S041–2006–0666–1212).

It is now 24 years since OSHA first proposed a rule addressing RDS, and 23 years since OSHA's 1991 RDS memorandum allowed the use of RDS provided they have ''sound anchorages.'' OSHA does not believe building owners, at this late date, need another two to five years to identify, inspect, test, certify, and maintain anchorages in new or existing buildings. OSHA believes that giving building owners an additional year to meet the requirements of final paragraph (b)(1)(i) is adequate.

Final paragraph (b)(2) establishes RDS design and work-practice requirements that employers must follow to ensure their workers' safety when using an RDS. OSHA drew most of the requirements from the 1991 RDS memorandum and the I–14.1–2001 national consensus standard. Many commenters who supported allowing the use of RDS also supported requiring employers to comply with all of the provisions in the 1991 RDS memorandum and I–14.1–2001 (Exs. 138; 151; 219).

Final paragraph (b)(2)(i), like proposed paragraph (b)(1) and the I–14.1 standard (Section 5.7.12), requires that employers ensure no RDS is used at heights greater than 300 feet (91 m) above grade. The final rule includes two exceptions to the 300-foot height limit, discussed extensively below.

Many stakeholders supported the proposed 300-foot height limit (Exs. 138; 147; 168; 206; 215; 300; 329 (1/19/2011, pgs. 253–254, 401); 329 (1/21/2011, pgs. 98, 474, 477); 331). They said using an RDS at heights above 300 feet was dangerous for workers, and establishing a height limit was an important ''safety issue'' (Exs. 147; 215). Mr. John Capon, of Valcourt, said, ''I think anything above 300 feet is preposterous, to be honest with you. The risks associated with it, just the height, all the conditions, are just overly-dramatic at that height'' (Ex. 329 (1/19/2011, p. 401)). Mr. LaRue Coleman, of JOBS Building Services (JOBS), also said worker safety mandated that employers not use RDS over 300 feet, noting: ''Contractors will always use the excuse that an area cannot be accessed in any other manner [than RDS] to save the building money. This is a safety issue and should not be left up to an individual employer or employee to make an onsite decision of this nature'' (Ex. 215). Mr. Coleman also suggested that OSHA adopt a height limit of 130 feet, which California OSHA [35] uses (Ex. 215). Not only would a 130-foot height limit significantly reduce the dangers to workers who use RDS, but Mr. Coleman said it also would eliminate stabilization issues and requirements (Ex. 215). OSHA notes that the State of California also requires all buildings over 130 feet to be equipped with a powered platform.

Mr. Lapham, of Valcourt, said their experience indicated that the following factors necessitated limiting RDS use to a maximum of 300 feet:

- The significant increased effect of wind at heights above 300 feet;
- The significant increased length and weight of ropes required for using RDS above 300 feet; and
- The increased potential that moving the weightier ropes will ''literally pull a window cleaner over the edge of the building'' roof (Ex. 147).

Other commenters agreed with Valcourt's analysis. Ms. Kelley Streeter, of Vertical Access, said ropes longer than 300 feet are heavy and moving or working with such lengths can be hazardous and strenuous for workers (Ex. 329 (1/21/2011, p. 98)). Mr. Brian Gartner, of Weatherguard Service, Inc. (Weatherguard), agreed, and identified additional factors that contributed to the danger of using RDS above 300 feet:

> In my opinion, based on testing and evaluation and basic engineering concepts, 300 feet is at the high end of the safe use range. Suspensions over 225 feet start responding to the effects of wind on the ropes and the worker. The longer the rope, the more surface area is exposed to the wind. The wind effect is variable. The lower the worker is from the roof, there is more rope above him or her that can be subjected to the wind, thus the higher the suspension, the more the worker is free to move.
>
> The longer the suspension the greater the ''spring'' in the suspension and safety ropes. This springiness is in all synthetic ropes that are in the diameter ranges that are used for this purpose whether they are static type ropes or other rope types. There are many other factors that contribute to the dangers of rope descents above 300 feet. For every foot of increased suspension, the dynamics and conditions change and become more problematic (Exs. 329 (1/19/2011, pgs. 253–254); 331).

Mr. Gartner added that there is a marked difference in handling RDS ropes (support and fall arrest) on buildings less than 300 feet compared to buildings above 300 feet: ''[T]he differences of how the winds affect [the ropes] and you, on the roof, and the trouble discerning what is happening with the ropes will speak volumes regarding the safety issues of building height and rope descent'' (Ex. 331; *see also* Ex. 300). For example, he said moving heavier ropes has the potential of pulling workers over the edge of the building (Ex. 147). In conclusion, he stated: ''Those that minimize, overlook, or disregard all of these factors, as they are all safety concerns, are not responsibly or realistically addressing the height issue and manifesting a disregard to worker and the public's safety'' (Exs. 329 (1/19/2011, pgs. 253–254); 331).

Some commenters said the 300-foot height limit would not be a burden on most employers. Mr. Gartner said, ''The [number] of buildings in the United States taller than 300-feet is miniscule when compared to the [number] of buildings under 300 feet in height'' (Ex. 331). Mr. Coleman said that the 300-foot limit would affect only six percent of office buildings in the 19 largest national markets:

> If you were to take the study out to additional markets the effect would be even less since smaller/shorter buildings are typically built in these markets. If you were to add schools, hospitals and hotels to a study the effect would be even less since again these types of structures are typically shorter except when located in a major metropolitan area. Of the 6% of buildings over 11 floors the vast majority of them will have either permanent rigging or building owned davits and tie-backs thereby reducing the cost effect of lowering the height (Ex. 215).

Finally, commenters said OSHA should adopt the 300-foot height limit because the I–14.1–2001 national consensus standard requires it. Mr. Lapham, of Valcourt, who was one of the members of I–14.1–2001 committee, said it took ''multiple decades'' for the industry to agree to the 300-foot limit in the I–14.1–2001 standard, so OSHA should not eliminate it ''under any circumstance'' (Ex. 147). Mr. Gartner, of Weatherguard, and also a member of the I–14.1–2001 committee, said that Ontario, Canada, also adopted the I–14.1–2001 standard's 300-foot limit for RDS:

> Canada spent much time and money in the establishment of their Code with respect to the height limit of 300 feet.[36] They did studies, hired consultants and deliberated at length. Their Code was promulgated due to the high death toll of their window cleaners; they had one fatality a month before the code was enacted (Ex. 331).

Many commenters opposed the proposed 300-foot RDS height limit for various reasons (Exs. 126; 151; 163; 178; 184; 205; 218; 219; 221; 222; 242). Most of those commenters said there was no safety-related reason to impose the height restriction, claiming that using RDS at heights above 300 feet is safe (Exs. 151; 163; 184; 218; 242). Mr. Terry, of Sparkling Clean, said using RDS ''at all heights is routinely performed safely [and] successfully . . . in many parts of the country'' (Ex. 163). He considered using RDS at any height to be so safe that ''I believe the proposed 1910.27(b) should actually read [that using RDS] is encouraged at any height'' (Exs. 163; 329 (1/19/2011, p. 330)). He added that OSHA's final rule also should allow employers to use RDS as a substitute to the means and methods originally designed into the building or structure when the design of the building or structure will safely support the use of the RDS (Ex. 163).

A number of commenters said their injury data also demonstrated that RDS are safe to use at any height. These commenters said that they had no recordable incidents related to using RDS on taller buildings (Exs. 163; 184; 242). Mr. Terry said his analysis of nine RDS incidents that involved RDS use over 300-feet indicated that none of the cases involved the height of the work as the cause of the incident (Ex. 163).

Many commenters said they considered RDS to be safer than powered platforms at any height, including above 300 feet, and, thus, there was no reason for OSHA to impose the 300-foot height limit on their use. For example, Corporate Cleaning said RDS are safer than powered platforms at all heights below 700 feet because they are more maneuverable, and allow workers to descend more quickly in an emergency (Ex. 126).

Other commenters disputed the argument that the effects of wind on RDS used above 300 feet are greater than for suspended scaffolding/powered platforms. Some commenters said there was no difference in the effects of wind on RDS use than on powered platforms at any height (Exs. 163; 205). For instance, Ms. McCurley, of SPRAT, said:

> We . . . find that the height restrictions and the wind exposure to be. . . unfounded. In practical living and in practical working, we find that all of these things are a matter of skills, knowledge and good decision-making. If the wind is too high that day, if there is ice out there that day, you just don't go. And that's true of whether you are using a scaffold or a powered platform or a ground-based system or whatever. You just have to

[35] California Code of Regulations, Title 8 Chapter 4, Subchapter 7 Article 5, § 3286.

[36] The Ontario window cleaning regulation specifies that employers must not use controlled descent devices above 90 meters, which equals 295.276 feet (R.R.O. 1990, Regulation 859 § 28(c)).

make the right decision based on the gear that you are using (Ex. 329 (1/19/2011, p. 154)).

Some commenters who opposed the proposed 300-foot RDS height limit claimed it was ''arbitrary.'' For instance, Mr. Ken Diebolt, of Vertical Access, said:

My primary objection is to the 300-foot limit . . . [is] it seems to us completely arbitrary. I mean, once you're X number of feet off the ground, once you're 10 feet off the ground, 50 feet, 100 feet, it doesn't really—you're no safer at 300—at 100 feet than you are at 300 feet or 500 feet if you're doing the work well. And I wonder where this came from. It comes from the window washing industry but I have no history of that and I don't know (Ex. 329 (1/21/2011, p. 138)).

Mr. Adkins, of Corporate Cleaning, agreed:

We urge you not to adopt that limitation, especially as it is written in your proposals. . . . It appears to be an arbitrary limit and does not, is not based on any kind of empirical research to determine that there is a problem in fact with the use of ropes in excess of 300 feet. In fact, I haven't been able to find any evidence of any accidents or any serious incidents where the length of the rope had anything to do with it (Ex. 329 (1/19/2011, p. 204)).

In addition, several commenters disputed there was consensus supporting the RDS height limit. For example, Mr. Adkins said:

[T]here is an implication there's a consensus in this industry supporting the 300-foot rule. I think a lot of testimony we've had here today makes it clear that that is not the case. Not only do I not believe it, not only will you hear from other individuals in the window washing industry who do not support that, you also heard from people on the other side, Mr. Stager from the Union who doesn't believe there's been an effective consensus developed on it (Ex. 329 (1/19/2011, pgs. 203–212)).

However, Mr. Bright, chair of the I–14.1–2001 committee, said there was ''broad agreement'' among the committee to include a 300-foot RDS height limit, which is ANSI's definition of ''consensus'' (Ex. 329 (1/19/2011), pgs. 244–46).

Commenters opposing the RDS height restriction also said the IWAC based the I–14.1–2001 requirement more on emotions and economics than on safety (Ex. 163; 184; 221; 222; 241). The comment of Mr. Sam Terry, of Sparkling Clean, was representative of those stakeholders:

It is my contention that the 300' limitation is based more on the following two issues:

- The emotions of the untrained observer who thinks [RDS] looks scary
- The financial benefit to the manufacturer, designer, installer or equipment associated with suspended scaffolding and the large window cleaning companies who can limit their competition by restricting the use of the less expensive option of [RDS] (Ex. 163).

Mr. Adkins agreed:

Now like I said, those people worked very hard on it, I don't dispute that, but the I–14 Committee or 50 percent of them were not window washers. They are from other industries and they are very honest, hard-working people of integrity but they have legitimate business interests to look at enforcing a 300-foot limitation or eliminating it all together and that has to be considered, I am sure (Ex. 329 (1/19/2011, pgs. 203–212)).

Mr. Adkins also said that restricting RDS use would lead to economic hardship for some window cleaning companies and to higher unemployment (Ex. 329 (1/19/2011, p. 220), but he did not have knowledge of any companies that experienced economic hardship by following the I–14.1–2001 height restriction on RDS use. However, Diamond Window Cleaning said the RDS height limit would give unfair competitive advantage to larger companies that have, and only use, powered platforms or systems installed on buildings (Ex. 219). Some commenters said using RDS is less costly than using powered platforms, and requiring companies to use powered platforms would be costly (Ex. 219). Mr. Terry explained:

Of the buildings in my marketplace, the buildings taller than 300 feet typically do not have permanently-installed powered platforms for access to the exterior of the building. Most of those buildings were designed and built in the last five years and do not have permanently installed powered platforms for access to the exterior of the building (Ex. 163).

After reviewing the rulemaking record, OSHA has decided to retain the proposed requirement that employers not use RDS at heights above 300 feet above grade. OSHA continues to believe that using RDS above 300 feet is hazardous, and that adopting the height limit in the final rule will help protect workers from injury and death.

OSHA agrees with commenters who said that there are many factors that contribute to the dangers of operating RDS above 300 feet. First, as the proposed preamble and commenters discussed, OSHA believes that using RDS at greater heights increases the potential effects of wind (*e.g.,* wind gusts, microbursts, tunneling wind currents) on workers. OSHA believes that, when working at heights over 300 feet, the effects of wind on the RDS and the worker are greater in general, and greater than the effects imposed on heavier powered platforms. OSHA notes that commenters identified incidents in which workers used RDS in windy weather, and the wind blew the workers around the side of a building and 30 feet away from a building (Exs. 163; 168). Moreover, while OSHA agrees that workers can descend more quickly on RDS if severe weather suddenly occurs, excessively windy weather can buffet workers descending from above 300 feet, causing them to swing great distances during the long descent. Most likely in these situations, workers using RDS will have only intermittent stabilization (*i.e.,* suction cups) so they can swing by the ropes and hit the building or other structures and get seriously injured before they reach the ground.

Second, using RDS above 300 feet requires the use of longer ropes. OSHA said in the proposed rule, and IWCA (Ex. 138) agreed, that the greater the length of rope used for descent, the greater the effect of winds (*e.g.,* wind gusts, microbursts, tunneling wind currents) (*see also* Ex. 300). Longer ropes have a greater possibility of getting tangled or caught on objects, especially in windy (or gusty) weather, leaving the worker unable to descend or self-rescue. The compilation of RDS incidents Mr. Terry submitted included cases in which the ropes got entangled in equipment lines, an antenna, and other workers' RDS lines, leaving the worker stuck and unable to descend (Ex. 163). These cases arise because, as Mr. Bright testified, employers often have a number of workers (*e.g.,* 5 to 6) descending on the same side of a building at the same time (Ex. 329 (1/19/2011, pgs. 477, 489–490)).

Third, OSHA agrees with Mr. Lapham, of Valcourt, and Ms. Streeter, of Vertical Access, who said that longer ropes needed for RDS use above 300 feet are heavier, and moving them can be hazardous (Ex. 147; 329 (1/21/2011, p. 98)). Taken together, OSHA finds convincing the arguments that workers are at an increased risk of harm when using RDS over 300 feet, and that the RDS height limit in the final rule is necessary to protect them.

OSHA also retained the RDS height limit in the final rule because the I–14.1–2001 national consensus standard included the same limit. The American National Standards Institute (ANSI) approved the I–14.1–2001 standard, and industry widely uses it. OSHA believes the national consensus standard reflects industry best practices. Commenters, including some who were members of the I–14.1 committee, said there was broad agreement to include the 300-foot RDS height limit in the I–14.1 standard (Ex. 147; 329 (1/19/2011, pgs. 210–211, 253, 267–268)).

Since IWCA issued the I–14.1–2001 standard, several jurisdictions have adopted the 300-foot RDS height limit. Minnesota (5205.0730, Subpart 6(A)) and Washington (WAC–296–878–20005) issued regulations limiting RDS use to 300 feet, while California now limits RDS use to 130 feet (Cal. Code Regs., Tit. 8, § 3286 (2012)). Additionally, OSHA believes the experience of Canada (Ontario province) deserves consideration (R.R.O. 1990, Regulation 859). According to Mr. Brian Gartner, of Weatherguard Service, who was a member of the I–14.1 committee:

> Canada invested much time and money in the establishment of their code with respect to the height limit of 300 feet. They did studies, hired consultants, and deliberated at length. Their code was promulgated due to the high death toll of their window cleaners. They had one fatality a month before the code was enacted (Ex. 331).

With regard to commenters' claims that economics was the basis for supporting or opposing the RDS height limit in I–14.1–2001 (as well as OSHA's proposed rule), OSHA notes that commenters on both sides of the issue claimed that the other side was seeking an economic advantage. Those commenters who supported the RDS height limit said employers were using RDS above 300 feet to win bids for window cleaning and save money (Ex. 215). For example, Mr. Gartner noted: ''RDS is the least expensive method to service a building, saving the building owner money while allowing for the largest profit margin for a window cleaning contractor'' (Ex. 331).

Commenters who opposed the 300-foot RDS height limit said large window cleaning companies that use powered platforms instead of RDS were pushing for the height restriction to gain an ''unfair competitive advantage.'' Those commenters also said that prohibiting the use of RDS above 300 feet would result in loss of jobs, higher unemployment, and loss of income because it costs more to use powered platforms.

During the rulemaking hearing, OSHA asked Mr. Coleman, of JOBS, whose company only uses powered platforms, why the company did not support prohibiting the use of RDS since such a prohibition would be in his company's best economic interests. He replied: ''Because . . . I understand the reality that it's here. It's going to be used and so I understand the importance of some regulation that's definite. Nothing that leaves a loophole, that leaves it up to the people in the field'' (Ex. 329 (1/19/2011, pgs. 315–316)). Moreover, Mr. Coleman said the company did not lay off any employees or lose business when they decided in 1985 to only use suspended scaffolding for suspended work (Ex. 329 (1/19/2011, p. 313)). Mr. Coleman testified that the company initially lost income because they did not change their prices even though using suspended scaffolding cost as much as 30 percent more than RDS use. He further noted that, the company eventually passed the cost to customers, ''the building owners did not really flinch when they understood that we were not going to use a device that there was no OSHA regulation for. They saw their liability rise. So . . . window cleaning on a building, if you put it on a chart, probably won't even measure as a measurable cost for most buildings'' (Ex. 329 (1/19/2011, p. 314)).

In conclusion, based on analysis of comments and the record as a whole, OSHA believes there is substantial evidence to support retaining the 300-foot height limit for RDS use.

Mr. Adkins, of Corporate Cleaning Services, recommended that OSHA, instead of prohibiting the use of RDS for heights greater than 300 feet, limit their use based on wind speeds [37] (Exs. 297; 360). Mr. Adkins' model assumes that a 25 mph wind speed and 300-foot rope length ''yields a 'safe' horizontal displacement,'' which he calculated to be 5 feet (Ex. 297). According to his model, as the RDS rope length increases, the permissible wind speed decreases. Thus, for example, under Mr. Adkins' model when the rope length is 700 feet the permissible wind speed for RDS use would be 15 mph [38] (Ex. 297).

The rulemaking record, however, does not support Mr. Adkins' model or recommendation to replace the 300-foot RDS height limit with wind speed limits. First, according to a study, ''Wind Effects on a Window Washer Suspended on a Rope,'' a 250-pound window cleaner hanging 75 feet down from a 300 foot building in a steady 25 mph wind would be displaced/deflected as much as 40 feet, which is far greater than the 5 feet Mr. Adkins' model predicts (Exs. 300; 352). Moreover, changes in wind speed (*i.e.,* gusts, stops) when window cleaners are deflected significantly more than 5 feet could cause them to swing back into the building resulting in death or serious injury. In fact, the study found that window cleaners can be knocked over by ''moderate wind speeds'' (*i.e.,* approximately 7 mph at 300 feet) and injured hitting buildings at a speed of 4 mph, both of which are significantly less than wind speeds Mr. Adkins says would be safe at 300 feet.

Second, many stakeholders did not support limiting RDS based on wind gusts instead of height (*e.g.,* Exs. 138; 147; 168; 206; 215; 300), or that the wind speeds limits Mr. Adkins recommends for RDS use above 300 feet would be safe (Exs. 153; 163; 184; 298; 317; 329 (1/19/2010, p. 411); 331; 352). Mr. Craig Schoch, of Tractel, Inc., said OSHA should reject Mr. Adkins' recommendation because his ''safe'' wind speeds are based on incorrect deflection assumptions (Ex. 352). Other stakeholders, including window cleaning contractors and members of the IWCA I–14.1–2001 committee, said wind speeds of 20—25 mph ''are excessive'' or ''very dangerous,'' regardless of height (Exs. 317; 329 (1/19/2010, p. 411); 331). Several employers said they discontinue using RDS when wind speeds are between 15—20 mph and stop cleaning windows before winds reach 15 mph (Exs. 153; 163; 184; 298). Mr. Terry said 15 mph is a ''reasonable'' speed limit, but added that his company stops window cleaning before winds reach that speed (Ex. 163). And although Mr. Adkins recommended the wind speed alternative, he said:

> Now, in actual fact, I've never had anybody work at 15 mph and never will because that, in my opinion, is too high for . . . a boatswain's chair, a swingstage, [and] a scaffold (Ex. 329 (1/19/2010, p. 213)).

Thus, OSHA does not believe there is sufficient evidence that Mr. Adkins' wind speed/rope length alternative would adequately protect of workers using RDS, and the final rule does not adopt that approach.

Final paragraph (b)(2)(i) includes two exceptions to the 300-foot height limit for using RDS. Employers may use RDS above 300 feet when they demonstrate (1) it is not feasible to access heights above 300 feet by any other means; or (2) other means pose a greater hazard than using RDS. The proposed rule would have allowed employers to use RDS at any height when the employer can demonstrate that ''access cannot otherwise be attained safely and practicably,'' which is consistent with I–14.1–2001.

OSHA received a number of comments on the proposed exceptions. Some commenters opposed the proposed exceptions (Exs. 147; 215; 331). For example, Valcourt said:

> In no case should a window cleaning contractor be allowed to determine when RDS is acceptable over 300 feet. . . . The determination that RDS can be utilized on a per case basis on descents over 300 feet

---

[37] Mr. Adkins said the term ''wind speed'' refers to wind gusts (''[W]hen I talk about wind speed, I talk about a gust'' Ex. 329 (1/19/2010, p. 234)).

[38] Mr. Adkins said 9 mph would be a safe wind speed when the rope is 700 feet if the maximum speed allowed at 300 feet is 15 mph (Ex. 297).

should be made by a third party qualified person and/or, likely, a registered professional engineer experienced in facade access equipment (Ex. 147).

Mr. Coleman, of JOBS, agreed with Valcourt, stating, ''This is a safety issue and should not be left up to an individual employer or employee to make an onsite decision of this nature'' (Ex. 215).

Mr. Gartner, of Weatherguard, said OSHA's proposed exception allowing RDS use above 300 feet when employers cannot attain access ''safely and practicably'' was subjective and difficult to enforce (Ex. 329 (1/19/2011, pgs. 255–256)). He said, ''What is practical for me may not be practical for you and what I deem to be safely is not necessarily what you consider safely'' (Ex. 331).

OSHA agrees with the commenters and revised the language in the final rule to make it consistent with established legal tests and defenses under the OSH Act.

Final paragraph (b)(2)(ii) requires employers to ensure RDS use is:

• In accordance with manufacturer instructions, warnings, and design limitations (hereafter collectively referred to as ''instructions''), or

• Under the direction of a qualified person.

The final rule (§ 1910.21(b)) defines qualified as someone who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.

The I–14.1–2001 standard also requires that employers use RDS in accordance with manufacturer's instructions. In addition, the standard specifies that employers follow design requirements in I–14.1–2001 (Section 5.7.1).

OSHA believes that following manufacturer's instructions is critical to ensure the safety of workers who use RDS. To illustrate, manufacturers may design and sell ropes and equipment rated appropriately for recreational, but not industrial, use. The final rule requires that employers ensure they use only equipment that the manufacturer rated for industrial use. Similarly, under the final rule, employers must ensure that, if they replace elements of one manufacturer's RDS with the components of another manufacturer's system, the instructions specify that the components are compatible. Using incompatible systems or components could endanger the safety of workers and result in fatal accidents.

Proposed paragraph (b)(2)(i)), like the 1991 RDS memorandum, would have required that employers use RDS in accordance with manufacturer or distributor instructions, and did not include the qualified person option. In the preamble to the proposed rule, OSHA requested comment about whether to allow employers to act in accordance with the instructions of either the manufacturer or a qualified person, as defined in § 1910.21(b) (75 FR 28886).

Commenters overwhelmingly supported adding the qualified person option and removing distributors (Exs. 138; 150; 153; 163; 184; 221; 220; 241; 242; 243; 245). For instance, Martin's said it was appropriate to allow employers to rely on qualified persons because they are ''able to solve relevant problems'' (Ex. 222). Mr. Gene Donaldson, of Sunlight Building Services (Sunlight), also preferred qualified persons because they ''must have a recognized degree, certificate, etc., or extensive experience and ability to solve subject problems, at the worksite'' (Ex. 227). Mr. Lawrence Green, president of Clean & Polish, said he supported replacing distributors with qualified persons ''because distributors primarily sell the product to the end user and are not responsible for the safety, design and training of the personnel using them'' (Ex. 242).

OSHA agrees with the commenters and revised final paragraph (b)(2)(ii) by adding qualified person and deleting distributor. The Agency believes the revised language in the final rule provides greater flexibility for employers, while ensuring that RDS use is at the direction of a person who is qualified.

Final paragraph (b)(2)(iii), like proposed paragraph (b)(2)(ii) and the 1991 RDS memorandum, requires employers to ensure that each worker who uses an RDS receives training in accordance with § 1910.30. This requirement means that the employer must train each worker who uses an RDS in the proper rigging, use, inspection, and storage of an RDS before the worker uses the RDS. In addition, since the final rule requires that each worker who uses an RDS also uses an independent personal fall arrest system (§ 1910.27(b)(2)(vi)), the employer must ensure that each worker receives fall hazard training before that worker uses an RDS in an area where the worker may be exposed to fall hazards (§ 1910.30(a)(1)). As final § 1910.30 specifies, the fall hazard training must include the nature and recognition of the fall hazards in the work area; the procedures to follow to minimize the hazards; the correct procedures for installing, inspecting, maintaining, disassembling, and operating the fall protection systems workers will use, such as proper hook-up, anchoring, and tie-off techniques; and methods of inspection and storage of the equipment the manufacturer specifies (§ 1910.30(a)(1) and (3)). Moreover, to ensure that the RDS training meets the requirements of § 1910.30, employers also must provide retraining when they have reason to believe the workers do not have the understanding and skill needed to use RDS safely.

OSHA notes that the final provision is similar to the I–14.1–2001 standard, which requires that employers train workers who use RDS so they understand the manufacturer's instructions, inspection of components, accepted rigging practices, identifying anchorages, descending, fall arrest requirements, rescue considerations, and safe working conditions (Section 5.7.2).

OSHA believes that the final provision is necessary. Evidence in the record indicates that some employers do not train their workers who use RDS (Ex. 329 (1/19/2011, pgs. 86, 100)). OSHA believes, and commenters agreed, that workers are able to safely use RDS only if they are thoroughly knowledgeable in the equipment and its proper use (Exs. 66; 138; 151; 163; 153; 184; 216; 221; 222; 242; 243; 245; 329 (1/19/2011, pgs. 22–24, 433)). A number of commenters said proper training is the most important aspect of using RDS safely (Exs. 163; 184; 221; 242; 329 (1/19/2011, p. 252)). Those commenters also said that proper training would prevent most, if not all, of RDS incidents they identified (Exs. 163; 184; 221; 242). Similarly, Mr. Capon, of Valcourt, credited their training program as the reason their company did not have a fatality during its 25 years of operation (Ex. 329 (1/19/2011, pgs. 419–420)). Some commenters recommended that OSHA also require that employers use professional organizations to train and certify their workers (Exs. 123; 205). The performance-based approach in the final rule clearly allows employers to use professional organizations to provide training, and to require that workers receive certification to operate RDS. However, the performance-based approach of the final rule gives employers flexibility to determine how to train their workers, provided the training and the training contents meet the requirements of § 1910.30. Accordingly, OSHA does not believe it is necessary to adopt the commenters' recommendation, and finalizes the provision as discussed.

Final paragraph (b)(2)(iv), like proposed paragraph (b)(2)(iii), requires that employers ensure inspection of each RDS at the start of each workshift in which their workers will use it. Additionally, the employer must ensure damaged or defective equipment is removed from service immediately and replaced. The equipment inspection must include every component of the RDS, including safety devices, ropes, rope grabs, lanyards, descent devices, harnesses, seat boards, carabiners and other hardware. When replacing damaged or defective equipment, the replacement component or system must be compatible, undamaged and not defective. Overwhelmingly, commenters supported the requirement to inspect RDS equipment (Exs. 138; 151; 153; 163; 184; 221; 222; 242; 243; 245).

The final rule revises the proposed paragraph to clarify the regulatory language. First, OSHA drafted the final provision to specify that employers must inspect each RDS ''at the start of each workshift that it is to be used'' rather than ''each day before use'' as in the proposed rule. Therefore, the final rule specifies that employers must inspect each RDS before a worker uses it in their workday. Thus, to the extent that there is more than one workshift in a work day, the RDS needs to be inspected to ensure it is safe for each worker to use during their workshift. The inspection of RDS equipment at the start of each workshift ensures that any damage (such as abrasions and cracks) that may have occurred when using the RDS during the last workshift is identified, and appropriate action is taken before another worker uses the RDS. In addition, employers need only inspect an RDS if a worker will use it during a workshift, rather than each day. The language in the final rule clarifies this requirement.

Second, the final rule requires that employers remove both damaged and ''defective'' equipment from service, while the proposed rule only specified removal of damaged equipment. OSHA added ''defective'' because, regardless of whether an inspection reveals that equipment was damaged during use or defectively manufactured, OSHA considers such equipment to be unsuitable for continued use.

Third, OSHA added language to the final rule specifying that employers remove damaged or defective equipment from service ''immediately.'' This addition is consistent with the I–14.1–2001 standard (Section 5.7.3).

Finally, the final rule revises the proposed rule to specify that employers must replace damaged or defective equipment removed from service. OSHA believes this language clarifies that improvised repairs are not allowed, consistent with I–14.1–2001 (Section 5.7.3). Replacing damaged or defective components is necessary to ensure that RDS are restored to their original condition and capacity. For these reasons, OSHA adopts the final provision as discussed.

Final paragraph (b)(2)(v), like proposed paragraph (b)(2)(iv) and the 1991 RDS memorandum, requires that employers ensure the RDS has proper rigging, including proper anchorages and tiebacks. The final rule also requires that employers ensure that RDS rigging emphasizes providing tiebacks when using counterweights, cornice hooks, or similar non-permanent anchorage. The I–14.1 standard addresses proper rigging by requiring that employers train workers in ''correct'' and ''accepted'' rigging practices (Section 5.7.2).

Proper rigging of RDS equipment is essential to ensure that the system is safe for workers to use. To ensure proper RDS rigging and safe use, OSHA believes that employers also must take into consideration and emphasize the specific conditions present. For example, OSHA believes that giving particular emphasis to providing tiebacks when using counterweights, cornice hooks, or similar non-permanent anchorages is an essential aspect of proper rigging and necessary to ensure safe work. To illustrate, when tiebacks and anchorages are not perpendicular to the building face, it may be necessary for worker safety for employers to install opposing tiebacks to support and firmly secure the RDS, have at least a 30-degree sag angle for opposing tiebacks, or ensure that no angle exists on single tiebacks. In addition, as the final rule specifies, OSHA believes that employers also must place emphasis on non-permanent anchorages because of the possibility of damage during transport and installation.

Finally, some commenters recommended that OSHA include additional rigging requirements in the final rule. For example, Vannoy & Associates recommended that OSHA include a requirement for angle of attachment (Ex. 213). OSHA believes that the term ''proper rigging'' includes the angle of attachment and, therefore, needs no further elaboration. For the reasons discussed above, OSHA adopts the provision as discussed.

Final paragraph (b)(2)(vi), like proposed paragraph (b)(2)(v) and the 1991 RDS memorandum, requires that each worker uses a separate, independent personal fall arrest system, when using an RDS. Final § 1910.140(b) defines personal fall arrest system as ''a system used to arrest an employee in a fall from a walking-working surface.'' A personal fall arrest system consists of at least an anchorage, connector, and a body harness, but also may include a lanyard, deceleration device, lifeline, or suitable combination of these devices (§ 1910.140(b)). The final rule requires that the personal fall arrest system meets the requirements in 29 CFR part 1910, subpart I, particularly final § 1910.140. This final rule is consistent with other existing OSHA standards (*e.g.,* § 1910.66(j), Powered Platforms for Building Maintenance, Personal Fall Protection; § 1926.451(g), Scaffolds, Fall Protection), as well as the I–14.1 consensus standard (Section 5.7.6).

OSHA believes the provision is essential to protect workers from injury or death if a fall occurs. As the 1991 RDS memorandum mentions, requiring workers to use personal fall arrest systems that are completely independent of RDS ensures that any failure of the RDS (*e.g.,* main friction device, seat board, support line, anchorage) does not affect the ability of the fall arrest system to quickly stop the worker from falling to a lower level.

Commenters uniformly supported the proposed provision (Exs. 138; 151; 153; 184; 221; 222; 242; 243). Also, Surface Solutions pointed out that 91 of 125 RDS incidents they reviewed as far back at 1977 resulted from the lack of an independent personal fall arrest system (Ex. 184). OSHA finds the comments and data persuasive and, therefore, adopts the requirement as proposed with only minor editorial change, for clarity.

Final paragraph (b)(2)(vii) requires that employers ensure all components of each RDS, except seat boards, are capable of supporting a minimum rated load of 5,000 pounds. For seat boards, the final rule requires that they be capable of sustaining a live load of 300 pounds. In accordance with section 6(b)(8) of the OSH Act (29 U.S.C. 655(b)(8)), OSHA revised the final provision in three ways to make it consistent with the I–14.1–2001 national consensus standard.

First, the final rule revised the proposal (proposed paragraph (b)(2)(vi)) to require that employers ensure ''all components'' of each RDS, except seat boards, are capable of supporting a 5,000-pound minimum rated load. As the final definition of RDS specifies, these systems usually consist of the following components: Roof anchorage, support rope, descent device, carabiner(s) or shackle(s), and chair (seat board) (final § 1910.21(b)).[39] I–14.1–2001 (Section 14.1.2) also requires that each RDS must include the same list of components. The proposed rule (proposed paragraph (b)(2)(vi)) and 1991 RDS Memorandum, by contrast, only required that ''all lines'' be capable of sustaining the required load, but was silent on the minimum load requirements for other RDS components.

However, like I–14.1–2001, OSHA believes that requiring all RDS components, except seat boards, be capable of supporting the required minimum rated load is essential to ensure that these systems are safe for workers to use. It makes no difference if RDS lines and ropes are capable of supporting the minimum 5,000-pound required load if RDS connectors, anchorages, and other components cannot sustain such a load. In other words, all components must be able to support the required load because RDS are only as strong as their weakest component. Thus, applying the final load requirement to all RDS components will ensure that none of the critical components will break or fail when supporting a significant load. OSHA notes that commenters overwhelmingly support the minimum 5,000 load requirement as essential to ensure RDS are safe to use (Exs. 138; 151; 153; 184; 221; 222; 242; 243).

Second, in final paragraph (b)(2)(vii), consistent with I–14.1–2001 (Section 14.1.4), OSHA does not apply the 5,000-pound rated load requirement to seat boards. Instead, OSHA incorporates language from I–14.1–2001 (Section 14.3.1(c)) specifying that seat boards must be capable of supporting a live load of at least 300 pounds. I–14.1–2001 (Section 14.3.1(a)) specifies that seat boards must be made of ''wood or other suitable material,'' which cannot and does not need to support a rated load of 5,000 pounds. OSHA notes that final paragraph (b)(2)(vi), as mentioned, requires that employers ensure each employee who uses an RDS also uses a ''separate, independent personal fall arrest system'' that meets the requirements in final § 1910.140.

Third, the final rule, consistent with I–14.1–2001 (Section 14.1.4), revises the proposed rule to require that RDS components be capable of sustaining a minimum ''rated load'' of 5,000 pounds. The proposed rule specified that RDS lines be able to sustain a minimum ''tensile load'' of 5,000 pounds. OSHA believes that ''rated load'' or ''rated strength'' is the appropriate term to specify the ability of all RDS components to support a load and is consistent with the I–14.1–2001 standard. I–14.1–2001 (Section 2) broadly defines ''rated load'' as ''the combined weight of the [workers], tools, equipment, and other materials which the device is designed and installed to lift.'' Tensile load, on the other hand, is the maximum stress that material can withstand while being stretched before breaking or failing. While the term is appropriate to use for identifying the required strength of ropes or lines, it is not a standard measure for components that do not stretch.

OSHA notes that the final rule does not preclude the use of lines or ropes that have a knot, swage, or eye splice, which could reduce the tensile strength of a rope or line. However, under final paragraph (b)(2)(vii), even if an employer uses a line or rope that has a knot, swage, or eye split, the rope or line still must be capable of supporting a minimum rated load of 5,000 pounds. Several commenters supported this interpretation of the final paragraph (b)(2)(vii).

In conclusion, OSHA believes that employers should not have difficulty complying with the final paragraph (b)(2)(vii) as revised. Virtually all RDS manufactured today meet the design requirements in I–14.1–2001 (Section 14) (See *e.g.,* Ex. 242). In addition, I–14.1–2001 represents standard industry practice, thus, OSHA believes that the revisions to final paragraph (b)(2)(vii) will make the final rule easier to understand and reduce potential for confusion.

Final paragraph (b)(2)(viii), like proposed paragraph (b)(2)(vii), requires that employers provide for prompt rescue of each worker in the event of a fall. The final rule is almost the same as the 1991 RDS memorandum and § 1910.140(c)(21), and generally consistent with the I–14.1 standard (Section 5.7.11).

Like § 1910.140(c)(21), final paragraph (b)(2)(viii) establishes two fundamental points—(1) employers must provide for the rescue of workers when a fall occurs, and (2) the rescue must be prompt. First, providing for rescue means employers need to develop and put in place a plan or procedures for effective rescue. The plan needs to include making rescue resources available (*i.e.,* rescue equipment, personnel) and ensuring that workers understand the plan.

Appendix C to § 1910.140 provides guidance to employers on developing a rescue plan (appendix C, Section (h)). For example, appendix C recommends that employers evaluate the availability of rescue personnel, ladders, and other rescue equipment, such as mechanical devices with descent capability that allow for self-rescue and devices that allow suspended workers to maintain circulation in their legs while they are awaiting rescue. OSHA's Safety and Health Information Bulletin on Suspension Trauma/Orthostatic Intolerance identifies factors that employers should consider in developing and implementing a rescue plan, including being aware of signs and symptoms of suspension trauma and factors that can increase the risk of such trauma, rescuing unconscious workers, monitoring suspended and rescued workers, and providing first aid for workers showing signs and symptoms of orthostatic intolerance (SHIB 03–24–2004).[40]

Although an increasing number of employers train workers and provide devices that allow workers to rescue themselves (Exs. 227; 242), the employer's rescue plan still needs to make provisions for appropriate rescue personnel and equipment because self-rescue may not be possible in some situations. For example, unconscious workers will not be able to move and, therefore, cannot pump their legs to maintain circulation or relieve pressure on the leg muscles. The same may be true for seriously injured workers or workers who are in shock. When RDS ropes get caught on structures or entangled, workers may not be able to self-rescue (see analysis of RDS and suspended scaffolding incidents in Ex. 163).

Second, the final rule requires that employers provide ''prompt'' rescue of workers suspended after a fall. Sunlight Building Services commented that ''prompt'' is ambiguous, and asked whether OSHA defines it to mean ''immediately'' or ''quickly'' (Ex. 227). The International Safety Equipment Association (ISEA) and Capital Safety Group (CSG) urged OSHA to require that rescue of suspended workers occur ''quickly,'' pointing out the life-threatening dangers of suspension trauma/orthostatic intolerance (Exs. 185; 198).

OSHA agrees with ISEA and CSG. OSHA's definition of ''quick'' or ''prompt'' is performance-based. Prompt means that employers must act quickly enough to ensure that the rescue is effective; that is, to ensure that the worker is not seriously injured. If the worker is injured in the fall, the employer must act quickly enough to

[39] OSHA notes that RDS often include tiebacks, but they are not a required component of RDS.

[40] SHIB 03–24–2006 is available from OSHA's Web site at: *http://www.osha.gov/dts/shib/shib032404.html.*

mitigate the severity of the injury and increase the survivability of the worker. OSHA's performance-based definition has consistently recognized, and taken into account, life-threatening injuries and dangers (Ex. 22; *see also* 76 FR 24576 (5/2/2011); Letter to Charles Brogan, January 16, 2007; Letter to Brian F. Bisland (March 23, 2007)). For example, OSHA's Safety and Health Information Bulletin (SHIB) on orthostatic intolerance explains:

> Orthostatic intolerance may be experienced by workers using fall arrest systems. Following a fall, a worker may remain suspended in a harness. The sustained immobility may lead to a state of unconsciousness. Depending on the length of time the suspended worker is unconscious/immobile and the level of venous pooling, the resulting orthostatic intolerance may lead to death. . . . Unless the worker is rescued promptly using established safe procedures, venous pooling and orthostatic intolerance could result in serious or fatal injury, as the brain, kidneys, and other organs are deprived of oxygen.
>
> Prolonged suspension from fall arrest systems can cause orthostatic intolerance, which, in turn, can result in serious physical injury, or potentially, death. Research indicates that suspension in a fall arrest device can result in unconsciousness, followed by death, in less than 30 minutes (SHIB 03–24–2004).

In sum, prompt rescue means employers must be able to rescue suspended workers quickly enough to ensure the rescue is successful, *i.e.,* quickly enough to ensure that the employee does not suffer physical injury (such as injury or unconsciousness from orthostatic intolerance) or death. Many employers provide self-rescue equipment so workers can rescue themselves quickly after a fall, ensuring that the rescue is prompt and risks associated with prolonged suspension are minimal. OSHA believes the performance-based approach in the final rule will ensure prompt rescue of workers after a fall, while also giving employers flexibility to determine how best to provide prompt and effective rescue in the particular circumstance.

Commenters uniformly supported the proposed provision (Exs. 138; 153; 184; 221; 222; 242; 243). Clean & Polish said, ''It is a documented fact that there is a great risk of suspension trauma when hanging from a harness.'' Accordingly, they recommended that a team of at least two workers should perform every job assignment and that workers receive training in self-rescue (Ex. 242). Sunlight also supported self-rescue, saying it is the quickest form of rescue, followed by assistance from a coworker trained in rescue. Sunlight added that, in a medical emergency, they recommend calling the local fire department (Ex. 227). A number of commenters said they train their own workers in rescue and require them to practice/demonstrate their rescue capabilities at least twice a year (Exs. 184; 221; 227; 243).

The final rule is performance-based and gives employers flexibility to select the rescue methods that work best for their workers and worksite. However, OSHA emphasizes that, whatever rescue methods employers use, they are responsible for ensuring that it provides prompt rescue. Some commenters said they rely on calling local emergency responders, which may or may not be adequate. If employers rely on this method of rescue, they need to ensure that the responders have the appropriate equipment to perform a high angle rescue and are trained and qualified to do so. (Also see the discussion of prompt rescue in final § 1910.140 below.)

Final paragraph (b)(2)(ix), consistent with proposed paragraph (b)(2)(viii), the 1991 RDS memorandum, and I–14.1 (Section 5.7.5), requires that employers ensure the ropes of each RDS are effectively padded or otherwise protected where they contact edges of the building, anchorage, obstructions, or other surfaces to prevent them from being cut or weakened. Padding protects RDS ropes from abrasion that can weaken the strength of the rope. If employers do not protect RDS ropes, the ropes can wear against the sharp edges of buildings (*e.g.,* parapets, window frames, cornices, overhangs), damaging their structural integrity and possibly causing them to break.

The final rule requires that employers ensure the rope padding is ''effective.'' To be effective, padding needs to be, for example, firmly secured in place and strong and thick enough to prevent abrasion. To ensure the padding remains effective, employers also need to inspect it ''regularly and as necessary'' (final § 1910.22(d)(1)).

OSHA added language to the final rule specifying that employers may ensure that ropes are padded or ''otherwise protected.'' OSHA believes the added language gives employers greater flexibility in complying with final (b)(2)(ix). OSHA recognizes that padding may not be the only effective measure available to employers. For example, several commenters said that parapet carpets and rope-wrapper protection are effective rope protection devices (Exs. 138; 153; 184; 221; 242). Other available measures include rubber hoses and polyvinyl chloride (PVC) piping. OSHA believes that various materials are readily available and used in common industry practice; thus, employers should not have significant problems complying with the final rule.

Overwhelmingly, commenters supported the provision (Exs. 138; 153; 184; 221; 222; 242; 243), and OSHA did not receive any comments opposing the requirement. Therefore, OSHA adopts the provision as discussed.

Final paragraph (b)(2)(x), like proposed paragraph (b)(2)(ix), requires that employers provide stabilization at the worker's specific work location whenever descents are greater than 130 feet. The purpose of the stabilization requirement is to reduce the risks of worker injury when longer descents are made using a RDS.

For purposes of final paragraph (b)(2)(x), the worker's ''specific work location'' refers to the location in the descent where the worker is performing the work tasks that necessitate the use of an RDS. For example, a window cleaner's specific work location is the window the worker is cleaning. While using an RDS, workers may have many specific work locations during a descent, and they must be stabilized at each of those locations when the descent is greater than 130 feet.

OSHA uses a performance-based approach in final paragraph (b)(2)(x). It gives employers the flexibility to use intermittent or continuous stabilization. In addition, the final rule allows employers to use any method of stabilization (*e.g.,* suction cups, rail and track system) that is effective to protect workers from adverse environmental effects, such as gusty or excessive wind.

OSHA notes that the 1991 RDS memorandum included a requirement for ''intermittent'' stabilization on descents in excess of 130 feet.[41] Similarly, the I–14.1 standard, which also requires stabilization on descents greater than 130 feet, specifies that stabilization may include continuous, intermittent, or work station stabilization (Section 5.7.12). The I–14.1–2001 standard identifies suction cups as an example of work station stabilization.

In the proposed rule, OSHA requested information on commonly used methods of stabilization and on other methods that may increase worker safety. The vast majority of commenters

[41] Shortly after OSHA issued the 1991 RDS memorandum, the Agency confirmed that employers could use suction cups to meet the stabilization requirement in the memorandum (Letter to Mr. Michael Bell, July 31, 1991, available on OSHA's website at: *http://www.osha.gov/portable_ladders/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=22722*).

said suction cups are the method they most use for stabilization (Exs. 138; 163; 184; 221; 222; 241; 242). Some commenters said they use different methods for stabilization, but only mentioned suction cups, and said suction cups is their ''primary'' method (Exs. 163; 184; 221; 242; 329 (1/19/2011, p. 436)).

Sunlight said that some buildings have permanent rail or track systems to provide stabilization (Ex. 227). TRACTEL North America (TRACTEL) also said they use ''mulling and track,'' designed for use by powered platforms for stabilization, to stabilize RDS (Ex. 329 (1/19/2011, p. 436)). TRACTEL added that mulling and track stabilization systems provide greater protection because the stabilization is continuous, while suction cups only provide intermittent protection (Ex. 329 (1/19/2011, p. 436)).

Many commenters supported the RDS stabilization requirement for work operations involving descents greater than 130 feet (Exs. 138; 147; 151; 215; 222; 241; 227; 356), and a number of commenters supported the use of suction cups as an effective stabilization method (Exs. 138; 151; 152; 222; 241).

However, a number of commenters said stabilization is not necessary. They indicated there was no need for a stabilization requirement because the prohibition against using RDS in adverse or hazardous weather is adequate and a more protective approach (Exs. 163; 184; 221; 227; 241; 242; 243). Mr. Terry, of Sparkling Clean, explained:

Every incident that can be partially abated by stabilization can be totally abated by substituting a restriction from working in adverse weather restrictions. Suspended workers using [RDS] only need stabilization during adverse weather conditions. . . .

[Suction cups] can certainly be used for stabilization, if a worker chooses to work in adverse conditions that should have been avoided in the first place . . . (Ex. 163).

Ms. McCurley, of SPRAT, also said the proposed requirement was not necessary:

Sometimes stabilization is required, and when stabilization is required, the stabilization needs to be adequate to the situation. But, stabilization is not necessarily required just as a matter of course. . . . [T]hat requirement tends to come from the scaffold industry, which does require stabilization all the time, because that's what scaffolds do. They have to have stabilization. But, because of the individual not having nearly the wind load—a wind load on this table, because it looks a lot like an airplane wing, is going to have a much different effect than the same wind load on your body standing there (Ex. 329 (1/19/2011, pgs. 167–168)).

Nevertheless, Mr. Terry and other commenters said they provide stabilization devices (primarily suction cups) and use them on descents as short as 10 feet (Exs. 163; 184; 221; 242; 329 (1/19/2011, p. 62)). Mr. Terry pointed out that his company uses the suction cups ''for positioning to keep us in front of the glass, not for stabilization against the effects of the wind'' (Ex. 329 (1/19/2011, p. 337)).

Mr. Diebolt, of Vertical Access, did not oppose the concept of stabilization, but opposed OSHA's 130-foot trigger:

Now, the 130-foot tie-offs, I have essentially the same objections. It seems arbitrary for the kind of work at least that we do, it's unnecessary. . . . Granted we're doing light work, making observations and notes and that sort of thing. Occasionally, we have done some work like take core samples out of a concrete structure using a coring rig drill rig hung from a separate line. And under those conditions, you do actually have to put in a bolt or something to hold you to the building . . . when you're on a long pendulum, when you're on a long tether.

But making it mandatory seems arbitrary and sort of eliminates the possibility of the flexibility of doing the work (Ex. 329 (1/21/2011, pgs. 139–140)).

However, the major objection to the proposed rule was not to the proposed regulatory text, but rather with the use of suction cups as a stabilization method. The Glass Association of North America (GANA), a trade association representing the architectural and glazing industry, recommended that OSHA not to allow the use of suction cups for worker stabilization:

Glass is a brittle material and, as such, can break without warning and vacate the window framing system. Glass installed in commercial and residential buildings is designed to withstand external loads, primarily wind events, with a certain safety factor. . . . In other words, breakage cannot be eliminated in brittle materials like glass. There is no way to guarantee a specific lite of glass will not break under the loads exerted by workers as they move vertically and horizontally back and forth across the glass lites. . . . The use of suction cups may be sufficient in certain conditions to cause the glass to break and vacate the opening, particularly in the event the RDS fails and the worker is left to rely upon the suction cups used for stabilization . . . to support his/her weight.

GANA urges OSHA, in its final rule, to reject the use of suction cups as an approved employee work location stabilization device for RDS. . . . Their use does not satisfy the safety criteria OSHA has established for this rulemaking proceeding: ''to be effective, fall protection systems must be both strong enough to provide the necessary fall protection and capable of absorbing fall impact so that the forces imposed on employees when stopping falls do not result in injury or death'' (Ex. 252).

Mr. Gartner, of Weatherguard, and Mr. Coleman, of JOBS, opposed the use of suction cups for the same reasons as GANA (Ex. 215; 329 (1/19/2011, pgs. 259–260)). Mr. Gartner said:

The use of suction devices for stabilization is problematic. The glass industry strongly discourages them and the window wall people are robustly against them. They are devices used at whim. The loads that they apply to a surface are totally unknown as there are numerous barrier bowls that influence them and they're applied to surfaces that have never been rated for these pinpoint concentrated loads.

Applying a device to glass seems reckless when we're all aware of glass's characteristics and lack of strength. Furthermore, as glass ages, it becomes more brittle and it loses strength, just another variable to make their use totally uncontrolled (Ex. 329 (1/19/2011, pgs. 259–260)).

Mr. Coleman also stated:

In order for Work Station Stabilization to be safe, the worker must attach to a component of the building curtain wall that is designed for and capable of providing the stabilization required. Presently most Work Station Stabilization is done by using suction cups attached to the glass pane. The glass is typically not designed for such point loading; it is designed for a wind load spread out over the entire surface of the glass (Ex. 215).

Therefore, Mr. Coleman concluded that the final rule should not allow suction cups, which provide only intermittent stabilization, as the primary stabilization device (Ex. 356). Rather, he said OSHA should define ''Work Station Stabilization'' as: ''a means to stabilize suspended access equipment by securing the worker or suspended access equipment to an approved anchor point on the exterior of the building surface,'' thus ensuring continuous stabilization (Ex. 215). Mr. Schoch, of TRACTEL, agreed with Mr. Coleman's recommendation (Ex. 329 (1/19/2011, p. 439)).

Several workers, based on personal experience, also opposed the use of suction cups, calling the devices ''unsafe'' (Exs. 311; 316; 329 (1/19/2011, pgs. 5, 8, 15, 18, 19, 61, 62); 329 (1/20/2011, p. 222)). For instance, Mr. Rosario, of SEIU Local 32BJ, stated:

I believe the use of suction cups fails to provide adequate protection. Suction cups are unreliable because they get dirty and fail to maintain suction. I remember having to clean 20-story buildings, sometimes with multiple stops per floor. At least half the time I applied the [suction] cup, it released during the cleaning and I had to apply it again (Ex. 311).

Mr. Rosario also said the support offered by suction cups ''usually only lasts for a few seconds'' (Ex. 329 (1/19/2011, p. 19)). Mr. Rosario added that usually he had to clean suction cups four or five times per descent (Ex. 329 (1/19/2011, p. 86)). Mr. McEneaney, with SEIU Local 32BJ, said suction cups were not reliable stabilization devices because they leave the worker ''de-stabilized during the movement from one floor to another'' (Ex. 329 (1/19/2011, p. 15)). However, most commenters said they primarily use suction cups for stabilization, and did not indicate they were not effective (Exs. 138; 163; 184; 222; 227; 241; 242).

After reviewing the rulemaking record, OSHA decided, for several reasons, to adopt the stabilization requirement as proposed. First, OSHA believes, and many commenters agreed, that stabilization of RDS is necessary to protect workers on descents greater than 130 feet. The effects of wind gusts, microbursts, and tunneling wind currents on longer RDS ropes is particularly severe and likely to increase the risk of injury to workers. For instance, increases or changes in the wind can cause a significant pendulum effect on the long RDS ropes, and will cause workers not stabilized to swing a great distance away from or into the building, possibly causing injury or death. For example, the RDS accident data analysis Mr. Terry submitted indicated that strong wind gusts (more than 35 mph) swung two workers using RDS 30 feet away from a building (Ex. 163).

In addition, even a single wind gust or a sudden drop in the wind speed can initiate this pendulum effect on RDS ropes and destabilize the workers using them. Moreover, when RDS ropes are long, the slightest wind movement also can cause the ropes to sway (*i.e.,* pendulum effect) and swing or propel workers into the building. OSHA believes that requiring stabilization in these situations will prevent RDS ropes from swaying and buffeting workers against the building.

Mr. Terry's accident analysis demonstrates what can happen when workers are not using stabilization, and how using stabilization could prevent such cases. Three RDS accidents in that analysis involved wind:

- Window cleaner cleaning 50-story building became stranded in descent equipment line as a result of a wind gust;
- Window cleaner was stuck between 12th and 13th floor and managed to rest on narrow window ledge. Winds that were gusting 35 mph caught his ropes and wrapped them around an antenna on the west side of the building so worker was unable free to himself; and
- Two window cleaners were left dangling from a building when their lines became tangled during a windy rain shower. Wind was gusting about 36 mph. The workers were stuck between the 11th and 14th floors and blown 30 feet away from the building (Ex. 163).

OSHA believes that stabilization, as required by this final standard, could prevent many such incidents.

Second, while OSHA agrees that employers must not allow workers to perform suspended work in hazardous weather and gusty or excessive winds, the Agency also recognizes that adverse conditions can suddenly occur without warning. When such conditions occur, employers must ensure that workers using RDS have stabilization methods immediately available so they can protect themselves from the effects of the wind, even if all they are doing is descending to stop work due to hazardous weather conditions. OSHA notes that even those commenters who asserted that stabilization is not necessary because weather restrictions can totally abate the hazard, also noted that they regularly use and rely on stabilization devices, even on descents as short as 10 feet (Exs. 163; 184; 221; 242).

Third, the final rule is consistent with the I–14.1–2001 national consensus standard. The I–14.1–2001 standard also requires that employers ensure workers using RDS have stabilization at their work station on all descents greater than 130 feet (Section 5.7.12). The I–14.1–2001 standard reflects best industry practices.

With regard to suction cups, for the following reasons OSHA decided not to prohibit their use under the final rule. First, OSHA believes that suction cups provide effective stabilization for workers using RDS, particularly in long descents. The record shows that suction cups are an effective and easy-to-use device that helps keep workers positioned or stabilized at their specific work location (Exs. 137; 138; 147; 153; 163; 184; 298).

OSHA received a comment from GANA stating that suction cups are not safe or effective to use for stabilization (Ex. 252). GANA's comment appears to indicate that they believe suction cups are a type of personal fall protection system, and concludes suction cups are not effective because the cups are not ''strong enough to provide the necessary fall protection and capable of absorbing fall impact so that the forces imposed on employees when stopping falls do not result in injury or death'' (Ex. 252). GANA also says suction cups are not effective because they cannot support the worker's weight if the RDS and personal fall arrest system both fail (Ex. 252). However, OSHA agrees with IWCA's post-hearing comments that GANA's description of the purpose and use of suction cups is not accurate (Ex. 346). As IWCA points out, and OSHA agrees, ''Suction cups are not intended to be part of the fall protection system and they are not part of the fall protection system'' (Ex. 346).

The second reason for allowing suction cups is that OSHA believes suction cups can provide stabilization and protection when sudden weather conditions occur while the worker is using an RDS, even if workers use the suction cups only to safely descend due to excessive wind. As Mr. Terry said, ''In the event of a sudden unforeseen weather hazard, the [RDS user] . . . can very easily . . . utilize the suction cup. . . . This method of stability can even be performed while descending out of harm's way'' (Ex. 329 (1/19/2011, p. 329)).

Third, OSHA believes that suction cups are widely used and accepted by employers and workers who use RDS, even by those employers who doubt the need for stabilization, because the devices have a track record of being effective, and economical. As far back as July 31, 1991, OSHA allowed employers to use suction cups to meet the stabilization requirement in the 1991 RDS memorandum. IWCA said that, since 1991, the use of suction cups in conjunction with RDS is widespread among window cleaning companies and workers in the United States and other countries (Ex. 346). Over that period, neither OSHA nor IWCA are aware of any data or evidence indicating that a significant problem exists with using suction cups. Although GANA said it is not safe to use suction cups on glass, they did not provide any data indicating that suction cups are causing glass windows to break (Ex. 252). Moreover, according to IWCA, a 2010 GANA press release said their members did not have any record of windows breaking when window cleaners were using suction cups (Ex. 346). OSHA notes that a review of the rulemaking record failed to show that suction cups cause anything more than a few isolated cases of window breakage. For example, Mr. John Capon, of Valcourt, reported that each year his company only had to replace 15 to 20 windows on the approximately 4,000 buildings they clean 2–3 times each year because of suction cup-related damage (Ex. 329 (1/19/2011, p. 372, 399)).

Finally, the performance-based final rule allows, but does not require, the use of suction cups for stabilization. Employers are free to use other devices, and some commenters said they use other stabilization methods, such as rail and track systems, that provide continuous stabilization (Exs. 163; 184; 221; 242; 329 (1/19/2011, p. 436)). Based on the above discussion, OSHA concludes that stabilization is essential at specific workplaces where descents are greater than 130 feet and is finalizing the provision as proposed.

Final paragraph (b)(2)(xi) is a new provision added to the final rule that requires employers to ensure no worker uses an RDS when ''hazardous weather conditions'' are present. The final provision also identifies some examples of weather conditions that OSHA considers hazardous for workers using RDS: Storms and gusty or excessive wind.

OSHA's general industry standard on powered platforms (§ 1910.66) and construction standard on scaffolds (§ 1926.451) also prohibit elevated work when certain weather conditions are present. Specifically, the powered platforms standard prohibits using powered platforms in winds in excess of 25 mph, and requires that employers determine wind speed based on ''the best available information, which includes on-site anemometer readings and local weather forecasts, which predict wind velocities for the area'' (§ 1910.66(i)(2)(v)). The construction standard prohibits work on scaffolds during storms or high winds ''unless a competent person has determined that it is safe for employees to be on the scaffold and those employees are protected by personal fall arrest systems or wind screens'' (§ 1926.451(f)(12)).

The I–14.1 standard also prohibits window cleaning operations and RDS use when the ''work area is exposed to excessive winds,'' which the standard defines as ''any wind which constitutes a hazard to the worker, public or property'' (Sections 3.7 and 5.7.12). The I–14.1 also requires that employers train workers in the effects of wind on RDS operations, and make workers aware of ''the potential of sudden climatic changes such as wind gusts, micro bursts or tunneling wind currents'' when they perform descents over 130 feet (Section 5.7.11(a)).

In the preamble to the proposed rule, OSHA requested comment on a number of issues regarding hazardous weather conditions including the following (75 FR 28886):

- Should the final rule prohibit RDS use in certain weather conditions? If so, what conditions?
- How should employers determine whether weather conditions are hazardous?
- How should OSHA define excessive wind?
- Should the final rule prohibit RDS use if winds reach a specific speed? If so, what speed?
- Should the final rule require that employers monitor winds speeds? If so, how?

Overwhelmingly, commenters supported prohibiting the use of RDS, as well as suspended scaffolding, in inclement or hazardous weather (Exs. 151; 163; 184; 221; 222; 227; 241; 242; 243; 329 (1/19/2011, p. 329)). They also agreed that conditions such as ''thunderstorms, lightning; hail, high winds, hurricane, snow and ice storms'' were hazardous. Sunlight added that heavy rain and extreme cold also make RDS use hazardous: ''Rain can affect the operation of the working line but the use of rope that is essentially waterproof can negate this problem. Very cold weather stiffens the rope and especially wet rope can be a hazard'' (Ex. 227).

In addition, some commenters said that as the length of rope during a drop increases, the effects of wind on RDS can increase (Exs. 147; 329 (1/19/2011, pgs. 253, 291–292)). As mentioned in the proposed rule, the greater the length of rope used for a descent, the greater the adverse effects of environmental factors such as wind gusts, microbursts, or tunneling wind currents, and the greater the risk of injury to workers (75 FR 28886). OSHA notes that some window cleaning companies disagreed that greater heights pose greater wind effects on RDS (Exs. 222; 247; 329 (1/19/2011, p. 329)). Dana Taylor, of Martin's, said their accident analysis files did not show any RDS accidents occurring due to excessive wind (*i.e.,* ''wind gusts, microbursts or tunneling wind currents'') (Ex. 222). Sam Terry of Sparkling Clean said:

> The adverse effects of environmental factors do not affect rope access any more than they affect suspended scaffolding. In actuality, users of rope access have the ability to get themselves and their equipment out of harm's way should unexpected weather hazards suddenly appear much quicker than users of suspended scaffolding.
>
> In the event of a sudden unforeseen weather hazard, the user of rope access can very easily use their hands, arms, legs, and feet to hold on to parts of the building or structure or to utilize the suction cup as long as a smooth surface is available. This method of stability can even be performed while descending out of harm's way. (Ex. 329, 1/19/2011, p. 329)).

Commenters also had different viewpoints about defining ''excessive'' wind. Some commenters said winds were excessive and dangerous when they reached 25 mph (Exs. 227; 329 (1/19/2011, p. 411)), while others said winds in excess of 15 mph were too high to use RDS (Exs. 138; 151; 152; 222; 329 (1/19/2011, p. 329)). For instance, John Capon of Valcourt said: ''I don't work . . . in more than 10 or 15 miles per hour [wind] and I almost look at that as normal. That seems a little awkward to me because that's not very windy at all. When it gets to 20 and 25 miles per hour, to me it gets very dangerous'' (Ex. 329 (1/19/2011, p. 411)).

Several stakeholders in the window cleaning industry indicated that including a 15-mph or 25-mph wind speed limit in the final rule was not necessary. Texas Window Cleaning Company said: ''Not many window cleaners are going to risk their health on wind, storm or other increments of bad weather. They know and are trained when, where and how to postpone the cleaning'' (Ex. 218).

Other window cleaning companies indicated that water ''blowback'' stops window cleaning operations long before winds reach 15 mph to 25 mph (Exs. 151; 163; 329 (1/19/2011, pgs. 213–214)). Mr. Adkins, of Corporate Cleaning, explained:

> I've never had anybody work at 15 miles an hour and never will because that, in my opinion, is too high, both for a boatswain's chair, a swingstage, a scaffold. Also, I might add there's something else that happens with window washing and that's the blowback effect. Window washers don't like to do their work over, and at a certain level of wind, you wind up with dirty water blowing on clean windows . . . which, of course, the customer doesn't like. They want us to come back, do it over. So, consequently, that's a lower level normally than anything where you have to worry about safety. Most normal window washers will shut down and we support this, we fully support this because I don't want the phone call from the property manager. Most window washers will shut down before they reach an unsafe level, before they come anywhere near it. The most I think I've ever seen our company working is in 15-mph winds (Ex. 329 (1/19/2011, pgs. 213–214)).

For companies that use RDS to perform operations that do not have the ''built-in monitoring'' capability for blowback of water, several commenters said, ''[I]t would seem to me that a 15 mph limit is reasonable'' (Exs. 163; 221).

The American Wind Energy Association (AWEA), however, opposed adding any wind-speed restriction to the final rule because it would be ''detrimental'' to the wind energy industry, which works in windy areas (Ex. 178). AWEA said that OSHA should allow employers to establish their own ''detailed policies and [job hazard analyses] for work in inclement weather'' (Ex. 178). Mr. Diebolt, of Vertical Access, also agreed that employers should be able to set their own weather policies:

Just a word about weather and changing site conditions. Wind has been a concern and understandably. But you can understand after AWEA's testimony this morning that a wind effect of somebody hanging on the outside of a turbine or working on top of a nacelle is entirely different from somebody working on a bridge, pier, abutment or the side of a building (Ex. 329 (1/21/2011, pgs. 139–140)).

With regard to monitoring wind speed, several window cleaning companies indicated that it was not necessary because ''blowback'' of water is an adequate measure (Exs. 138; 163; 222). That said, some of these companies recommended that employers monitor weather reports in their area and notify workers of changes that would prohibit the use of RDS (Exs. 151; 163; 222). Sunlight noted that ''the use of [B]lackberry, PDAs, internet and cell phones give the employer the tools to monitor weather conditions in real time'' (Ex. 227).

OSHA agrees with commenters who said the final standard must prohibit the use of RDS when weather conditions are hazardous for workers and the equipment. As the record and OSHA standards indicate, workers using RDS are vulnerable to sudden weather changes such as wind gusts, microbursts, and wind tunneling. Gusty and excessive winds can cause workers using RDS to swing into buildings, resulting in possible injury or death.

OSHA believes that employers' support of a mandatory prohibition on RDS during windy weather indicates that they are aware of the hazards posed by inclement weather. That said, the record indicates that what constitutes ''hazardous'' weather and ''excessive'' wind is dependent on the type of work performed when using RDS. For window cleaning, the record shows that water blowback acts as a reliable sign that winds have become excessive, even if they are well below 15 mph. However, for other jobs it may be safe to use RDS at higher wind speeds, depending on the type of job performed. For instance, the record indicates that using an RDS below 130 feet may be safe when winds approach 25 mph, but hazardous when using RDS at heights approaching 300 feet, or when the length of the descent rope is long.

In light of the many variables of RDS use, OSHA decided that using a performance-based approach in the final rule is the most effective way to cover varying worksite and job conditions. Under the performance-based final rule, employers must evaluate or analyze the worksite and job variables in light of existing weather conditions. If that analysis indicates that weather conditions are hazardous and winds are excessive, the employer must ensure that no employee uses an RDS. OSHA believes this approach will best ensure that employers provide an adequate level of safety, and take appropriate measures to protect workers in each specific work operation. Moreover, OSHA believes the performance-based final rule will not impose significant burdens on employers. The record shows that employers said they already monitor on-site weather conditions to determine whether to proceed with or postpone the job.

OSHA also believes the performance-based approach obviates the need to require in the final rule that employers conduct on-site weather monitoring or use specific weather-monitoring systems. The record shows that many employers currently use various electronic tools to monitor local weather forecasts.

Final paragraph (b)(2)(xii), like proposed paragraph (b)(2)(x), requires that employers ensure equipment is secured by a tool lanyard or similar method to prevent it from falling. Examples of equipment include tools, squeegees, and buckets. The purpose of this provision is to protect workers and the public below from being struck by falling equipment. The final rule is consistent with the I–14.1–2001 standard (Sections 3.10 and 5.7.15), and supplements the falling object requirements in final § 1910.28(c) (Protection from falling objects).

Several commenters, including IWCA, supported the requirement (Exs. 138; 151; 153). However, Mr. Donaldson, of Sunlight, said the provision was not practical or needed (Ex. 227). In particular, he stated that tool bungees are imperative to the window cleaning business, but a serious impediment to the use of squeegees or other tools. Therefore, he suggested the following alternative to the final rule:

The danger of workers below being struck by falling equipment is minimal. Workers rarely work directly below other workers. The tools themselves are light and blunt and could not cause serious injury unless dropped from a great height. . . . Requiring window cleaners to wear hard hats would be a more practical solution than tool bungees (Ex. 227).

AWEA also suggested additional alternatives:

[T]here are various ways to protect workers from falling objects in the wind industry. Workers are prohibited to work below other workers when using items that can fall. In addition, workers often use tool tethers for equipment. Typically, tools are hoisted in tool buckets versus being carried by workers. This practice allows the trained employee free use of his hands and mitigates the potential for tools falling out of workers' pockets (Ex. 329 (1/21/2011, p. 12)).

OSHA does not agree with Sunlight's comment for several reasons. First, OSHA believes the performance-based approach in the final rule assures that employers have maximum flexibility in meeting the requirement to secure equipment (*e.g.,* tools, squeegees, buckets) that workers use. Many different types of tool lanyards and similar methods are currently available to secure equipment. Tool lanyards and other securing equipment are available in many types, lengths, and load capacities, and a worker can secure the equipment at various points, including the worker's wrist, tool belt, harness, and seat board.

Second, Mr. Donaldson did not provide any explanation about how or why tool bungees are a ''serious impediment'' to using squeegees and other tools. OSHA did not receive any other comments supporting Mr. Donaldson's claim.

Third, OSHA disagrees with Mr. Donaldson's assertion that falling tools will not cause serious injury if they hit workers below. Many of the tools employees use in suspended work can be heavy and sharp (*e.g.,* a bucket of cleaning water or the corner at the end of a squeegee). Tools can cause injury to various parts of the body, especially if dropped from significant heights. In any event, Mr. Donaldson's recommendation that employees wear head protection when they work below elevated workers, such as window cleaners, will not protect other persons who also may be below.

With regard to the controls AWEA identified, OSHA believes that tethering controls is one way employers can comply with the final rule. As to the other controls AWEA suggested, OSHA believes that securing equipment is the most protective option because it removes the hazard of equipment falling and hurting workers. Putting tools in buckets and prohibiting employees from working below other workers, as AWEA suggests, does not prevent equipment from dropping and, in the case of prohibiting work below the worker, requires ongoing monitoring by the employer to be effective. Thus, OSHA believes that the final rule establishes the most protective control, and likely the most efficient one. Accordingly, OSHA adopts the requirement that employers ensure that equipment used in RDS work is secure to prevent it from falling and injuring workers and the public.

Final paragraph (b)(2)(xiii), like proposed paragraph (b)(2)(xi), requires that employers protect RDS ropes from exposure to open flames, hot work, corrosive chemicals, and other destructive conditions that could damage or weaken the ropes. This requirement will prevent damage to ropes that could lead to failure. Failure of a suspension or fall arrest line could seriously injure or kill a worker.

The performance-based approach in final paragraph (b)(2)(xiii) gives employers flexibility in determining how to protect RDS ropes from damage. OSHA believes that this approach is appropriate for the final rule because there are various controls available to protect RDS ropes from damage. This approach also is consistent with the I–14.1–2001 standard, which prohibits the use of hazardous or corrosive materials that could ''endanger the . . . safety of the worker or may affect the safe operation of equipment'' (Section 3.5).

A number of commenters supported the provision (Exs. 138; 151; 153; 184; 221; 222; 243), and OSHA did not receive any comments opposing the provision, and finalizes the provision as proposed.

Section 1910.28—Duty To Have Fall Protection and Falling Object Protection

Final § 1910.28 is the first of three new sections in subpart D that consolidate requirements pertinent to fall protection and falling object protection. The new sections are:

- § 1910.28—Duty to have fall protection and falling object protection;
- § 1910.29—Fall protection systems and falling object protection—criteria and practices; and
- § 1910.30—Training.

Final § 1910.28 specifies the areas and operations where employers must ensure that workers have fall and falling object protection and what type(s) of protection employers may use. The criteria for fall and falling object protection that employers use to comply the duties imposed by § 1910.28, and the training workers who use those systems must receive are in §§ 1910.29 and 1910.30, respectively. OSHA notes that § 1910.140 specifies criteria for personal fall protection systems that employers must meet when their workers use these systems.

OSHA believes these sections along with the general requirements in § 1910.22, taken together, establish a comprehensive approach to fall and falling object protection. OSHA believes this approach will ensure a better understanding of the final rule, fall hazards, and fall protection systems; provide flexibility for employers when choosing a fall protection system and falling object protection; ensure the systems they choose will be effective; and most importantly, will reduce significantly the number of fall injuries and fatalities in general industry.

Final § 1910.28, like the proposed rule, consolidates most of the general industry fall and falling object protection requirements throughout subpart D. OSHA patterned this section after the construction fall protection standard (29 CFR 1926.501, Duty to have fall protection). OSHA draws the range of fall protection options in the final rule, for the most part, from the construction standard. These options include engineering controls (*e.g.,* guardrails, safety net systems), personal fall protection systems (*e.g.,* personal fall arrest systems, travel restraint systems, positioning systems), and administrative measures (*e.g.,* designated areas). OSHA strived to make the final rule consistent with the construction standard, when appropriate. The record shows a number of employers have workers who perform both general industry and construction activities.

There are several ways in which OSHA made the final rule consistent with the construction fall protection standard. For example, the final rule provides for control flexibility. This rule, like the construction fall protection standard, allows general industry employers, similar to construction employers, to protect workers from fall hazards by choosing from a range of accepted conventional fall protection options. The existing general industry standard does not allow this flexibility and mandated the use of guardrail systems as the primary fall protection method (*e.g.,* see existing § 1910.23(c)).

The 1990 proposed revision of subpart D continued to require the use of guardrail systems. However, in the 2003 notice reopening the record, OSHA acknowledged that it may not be feasible to use guardrails in all workplace situations (68 FR 23528, 23533 (5/2/2003)) and requested comment on whether the Agency should allow employers to use other fall protection systems instead of guardrails. Commenters overwhelmingly favored this approach, which the construction fall protection standard adopted in 1994. In response to comments and OSHA's history and experience with the construction fall protection standard, the Agency proposed in 2010 to allow employers to select from a range of fall protection options instead of requiring employers to comply with the existing mandate to use guardrail systems.

OSHA is adopting the proposed approach for several reasons. First, the final rule's control flexibility reflects longstanding OSHA policy first incorporated in the 1994 construction fall protection standard. OSHA's history and experience with the construction standard indicates that its control flexibility approach has been effective. In addition, stakeholders responding to the proposed rule overwhelmingly supported this approach and there was little opposition to providing greater flexibility in controlling fall hazards.

Second, the fall protection systems that the final rule allows employers to use (guardrail systems, safety net system, personal fall protection systems) are accepted conventional fall protection systems that OSHA has determined provide an appropriate and equal level of safety. Moreover, allowing employers to select the least costly fall protection system from those controls that provide equal protection also ensures the final rule meets OSH Act requirements that a standard be cost effective (*Cotton Dust,* 452 U.S. at 514 n. 32; *Lockout/Tagout II,* 37 F.3d at 668).

Third, OSHA believes giving employers greater control flexibility in selecting fall protection systems allows them to select the system or method that they determine will work best in the particular work operation and location and draw upon their experience successfully protecting workers from fall hazards. OSHA believes that the process of determining the best fall protection system for the specific work activity will improve safety because employers will need to evaluate the conditions present in each specific workplace and consider factors such as exposure time, availability of appropriate attachment points, and feasibility. Similarly, it also will allow employers to consider and select the fall protection system that enables workers to perform the job most efficiently, thereby reducing workers' exposure to fall hazards.

Fourth, providing control flexibility allows general industry employers to take advantage of advances in fall protection technology developed since OSHA adopted the existing rule. For example, neither safety net systems nor personal fall protection systems were developed until after OSHA adopted the existing rule.

Fifth, greater control flexibility makes the final rule consistent with the construction fall protection standard, which makes it easier for employers to comply with the final rule and thereby should increase compliance. To illustrate, making the final rule consistent with the construction standard ensures that employers who have workers engaged in both general industry and construction activities are able to use the same fall and falling object protection while performing both types of activities. It eliminates the need to purchase different fall protection systems when their workers switch from performing general industry operations to construction activities, which ensures that the final rule is a cost-effective approach for eliminating or reducing fall hazards.

Finally, as mentioned, providing greater control flexibility is part the final rule's comprehensive approach to fall protection that also includes new requirements on system criteria and use; regular inspection, maintenance and repair; and fall hazard and equipment training. OSHA believes this comprehensive approach will provide equivalent or greater protection than the existing rule. As a result, OSHA believes that the additional flexibility and consistency achieved by this final rule in providing fall protection will reduce worker deaths and injuries. OSHA's history and experience with the construction standard confirms that its comprehensive approach to fall protection has been effective.

As mentioned, stakeholders supported incorporating control flexibility in the final rule (*e.g.,* Exs. OSHA–S029–2006–0662–0224; OSHA–S029–2006–0662–0252; OSHA–S029–2006–0662–0306; OSHA–S029–2006–0662–0365). For example, Northrop Grumman Shipbuilding (NGS) commented:

> We applaud the agency's work to recognize modern methods and technologies that are now available to ensure adequate fall protection for employees. Our experience is that no single method is effective in all potential fall situations and that a menu of proven methods and techniques . . . works best (Ex. 180).

Uniseal, Inc. said:

> OSHA should allow employers to responsibly choose any type of fall protection in proposed Sec. 1910.28 that the employer can demonstrate will be appropriate for the specific work location and activities being performed (Ex. OSHA–S029–2006–0662–0345).

Clear Channel Outdoor agreed, saying:

Clear Channel Outdoor and employers in the outdoor advertising industry should be permitted to choose appropriate fall protection, depending upon the location and type of structure. (Ex. OSHA–S029–2006–0662–0308)

The National Grain and Feed Association (NGFA) said:

> OSHA should not require guardrails as the primary means of fall protection but allow employers the flexibility to choose the most appropriate fall protection system that is appropriate to the specific work situation and activities being performed.
>
> [E]mployers evaluate each work situation to determine which option (*e.g.,* guardrails, cages, fall arrest systems, etc.) is the most appropriate and effective (Ex. OSHA–S029–2006–0662–0223).

Duke Energy said OSHA should allow general industry employers to ''select from the list of options'' like the construction fall protection standard:

> The construction industry standard allows employers to select fall protection from a list of options. All of the options provide equivalent protection. Employers should be allowed to use the option that fits the specific situation. The factors that employers use when selecting fall protection options include (1) duration of the job; (2) experience of the workers involved; (3) installation costs; (4) availability of fall protection at the location. There are times when the installation of guardrails is technically ''feasible'' but adds costs that are unnecessary, since other systems (such as a personal fall arrest system) provide equivalent protection (Ex. OSHA–S029–2006–0662–0310).

Some stakeholders, however, raised concerns about providing greater control flexibility. The American Federation of State, County and Municipal Employees (AFSCME) commented, ''Although we understand the need for flexibility, we believe employers should use guardrail systems and other engineering controls whenever possible, as is stated in the existing standard'' (Ex. 226). Thomas Kramer of LJB, Inc., expressed concerns that the proposed control flexibility would not be as protective as the existing rule's requirement to use guardrail systems to protect workers from fall hazards, stating:

> The hierarchy of control is something that is essential in the area of safety, and OSHA's failure to include something on this . . . is a significant omission. While there are a number of effective abatement options in the proposed regulation—and I understand that many considerations are involved in the cost/benefit analysis for hazard abatement—I still believe that it is a material oversight to remove the hierarchy and state that the options outlined provide ''equivalent protection.''
>
> The hierarchy of control clearly compares the effectiveness and ''defeatability'' of a protective system. Employing the hierarchy of control to evaluate abatement options is fundamental, and eliminating its application will lead to more use of a harness and lanyard than ever before. Although this can be an effective way to protect someone from a fall hazard, personal protective equipment is definitely not the safest and is not equal to engineering controls or passive fall protection (Ex. 204).

As discussed above, OSHA believes the comprehensive approach to fall protection that the final rule, like the construction fall protection standard, incorporates will provide equivalent or greater protection than the existing rule. OSHA is only permitting employers to use those accepted conventional fall protection systems that the Agency has determined to provide an appropriate and equal level of protection. The greater flexibility the final rule affords employers will allow them to select from those fall protection systems that provide equal protection the option that works best in the specific situation and is the most cost-effective protective measure capable of reducing or eliminating fall hazards. Moreover, the comprehensive approach in the final rule, like the construction fall protection standard, recognizes that, in some instances, it may not be possible to use guardrail systems or safety net systems to protect workers from falls. For example, some commenters said employers may not be able to install permanent systems such as guardrails when they do not own the building or structure on which their workers are working. OSHA believes the final rule addresses the concerns of these commenters without limiting employer flexibility or compromising worker safety.

OSHA notes that the final rule also limits fall protection choices in some situations where the Agency determined that guardrail systems are necessary to protect workers from falling. For example, in final paragraphs (b)(4) and (5) of this section, OSHA specifically requires the use of guardrails on dockboards and runways and similar walkways, respectively.

In addition to control flexibility, there are other ways in which OSHA made the final rule consistent with the construction fall protection standard. OSHA increased the consistency between the general industry and construction fall protection standards by including a provision similar to the construction standard addressing work on low-slope roofs (final paragraph (b)(13)). Workers on these walking-working surfaces perform both construction and general industry activities and OSHA believes that uniform requirements should apply to both activities. Final paragraph (b)(13), like the construction fall protection standard, allows employers to use designated areas instead of conventional fall protection systems when workers are performing work that is both infrequent and temporary at least six feet from the edge of a low-slope roof, while also ensuring that employers protect workers working closer to the edge using conventional systems (*e.g.,* guardrail, personal fall arrest, or travel restraint systems). As mentioned, OSHA believes that an important key to protecting workers is allowing employers the flexibility to select the fall protection system or method that will work best for their particular work activities or operations, thereby allowing employers to consider factors such as exposure time, availability of appropriate attachment points, and feasibility of compliance.

Consistent with the construction standard, the final rule requires that employers also must train their workers working in designated areas in the use of warning lines (see final §§ 1910.29(d) and 1910.30(a)).

Finally, OSHA increased the consistency of the general industry standard with the construction fall protection standard by organizing this final rule in a format that is similar to the construction standard. OSHA believes that the reorganized format will increase employer understanding of, and compliance with, the final rule.

Many commenters supported making the general industry and construction industry fall protection rules consistent (Exs. 111; 157; 165; 176; 212; 225; 236). For example, American Airlines (AA) supported making the general industry and construction standards uniform because they said it is ''nonsensical to have different fall protection requirements for similar—and sometimes identical—hazards across construction and general industries'' (Ex. 194).

However, Mr. Kramer, of LJB, Inc., expressed doubts about whether making the final rule similar to the construction fall protection standard will produce a significant decrease in fatalities. He claimed that fatality data in the years following adoption of the construction fall protection standard showed an increase in fall fatalities. OSHA does not find his argument convincing. Mr. Kramer does not clearly identify the source or scope of the data. At one point he suggests the data are from BLS, and at another point he indicates the data are from another source. In addition, it is unclear whether the data to which he refers are for construction or for all private industry fatalities. He did not provide any of the data itself. In any event, as explained in more detail in the Analysis of Risk and FEA (Sections II and V), there are a significant number of fall fatalities in general industry, and OSHA believes the final rule will be effective in reducing those numbers.

The final rule also establishes criteria and work practices addressing personal fall protection systems (§ 1910.140). These criteria include minimum strength and load, locking, and compatibility requirements for components of personal fall protection systems, such as lines (vertical lifelines, self-retracting lines, and travel restraint lines), snaphooks, and anchorages. The work practices include requiring employers to ensure inspection of personal fall protection systems before each use, and to ensure that a competent or qualified person inspects each knot in a lanyard or vertical lifeline. OSHA believes these criteria and work practices, in conjunction with the training and retraining requirements in the final rule, provide a combination of controls and redundancies that will help to ensure that personal fall protection systems are effective in protecting workers from falls hazards.

Paragraph (a)—General

Final paragraph (a)(1), like the proposed provision, requires employers to provide protection for workers exposed to fall and falling object hazards. It also specifies that, unless stated otherwise, the protection employers provide must comply with the criteria and work practices set forth in § 1910.29, Fall protection systems and falling object protection—criteria and practices. In addition, final paragraph (a)(1) clarifies that personal fall protection systems must comply with the criteria and work practices in § 1910.140, Personal fall protection systems.

Fall hazard identification is particularly important when workers work in a ''designated area'' or under other work situations where employers do not provide conventional fall protection systems. Additionally, when general industry employers contract with other employers to perform jobs and tasks at the worksite, OSHA also requires that the host employer and contract employer work together to identify and address fall hazards. One method of accomplishing this requirement is to follow the guidance specified by appendix B of 29 CFR part 1910, subpart I, Non-Mandatory Compliance Guidelines for Hazard Assessment and Personal Protective Equipment Selection. National consensus standards provide another resource for identifying and controlling fall hazards. For example, ANSI/ASSE Z359.2–2007, Minimum Requirements for a Comprehensive Managed Fall Protection Program, provides procedures for eliminating and controlling fall hazards (Ex. 29).

OSHA notes that the requirements in proposed paragraph (a)(2), which address the strength of walking-working surfaces, have been moved to final § 1910.22(b), which establishes requirements for maximum intended loads applied to walking-working surfaces. OSHA believes this change more clearly emphasizes that all walking-working surfaces must have the strength and structural integrity to support workers safely, not just those surfaces and work conditions requiring fall protection.

Final paragraph (a)(2) lists seven situations in which the requirements in § 1910.28 do not apply:

- Portable ladders (final paragraph (a)(2)(i));
- When the employer is inspecting, investigating, or assessing workplace conditions or the location at which work is to be performed prior to the start of work or after all work has been completed. However, this exception does not apply when fall protection systems or equipment meeting the requirements of § 1910.29 have been installed and are available for workers to use. If fall protection systems are present, workers must use them while conducting pre-work and post-work inspections, investigations, or assessments of workplace conditions (final paragraph (a)(2)(ii));
- Fall hazards presented by the exposed perimeters of entertainment stages and the exposed perimeters of rail-station platforms (final paragraph (a)(2)(iii));
- Powered platforms covered by § 1910.66(j) (final paragraph (a)(2)(iv));
- Aerial lifts covered by § 1910.67(c)(2)(v) (final paragraph (a)(2)(v));
- Telecommunications work covered by § 1910.268(n)(7) and (n)(8) (final paragraph (a)(2)(vi)); and
- Electric power generation, transmission, and distribution work covered by § 1910.269(g)(2)(i) (final paragraph (a)(2)(vii)).

The first two exceptions, specified in final paragraphs (a)(2)(i) and (ii), are new additions to the final rule. OSHA added language specifically excepting portable ladders to clarify that employers only have to provide fall protection on fixed ladders. The National Chimney Sweep Guild (NCSG) (Exs. 150; 240; 268; 269; 329 (1/18/2011, pgs. 254–348); 365) pointed out that in the proposed rule OSHA did not exclude portable ladders from the duty to have fall protection, and expressed concern that, by default, the rule would cover portable ladders under the ''catch-all'' provision (final paragraph (b)(15), Walking-working surfaces not otherwise addressed). The fall protection requirements in the proposal were to apply only to fixed ladders, not portable ladders. Therefore, OSHA agrees with NCSG that adding a specific exception to the final rule clarifies this requirement.

The final rule also adds an exception when workers are inspecting, investigating, or assessing (collectively referred to as ''inspecting'') workplace conditions prior to the start of any work or after completing all work. However, once any work begins, employers must provide workers performing inspections (inspectors) with, and ensure that they use, fall protection where required by this section. Moreover, this exception does not apply when properly installed fall protection systems or equipment meeting the requirements of § 1910.29 are available for use. The existing rule does not exclude pre-work or post-work inspections from fall protection requirements. OSHA drew the exception from the construction fall protection standard (§ 1926.500(a)(1)).

Several commenters urged OSHA to add this exception to the final rule (Exs. 111; 150; 157; 176; 177; 212; 225; 240; 268; 269; 329 (1/18/2011, pgs. 254–348); 365). First, some commenters said it was not necessary for workers conducting pre-work or post-work inspections to use fall protection. For example, American Insurance Association (AIA) said the final rule should recognize that certain tasks that workers (*e.g.,* claims adjustors and loss-control personnel) perform on roofs have ''lower risks'' because ''these tasks are usually conducted in good weather and normally expose employees to a fall hazard only for a short time, if at all'' (Ex. 157). Allstate Insurance Company (Allstate) agreed, adding that insurance inspectors (and adjustors) only access roofs infrequently to inspect damage (Ex. 212).

Littler Mendelson, P.C., said, ''Employees who inspect, investigate or assess workplace conditions and perform no physical work should be exempt from the requirements of fall protection, provided the employee has received the training specified in Section 1910.30'' (Ex. 111). AIA added that all of their workers who perform inspections receive training in safe roof access, and are well aware of the proximity of unprotected sides (Ex. 157). Allstate also said that workers performing inspections are more aware of their location than other workers (Ex. 212).

A number of commenters said OSHA should add an exception because requiring inspectors to use fall protection would expose them to greater, and additional, hazards (Exs. 111; 150; 157; 177; 212; 225; 240; 268; 365). For instance, Littler Mendelson said, ''By allowing such employees to perform their inspection duties without fall protection, OSHA would avoid the greater fall hazards incurred by employees who must access elevations carrying the tools and materials required to install fall protection for the inspectors'' (Ex. 111). Commenters also said that requiring inspectors to use fall protection would pose greater hazards because it would expose them to fall hazards for greater periods of time. Littler Mendelson said requiring inspectors to use fall protection would expose them to fall hazards for longer than it takes to perform the inspection (Ex. 111). NCSG agreed, explaining that it would take longer to get to, install, and remove anchors than the time it takes to conduct the inspection (Exs. 150; 240; 268; 269; 329 (1/18/2011, pgs. 254–348); 365). NCSG said the vast majority of their work is chimney cleaning and inspection in which chimneys are cleaned from the ground and workers only access the roof for a few minutes to inspect the chimney at the conclusion of the job to verify the cleaning operation is complete (Ex. 150). NCSG also said that chimney sweeps perform pre-inspections on roofs to identify whether repairs or other maintenance work may be needed. The fall protection exception in final paragraph (a)(2)(ii) would cover both of these inspections.

Similarly, Roofing Consultants Institute, Inc. (RCI) said that complying with the proposed rule would require spending increased time on roofs to anchor and position fall protection systems, therefore increasing worker exposure to falls (Ex. 225). AIA, Allstate, Confrere Strategies on behalf of the National Association of Mutual Insurance Companies (Confrere Strategies), and Farmers Insurance Group of Companies (Farmers) also voiced the same argument (Exs. 157; 176; 177; 212).

Several commenters complained that requiring inspectors to use fall protection would be infeasible and ''unduly burdensome'' (Exs. 150; 157; 176; 177; 212; 235). Allstate said the proposed requirement was infeasible because the insurance company does not own or control the properties that its adjusters inspect and does not have permission to install fall protection systems (Ex. 212). AIA indicated that the proposed requirement was infeasible, and that an exception was necessary for the insurance industry to continue its work. However, AIA did not provide any explanation regarding why the proposed requirement was infeasible (Ex. 157). RCI said the proposed rule was unreasonably burdensome because it did not provide any discernible benefits (Ex. 225).

Two commenters, Allstate and Farmers, indicated that inconsistency between the proposed rule and the construction fall protection standard, and lack of clarity about which standard would apply to inspectors, would cause confusion and pose an unreasonable burden on employers (Exs. 157; 176). Specifically, Allstate believed that the construction exception covered the activities of insurance adjusters, but was unsure whether inspecting damaged property is subject to the general industry rule or the construction rule. Farmers pointed out:

> Currently, neither the Proposed Rule nor the construction fall protection requirements make clear whether a claims adjuster's inspection and assessment of damaged property before and after construction is considered ''construction work'' covered by 29 CFR § 1926.500(a) or whether such inspection activities would be subject to the General Industry Standards under the Proposed Rule (Ex. 176).

Finally, some commenters said OSHA's rationale for allowing the exception for the construction industry also should apply to general industry inspectors (Exs. 157; 177; 212; 225). For example, RCI said, ''[W]ork practices used by RCI members performing site visits . . . such as [on] roofs would most likely be identical for both general and the construction industry'' (Ex. 225). Confrere Strategies said:

> The 1994 rationale for the insurance and inspection exception remains today. Subjecting inspectors and adjusters to fall protection standards would be overly burdensome and infeasible and would subject employees to fall hazard for greater periods of time. Incorporation of specific exemption language in Subpart D is consistent with prior regulations, reflects the realities of insurance inspection and claims adjustment operations and would eliminate any potential confusion related to the definition of ''construction activities'' (Ex. 177).

AIA added, ''AIA supports harmonization of the fall protection requirements in the Construction and General Industry Standards. In furtherance of that goal, we recommend incorporating into the proposed rule the exception to fall protection requirements for inspection, investigation and assessment activities contained in the Construction Industry Standard'' (Ex. 157).

OSHA recognizes that requiring workers to use fall protection when conducting inspections prior to, and after completion of, work may not be feasible in some isolated or limited situations. For example, as Allstate said, the insurance companies are unlikely to own the structures the inspectors are inspecting, and it may not be possible to obtain permission to install fall protection equipment, such as anchors (Ex. 212). Therefore, OSHA added a limited exception to the final rule for pre-work and post-work inspections activities.

However, as mentioned earlier, unlike the exception in the construction fall protection standard, final paragraph (a)(2)(ii) does not apply when fall protection systems or equipment already are installed on the structure where an inspector will conduct a pre-work or post-work inspection, that is, when fall protection systems are installed, workers performing pre-work and post-work inspections, like all other workers, must use them.

OSHA believes that limiting the application of the exception to pre-work and post-work is appropriate. The Agency believes that, where fall protection equipment already is installed, there is no reason why inspectors should not use it like all other workers working on the same walking-working surface must. To illustrate, where anchors and self-retracting lifelines meeting the requirements of § 1910.29 already are installed on a roof, OSHA believes that attaching a harness should not increase inspectors' exposure to the fall hazard in any appreciable way, while taking this action ensures that they can safely conduct the inspection. When inspectors have to climb fixed ladders equipped with ladder safety systems or self-retracting lifelines for personal fall arrest systems to inspect damage or assess maintenance needs, OSHA believes it is feasible for these workers to attach their harnesses to the existing equipment without difficulty or increasing exposure time.

OSHA notes that evidence in the record indicates that an increasing number of buildings and fixed ladders are equipped with anchorages and ladder safety or personal fall arrest systems, respectively. Unlike pre-work and post-work inspections in the construction industry, in general industry, buildings and structures already exist and already may have fall protection equipment installed. Therefore, OSHA believes that a number of situations currently exist in which it may be feasible to use fall protection when conducting pre-work and post-work inspections, and that these situations are likely to continue increasing.

The third exception to the requirement to provide fall protection, specified in final paragraph (a)(2)(iii), applies to fall hazards presented by exposed perimeters of entertainment stages and rail station platforms; OSHA carried this exception over from the proposed rule. The use of guardrails or other fall protection systems could interfere with performances on stage, or create a greater hazard to the performers than would otherwise be present. OSHA recognizes that there may be circumstances when fall protection may be feasible in these occupational settings, and encourages employers in these settings to use fall protection when possible, such as during rehearsals. OSHA did not receive any comments opposing this exception, and adopted it as proposed.

Paragraphs (a)(2)(iv) through (vii), like the proposed rule, specify that the final rule does not apply to powered platforms (§ 1910.66), aerial lifts (§ 1910.67), telecommunications (§ 1910.268), or electric power generation, transmission, and distribution (§ 1910.269). Other general industry standards address those operations and equipment, and include provisions requiring employers to provide and ensure workers have and use fall protection. OSHA received one comment on these exceptions. Ameren Corporation agreed that final § 1910.28 should not apply to work that § 1910.269 covers (Ex. 189). OSHA adopted the proposed exceptions with only minor editorial changes, for clarity.

Paragraph (b)—Protection From Fall Hazards

Final paragraph (b), like the proposed rule, sets forth the requirements on the types of fall protection systems that employers must select and use to protect workers from fall hazards while working in specific workplace areas, situations, and activities (final paragraph (b)(1) through (15)). The final rule allows employers to use any one or more of the fall protection systems listed for the particular area, situation, or activity, including:

- *Guardrail systems*—barriers erected to prevent workers from falling to a lower level (final § 1910.21(b));
- *Safety net systems*—passive fall protection systems that arrest a worker from falling to a lower level when a fall occurs. Employers must install safety net systems as close as practicable below the surface where workers are working, and extend the systems beyond the outermost projection of the workstation;
- *Personal fall protection systems*—a type of conventional fall protection system that protects a worker from falling, or safely arrests a worker's fall if one occurs. They include personal fall arrest, and travel restraint and positioning systems, but not rest lanyards (final § 1910.140(b));
- *Personal fall arrest systems*—a type of personal fall protection system used to arrest workers from falling to a lower level when a fall occurs. These systems consist of an anchorage, connector, and body harness. A personal fall arrest system also may include a lanyard, deceleration device, lifeline, or combination of these items (final § 1910.140(b));
- *Travel restraint systems*—a type of personal fall protection system used to limit a worker's travel to prevent exposure to a fall hazard. Travel restraint systems consist of a combination of an anchorage, connector, lanyard, and body support. Unlike personal fall arrest systems, travel restraint systems do not support the worker's weight. Rather, the purpose of these systems is to prevent workers from reaching the fall hazard, such as an unprotected side or edge (final § 1910.140(b)).
- *Ladder safety systems*—a system designed to eliminate or reduce the possibility of falling from a fixed ladder. A ladder safety system usually consists of a carrier (*i.e.,* a flexible cable or rigid rail track), a safety sleeve (*i.e.,* a moving component that travels up and down on the carrier), lanyard, connectors, and body harness (final § 1910.21(b));
- *Positioning systems (work-positioning systems)*—a type of personal fall protection system designed to support a worker in a fixed location, on an elevated vertical surface (*e.g.,* fixed ladders), so the worker can work with both hands free (final § 1910.140(b));
- *Handrails*—rails used to provide workers a handhold for support (final § 1910.21(b)); and
- *Designated areas*—a distinct portion of a walking-working surface delineated by a perimeter warning line in which workers may perform work in certain situations without using additional fall protection (final § 1910.21(b)).

OSHA believes each of the fall protection systems listed for a particular situation are effective and appropriate in those situations. In this regard, OSHA notes that the final rule only permits employers to use designated areas on low-slope roofs (final paragraph (b)(13)). The proposed rule permitted employers to use designated areas for unprotected sides and edges (proposed paragraph (b)(1)(ii)), wall openings (proposed paragraph (b)(7)(ii)), and walking-working surfaces not otherwise addressed (proposed paragraph (b)(13)(ii)).

After reviewing the rulemaking record, as well as OSHA's letters of interpretation addressing the use of controlled access zones and warning line systems under the construction fall protection standard, OSHA believes that designated areas must be limited to only ''a few, very specific situations'' (see, *e.g.,* letter to Mr. Keith Harkins (11/15/2002)[42]). To illustrate, the construction standard only permits the use of a warning line system for roofing work on low-slope roofs (§ 1926.501(b)(10)), and the use of controlled access zones for overhand bricklaying and related work (§ 1926.501(b)(9)). The construction standard also allows the use of controlled access zones for some leading edge work, for precast concrete erection, and in residential construction, rather than the broad category of unprotected sides and edges (§ 1926.502(k)), and then only when employers can demonstrate that it is infeasible or creates a greater hazard to use conventional fall protection equipment.

Applying the rationale in the construction standard to general industry, the final rule limits the use of designated areas to work on low-slope roofs (final paragraph (b)(13)). OSHA believes that the use of designated areas is appropriate on flat or gently sloping surfaces or when workers and work are located a safe distance from a fall hazard, such as a roof edge. However, OSHA does not believe that designated areas provide adequate protection from fall hazards on steep or vertical surfaces or for work performed near an unprotected edge or side, such as narrow walking-working surfaces. (See further discussion of designated areas in final paragraph (b)(13), below.)

OSHA received several comments on the use of designated areas. David Hoberg, with DBM Consultants, supported limiting the use of designated areas because ''it is a huge opening for abuse'' (Ex. 206). He suggested limiting the use of designated areas to those situations that existed prior to publication of this final rule, are unique to the work such that the same work is not done at other locations using standard methods, and when a certified safety professional or professional engineer with experience in the work and conditions approves use of a designated area (Ex. 206). As discussed in more detail below (final § 1910.28(b)(13)), OSHA is limiting the use of designated areas to low-slope roofs and to work more than 6 feet from the edge. Employers may use designated areas for work that is more than 6 feet and less than 15 feet from the edge if it is both infrequent and temporary. If the work is not temporary or infrequent, the employer may use a designated area if the work is more than 15 feet from the roof edge. The Agency believes this clarification addresses Mr. Hoberg's concerns.

Several commenters objected to the designated area approach because it was too different from the construction standard's requirements for residential roofs, and instead asked that OSHA synchronize the general industry requirements with the construction standard for those roofs (See, *e.g.,* 124, 149, 150.). OSHA agrees in general, and the final rule includes a new paragraph (final § 1910.28(b)(1)(ii)) addressing these concerns. Under this provision, employers may implement a fall protection plan meeting the requirements of the construction standard if they can demonstrate that it is not feasible or creates a greater hazard to use guardrail, safety net, or personal fall protection systems on a residential roof.

In addition to establishing fall protection options for specific workplace areas and situations, final paragraph (b) also establishes the height that triggers the employer's obligation to provide fall protection. The final rule, like the existing and proposed rules, generally requires that employers provide fall protection when workers work at levels that are four feet or more above a lower level. The final rule, like the proposal, defines ''lower level'' as an area to which a worker could fall (§ 1910.21(b)). The definition also includes examples of lower levels, including ground levels, floors, excavations, pits, tanks, materials, water, equipment, and similar surfaces and structures, or portions thereof.

Employers' duty to provide fall protection when workers can fall four feet or more to a lower level is not new. As mentioned earlier, the existing rule, which OSHA adopted in 1971, has a four-foot trigger height (*e.g.,* existing § 1910.23(b)(1)(i), (b)(2), (b)(3), (c)(1), (c)(2); § 1910.268(g)). Pursuant to section 6(a) of the OSH Act, OSHA adopted the 4-foot trigger from ANSI A12.1–1967, Safety Requirements on Floor and Wall Openings, Railings and Toe Boards. As far back as 1932, ANSI A12.1 prescribed a 4-foot trigger height. ANSI/ASSE A1264.1–2007, Safety Requirements for Workplace Floor and Wall Openings, Stairs and Railing Systems, also requires the use of fall protection where there is an unprotected side or edge 4 feet or more above a lower level (Ex. 13). Like ANSI A12.1, the ANSI/ASSE A1264.1 standard has specified the 4-foot fall protection height requirement since its inception.

Since OSHA adopted the general industry four-foot trigger, the Agency consistently reinforced the requirement in numerous public statements and Agency interpretations (*e.g.,* letters to Mr. Paul Osborne (May 13, 1980);[43] Mr. Anil Desai (September 14, 1990);[44] M.O. Brown, Jr. (October 22, 1992)[45]). Moreover, as far back as 1932, the ANSI A12.1 standard included the four-foot trigger. Thus, OSHA believes the general industry four-foot trigger is a well-recognized requirement.

In 1994, the construction fall protection standard, with some exceptions, set a six-foot trigger height for construction work (59 FR 40672 (8/19/1994)). In 2003, when OSHA reopened the record for comment on subpart D, comments received by the Agency indicated that some stakeholders mistakenly believed that the general industry fall protection trigger height is the same as the construction fall protection standard. To address this confusion, OSHA clearly pointed out in the 2010 proposed rule that the four-foot trigger height for general industry ''has been standard industry practice for more than 75 years'' (75 FR 28887).

OSHA did not propose to revise the four-foot trigger height, noting that the existing rule is a long-standing requirement and standard industry practice. OSHA also said the results of a 1978 University of Michigan study supported the four-foot fall protection trigger height (Ex. OSHA–S041–2006–0666–0004). OSHA requested comment on the four-foot trigger height, including information on any recent studies and information that ''support or contradict'' the four-foot trigger height (75 FR 28887).

A number of commenters supported retaining the existing four-foot trigger height (Exs. 65; 172; 226). In particular, the American Federation of Labor and Congress of Industrial Organizations (AFL–CIO) stated, ''The 4-foot rule maintains a long-standing OSHA requirement and industry practice that we believe is important for protecting workers against fall hazards to a lower

[42] OSHA letter to Mr. Keith Harkins available at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24552.*

[43] OSHA letter to Mr. Osborne available at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=18868.*

[44] OSHA letter to Mr. Desai available at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=20086.*

[45] OSHA letter to Mr. Brown available at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=20899.*

level'' (Ex. 172). Martin's Window Cleaning said that ''[s]ince it has always been OSHA's stand that [potential] falls be limited to less than 4 [feet in general industry], then it is imperative that OSHA include requirements for . . . lifeline tie backs . . . in locations that would limit falls to this distance'' (Ex. 65). In addition, they said, ''OSHA should require that all fall protection systems and suspension systems limit falls to 4 [feet]'' (Ex. 65).

The American Society of Safety Engineers (ASSE) urged OSHA to conduct research that would support a single trigger height for fall protection in general industry and construction, noting:

As OSHA ably recognizes in its discussion [in the proposed rule], research supports the conclusion to maintain its current 4-foot trigger height for general industry. In the same discussion, however, OSHA also recognizes that a 6-foot trigger height is the standard for construction. Despite the long-established traditions behind these different trigger heights, we would encourage OSHA to work with NIOSH to determine if appropriate research can be conducted that would help lead the occupational safety and health community to a single trigger height. If a single trigger height could become widely accepted, ASSE believes there would be significant gains in understanding the importance of fall protections and ways to protect employers. Given the continued high incidence of injuries from heights, it would be prudent to at least examine whether a single trigger height would be helpful (Ex. 127).

ORC Mercer also supported a single fall protection trigger height for general industry and construction, although it was ''not arguing that OSHA should set the trigger for fall protection to six feet for all general industry work'' (Ex. 254). However, they said OSHA needed to provide a ''better explanation/ justification for the disparity in the trigger for fall protection in General Industry maintenance work versus Construction work,'' stating:

The proposed rule retains the historic disparity of a 4-foot trigger for fall protection in General Industry and a 6-foot trigger for fall protection in Construction. Although the proposal makes a number of arguments regarding the history of its adoption of the four-foot trigger for General Industry work and states that the four-foot rule has been used in consensus standards for more than 75 years, OSHA has not addressed the difficulties for employers who may have General Industry maintenance work going on within only a few feet of activities that meet the definition of Construction work. The definition of what constitutes construction work versus work that falls under the General Industry [standard] continues to confuse employers seeking to set a consistent standard in their workplaces. Simply telling a construction contractor (who is performing work at a manufacturing site) that he must protect his employees whenever they may fall more than four feet above a lower level (because the host employer wishes that all workers on the site to adhere to a uniform standard) is likely to be met with resistance as the construction contractor's employees will have been trained and equipped to work with the 6-foot trigger. Hence many employers have simply adopted the six-foot trigger for all non-routine or maintenance work (Ex. 254).

ORC Mercer added that ''language and guidance for determining the feasibility of fall protection for work that is done between four and six feet above the next lower lever is needed in both the final rule and in any compliance documents that follow the promulgation of this rule'' (Ex. 254).

Others stakeholders also supported a single trigger height, but argued that the single height should be six feet instead of four feet (Exs. 165; 202; 236). The Mechanical Contractors Association of America (MCAA) said, ''Construction workers performing work at existing facilities often have to comply with both standards, which creates confusion, and therefore, opportunity for unintentional noncompliance'' (Ex. 236). MCAA added that making the general industry trigger height consistent with the construction standard ''would eliminate the confusion and simplify compliance requirements without compromising worker safety,'' noting:

This section proposes to keep the previously established four foot fall protection/prevention rule in place for general industry. However, employers are often unclear about what OSHA considers to be maintenance and repair, which falls under the agency's general industry standards (29 CFR 1910), vs. construction work, which falls under the construction standards (29 CFR 1926). In addition, inconsistencies between the two sets of standards often require employers to comply with both sets of standards for the same application (Ex. 236).

Mr. Kramer, of LJB, Inc., raised concerns about the availability and effectiveness of personal fall arrest systems in situations where the fall hazard is only four feet, stating:

It is clear from the proposed regulation that a personal fall arrest system can be used in situations where the fall hazard is 4 feet. I acknowledge that it is possible to rig a fall arrest system to protect a worker from a fall where the allowable fall distance is 4 feet. However, without a direct and in-depth discussion on fall clearance requirements, the statement by OSHA can be very misleading. Falls occurring while attached to a horizontal lifeline can result in total fall distances as large as 15 feet. OSHA risks having employers simply provide their employees with a harness, lanyard and anchorage when they are four feet above a lower level. In this case, the employee is not protected. The stated goal of reducing fatalities and injuries due to a fall has not been achieved and it is clear in these circumstances that a personal fall arrest system does not provide equivalent protection to a guarded platform (Ex. 204).

However, other commenters said there is personal fall protection equipment available that can limit falls to four feet. In this regard, Capital Safety Group (CSG) and the International Safety Equipment Association (ISEA) said:

ASSE is currently working on a standard for self-retracting lanyards that includes a class of [self-retracting line] that when anchored overhead is designed to protect workers in situations where fall clearance is very limited such as the case when exposed to a 4-foot fall. OSHA should include a reference to this standard when it becomes available (Exs. 185; 198).

Comments and testimony submitted in this rulemaking record have not persuaded OSHA that adopting a fall protection trigger height greater than four feet would provide equivalent or greater protection than the current trigger. As mentioned, existing national consensus standards require that employers provide fall protection where unprotected sides or edges are more than four feet above a lower level. Section 6(b)(8) of the OSH Act specifies that OSHA follow the requirements in national consensus standards unless the Agency can show why a rule that differs substantially from consensus standard ''will better effectuate the purposes'' of the OSH Act than the national consensus standard. None of the stakeholders arguing that OSHA should change its longstanding general industry four-foot trigger height provided any recent studies, data, or other information to support changing the trigger height to six feet. OSHA believes increasing the height at which employers must provide fall protection may expose workers to additional risk of injury, reduce worker safety, and decrease the protection afforded to workers by OSHA's general industry fall protection standards (75 FR 28887).

With regard to comments arguing that different fall protection trigger heights for general industry and construction would cause confusion and non-compliance, OSHA's experience and the rulemaking record do not bear that out. The general industry and construction fall protection trigger heights have been in place for years. OSHA's enforcement experience with both standards does not indicate that employers are confused about or not been able to comply with applicable fall protection height requirements. In addition, stakeholders did not submit comments in this rulemaking indicating that they currently are experiencing confusion. Given that, OSHA does not believe that reaffirming the current general industry four-foot fall protection height trigger will cause confusion in the future. In any event, OSHA points out that employers will be in compliance with both the general industry and construction fall protection standards if they provide fall protection when workers are working four feet or more above a lower level.

Final paragraph (b), like the proposal, includes the following four exceptions[46] from the four-foot trigger height:

- When using motorized equipment on dockboards (final paragraph (b)(4)(ii));
- Over dangerous equipment (final paragraph (b)(6));
- Around repair, service, and assembly pits (final paragraph (b)(8)); and
- On fixed ladders (final paragraph (b)(9)).

More specifically, for work performed on dockboards, the final rule establishes a trigger height of greater than 10 feet for guardrails or handrails when dockboards are used solely for materials-handling operations using motorized equipment. For work performed over dangerous equipment, the final rule, like the proposal, requires that employers protect workers from falling onto or into dangerous equipment regardless of the height at which the workers are working above the dangerous equipment. For work around repair, service, and assembly pits, the use of fall protection is not required for pits that are less than 10 feet deep, provided the employer limits access to the edge of the pit to trained, authorized employees, marks the floor around the edge of the pit in contrasting colors (or places a warning line at least 6 feet from the pit edge), and posts readily visible caution signs around the pit that warn workers of the fall hazard. For fixed ladders, the final rule adopts the proposed requirement that employers must provide fall protection when the ladder extends more than 24 feet above a lower level. (See the detailed discussion of these exceptions below.)

As mentioned earlier, final paragraph (b) also adds a new provision for work on low-slope roofs (final paragraph (b)(13)). In addition, the final rule moves work on platforms used in slaughtering facilities into a separate provision (final paragraph (b)(14)). The proposed rule addressed these platforms as part of proposed paragraph (b)(1), Unprotected sides and edges.

Unprotected sides and edges. Final paragraph (b)(1), like the proposed rule, establishes fall protection requirements employers must follow to protect workers from falling off unprotected sides and edges of walking-working surfaces that are four feet or more above a lower level. The final rule defines ''unprotected sides and edges'' as any side or edge of a walking-working surface (except at entrances and other points of access) where there is no wall, guardrail system, or stair rail system to protect an employee from falling to a lower level (final § 1910.21(b)).

Final paragraph (b)(1)(i), similar to the construction fall protection standard (§ 1926.501(b)(1)), specifies that employers may use one or more of the following fall protection options to protect workers from fall hazards at unprotected sides and edges:

- Guardrail systems (final paragraph (b)(1)(i)(A));
- Safety net systems (final paragraph (b)(1)(i)(B));
- Personal fall protection systems, such as positioning, travel restraint, and personal fall arrest systems (final paragraph (b)(1)(i)(C)).

Final paragraph (b)(1)(i) differs from the proposed rule in two ways. First, the final rule allows employers to use positioning systems, in addition to using personal fall arrest and travel restraint systems. Neither the proposed rule nor the construction fall protection rule (§ 1926.501(b)(1)) included positioning systems in the list of personal fall protection systems that employers may use. However, OSHA believes positioning systems are effective to protect workers from falling when they are working in a fixed location above a lower level. OSHA notes that some employers equip their workers with both systems, especially when the workers climb and work on fixed ladders. That is, employers provide personal fall arrest systems to protect workers during climbing and positioning systems to protect workers when they work while standing on the ladder.

Second, as discussed, final paragraph (b)(1)(i) eliminates the use of ''designated areas'' to protect workers from fall hazards on any unprotected side or edge, which proposed paragraph (b)(1)(ii) would have allowed. As discussed, the use of designated areas is intended for a very few specific and limited situations rather than all unprotected sides or edges.

General industry work on residential roofs. In final paragraph (b)(1)(ii), which was not in the proposed rule, OSHA adds a provision from the construction fall protection standard (§ 1926.501(b)(13)) that applies to construction on residential roofs. Final paragraph (b)(1)(ii) specifies that when employers can demonstrate it is infeasible or creates a greater hazard to use any type of conventional fall protection system (*i.e.,* guardrail, safety net, or personal fall protection system) when working on a residential roof they must take specific alternative measures to eliminate or reduce fall hazards. Specifically, employers must develop and implement a written ''fall protection plan,'' including other control measures, and training that meet the requirements in the construction standard (29 CFR 1926.502(k) and § 1926.503(a) and (c); STD 03–11–002 Compliance Guidance for Residential Construction (6/6/2011)).

At the outset, and discussed in detail below, OSHA notes that many stakeholders, including NCSG, urged OSHA to add the construction fall protection plan requirements to the final rule (Exs. 149; 150; 240). These stakeholders, many of whom perform both general industry and construction activities, said making the final rule consistent with the construction standard would make it easier for them to protect workers performing both types of activities. In addition, stakeholders indicated the specific requirements of the fall protection plans give employers a clear blueprint for protecting their workers and achieving compliance when conventional fall protection is infeasible or creates a greater hazard.

OSHA limits final paragraph (b)(1)(ii) to work employers perform on ''residential roofs.'' OSHA's definition of ''residential roof'' incorporates the principles established in its Compliance Guidance for Residential Construction (STD 03–11–002 (6/6/2011)):

> The Agency's interpretation of ''residential construction'' for purposes of 1926.501(b)(13) combines two elements—both of which must be satisfied for a project to fall under that provision: (1) the end-use of the structure being built must be as a home, *i.e.,* a dwelling; and (2) the structure being built must be constructed using traditional wood frame construction materials and methods (although the limited use of structural steel in a predominantly wood-framed home, such as a steel I-beam to help support wood framing, does not disqualify a structure from being considered residential construction). . . .

[46] For work on scaffolds, the final rule specifies that employers must protect workers from falls in accordance with the construction scaffold standards (29 CFR part 1926, subpart L). The construction scaffold standards (§ 1926.451(g)(1)) require that employers provide fall protection for workers working on a scaffold more than 10 feet above a lower level.

Recently it has become more common to use metal studs for framing in residential construction rather than wood. . . . OSHA will consider it within the bounds of ''traditional wood frame construction materials and methods'' to use cold-formed sheet metal studs in framing.

And finally, OSHA is aware that many homes and townhouses, especially in the southern and southwestern regions of the country, have usually been built using traditional wood frame construction throughout the structure except for the exterior walls, which are often built with masonry brick or block. . . . Because the same fall protection methods are likely to be used in the construction of homes built with wood framed and masonry brick or block exterior walls, the Agency has decided that it is consistent with the original purpose of 1926.501(b)(13) to treat the construction of residences with masonry brick or block in the exterior walls as residential construction.

In accord with the discussion above, and for purposes of the interpretation of ''residential construction'' adopted herein, ''traditional wood frame construction materials and methods'' will be characterized by:

Framing materials: Wood (or equivalent cold-formed sheet metal stud) framing, not steel or concrete; wooden floor joists and roof structures.

Exterior wall structure: Wood (or equivalent cold-formed sheet metal stud) framing or masonry brick or block.

Methods: Traditional wood frame construction techniques.

Consistent with the construction standard, final paragraph (b)(1)(ii) does not apply to nursing homes, hotels, and similar facilities, even though they are homes or dwellings. As OSHA explained in Compliance Guidance for Residential Construction:

Construction of nursing homes, hotels, and similar facilities typically involves the use of the following materials in the framework of the structure: precast concrete, steel I-beams (beyond the limited use of steel I-beams in conjunction with wood framing, described above), rebar, and/or poured concrete. These materials are not used in traditional wood frame construction, and buildings constructed using these materials will not be considered ''residential construction'' for purposes of § 1926.501(b)(13) (STD 03–11–002 (6/6/2011).

OSHA does not intend for final paragraph (b)(1)(ii) to apply to low-slope residential roofs. Employers performing work on low-slope residential roofs must comply with final § 1910.28(b)(13), which requires the use of conventional fall protection in certain locations (within 6 feet of the roof edge) and allows employers to use designated areas further from the roof edge. OSHA does not believe these residential roofs pose the same types of hazards and potential feasibility issues as work performed on residential roofs that have a greater slope. OSHA notes that final paragraph (b)(1)(ii) applies to the vast majority of residential roofs because they do not meet the final rule's definition of low-slope roof: ''a roof having a slope less than or equal to 4 in 12 (vertical to horizontal)'' (§ 1910.21(b)).

As mentioned, final paragraph (b)(1)(ii), like the construction standard, requires that employers use a fall protection plan but only where they demonstrate that all of the fall protection systems specified in final paragraph (b)(1)(i) are infeasible or present a greater hazard in a specific location on a residential roof. The final rule adopts the definition of ''infeasible'' in the construction fall protection standard, which states that ''infeasible'' means that it is impossible to perform the construction work using a conventional fall protection system (*i.e.,* guardrails, safety net system, or personal fall arrest system) or that it is technologically impossible to use any one of those systems to provide fall protection (§ 1926.500(b)).

To establish that an OSHA standard creates a greater hazard, an employer must prove, among other things, that the hazards of complying with the standard are greater than those of not complying, and no alternative means of employee protection are available (*Bancker Construction Corp.,* v. *Reich,* 31 F.2d 32, 34 (2d Cir. 1994); *Dole* v. *Williams Enterprises, Inc.,* 876 F.2d 186, 188 (D.C. Cir. 1989)). It is not enough for the employer to show that complying with a standard will create a new hazard. The Occupational Safety and Health Review Commission (the Commission) has held that the employer must establish that complying with a standard would be more dangerous than allowing employees to work without compliance (*Secretary of Labor* v. *Spancrete Northeast, Inc.,* 16 O.S.H. Cas. (BNA) 1616, *aff.* 40 F.3d 1237 (2d Cir. 1994)) (See further discussion of greater hazard vis-à-vis rolling stock and motor vehicles in the explanation of final § 1910.21). OSHA notes that employers must document in the fall protection plan the reasons for their determination of infeasibility or greater hazard (§ 1926.502(k)(5)).

Final paragraph (b)(1)(ii), like the construction standard, includes a note specifying there is a presumption that using at least one of the fall protection systems final paragraph (b)(1)(i) specifies is feasible and will not create a greater hazard. The record includes information and examples of conventional fall protection controls that employers currently are using or are available for work on residential roofs (Exs. 150; 240; 347). For example, the NCSG acknowledged there are personal fall protection anchorages available that work on residential roofs (Ex. 150). Some of these systems have been available and in use since OSHA issued the construction fall protection standard in 1994 (59 FR 40694–95). Based on the rulemaking record, OSHA believes there is substantial evidence that employers can protect workers from falling with conventional fall protection systems in virtually all work operations performed on residential roofs. For example, NCSG indicates that it is feasible to use conventional fall protection in substantial and major installation and repair jobs. Thus, OSHA believes it is appropriate to include the note to underscore that employers have the burden to prove in the particular roof operation all of the controls in final paragraph (b)(1)(i) are infeasible or pose a greater hazard.[47] If those criteria are satisfied, employers must implement:

- A written fall protection plan that meets the requirements of § 1926.502(k), including implementing other control measures (§ 1926.502(k)(6) and (8)); and
- Training that meets the requirements of § 1926.503(a) and (c).

Section 1926.502(k) specifies that the employer's fall protection plan must:

- Be prepared by and have any changes approved by a ''qualified'' person (§ 1926.502(k)(1) and (2)). The final rule defines qualified as a person who, by possession of a recognized degree, certificate, or professional standing, or who, by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the product (final § 1910.21(b));
- Be developed specifically for the site where the employer will perform work on residential roofs (§ 1926.502(k)(1));
- Be maintained up to date (§ 1926.502(k)(1)), which OSHA said in the construction fall protection standard ''provides clear notice to employers that they have an ongoing responsibility'' to monitor conditions and address any changes or deficiencies (59 FR 40718);
- Be maintained at the job site (§ 1926.502(k)(1) and (3)), which gives workers the opportunity to inspect the fall protection plan and provides them with needed reassurance that the employer is taking appropriate measures to reduce or eliminate exposure to fall hazards when conventional fall

[47] Employer claims that standards are infeasible or create a greater hazard are affirmative defenses that employers have the burden of proving in citation cases (OSHA Field Operation Manual, Chapter 5, Section VI).

protection cannot be used (59 FR 40719);

- Be implemented under the supervision of a ''competent person'' (§ 1926.502(k)(4)). The construction standard defines competent person as a person who is capable of identifying existing and predictable hazards in the surrounding or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them (§ 1926.32(f));
- Identify each location where conventional fall protection cannot be used and document the reasons why the use of conventional fall protection systems is infeasible or would create a greater hazard (§ 1926.502(k)(5) and (7)).[48] OSHA explained in the preamble to the construction fall protection standard that requiring employers to make a close examination helps to ensure their decision is justified and has an objective basis (59 FR 40719). A closer examination also ensures that employers have not overlooked locations or operations where conventional fall protection can be used (59 FR 40719);
- Discuss other measures that the employer will take to eliminate or reduce the fall hazard for workers where conventional fall protection is infeasible or creates a greater hazard (§ 1926.502(k)(6));
- Implement control measures to reduce or eliminate hazards or implement a safety monitoring system that complies with § 1926.502(h) (§ 1926.502(k)(8));
- State the name or other method of identification for each worker who works in a location where a fall protection plan is implemented (§ 1926.502(k)(9)); and
- Investigate the circumstances of any fall or other serious incident that occurs to determine whether the employer needs to change the fall protection plan and implement those changes (§ 1926.502(k)(10)).

In the preamble to the construction fall protection standard, OSHA said the fall protection plan requirements gives employers a ''clear direction'' about what they must do and how they must proceed if conventional fall protection cannot be used (59 FR 40718). Requiring employers to comply with all of the requirements of the fall protection plan, including implementing other control measures, reflects the Agency's position that any deviation from the general requirements for fall protection must be construed as narrowly as possible'' (59 FR 40720). OSHA believes that requiring employers to strictly comply with all of the requirements in § 1926.502(k) when conventional fall protection is not feasible or creates a greater hazard ''will provide the best opportunity to avert employee injury and death'' (59 FR 40718).

The construction fall protection standard requires that employers develop and implement a fall protection plan for the specific site where they are performing work on a residential roof (§ 1926.502(k)(1)). OSHA notes that a fall protection plan an employer develops for repetitive use for a particular style or model of a residential structure will be considered site-specific for other sites, but only if the plan ''fully addresses all issues related to fall protection at that particular site'' (STD 02–11–002). For example, chimney sweep companies may use a fall protection plan they develop for a particular type of residential roof (*e.g.,* tile, metal) for other roofs of that type rather than developing a new plan for each residence. Additionally, where a roof is similar to others for which the employer has a fall protection plan, the employer may modify an existing plan instead of developing a new one. However, where the roofs are not the same type or involve different specifications or working conditions, employers must develop and implement a fall protection plan that is specific to the site.

OSHA stresses that after employers have identified where and why conventional fall protection cannot be used (§ 1926.502(k)(5)), it will not be acceptable for employers' fall protection plans to simply state that they will not be implementing any measures to reduce or eliminate the fall hazard in those locations. Employers must implement other measures to reduce or eliminate fall hazards for workers in those locations (§ 1926.502(k)(6)). The construction fall protection standard identifies a number of measures employers can use to reduce fall hazards when conventional fall protection cannot be used, such as scaffolds, ladders, bucket trucks, and vehicle mounted platforms (§ 1926.502(k)(6)). To reduce the risk of falls in ''ladder to roof transitions,'' which NCSG said was ''one of the highest hazards,'' employers can use equipment (*e.g.,* quivers, backpacks, rope pull) to lift materials and tools instead of carrying them up on ladders. Other measures include safe work practices (*e.g.,* workers positioning themselves so their backs are not to the fall hazard, not working in adverse weather), safety screens (59 FR 40720), scaffold platforms (Ex. 150), and fall hazard training specific to residential roofs.

Stakeholders who recommended adding the fall protection plan provision to the final rule, indicate that they are using the measures identified above (Exs. 150; 342). NCSG, for example, said they use scaffolds and bucket trucks for some chimney sweep operations, particularly significant and major repairs and installations that may takes days to a week to complete (Ex. 329 (1/18/2011), pgs. 268–69, 278–80). Chimney sweep companies also work from ladders where possible because, according to NCSG, doing so reduces the fall hazards associated with transitioning from the ladder to the roof (Ex. 150).

Where no other measures can be implemented, the construction fall protection standard requires that employers implement a safety monitoring system that complies with § 1926.502(h). In the preamble to the construction fall protection standard, OSHA indicated that using safety monitoring system is a last resort ''when no other, more protective measures can be implemented'' (59 FR 40719–20 (''OSHA has determined that the employer must do what it can to minimize exposure to fall hazards before turning to the use of safety monitoring systems'')).

Section 1926.502(h)(1) requires that safety monitoring systems must designate a competent person to be the safety monitor for employees working in areas where no other fall protection measures are used. Section 1926.502(h)(1) also specifies, among other things, that safety monitors must be on the same walking-working surface be within visual sight of workers, close enough to orally communicate with the workers they are monitoring, and not have any other responsibilities that could take their attention away from the workers they are monitoring. In addition, safety monitors must warn workers when it appears that the workers are not aware of fall hazard or are acting in an unsafe manner.

OSHA believes that many employers will not use safety monitoring systems as alternate control measures because

[48] OSHA notes that the construction fall protection standard requires employers to classify each location in which conventional fall protection cannot be used as a ''controlled access zone'' and follow the requirements for controlled access zones in § 1926.502(g) (§ 1926.502(k)(7)). Unlike the construction fall protection standard, the general industry final rule does not permit the use of controlled access zones. Therefore, the final rule does not require employers to comply with the controlled access zones requirements in § 1926.502(k)(7), such as erecting a flagged control line around the entire length of the unprotected edge, in locations where the employer has demonstrated that conventional fall protection cannot be used.

they assign one-worker jobs and a safety monitoring system requires at least two workers at each work location. NCSG said, for instance, that one-person jobs constitute the majority of their work (Ex. 150).

In addition to implementing other measures to eliminate or reduce worker exposure to fall hazards, final paragraph (b)(1)(ii) also requires that employers using fall protection plans must develop and implement a training program and retraining for each employee who works in a location where conventional fall protection cannot be used. The training must meet the requirements in § 1926.503(a) and (c). Section 1926.503(a) requires that employers ensure, among other things, their fall protection plan training program ''enables each employee to recognize the hazards of falling and . . . train each employee in the procedures to be followed in order to minimize the hazards'' (§ 1926.503(a)(1)). The retraining requirements in § 1926.503(c) are essentially the same at those in final § 1910.30(c).

As stated above, OSHA believes, based on the rulemaking record and the Agency's experience with the construction fall protection standard, that in most, if not virtually all, jobs performed on residential roofs employers can protect workers from falls by using conventional fall protection systems (*i.e.,* guardrail systems, safety net systems, personal fall protection systems). That said, OSHA has decided to add paragraph (b)(1)(ii) to the final rule for two reasons: (1) To make the final rule consistent with the construction fall protection standard, which is one of the stated goals of this rulemaking, and (2) to address stakeholder concerns about the feasibility of conventional fall protection in certain residential roof operations.

Allowing employers who perform both general industry and construction activities to follow the same standard makes it easier and more efficient for employers to safely perform both types of activities, and thereby, facilitates compliance and reduces potential for confusion about which standards apply to a particular operation.

Throughout this rulemaking, stakeholders have repeatedly urged OSHA to harmonize the general industry and construction fall protection standards, particularly with respect to the fall protection plan requirements in the construction standard (Exs. 124; 149; 150; 240; 329 (1/18/2011, p. 279); 342; 365). For example, SBA Office of Advocacy said small business representatives (SERs) who attended a roundtable discussion on the proposed rule, recommended that ''OSHA should further synchronize the proposed general industry rule with the existing construction standard'' (Ex. 124). According to SBA Office of Advocacy, SERs expressed concern that ''[t]wo employees could be working side by side on similar tasks, but one could be covered by the general industry standard and the other by the construction standard'' (Ex. 124). SBA Office of Advocacy added that SERs were confused about ''the difference between maintenance and repair (general industry) and construction activities'' and ''which standards applied under what circumstances'' (Ex. 124). To illustrate, NCSG said it can be difficult to figure out whether certain chimney sweeps operations (*e.g.,* replacing chimney caps, repairing roof flashing) are maintenance (general industry) or construction activities. OSHA believes that making the general industry and construction fall protection standards consistent resolves those concerns.

OSHA notes the construction fall protection plan requirements have been in place since 1994, therefore, general industry employers who perform construction activities (*e.g.,* chimney sweep companies) have significant experience developing and implementing fall protection plans, other control measures, and training in jobs where conventional fall protection cannot be used. OSHA has not received any reports that these employers have experienced difficulty complying with the fall protection plans requirements in the construction standard. Rather, these stakeholders repeatedly urged OSHA to allow them to implement fall protection plans when they satisfy the criteria in final paragraph (b)(1)(ii) regardless of whether the activity is general industry or construction.

OSHA also is adopting final paragraph (b)(1)(ii) to address the concerns stakeholders raised (*e.g.,* Exs. 149; 150; 240). NCSG, for instance, commented that using conventional fall protection systems on residential roofs is ''technologically and/or economically infeasible'' ''for the great majority of tasks performed by [chimney] sweeps'' and ''threatens both the continuing viability of the industry and the availability of chimney inspection, sweeping, and repair services at affordable prices'' (Ex. 150).

NCSG and the National Association of Home Builders (NAHB) both argued that it is not possible to use conventional fall protection systems on residential roofs because there are not suitable attachment or anchorage points and it is not possible to install them (Exs. 149; 150; 342). For instance, NAHB said it is not possible to penetrate tile or metal roofs to secure an anchor (Ex. 149). In addition, NAHB and NCSG said homeowners would not permit contractors to nail anchorages into the roof or install guardrails because of concern that such installation would cause damage.

OSHA notes that NCSG's own materials suggest some flexibility in the use of nails in particular. In their ''successful chimney sweep training'' booklet, NCSG recommends securing ladders by ''driv[ing] a nail into the roof and secur[ing] the ladder with rope. If you choose this method, remember to remove the nail and to seal the hole before leaving the rooftop'' (Ex. 342). NCSG offers no explanation as to why homeowners would allow ladders to be secured to the roof with nails but not roof anchorages. In addition, CSG and ISEA said temporary roof anchors can be mounted to common roof structural materials by clamps or screws, which would not damage the roof (Exs. 185; 198).

OSHA recognizes that, where homeowners will not allow employers to install temporary or permanent anchors or other fall protection (*e.g.,* guardrails) and all other conventional fall protection systems are infeasible, implementing a fall protection plan, other measures to eliminate or reduce fall hazards, and training ''will provide the best opportunity to avert employee injury and death'' (59 FR 40718). That said, OSHA notes that attaching personal fall protection systems to a roof anchorage may not be the only available method of anchoring those systems. However, to the extent other types of anchors or attachment devices are or become available, employers would have to demonstrate that those devices are infeasible in order to satisfy the criteria in final paragraph (b)(1)(ii).

As mentioned, stakeholders, including NCSG, have argued they should be allowed to use fall protection plans and other control measures where they demonstrate conventional fall protection would create a greater hazard. NCSG said requiring the use of conventional fall protection would result in extended exposure to fall hazards, and thereby create a greater hazard, because it may take longer to install and remove fall protection (*e.g.,* roof anchors for personal fall protection) than to perform the work. NCSG said chimney cleaning and inspection involves accessing the roof for only 5 to 20 minutes and minor repairs (*e.g.,* replacing a chimney cap, minor flashing repair) typically requires the chimney sweep to work on the roof for 20 minutes to 2 hours (Ex. 150). By contrast, they said installing anchors would take 45 to 90 minutes (Ex. 150). However, Tom Wolner, of CSG, said that employers can install temporary nail-on roof anchors in ''probably less than 10 minutes'' (Ex. 329 (1/18/2011, p. 107)).

Stakeholders also said requiring the use of conventional fall protection in residential rooftop operations would create a greater hazard because workers would have to carry extra equipment to the roof, which they said would ''increase the number of ground to roof trips'' (Ex. 150). NCSG pointed out that chimney cleaning and inspection typically is done in one climb; however, they also acknowledged that fall protection can be brought to the roof during the initial climb and even minor repairs and installations can involve multiple climbs (Ex. 150). As the examples above illustrate, rooftop work varies widely in the duration and climbs. Employers will have to demonstrate that using conventional fall protection in the specific operation makes it more dangerous for workers than working without that protection.

Some commenters opposed allowing any exemptions from using conventional fall protection systems (Exs. 185; 198; 329 (1/18/2001), pgs. 82–83, 107). For example, Tom Wolner, of CSG, said:

> Certain segments within general industry have requested that OSHA provide broad exemptions from proposed fall protection regulations, by citing things such as hardships that the use of fall protection would create, safe work histories or feasibility concerns. Capital Safety is opposed to granting such general exemptions within the regulation. It is our opinion that it is feasible and practical to provide workers with active or passive means of fall protection in nearly every work situation. A variety of all fall protection equipment available today, combined with our ability and the ability of others like us within the fall protection industry to customize or tailor fall protection equipment to specific needs often eliminates the need for exemptions (Ex. 329 (1/18/2011, pgs. 82–83)).

OSHA agrees with Mr. Wolner that it is feasible for employers to provide workers with conventional fall protection systems in ''nearly every work situation.'' However, OSHA does not agree with Mr. Wolner that final paragraph (b)(1)(ii) is an overly broad exemption or unprecedented. In enforcement action, employers always are permitted to raise affirmative defenses, such as a claim that the required controls are not feasible or pose a greater hazard.

Final paragraph (b)(1)(iii), similar to proposed paragraph (b)(1)(vi), excepts employers from providing the fall protection specified in final paragraph (b)(1)(i) when employers can demonstrate that it is not feasible for workers to use fall protection on the working side of platforms used at loading racks, loading docks, and teeming platforms. The ''working side'' is the side of the platform where workers are in the process of performing a work operation. The final rule, similar to the proposed rule, specifies that the working side exception to providing fall protection only applies when the employer demonstrates infeasibility and:

- The work operation for which fall protection is infeasible is in process (final paragraph (b)(1)(iii)(A));
- The employer limits access to the platform to ''authorized'' workers (final paragraph (b)(1)(iii)(B)), which the final rule defines as a worker who the employer assigns to perform a specific type of duty, or allows to be in a specific location or area (final § 1910.21(b)); and
- The employer trains authorized workers in accordance with final § 1910.30 (final paragraph (b)(1)(iii)(C)).

Section 1910.30 requires, among other things, that employers train workers, including authorized workers, to recognize fall hazards and the procedures to follow to minimize them.

OSHA notes that, in limited cases, it may not be possible for workers to perform work operations if fall protection, such as guardrails, interferes with access to the work operation. However, as the final rule specifies, the issue of blocking access to the work operation is a concern only when workers are in the process of performing the work operation. As a result, fall protection, such as guardrails, must be in place or used when workers are not performing a work operation on the working side of a platform. OSHA believes that fall protection does not interfere with performing tasks such as maintenance, cleaning, and similar tasks; therefore, when workers are performing these tasks, employers must provide fall protection.

Final paragraph (b)(1)(iii) differs from the proposal in two respects. First, the final rule deletes the proposed exception for the ''working side'' of slaughtering facility platforms (proposed paragraph (b)(1)(iv)). Based on evidence in the record, OSHA decided to regulate those platforms separately in final paragraph (b)(14).

Second, the exception in the final rule only applies when the employer demonstrates that no fall protection system is feasible. The proposed rule applied the exception when the employer demonstrates guardrail systems are not feasible (proposed paragraph (b)(1)(vi)). Therefore, to the extent fall protection systems other than guardrails are feasible, such as travel restraint or personal fall arrest systems, the employer would have to provide those systems and the exception would not apply.

Stacked materials. In the proposed rule, OSHA raised an issue about whether there is a need to promulgate specific requirements to address the use of fall protection when employees work and climb four feet or more above a lower level on stacked materials, such as stacks of steel and precast concrete products that are being stored or loaded onto motor vehicles and rail cars for transport (75 FR 28868). OSHA noted in the proposed rule that the Agency uses § 1910.23, § 1910.132 and the general duty clause (29 U.S.C. 654(a)(1)) to protect workers who climb and stand on stacked materials from falling (75 FR 28868).

By 2004, the American Iron and Steel Institute (AISI) and Precast/Prestressed Concrete Institute (PCI) had raised the issue of fall protection on stacked materials (75 FR 28868; Exs. 5; 41). In general, they both said using fall protection, such as ''guardrails or tie-off protection,'' on stacked materials was infeasible or creates a greater hazard (75 FR 28868). AISI said workers at steel and steel product companies ''need to stand on 'stacks' of product that have a large surface area in order to rig bundles for crane lifts and similar activities'' or ''[load] products onto truck trailers and railcars'' (Ex. 5, AISI's comments on the Office of Management and Budget ''Draft Report to Congress on the Costs and Benefits of Federal Regulations''). They characterized the solutions OSHA recommended to protect those workers (*i.e.,* guardrails around stacked materials, magnet cranes, and safety lines around vehicle trailers and rail cars) as ''not feasible'' and ones that could ''create its own serious safety hazard.'' For example, AISI said safety lines would interfere with movement of the product and magnet cranes cannot connect to single bundles.

PCI, in a January 3, 2000, letter requesting an exception from existing fall protection requirements for loading/unloading precast concrete products on motor vehicles and for stacking, storing, and loading/unloading precast concrete products in the plant, said workers need to access the top of concrete products for only ''very short periods of time'' to connect/disconnect lifting devices or rigging (Ex. 41). They said installing a fall protection system, by contrast, would expose employees to fall hazards for ''an extended period of time'' and, therefore, poses a greater hazard (Ex. 41). PCI also pointed out that the OSHA construction fall protection standard does not require that workers use fall protection when unloading precast concrete at construction sites (Ex. 41).[49]

AISI and PCI recommended that OSHA allow employers to use alternative measures, such as safe work practices and training, including a ''mentor system hands-on process for training'' (Exs. 5; 41). AISI said OSHA should require guardrails or tie-off protection only ''where practical'' and be permitted to use an ''alternative practice'' and provide training where it is not (Ex. 5). However, AISI did not identify any alternative practices that would provide adequate protection for employees working on stacked materials. PCI said employers should be allowed to provide ''individual instruction as well as have a mentor system hands on training process'' instead using fall protection systems on stacked materials (Ex. 41). PCI also recommended that employees perform ''corrective and detail work'' at the ground level or from a ladder or mobile-elevating work platform instead of on the stacked materials.

OSHA received a number of comments in response to the proposed rule, most of which supported requiring the use of fall protection on stacked materials (Exs. 127; 155; 161; 185; 198; 205; 238). For example, ASSE stated:

> ASSE cannot agree with ''some commentators (who) have recommended that OSHA allow the use of safe work practices by trained employees in lieu of conventional fall protection for certain activities,'' . . . . If employers are going to ask employees to climb on stacked materials where there are fall hazards and, typically, exposure to falls off the sides to lower levels, employers have the duty to warn, train and protect workers from falls. In our members' experience, this is not infeasible or unreasonable to ask (Ex. 127).

The Society of Professional Rope Access Technicians (SPRAT) said ''the prevalence of incidents that have occurred in these situations'' warrants a requirement to use ''fall protection of some sort'' on stacked materials (Ex. 205). SPRAT recommended allowing employers to use industrial rope access systems (IRAS) to protect employees because they said it would mitigate any difficulty or impossibility of using ''measures previously recognized by OSHA as being 'conventional' '' (Ex. 205). SPRAT further recommended:

> [I]f OSHA's language toward protection against falls were less method-specific and more results-oriented, competent and qualified persons would have greater latitude in creating protective systems that would be very protective without having to use a proscribed method. OSHA would be well-advised to permit use of such systems so long as they are approved by a Qualified Person, created by a Competent Person, and appropriate training [is] provided to the Authorized Person (Ex. 205).

OSHA did not propose to cover IRAS and the final rule clarifies that IRAS are not rope descent systems (§ 1910.21(b)). Given that, OSHA is not adopting SPRAT's recommendations.

Several commenters said fall protection systems to protect employees working on stacked materials are feasible and currently in use in general industry (Exs. 155; 185; 198). For instance, ISEA and CSG said fall protection manufacturers have developed and are supplying employers with such systems, including ''trailer-mounted systems, A-frames, rope grab systems, and ropes at tie-off points'' (Exs. 185; 198). They added that manufacturers also create custom fall protection systems (Exs. 185; 198). Ellis Fall Safety Solutions (Ellis) said that temporary and permanent wheeled and fork-lifted devices with railed personal fall protection anchorages are available for loading/unloading operations and should be required for stacked materials (Ex. 155; *see also* 148; 158; 198; 355–2). Ellis also pointed out that these systems can provide fall protection over a large surface area (*i.e.,* ''up to 30 ft.'') (Ex. 155).

PCI and the International Sign Association (ISA), in response to the proposed rule, submitted comments opposing any requirement for fall protection on stacked materials (Exs. 161; 238). PCI said in the 14 years since their request for an exception from the existing fall protection requirements they had ''not learned of any system or device'' that would change their position that requiring the use of fall protection on stacked materials is infeasible and would create a greater hazard (Ex. 238).

ISA, like PCI and AISI, argued that it is infeasible to require the use of fall protection on stacked cargo and motor vehicles (Ex. 161). In particular, ISA said permanent attachment of fall protection equipment to motor vehicles is not feasible because the area of the truck bed normally available for walking or working is usually quite small and such equipment would interfere with the utility of trucks as cargo-carrying vehicles. Like PCI and AISI, ISA also recommended that OSHA ''should provide flexibility for employers in terms of implementing alternative practices, appropriate training, or both'' (Ex. 161).

ISA also appeared to suggest that installing fall protection for employees working on stacked materials would create a greater hazard. ISA said employees stand or work on stacked materials only ''occasionally'' and ''temporarily'' to perform operations that ''are strictly associated with rigging of cargo items for hoisting,'' implying that rigging stacked cargo only exposes employees to fall hazards for a very brief period of time compared to the time necessary to install fall protection systems (Ex. 161).

After reviewing the rulemaking record, OSHA does not agree that requiring fall protection on stacked materials is infeasible or could create a greater hazard. OSHA finds there is substantial evidence showing that a number of fall protection systems for stacked materials are available and already are in use in general industry (Exs. 155; 185; 198). For example, commenters said wheeled, trailer-mounted and fork-lifted overhead anchor and retractable line systems are available and in use to protect employees working on stacked materials (Exs. 155; 185; 198. *See also, e.g.,* Exs. 148; 158; 355–2; OSHA–S029–2006–0662–0373). These stand-alone systems can be used for stacking, storing, and loading/unloading stacked materials in open yards and plants as well as for loading/unloading stacked materials on rolling stock and motor vehicles (*e.g.,* Ex. 355–2). In addition, the record shows that other fall protection systems employers use for loading/unloading stacked cargo on rolling stock and motor vehicles also work for materials that are stacked or stored in yards or plants. These systems include mobile work platforms, scissor lifts and stairs equipped with railings/guardrails that allow workers to access stacked materials without standing on them (*e.g.,* Exs. 63; 124; 169; 181; 335; OSHA–S029–2006–0662–0208; OSHA–S029–2006–0662–0227; OSHA–S029–2006–0662–0350; OSHA–S029–2006–0662–0373).

Finally, OSHA also concludes that the final rule does not need to include specific or separate requirements addressing stacked materials. OSHA believe that final § 1910.28(b)(1) (Unprotected sides and edges) and (b)(15) (Walking-working surfaces not otherwise addressed) adequately address fall protection on stacked materials.

Hoist areas. Final paragraph (b)(2), like the proposed rule, establishes fall

[49] OSHA notes that the definition of ''walking-working surface'' in the construction fall protection standard does not include rolling stock and motor vehicles (29 CFR 1926.500(b)).

protection requirements for workers who work in hoist areas that are four feet or more above a lower level. The final rule defines a ''hoist area'' as an elevated access opening to a walking-working surface through which equipment or materials are loaded or received (final § 1910.21(b)).

Final paragraph (b)(2)(i) requires employers to protect workers in hoist areas from falls by:

- Guardrail systems (final paragraph (b)(2)(i)(A));
- Personal fall arrest systems (final paragraph (b)(2)(i)(B)); or
- Travel restraint systems (final paragraph (b)(2)(i)(C)).

The construction fall protection standard includes a similar provision requiring that employers provide guardrail or personal fall arrest systems to protect workers in hoist areas that are six feet or more above a lower level (§ 1926.501(b)(3)). This final rule provides greater control flexibility than the construction standard because it also allows employers to provide travel restraint systems to protect workers. OSHA received no comments on the proposed provision and it is finalized as discussed.

Final paragraph (b)(2)(ii), like the proposed and construction rules (§ 1926.501(b)(3)), requires that, if removing any portion of a guardrail system, gate, or chains and if the worker leans through or over the edge of the access opening to facilitate hoisting, the employer must protect the worker from falling by a personal fall arrest system. The proposed rule required that employers provide ''grab handles'' on each side of a hoist area opening, in addition to a personal fall arrest system, if removing the guardrail, gate, or chains and if the worker leans out the access opening. The existing rule does not have a specific provision addressing hoist areas. However, the existing provisions on wall openings and holes requires that both sides of openings and holes have grab handles if the rail, half door, or other equivalent barrier is removed (existing § 1910.23(b)(1)). In addition, where the structure has extension platforms onto which employers may place hoisted materials, the existing rule requires that employers provide side rails or equivalent guards to protect workers (existing § 1910.23(b)(ii)). OSHA notes that it adopted the existing rule in 1971, before personal fall arrest systems were widely available.

OSHA only received one comment on the proposed provision. Ameren recommended that OSHA define what would qualify as a grab handle to ensure the final rule does not result in confusion or misinterpretation (Ex. 189). After further consideration, OSHA believes it is not necessary for employers to provide grab handles in addition to personal fall arrest systems if removing guardrails, gates, or chains and if workers look through or over the edge of an access opening to facilitate hoisting. OSHA believes that personal fall arrest systems provide adequate worker protection, and better protection than grab handles, therefore, OSHA does not carry forward the proposed requirement on grab handles. Of course, employers are free to provide grab handles or other handholds in addition to personal fall arrest systems in those situations. OSHA believes that the revisions in the final rule address Ameren's concern and the provision is finalized as discussed.

Final paragraph (b)(2)(iii), specifies that if grab handles are installed at hoist areas, they must meet the requirements of § 1910.29(l). Employers are not required to install grab handles at hoist areas; however, if they do install grab handles, the handles must meet the criteria specified in § 1910.29(l). Although OSHA believes it is not necessary to install grab handles at hoist areas when workers use a personal fall arrest system, the Agency recognizes grab handles can provide some security when workers must lean out from a hoist area. In those cases, OSHA believes it is important for grab handles to be of a certain size, have sufficient clearance, and be capable of withstanding the forces placed on them.

Holes. Final paragraph (b)(3) consolidates the proposed requirements to protect workers from falls associated with holes (proposed paragraph (b)(3)) and floor holes (proposed paragraph (b)(14)), and requires that employers protect workers from falling into or through any hole, including skylights, stairway floor holes, ladderway floor holes, hatchway and chute-floor holes, and other holes on roofs. The final rule defines a ''hole'' as a gap or open space in a floor, roof, horizontal walking-working surface, or other similar surface that is at least 2 inches in its least dimension (final § 1910.21(b)). Although skylights may be covered by screens or other material, for the purposes of this definition and the final rule, OSHA classifies skylights as holes. Falling into a hole or tripping and possibly falling due to a hole in a walking-working surface may injure or kill a worker.

OSHA believes that consolidating the requirements for protecting workers from falling into or tripping on a hole is appropriate because the hazards generally associated with these conditions, and the methods to address these hazards, are the same. Moreover, consolidating the provisions makes the final rule easier to understand and follow, which will enhance employer compliance.

In the final rule, OSHA moved the proposed requirement (proposed paragraph (b)(3)(iii)) to protect workers on walking-working surfaces from being hit by objects falling through overhead holes to final paragraph (c), Protection from falling objects. The final rule consolidates all requirements addressing falling object hazards in final paragraph (c).

OSHA received one general comment on the proposed requirements to protect workers from falling or stepping into, or tripping on, holes. Ellis Fall Safety Solutions (Ellis) said the final rule should require that employers not leave holes exposed or uncovered for more than two minutes and assign a ''standby person'' to be present to warn workers about the hole until employers cover or barricade the hole (Ex. 155). Ellis also said the final rule should require that employers use two means to protect employers from falling into holes as a way ''to safeguard the next trade or planned work'' (Ex. 155). For example, Ellis suggested that employers cover the hole with a plywood board as the primary means of protection and, as the secondary protection, attach a net to a bar joist underneath the hole using a scissor lift. OSHA believes the final rule provides a reasonable and appropriate level of protection. Any of the fall protection systems specified by the final rule will protect workers from falling, tripping, or stepping into holes. OSHA believes the final rule already ensures the ''next trade'' is safeguarded from holes. The final rule requires that all employers in any trade must conduct inspections of walking-working surfaces and maintain those surfaces in a safe condition before allowing workers to work there (final § 1910.22(d)(1)). OSHA notes that employers are free to use more than one measure to protect workers from hazards associated with holes.

Final paragraph (b)(3)(i) requires that employers ensure workers are protected from falling through any hole (including skylights) that is four feet or more above a lower level using one or more of the following:

- A cover over the hole (paragraph (b)(3)(i)(A));
- A guardrail system around the hole (paragraph (b)(3)(i)(B));
- A travel restraint system (paragraph (b)(3)(i)(C)); or
- A personal fall arrest system (paragraph (b)(3)(i)(D)).

Final paragraph (b)(3)(i) is the same as the proposed rule, and provides greater control flexibility than the existing general industry and construction fall protection rules (existing § 1910.23(a)(4), (8), and (9), and § 1926.501(b)(4)). The existing general industry rule only allows employers to guard holes using standard railings (guardrails) or, in some situations, a cover. The construction rule does not include travel restraint systems as a fall protection option to protect workers from falling into holes (§ 1926.501(b)(4)(i)).

Final paragraph (b)(3)(ii) requires that employers ensure workers are protected from tripping into or stepping into or through any hole that is less than four feet above a lower level by covers or guardrail systems. The final rule differs from the proposal in two ways. First, final paragraph (b)(3)(ii) clarifies that OSHA intended that the proposed requirement only applied to holes that are less than four feet above a lower level. Where a hole is four feet or more above a lower level, the requirements in final paragraph (b)(3)(i) apply and ensure that workers do not step or trip into the hole or fall into it. Second, final paragraph (b)(3)(ii) provides greater control flexibility than the proposal and the construction fall protection standard because it adds guardrail systems as an alternative option employers may use to protect workers from tripping or stepping into holes. Proposed paragraph (b)(3)(ii) and the construction standard (§ 1926.501(b)(4)(ii)) only permit employers to use covers to prevent stepping or tripping into holes.

Final paragraph (b)(3)(iii), like the existing standard (§ 1910.23(a)(1)) and the proposed rule (proposed paragraph (b)(14)(i)), requires that employers ensure workers are protected from falling into stairway floor holes by a fixed guardrail system erected on all exposed sides, except at the stairway entrance. The final rule also carries forward, with revisions, the existing and proposed exception for stairways when (1) used less than once a day and (2) traffic across the opening prevents the use of a fixed guardrail system (*e.g.,* stairway floor hole located in store aisle). In that situation, employers may protect workers from falling using a hinged floor-hole cover that meets the criteria in § 1910.29 plus a removable guardrail system on all exposed sides except the stairway entrance. The exception in the final rule is consistent with ANSI/ASSE A1264.1–2007, Safety Requirements for Workplace Walking/Working Surfaces and Their Access; Workplace, Floor, Wall and Roof Openings; Stairs and Guardrails Systems (ANSI/ASSE A1264.1–2007).

OSHA also clarifies the ''infrequently used'' language in the existing exception by incorporating the language in a note in the proposed rule stating that ''infrequently used'' means using the stairways ''on less than a daily basis.'' The exception in the final rule also clarifies the language in the existing and proposed rules requiring that the hinged floor-hole cover be of ''standard strength and construction'' by specifying that the cover must meet the criteria in final § 1910.29, specifically § 1910.29(e). OSHA believes the language in the final rule will make the rule easier for employers to understand and follow. For example, requiring that the hinged floor-hole cover meet the requirements in § 1910.29 ensures that they will support, without failure, at least twice the maximum intended load that may be imposed on the cover (final § 1910.29(e)(1)). This is important because a hinged floor-hole cover, like all covers, need an adequate margin of safety to ensure they are capable of supporting intended loads, and to account for the possibility of unforeseen traffic across the cover.

In addressing stairways used less than once a day, OSHA requested information and comment in the proposed rule on using automatically rising railings that come into position when a load-bearing hinged floor-hole cover opens (75 FR 28892). Explanatory paragraph E3.1 in ANSI/ASSE A1264.1–2007 states that the removable guardrail system required for infrequently used stairways should be ''hinged or otherwise mounted so as to come into position automatically with the opening of the [hinged floor-hole] cover.'' Ameren commented, ''As long as the automatic rising railings are an option and not the only method of protection this provision would be feasible'' (Ex. 189). OSHA did not receive any comments supporting making automatically rising guardrails mandatory, and the final rule does not include such a requirement.

Final paragraph (b)(3)(iv), similar to the existing (§ 1910.23(a)) and proposed (proposed paragraph (b)(14)(ii)) rules, requires that employers ensure they protect workers from falling into ladderway floor holes or ladderway platform holes by providing a guardrail system and toeboards on all exposed sides, except at the hole entrance. In addition, the final rule requires that employers protect the access opening in the guardrail system by using a ''self-closing'' gate or an offset so workers cannot walk or step into the hole.

Final paragraph (b)(3)(iv) substitutes ''self-closing'' gate for ''swinging'' gate language in the existing and proposed rules. The purpose of these gates, when open, is to provide a means of access to ladderway floor holes and, when closed, to provide guardrail protection that meets of all the criteria in final paragraph (b). The term ''swinging'' gate, as used in the existing and proposed rules, refers to gates that automatically swing back into a closed position when the opening is not being used for access to prevent workers from falling into the ladderway hole. These are sometimes called ''safety gates'' (Ex. 68). If gates do not swing automatically into a closed position, they do not provide the required guardrail protection.

OSHA is aware that, in addition to swinging gates, there are automatically closing sliding gates that are currently manufactured, readily available, and in use to protect workers from falling into ladderway floor and platform holes. OSHA believes these sliding gates provide protection that is as effective as the protection swinging gates provide. Therefore, to give employers the flexibility to use the type of automatically closing gate that works best for them, OSHA uses the term ''self-closing'' gates in final paragraph (b)(3)(iv).

OSHA received one comment on the proposed requirement. Edison Electric Institute (EEI) recommended that OSHA allow employers to use double chains ''around holes used as points of access (such as ladderways)'' (Ex. 207). ''Many industrial facilities use double chains instead of swinging gates or guardrails at the top of fixed ladders,'' EEI said. ''These have been effective for a number of decades'' (Ex. 207). EEI also pointed out that the 1990 proposed rule would have allowed the use of chains, in addition to swinging gates and offsets, at the access openings in the guardrail systems.[50]

OSHA has not adopted EEI's recommendation. In the preamble to the 2010 proposed rule, OSHA said the new proposed rule replaces the 1990 proposal (75 FR 28863). Unlike the 1990 proposal, proposed paragraph (b)(14)(ii)

[50] *See also* Letter to Mr. Stephen Hazelton (5/23/2005) that states:

[T]he [1990] proposed paragraph at 1910.28(b)(6) permits the use of movable guardrail sections such as gates, chains, and other means, which, when open, provide a means of access and, when closed, provide the guardrail protection that meets the proposed paragraphs 1910.28(b)(1) through (b)(5). An employer's compliance with the proposed rule, in lieu of compliance with an existing rule [1910.23(a)(2)], is considered as a de minimis violation.

This letter available on OSHA's website at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=25100.*

did not permit employers to use double chains in place of self-closing gates or offsets. As mentioned, OSHA believes that chains less protective than self-closing gates or off sets. Self-closing gates and offsets are passive fall protection methods that automatically restore guardrail protection as soon as the worker passes through the opening or offset area. Neither method requires the worker to take any action to restore that protection. However, if employers provide double chains at entrances to ladderway floor or platform holes, their employees would have to remove the chains and reattach them once they pass through the opening. If workers forget or fail to reattach the chains, they and others in the area could fall through the hole. Workers also are at increased risk of falling through the hole once they enter the area inside the guardrails to climb down the ladder because they have to turn around and away from the hole to reattach the chains and risk falling backward into the hole. If workers avoid this risk by not reattaching the chains, it exposes other workers to the risk of a fall when they approach the opening in the guardrail system. OSHA believes that double chains do not fully protect workers from falls at hole entrances, and therefore, is adopting the existing and proposed requirements that entrances to ladderway floor and platform holes have a self-closing gate or be offset to prevent workers from falling.

Final paragraph (b)(3)(v), like proposed paragraph (b)(14)(iii), requires that employers ensure workers are protected from falling through hatchway and chute-floor holes by one of the following:

- A hinged floor-hole cover and a fixed guardrail system that leaves only one exposed side.[51] When the hole is not in use, the employer must ensure the cover is closed or a removable guardrail system provided on all exposed sides (final paragraph (b)(3)(v)(A));
- A removable guardrail system and toeboards on not more than two sides of the hole and a fixed guardrail system on all other exposed sides. The employer must ensure the removable guardrail system remains in place when the hole is not in use (final paragraph (b)(3)(v)(B)); or
- A guardrail system or travel restraint system when the work operation necessitates passing material through a hatchway or chute floor hole (final paragraph (b)(3)(v)(C)).

With one exception (final paragraph (b)(3)(v)(C)), the final rule generally is consistent with existing § 1910.23(a)(3) and A1264.1–2007 (Section 3.1). Final paragraph (b)(3)(v)(C) adds a requirement that employers provide a guardrail system or travel restraint system when workers need to pass materials through a hatchway or chute-floor hole. The existing and ANSI rules only state that ''protection shall be provided to prevent a person from falling through the opening,'' but do not specify what protection is needed. OSHA believes the final rule is more protective and clearer than these rules because it specifies how employers must protect workers. OSHA adopts final paragraph (b)(3) as discussed.

Dockboards. Final paragraph (b)(4) adds fall protection requirements to protect workers on dockboards. The final rule defines a ''dockboard'' as a portable or fixed device for spanning a gap or compensating for the elevation difference between a loading platform and a transport vehicle. Dockboards include, but are not limited to bridge plates, dock plates, and dock levelers. (final § 1910.21(b)).

Final paragraph (b)(4)(i), like the proposal, requires that employers ensure each worker on a dockboard is protected from falling four feet or more to a lower level by a guardrail system or handrails. The final rule limits the fall protection options that employers may use. OSHA believes guardrails and handrails will provide adequate protection for workers. In addition, employers can use them on dockboards while other options may not work. For example, it may not be possible to install anchorages on dockboards that would support the use of personal fall arrest systems.

OSHA notes that in some situations there may be insufficient space between the dock and the transport vehicle for a worker to fall and, therefore, no fall hazard would exist. In that situation, final paragraph (b)(4)(i) would not apply.

Final paragraph (b)(4)(ii), like the proposal, includes an exception specifying that employers do not have to provide a guardrail system or handrails when:

- Using the dockboard solely for materials-handling operations using motorized equipment (final paragraph (b)(4)(ii)(A));
- Workers engaged in motorized material-handling operations are not exposed to fall hazards greater than 10 feet (final paragraph (b)(4)(ii)(B)); and
- Employers train those workers in accordance with § 1910.30 (final paragraph (b)(4)(ii)(C)).

Final paragraph (b)(4)(ii)(C) does not include the proposed language identifying the subjects that training must address. The requirements in final § 1910.30 cover all of the topics OSHA proposed, thus, OSHA does not believe it is necessary to repeat them in this provision.

OSHA believes the exception in final paragraph (b)(4)(ii) is appropriate. Employers often use motorized equipment to move large and heavy material across dockboards. However, such equipment may not fit on a dockboard that has guardrails or handrails. Preventing workers from using motorized equipment to move the material may expose them to other hazards, such as risk of injury associated with lifting and carrying heavy materials. OSHA did not receive any comments on the proposed dockboard requirements, and finalizes the provisions as discussed.

Runways and similar walkways. Final paragraph (b)(5) specifies the fall protection systems that employers must provide to protect workers from falling off runways and similar walkways. The proposed and final rules define a ''runway'' as an elevated walking-working surface (§ 1910.21(b)). For purposes of the final rule, runways include catwalks, foot walks along shafting, and elevated walkways between buildings.

Final paragraph (b)(5)(i), like the proposed rule, retains the existing requirement (§ 1910.23(c)(2)) that employers must protect workers on runways or similar walkways from falling four feet or more to a lower level by a guardrail system. The final rule generally is consistent with the construction fall protection standard (§ 1926.501(b)(6)). Like dockboards, the final rule limits the fall protection options employers may use. OSHA believes that guardrails will provide adequate protection from falls, and that other options may not work on runways. For example, it may not be possible for employers to install anchorages and other components of personal fall protection systems that would protect workers from falling off runways while still allowing them to walk on the runway.

Final paragraph (b)(5)(i) no longer includes the existing and proposed requirement that employers provide toeboards on both sides of runways if workers are likely to use tools, machine parts, or other objects on the runway. The primary purpose of requiring toeboards is to prevent objects from

[51] OSHA used the term ''permanently attached'' guardrail system in the proposal. In the final rule, OSHA uses the term ''fixed'' guardrail systems, which OSHA considers to be equivalent to, but clearer than, the proposed term.

falling onto workers on a lower level. As mentioned earlier, OSHA consolidated all requirements addressing falling object hazards in final paragraph (c), and, therefore, does not repeat them here.

Final paragraph (b)(5)(ii), which is similar to the proposed rule, addresses runways used exclusively for special purposes, such as filling tank cars. The final paragraph requires that when the employer can demonstrate that it is not feasible to have guardrails on both sides of special purpose runways, the employer may omit the guardrail on one side, provided the employer:

- Ensures that the runway is at least 18 inches wide (final paragraph (b)(5)(ii)(A)); and
- Provides each worker with, and ensures that each worker uses, a personal fall arrest system or travel restraint system (final paragraph (b)(5)(ii)(B)).

The final rule clarifies two points in the proposed rule. First, the final rule clarifies that guardrails may be omitted from a special purpose runway only when the employer can demonstrate that it is not feasible to have guardrails on both sides of the runway. Feasibility is the standard test of whether employer action is possible, and OSHA believes employers are familiar with, and understand, it.

Second, final paragraph (b)(5)(ii)(B) clarifies the language in the proposed rule requiring that employers ensure ''the proper use of personal fall arrest systems or travel restraint systems.'' This provision means that employers may omit a guardrail on one side of a special purpose runway only when the employer both provides and ensures that each worker properly uses a personal fall arrest system or travel restraint system.

OSHA notes that the final rule provides greater protection for workers than both the existing rule (§ 1910.23(c)(2)) and A1264.1–2007 (Section 5.2). Although these standards specify that employers may omit a guardrail on one side of a special use runway only if they use a runway that is at least 18 inches wide (consistent with final paragraph (b)(5)(ii)(A)), the standards do not require that employers provide, and ensure that workers use, personal fall arrest or travel restraint systems while on those runways.

OSHA received no comments on the proposed runway requirements, and adopts them with the revisions discussed above.

Dangerous equipment. Final paragraph (b)(6) addresses the hazards associated with working above dangerous equipment. Final § 1910.21(b) adopts the definition of ''dangerous equipment'' in the construction fall protection standard (§ 1926.500(b)). The definition also specifies that such equipment includes vats, tanks, electrical equipment, machinery, machinery with protruding parts, or similar units that, because of their function or form, may harm a worker who falls into or onto the equipment. The existing rule in § 1910.23(c)(3) also provides examples of equipment OSHA considers to be dangerous, including pickling or galvanizing tanks and degreasing units. The definition of dangerous equipment in this final rule includes similar equipment. OSHA added a definition of dangerous equipment to the final rule in response to Northrup Grumman Shipbuilding's (NGS) recommendation that OSHA define the term so that employers understand what equipment the final rule covers (Ex. 180).

This final rule, like the proposed rule, includes requirements for protecting workers who are working less than four feet above dangerous equipment. OSHA believes it is necessary to protect workers from falling onto or into dangerous equipment regardless of how far above the equipment they are working. Falling less than four feet into or onto equipment that has sharp, protruding, or moving parts could kill or seriously injure a worker.

When workers are less than four feet above dangerous equipment, final paragraph (b)(6)(i), like the proposed rule, requires that employers protect workers from falling into or onto the dangerous equipment using a guardrail system or a travel restraint system, unless the equipment is covered or guarded to eliminate the hazard. The existing rule in § 1910.23(c)(3) requires that, regardless of height, employers must protect workers who are working above dangerous equipment using guardrails and toeboards. The construction fall protection standard contains a provision requiring guardrails or equipment guards when workers are working less than six feet above dangerous equipment (§ 1926.501(b)(8)).

OSHA believes final paragraph (b)(6)(i), which allows employers to protect their workers by providing either guardrails or travel restraint systems, but does not require toeboards, provides greater control flexibility than the existing rule without compromising worker safety. OSHA believes that either guardrails or travel restraint systems provide sufficient protection for workers above dangerous equipment. Therefore, OSHA does not believe that toeboards, which primarily protect workers from falling objects from higher levels, are necessary. Accordingly, OSHA deleted the existing toeboard requirement, but notes that final paragraph (c)(1) of this section requires that employers provide toeboards to protect workers from objects falling from higher levels and hitting them.

OSHA notes that the final rule does not permit employers to use safety nets or personal fall arrest systems when workers are less than four feet above dangerous equipment. At these heights, safety nets and personal fall arrest systems may not be safe to use because there may not be sufficient stopping distance to prevent a falling worker from making contact with the dangerous equipment.

Final paragraph (b)(6)(i), like the proposal, does not require employers to use guardrails or travel restraint systems if the employer covers or guards dangerous equipment and the worker is less than four feet above the equipment. OSHA believes that covering or guarding dangerous equipment that is less than four feet below workers adequately eliminates the hazard.

When workers are four feet or more above dangerous equipment, final paragraph (b)(6)(ii), like the proposed rule, requires that employers protect workers from falling by providing:

- Guardrail systems (final paragraph (b)(6)(ii)(A));
- Safety net systems (final paragraph (b)(6)(ii)(B));
- Travel restraint systems (final paragraph (b)(6)(ii)(C)); or
- Personal fall arrest systems (final paragraph (b)(6)(ii)(D)).

Final paragraph (b)(6)(ii) provides more control flexibility for employers than the existing rule, which requires that employers protect workers from falling onto or into dangerous equipment by providing a guardrail system. OSHA believes that allowing employers to use a range of fall protection options ensures that employers will be able to select the fall protection option that best fits the particular workplace situation and conditions.

OSHA received two comments on the proposed provision. Verallia recommended that OSHA delete the requirement because they said the proposal was ''too subjective and vague'' and ''could be interpreted differently'' (Ex. 171). However, Verallia did not provide examples or further explain its recommendation. As mentioned earlier, this final rule adds a definition of dangerous equipment, which also includes examples of specific equipment OSHA considers to be dangerous. The final rule specifically and clearly identifies what constitutes dangerous equipment, what protections employers must provide at specific heights, and when and at what height employers can protect workers from falling using fall protection options other than guardrails or travel restraint systems. Moreover, OSHA believes the examples of equipment OSHA defines as being dangerous specifically clarifies, in objective terms, under what conditions employers must comply with the final rule and, therefore, reduces the possibility of conflicting interpretations.

The second commenter, NGS, said the proposed rule was not as protective as the existing rule and would not provide an equivalent level of protection from ''open pits, vats, etc.'' as existing § 1910.22(c) (Ex. 180). NGS recommended that ''standard guardrails be required around open tanks'' and ''vats that contain hazardous substances that pose an immediate threat to life'' (Ex. 180). OSHA does not believe including NGS's recommendations are necessary in this final rule. First, although final paragraph (b)(6) does not retain existing § 1910.22(c) as a separate provision, OSHA incorporated into the final definition of dangerous equipment all of the equipment § 1910.22(c) covers, including the equipment NGS mentioned. The final rule does not leave any dangerous equipment unaddressed, and, therefore, the Agency believes the final rule provides protection equivalent to that in existing § 1910.22(c).

Second, the final rule allows employers to use controls that provide equivalent or greater protection than the controls specified in existing § 1910.22(c). OSHA believes that giving employers flexibility in choosing what protection to use will enable them to select the measure that works best, and is the most effective, in the particular work situation. Third, the final rule recognizes that it may not be possible to use guardrails in a particular situation and provides employers with alternatives that will protect their workers in those cases.

Fourth, where dangerous equipment is not covered or guarded, final paragraph (b)(6)(i) requires that employers use guardrails or travel restraint systems to protect workers from falling onto the dangerous equipment, when the height of the fall is less than four feet. OSHA notes that employers are free to use guardrails when an employee works at any height above dangerous equipment.

Openings. Final paragraph (b)(7), similar to the proposed rule, requires that employers protect workers from falling through openings. Final § 1910.21(b), like both the proposed and construction (§ 1926.500(b)) rules, defines an ''opening'' as a gap or open space in a wall, partition, vertical walking-working surface, or similar surface that is at least 30 inches high and at least 18 inches wide through which a worker can fall to a lower level.

The final rule requires that employers protect workers on walking-working surfaces near openings (including openings with a chute attached) if the inside bottom edge of the opening is less than 39 inches above the walking-working surface and the outside bottom edge of the opening is four feet or more above a lower level. The employer must protect workers from falling through those openings by providing:

- Guardrail systems (final paragraph (b)(7)(i));
- Safety net systems (final paragraph (b)(7)(ii));
- Travel restraint systems (final paragraph (b)(7)(iii)); or
- Personal fall arrest systems (final paragraph (b)(7)(iv)).

The final rule, unlike the proposal (proposed paragraph (b)(7)(ii)), does not allow employers to use designated areas instead of providing conventional fall protection to protect workers from falling through openings. As discussed above, the final rule limits the use of designated areas to the limited and specific situation of work on low-slope roofs. Deleting the option of designated areas from final paragraph (b)(7) makes the provision consistent with the construction standard, which also does not allow the use of designated areas to protect workers from falling through openings (§ 1926.501(b)(14)).

The final rule simplifies, updates, and increases the control flexibility of the existing rule. For example, the final rule establishes one set of requirements that apply to all openings, while the existing rule, in § 1910.23(b), contains different provisions for different types of wall openings (*e.g.,* chute-wall, window-wall, and temporary wall openings). The final rule also incorporates new fall protection technology (*e.g.,* personal fall arrest systems, travel restraint systems, safety net systems) in place of some of the measures listed in the existing rule (*e.g.,* rail, roller, picket fence, half door, standard slats, standard grill work). OSHA believes that allowing employers to use new technology will enhance worker protection.

Finally, in several ways the final rule provides more flexibility than the existing rule. First, the final rule only requires employers to provide fall protection when the inside bottom edge of the opening is less than 39 inches above the floor or other type of walking-working surface, while the existing rule, with one exception, generally requires employers to protect wall openings regardless of the height of the bottom inside edge of the opening.[52] OSHA does not believe that it is necessary to provide fall protection when the bottom inside edge of openings are 39 inches or higher than the walking-working surface on which the worker is standing; in such cases, OSHA believes the wall or partition itself usually provides adequate protection against falling though the opening. Second, the final rule allows employers to use a wider range of fall protection options than the existing rule to protect workers near wall openings. OSHA believes the increased flexibility will ensure that workers have the most effective protection because employers will be able to select the fall protection option they determine works best in the particular situation. Finally, paragraph (b)(7) of the final rule, unlike the existing rule in § 1910.23(b)(1)) and (e)(10), does not require that employers install grab handles on each side of wall openings. OSHA believes that the fall protection options specified by final paragraph (b)(7) provide adequate protection from falls through wall openings, and therefore, grab handles are not necessary.

As discussed in the preamble to the proposed rule, when work operations require that workers reach through wall openings to facilitate hoisting materials, OSHA considers the opening to be a ''hoist area'' covered by final paragraph (b)(2), and not a wall opening. OSHA believes this distinction is important. Final paragraph (b)(7) allows employers to use guardrail, personal fall arrest, travel restraint, or safety net systems to protect workers from falling through wall openings. However, it is not always possible to use a safety net system to protect workers from falling when they are hoisting materials through an opening because a safety net system may interfere with materials being hoisted or may not provide a sufficient stopping distance to prevent a falling worker from making contact with the lower level. Accordingly, final paragraph (b)(2) specifies that employers must protect workers using only a guardrail, personal fall arrest, or travel restraint systems. Moreover, when workers need to lean out or over the edge of the hoist area, final paragraph (b)(2) requires that employers protect workers with personal fall arrest

[52] OSHA notes the existing provision (§ 1910.23(b)(3)) for window wall openings at stair landings, floors, platforms, or balconies did not require fall protection if the bottom edge of the opening is three feet or more above the landing, floor, platform, or balcony.

systems. Final paragraph (b)(7) does not contain the protective limitations specified by final paragraph (b)(2). OSHA did not receive any comments on proposed paragraph (b)(7), and adopts it as discussed.

Repair, service and assembly pits (pits) less than 10 feet deep. Final paragraph (b)(8), like the proposed rule, adds a new provision addressing fall hazards associated with repair, service, and assembly pits that are less than 10 feet deep. Employers use these pits primarily to provide access to the underside of vehicles to perform work, such as vehicle maintenance. Typically, a worker drives a vehicle over the pit and uses stairs to get into the pit. The final rule specifies that employers do not have to provide fall protection systems for service, repair, or assembly pits that are less than 10 feet deep, provided the employer:

• Limits access within six feet of the pit edge to authorized workers trained in accordance with final § 1910.30 (final paragraph (b)(8)(i));

• Applies floor markings or warning lines and stanchions, or a combination thereof, at least six feet from the pit edge. Floor markings must be a color that contrasts with the surrounding area and warning lines and stanchions must be capable of resisting, without tipping over, a force of at least 16 pounds that is applied horizontally against the stanchion at a height of 30 inches (final paragraph (b)(8)(ii)); and

• Posts readily visible caution signs that state ''Caution—Open Pit'' and meet the requirements of § 1910.145, Specifications for Accident Prevention Signs (final paragraph (b)(8)(iii)).

Final paragraph (b)(8) only applies to service, repair, and assembly pits that are less than 10 feet deep. For deeper pits, employers must provide a conventional fall protection system specified in final paragraph (b)(1), Unprotected sides and edges.

Neither the existing nor construction fall protection rules contain a similar provision on service, repair, and assembly pits. Historically, OSHA addressed these hazards through Section 5(a)(1) (General Duty Clause) of the OSH Act (29 U.S.C. 654).

The final rule recognizes that protecting workers from falling into service, repair, and assembly pits can present some unique issues. For example, for vehicle service and repair pits, the fall hazard is present only when a vehicle is not over the pit. Driving a vehicle over the pit normally eliminates the fall hazard. In addition, conventional fall protection systems may not work at service, repair, and assembly pits. For instance, using guardrails can interfere with driving vehicles over or away from a pit, and personal fall arrest and travel restraint systems may prevent workers from reaching the area where they need to perform work. Finally, it is OSHA's understanding that workers are unlikely to be near service, repair, and assembly pits when they are not working on vehicles.

OSHA believes the final rule strikes an appropriate balance between protecting workers and ensuring that they can repair, service, or assemble vehicles. The Agency believes that establishing well-marked areas (that is, floor markings or warning lines and stanchions, or both), along with posting caution signs, will be effective in warning authorized workers that they are about to enter a hazardous area, and other workers that they need to keep out of the area. In addition, limiting access within six feet of pits to those workers who the employer specifically assigns or allows to be in the area, and who, as a result of training, recognize the applicable fall hazards, will keep worker exposure to these hazards to a minimum.

OSHA received comments on the proposed provision from the American Trucking Associations, Inc. (ATA) and the American Truck Dealers Division of the National Automobile Dealers Association (NADA). Both organizations supported the proposed rule (Exs. 181; 187). NADA said, ''These proposed requirements should serve to adequately address the potential for fall hazards related to motor vehicle service pits'' (Ex. 181).

OSHA added a sentence to the final rule addressing the situation where two or more pits are in a common area and are not more than 15 feet apart. It specifies that OSHA employers may comply with final paragraph (b)(8)(ii) if they place contrasting floor markings at least six feet from the pit edge around the entire area of the pits. OSHA added the sentence to respond to a comment from ATA, which stated:

> OSHA should include a provision stating that when two or more pits are in a common area, a perimeter marking and the posting of appropriate warnings around the entire area will meet the requirements of this section. In addition, when the distance from a building entrance to the pit is less than 6 feet, a floor marking and warning sign at the entrance will satisfy the requirements (Ex. 187).

ATA also noted, ''In some large motor carrier facilities, there may be two or more adjacent pits in one area of the shop,'' that ''[t]he distance between pits can vary from 12 to 15 feet,'' and that ''the distance from the doorway to the closest portion of the pit . . . is less than six feet'' (Ex. 187). OSHA believes the added sentence in the final rule addresses ATA's concerns and finalizes the provision as discussed.

Fixed ladders (that extend more than 24 feet above a lower level). Final paragraph (b)(9) establishes fall protection requirements for fixed ladders that extend more than 24 feet above a lower level. Final § 1910.21(b), like the proposed rule, defines ''fixed ladder'' as a ladder with rails or individual rungs that is permanently attached to a structure, building, or equipment. Fixed ladders include individual rung ladders, but not ship stairs, step bolts, or manhole steps.

Final paragraph (b)(9), like the proposal, only requires that employers provide fall protection to those fixed ladders that extend more than 24 feet above a lower level. The existing rule (§ 1910.27(d)(1)(ii)) requires that fixed ladders more than 20 feet above a lower level be equipped with cages or wells. Changing the fall protection trigger height to 24 feet makes the final rule consistent with ANSI/ASC A14.3–2008 and OSHA's construction ladder standard (§ 1926.1053(a)(18) and (19)), which is one of the Agency's goals in this rulemaking. This change allows workers who perform both general industry and construction activities to use fixed ladders with the same fall protection trigger height.

Siebe North, Inc., a manufacturer of ladder safety systems and personal fall arrest systems, supported the proposed change in the fall protection trigger height for fixed ladders (Ex. OSHA–S041–2006–0666–0198). CSG and ISEA, on the other hand, argued that OSHA should require fall protection on fixed ladders from the ground up (Exs. 185; 198). As discussed above, limiting fall protection to fixed ladders that extend more than 24 feet above a lower level makes the final rule consistent with both OSHA's construction rule and the long-standing ANSI standard (A14.3). In any event, OSHA does not believe the change from the existing rule will affect worker safety substantially because fixed ladders that extend more than 24 feet must have fall protection systems that protect workers from the ground up even if workers climb the ladder less than 24 feet above the lower level.

In final paragraph (b)(9)(i), OSHA revises the existing fall protection requirements for fixed ladders. The final rule requires that employers equip fixed ladders with ladder safety systems or personal fall arrest systems to protect workers from falling to a lower level, which could result in death or serious injury. Final paragraph (b)(9)(i) establishes a new framework to protect workers from fall hazards on fixed ladders that allows employers to gradually, over 20 years, phases in ladder safety systems/personal fall arrest systems and phase out the use of cages and wells as a means of fall protection. After this 20-year period ends, the final rule requires that employers must ensure all fixed ladders are equipped with either ladder safety or personal fall arrest systems to protect workers from fall hazards. The final rule establishes the following phase-in/phase-out schedule:

- For existing fixed ladders (that is, for ladders erected before November 19, 2018)—employers have up to 20 years to install ladder safety or personal fall arrest systems (final paragraph (b)(9)(i)(A));
- For new fixed ladders (that is, for new ladders erected on or after November 19, 2018)—the employer must equip the new ladder with a ladder safety or personal fall arrest system (final paragraph (b)(9)(i)(B));
- For ladder repairs and replacements—when an employer replaces any portion of a fixed ladder the replacement must be equipped with a ladder safety or personal fall arrest system (final paragraph (b)(9)(i)(C)); and
- The final deadline for all fixed ladders—on and after November 18, 2036 all fixed ladders must be equipped with a ladder safety or personal fall arrest system (final paragraph (b)(9)(i)(D)). (See further discussion of phase-out schedule below.)

The gradual phasing out of cages and wells means that employers may continue to use existing fixed ladders during the 20-year phase-out period, even if the existing fixed ladders are equipped only with cages and wells. However, during the 20-year phase out period, when employers install new fixed ladders or replace a portion of a section on an existing fixed ladder, final paragraphs (b)(9)(i)(B) and (C) require them, respectively, to install a new fixed ladder equipped with a ladder safety or personal fall arrest system (when replacing the entire ladder) or equip the replacement section (*e.g.,* a ladder with multiple, offset sections) with a ladder safety system or personal fall arrest system (when replacing a portion of an existing fixed ladder). At the end of 20 years, final paragraph (b)(9)(i)(D) specifies that all fixed ladders must be equipped with ladder safety or personal fall arrest systems. (OSHA notes that after the 20-year phase out period ends employers may still have or equip fixed ladders with cages and wells, but OSHA will not consider them to be a means of fall protection.)

The proposed rule would have allowed employers to use cages, wells, ladder safety systems, or personal fall arrest systems when the length of a climb is less than 24 feet regardless of the height of the ladder (proposed § 1910.28(b)(9)(i)). When the total length of a climb on a fixed ladder is at least 24 feet, the proposed rule would have allowed employers to equip the fixed ladder with a ladder safety system, personal fall arrest system, cage or well (proposed § 1910.28(b)(9)(ii)). OSHA is phasing in the requirement to equip fixed ladder with ladder safety systems/personal fall arrest systems and phasing out the use of cages and wells as a means of fall protection because there is wide recognition in general industry that cages and wells neither prevent workers from falling off ladders nor protect them from injury when a fall occurs (*e.g.,* Exs. OSHA–S041–2006–0666–0198; 113; 155; 185; 198; 329 (1/21/2011), pgs. 18–19, 259). In general, stakeholders said cages and wells simply ''contain employees in the event of a fall and direct them to a lower landing'' rather than preventing them from hitting a lower level (Ex. 113; *see also* Exs. OSHA–S041–2006–0666–0198; 155; 185; 198; 329 (1/21/2011), pgs. 18–19, 259)). In addition, they also said fixed ladder cages and wells may result in severe injury or fatality and increase the severity of fall injuries (Ex. 113; 185; 198; OSHA–S041–2006–0666–0198). Therefore, they said OSHA should require that fixed ladders be equipped with ladder safety systems or personal fall arrest systems (Exs. OSHA–S041–2006–0666–0198; OSHA–S041–2006–0666–0354; 113; 155; 185; 198; 329 (1/21/2011), pgs. 18–19, 259).

As far back as 1990, when OSHA first raised the question about the effectiveness of cages and wells as a means of fall protection on fixed ladders, Siebe North, Inc., a manufacturer of ladder safety and personal fall protection systems, said OSHA should require that fixed ladders be equipped with ladder safety systems or personal fall arrest systems:

> Except to the extent that a cage or well will change the trajectory of a fall so that the victim falls directly to the base of the ladder, we are unaware of *any* empirical or other data which suggests that a cage or well will otherwise result in a fall which is not a free fall—or, more importantly, a fall likely to result in less severe injury than would be caused by a free fall of the same distance. (Indeed, most falls of any significant distance in cages, and probably in wells as well, are likely to add to the victim's trauma due to impacts with the cage or well during the course of the fall.)
>
> * * * * *
>
> As already noted, except to the extent that it directs the victim's falling body to the base of the ladder, a cage or well provides no protection for the falling climber. On the other hand, where a ladder safety device is used, a climber's fall is stopped in 2 feet or less, with no trauma from this short fall. When a fall *occurs,* a ladder safety device alone will *both save a life and prevent injury,* no matter where in the climb the fall begins. On the other hand, a cage or well will do neither. If the ladder is equipped with only a cage or well, whether a falling climber dies or merely lives with severe injury depends entirely on the length of the fall since the cage or well will have no protective effect (Ex. OSHA–S041–2006–0666–0198) (emphasis in original).

In response to the 2010 proposed rule, a number of commenters also agreed that employers need to equip fixed ladders with ladder safety systems/personal fall arrest systems because cages and wells are not effective fall protection measures (Exs. 113; 185; 198; 329 (1/18/2011), p. 96; 329 (1/21/2011), p. 259). For example, CSG said:

> [C]ages should not be used as an individual method of fall protection, but only in conjunction with a personal fall arrest/cable-and-rail system or a twin-leg lanyard. CSG recognizes that a cage system allows a measure of security. However, if a person does fall in a cage, OSHA is correct that the cage will direct the person to the ground, likely resulting in a severe injury or fatality (Ex. 198).

ISEA agreed with CSG (Ex. 185). The Oregon Department of Transportation (DOT) added:

> Ladder cages are an old technology used for decades before ladder safety systems were ever developed . . . [C]ages and wells are designed to ''. . . contain employees in the event of a fall and direct them to a lower landing.'' Cages provide little fall protection and no fall prevention. They do give a sense to the climber of being contained, and do provide a surface to rest against for a winded climber, but will not prevent a fall. Falls in cages can be very gruesome with the faller entangling themselves in the cage as they fall, sometimes tearing off body parts (Ex. 113).

Similarly, Ellis testified that OSHA should prohibit the use of cages and wells for fall protection because he said they are ineffective:

> [T]his may be the time to withdraw cages since they are ineffective. I refer to the [Health and Safety Executive] Report on their website relating to cages and the testing that's being done to show that they're incapable of stopping falls. It may not be OSHA's best move to keep citing a device that fails to work which most people would admit that you're not get stopped in a fall. The best that happens in a fall inside a cage is to be a—have a feeling of being contained. . . . (Ex. 329 (1/21/2011, p. 259)).

The Health and Safety Executive (HSE) report Ellis cited was

''Preliminary investigation into the fall-arresting effectiveness of ladder safety hoops'' (Research Report 258–2004).[53] The Executive Summary states:

> After studying the information from the references, the survey, from the accident database and the results from testing, it seems clear that caged ladders cannot provide positive fall-arrest capability, especially in the case of the three-upright design which was tested as part of this research. There is every possibility of a fall down the cage to the ground or other platform.
>
> There would appear, or so it seems, a possibility to stop the fall of a worker in certain circumstances, but this depends upon the attitude of the worker both before the fall and during the fall, and whether or not the worker manages to catch part of his or her body in one of the cage apertures, or manages to trap themselves in the cage some other way. In any event, it is a chance occurrence, and the opinion is that even if the worker could be caught by the cage, it could lead to significant if not fatal injury.
>
> The accidents reviewed indicate that workers fall down cages to the next level and are rarely caught. Injuries have been reported. Even if a fall is halted by limb entanglement within a cage, rescue would be extremely difficult process to carry out successfully (Ex. 392).

OSHA believes there is substantial evidence in the rulemaking record to support eliminating the use of cages and wells as a means of fall protection on fixed ladders. Therefore, for the reasons discussed above, OSHA is phasing out their use and requiring that employers equip fixed ladders with ladder safety systems or personal fall arrest systems according to the schedule established in final paragraph (b)(9)(i).

OSHA believes that gradually phasing out the use of cages and wells as a means of fall protection over 20 years and requiring employers to provide ladder safety systems/personal fall arrest systems prospectively (that is, when installing new fixed ladders or replacing a portion of an existing fixed ladder section) is a safe, cost-effective way to increase worker protection beyond the existing and proposed rules, and will not pose difficulties or undue burdens for employers. For example, ladder safety and personal fall arrest systems generally are less costly and easier to install on fixed ladders than cages and wells. OSHA believes that providing 20 years to phase out cages and wells gives employers ample time to plan and carry out this transition as part of their normal business and replacement cycles, instead of retrofitting fixed ladders. According to the FEA, the useful life of a large majority of fixed ladders will be exhausted within 20 years.

Several stakeholders specifically recommended that OSHA prospectively require new fixed ladder be equipped with ladder safety systems/personal fall arrest systems (Exs. OSHA–S041–2006–0666–0198; 113; 329 (1/21/2011), p. 18–19). For example, Siebe North supported installing ladder safety systems/ personal fall arrest systems ''in the design stage'' because ''ladder safety devices can be engineered into and installed as part of the original ladder installation without any extra hazardous exposure to the installation workers,'' adding that ''well or cage installations hazards will always be significantly greater than the installation hazards for ladder safety devices'' (Ex. OSHA–S041–2006–0666–0198). The American Wind Energy Association said:

> Technology in fall protection has developed to the point where suitable solutions exist for the protection of climbers for fixed ladders. At a minimum, new installation of fixed ladders, that meet the trigger heights and length listed, should include falling-object for workers regardless of the industry. The wind industry is an example of a new industry that has embrace ladder-climbing systems across-the-board (Ex. 329 (1/21/2011), pgs. 18–19).

Siebe North also indicated that requiring employers to install ladder safety systems/personal fall arrest systems instead of cages/wells was cost effective, ''For a 50-foot climb, a ladder safety device would cost about $500 installed, but a case or well would cost in excess of $1,500'' (Ex. OSHA–S041–2006–0666–0198). Clear Channel Outdoor indicated that equipping billboard ladders with ladder safety systems/personal fall arrest systems would cost significantly less than installing cages and wells (Ex. 329 (1/18/2011), pgs. 134–35). Ameren Corporation recommended grandfathering in all existing ladders ''due to the potential financial impact'' (Ex. 189).

As mentioned, OSHA believes the prospective application of the requirement to equip fixed ladders with ladder safety systems or personal fall arrest systems will not pose financial hardship on employers. According to CSG, it is ''common'' for fixed ladders manufactured today to be equipped with ladder safety systems (Ex. 329 (1/18/2011), p. 104).

As mentioned, final paragraph (b)(9)(i) also establishes the cage and well phase-out dates for existing, new, replacement, and eventually all fixed ladders (*i.e.,* a final deadline when employers may no longer use cages and wells as a means of fall protection on any fixed ladder):

Existing fixed ladders.[54] Final paragraph (b)(9)(i)(A) requires that employers ensure existing fixed ladders are equipped with at least one of the following four devices no later than November 19, 2018:

- A cage;
- A well;
- A ladder safety system; or
- A personal fall arrest system.

Although the existing rule requires that employers already must have installed cages or wells on fixed ladders, the record indicates some have not. Therefore, OSHA is giving employers two years to come into compliance with the existing rule (existing § 1910.27). Providing two years will ensure that employers have adequate time to order and install devices on fixed ladders and will reduce costs for employers who have ordered and not yet installed new fixed ladders equipped with cages or wells. Although the final rule is phasing out the use of cages and wells as a fall protection device, final paragraph (b)(9)(i) allows employers to continue to use existing fixed ladders that have a cage or well, but not ladder safety or personal fall arrest system, until:

- The fixed ladder, cage, or well, of portion of it is replaced (final paragraph (b)(9)(i)(C)); or
- November 18, 2036 (final paragraph (b)(9)(i)(D)), whichever comes first.

This means that employers may not have to install ladder safety or personal fall arrest systems on their existing fixed ladders for up to 20 years. However, OSHA believes that many employers already have installed ladder safety systems and personal fall arrest systems or will install those systems long before the 20-year deadline comes due.

Like final paragraph (b)(9)(i)(A), ANSI/ASC A14.3–2008 (Section 1.6.1) generally permits employers to use existing fixed ladders without change. The requirements of ANSI/ASC A14.3–2008 do not apply to existing fixed ladders, provided that the ladder was in compliance with a Federal, state, or national consensus standard at the time it was installed and there is documentation available to substantiate that (Section 1.6.1(1)), or a person competent in structural design determines that any differences in the existing ladder are such that its performance ''will not substantially deviate from the requirements'' of ANSI/ASC A14.3–2008 (Section 1.6.1(2)).

[53] The HSE Report is available at *http://www.hse.gov.uk/research/rrpdf/rr258.pdf.*

[54] For purposes of final paragraph (b)(9)(i)(A), the term ''existing fixed ladder'' includes any fixed ladder installed before November 19, 2018.

OSHA believes that most fixed ladders, except for some used in outdoor advertising, already have at least one of the four devices final paragraph (b)(9)(i)(A) requires and, therefore, will be able to continue using those ladders under the final rule. At a minimum, OSHA believes that most existing fixed ladders have cages or wells, which the existing rule (§ 1910.27(d)(1)(i)) has required since the Agency adopted it pursuant to section 6(a) of the OSH Act (29 U.S.C. 655(a)). Evidence discussed in the FEA also indicates that a significant percentage of employers already have ladder safety or personal fall arrest systems on existing fixed ladders.

For fixed ladders that do not have any fall protection, which appears to be the case in the outdoor advertising industry, final paragraph (b)(9)(i)(A) requires that employers install a cage, well, ladder safety system, or personal fall arrest system before November 19, 2018. OSHA believes that most of those employers will install ladder safety or personal fall arrest systems during that time. First, according to the FEA, those systems generally are less expensive than cages or wells. Second, even ANSI/ASC A14.3–2008 requires the use of ladder safety systems for some climbs (Sections 4.1.3, 4.1.4, 4.1.4.2). However, the Agency notes that employers also will be in compliance if they install cages or wells on existing fixed ladders during the first two years after the final rule is published.

One commenter, Ameren, said OSHA should make allowances for employers who have ordered fixed ladders but not yet received and installed them (Ex. 189). They said that it may take up to one year to receive a fixed ladder after placing the order. Final paragraph (b)(9)(i)(A) gives employers two years to install fall protection devices on their fixed ladders. As mentioned, OSHA considers ladders installed during this two-year period to be ''existing fixed ladders,'' which means employers may install any of the four devices specified in final paragraph (b)(9)(i)(A). Thus, employers will not have to change their orders if they purchased fixed ladders equipped with a well or cage. That said, OSHA believes many employers will change their orders to ladder safety or personal fall arrest systems which are less expensive than cages and wells and brings employers into compliance with final paragraph (b)(9)(i)(D) without having to make changes when the final phase-out deadline comes due.

New fixed ladders. Final paragraph (b)(9)(i)(B) requires that employers ensure new fixed ladders they install on and after November 19, 2018 are equipped with a ladder safety system or personal fall arrest system. Requiring that new fixed ladders, rather than existing fixed ladders, be equipped with ladder safety or personal fall arrest systems makes the final rule primarily prospective. OSHA believes that employers should not have any difficulty complying with this approach.

OSHA believes virtually all new fixed ladders manufactured and installed today are available with ladder safety and personal fall arrest systems. Allowing employers two years to begin equipping new fixed ladders with ladder safety or personal fall arrest systems gives employers adequate time to identify companies that manufacture fixed ladders equipped with these systems. OSHA notes that the 2-year phase-in also gives ladder manufacturers time to ensure their ladder safety and personal fall arrest systems comply with the personal fall protection system criteria in the final rule (final § 1910.29).

OSHA points out that final paragraph (b)(9)(i)(B) does not prohibit employers from also installing cages and wells on new fixed ladders in addition to ladder safety or personal fall arrest systems. Cages and wells can provide a way for workers to rest while they are climbing and working on fixed ladders. However, OSHA stresses that employers may not use cages and wells instead of providing ladder safety and personal fall arrest systems. In addition, employers must ensure that the cages and wells are compatible with and do not interfere with the ladder safety or personal fall arrest systems. (See final paragraph (b)(9)(iv) for further discussion.)

Unlike final paragraph (b)(9)(i)(B), ANSI/ASC A14.3–2008 does not require that employers ensure new fixed ladders they install are equipped with ladder safety systems or personal fall arrest systems; but rather allows employers to install new ladders that only have cages or wells in some situations. For example, that standard allows employers to install new fixed ladders equipped with only cages where the length of any climb is less than 24 feet even though the top of the ladder is at a distance greater than 24 feet above a lower level (Section 4.1.2). Similarly, A14.3–2008 allows employers to install only cages or wells on new multiple-section fixed ladders that do not have a single length of climb exceeding 24 feet, provided each ladder section is offset horizontally from adjacent sections and there is a landing platform for safe access/egress (Section 4.1.4.1). That standard only requires employers to use ladder safety systems when a single length of climb exceeds 24 feet (Section 4.1.3) or the length of climb on multiple section ladders exceeds 50 feet (Section 4.1.4.2).

Final paragraph (b)(9)(i)(B) does not adopt the approach in ANSI/ASC A14.3–2008. As discussed above, evidence in the record shows that cages and wells do not prevent workers from falling off ladders or protect workers from injury if they fall (*e.g.,* Exs. 113; 155; 185; 198; OSHA–S041–2006–0666–0198). OSHA believes the final rule, requiring that employers ensure new fixed ladders are equipped with ladder safety systems or personal fall arrest systems, is more protective than ANSI/ASC A14.3–2008. In addition, OSHA believes the final rule is easier to understand and follow than specifying the type of fall protection employers must provide based on the length of the worker's climb, as A14.3–2008 requires.

Replacement. Final paragraph (b)(9)(i)(C) requires that employers ensure when a fixed ladder, cage, or well, or any portion of a section thereof is replaced, a personal fall arrest system or ladder safety system is installed in at least that section of the fixed ladder, cage, or well where the replacement is located. Unlike final paragraph (b)(9)(i)(B), which does not become effective until November 19, 2018, any replacement installed after the final rule becomes effective, which is January 17, 2017, must be equipped with a ladder safety system or personal fall arrest system.

Final paragraph (b)(9)(i)(C) does not require that employers install ladder safety or personal fall arrest systems when they make minor repairs to fixed ladders, cages, or wells, such as replacing a bolt or repairing a weld on a cage. However, when employers determine that they cannot simply make a repair to a section or a portion of a section of a fixed ladder, cage, or well but must replace that portion or section, employers must ensure the replacement is equipped with a ladder safety or personal fall arrest system. OSHA believes the inspection requirement in final § 1910.22(d) will help employers identify when simple repairs or corrections will be adequate and when the situation, such as a condition that affects the structural integrity of the fixed ladder, cage, or well, necessitates replacement of the fixed ladder, cage, or well section.

OSHA also notes that when ''a portion of a section'' of a fixed ladder, cage, or well needs replacement, the final rule only requires the employer to install a ladder safety or personal fall arrest system in that ''section of the fixed ladder, cage, or well where the replacement is located.'' The final rule does not require employers to install a ladder safety or personal fall arrest system on the entire fixed ladder when a portion of one section needs replacement. For example, only part of a 50-foot section of a cage, well or multi-section ladder might need replacement because of damage. Final paragraph (b)(9)(i)(C) only requires that the employer replace that 50-foot section of the ladder, cage, or well with a ladder safety system or personal fall arrest system, not all sections. OSHA believes that a ''section'' of a fixed ladder equipped with a cage or well most likely will not exceed 50 feet. In this regard, ladder sections are the length of ladder between landings or platforms, and final paragraph (b)(9)(iii) requires that fixed ladders that have cages or wells must have landing platforms at least every 50 feet.

The approach ANSI/ASC A14.3–2008 follows when existing fixed ladders are replaced, modified, or repaired differs from the final rule in two respects. First, when existing fixed ladders are replaced, modified, or repaired, the ANSI/ASC standard specifies that employers may install cages or wells instead of ladder safety systems or personal fall arrest systems in some situations (see discussion of final paragraph (b)(9)(i)(B)). Second, the ANSI/ASC standard requires that employers only have to install cages, wells, or ladder safety systems when they make repairs to more than 25 percent of the whole ladder. OSHA believes that requiring employers to install personal fall arrest or ladder safety systems when repairs necessitate replacement of a portion of a fixed ladder, cage, or well is more protective than allowing employers to wait until more than 25 percent of the fixed ladder is in need of repair. In fact, the final rule prohibits that approach. Section 1910.22(d)(2) requires that hazardous conditions be repaired immediately and, if that is not possible, guarded so workers cannot use the walking-working surface until it is fixed (final § 1910.22(d)(2)). Moreover, as discussed above, the record indicates that installing ladder safety systems or personal fall arrest systems instead of cages or wells also is more protective.

Again, this provision does not prohibit employers from keeping those portions of a cage or well that are functioning properly, or installing a new cage or well, provided the employer also installs a personal fall arrest or ladder safety system as final paragraph (b)(9)(i)(B) requires, and the cage or well does not interfere with the fall protection system.

Final deadline. Finally, final paragraph (b)(9)(i)(D) establishes the final deadline for employers to ensure that all fixed ladders that extend more than 24 feet above a lower level are equipped with ladder safety or personal fall arrest systems, which, as mentioned, is 20 years after OSHA publishes the final rule. By that date (November 18, 2036), and thereafter, employers must ensure that all fixed ladders are equipped with personal fall arrest or ladder safety systems, even if the ladders have cages or wells.

OSHA set the extended phase-out period to take into account normal replacement and average useful life of fixed ladders, cages, and wells. After 20 years, OSHA estimates that the large majority of fixed ladders will have been replaced or in need of replacement. Even ANSI/ASC A14.3–2008 notes that while ''[fixed] ladders are designed for extended service,'' they ''are neither designed nor intended to possess an infinite safe useful life'' (Section 9.1.3).

OSHA also believes the extended phase-out lessens the compliance burden on employers, provides a smooth transition to update ladder systems, and allows employers to install ladder safety and personal fall arrest systems according to normal replacement schedules. In addition, OSHA believes that, through replacement and new installations, the vast majority of fixed ladders will have ladder safety or personal fall arrest systems before the time the final deadline arrives.

Final paragraph (b)(9)(ii) adds new requirements for one-section fixed ladders that are equipped with personal fall arrest systems or ladder safety systems and fixed ladders equipped with those systems on more than one ladder section. For these ladders, the final rule requires that employers ensure:

- The personal fall arrest or ladder safety system provides protection throughout the entire vertical distance of the ladder, including all ladder sections (final paragraph (b)(9)(ii)(A)); and
- The ladder has rest platforms provided at least every 150 feet (final paragraph (b)(9)(ii)(B)).

In final paragraph (b)(9)(ii)(A), OSHA clarified the proposed language (''vertical distance'') so the Agency could eliminate the need for the proposed note to paragraph (b)(9). OSHA stresses that the entire vertical distance of a fixed ladder includes all sections of a ladder, as well as any vertical distance in between ladder sections (sometimes referred to as ''entire length of climb''). This means that employers must protect workers for the entire vertical distance of fixed ladders equipped with ladder safety or personal fall arrest systems. The final provision also addresses the hazard of attempting to connect to a ladder safety or personal fall arrest system part way through a climb (*i.e.,* at 24 feet), which would require that the worker release one hand from the ladder, and thereby increase the risk of falling. This requirement is consistent with the construction fall protection standard and ANSI A14.3–2008 (Section 7.1.6).

OSHA notes that final paragraph (b)(9)(ii)(A) does not apply when only one section of a multiple-sectioned fixed ladder has a personal fall arrest system or ladder safety system and the other sections have only cages or wells. In this case, final paragraph (b)(9)(i)(C) applies, and employers need only ensure that the ladder safety or personal fall arrest system protects the worker during that section of the climb. However, when one-section fixed ladders and multiple sections of a fixed ladder have a ladder safety or personal fall arrest system, final paragraph (b)(9)(ii)(A) applies, and the employer must ensure the system protects the worker throughout the entire climb. The Agency does not believe that complying with final paragraph (b)(9)(ii)(A) should pose difficulties for employers. Rather, OSHA believes that if employers must install a ladder safety or personal fall arrest system, it is likely they will install the system on the entire fixed ladder (including all ladder sections). This is particularly true if the employer anticipates that other sections of the fixed ladder, cage, or well also will need replacement at some point.

Paragraph (b)(9)(ii)(B), like the proposal, requires that employers ensure fixed ladders that have personal fall arrest or ladder safety systems also have landing platforms at intervals of at least every 150 feet. This final provision generally is consistent with OSHA's construction ladder standard and ANSI A14.3–2008. OSHA's ladder standard for construction requires that fixed ladders with self-retracting lifelines have rest platforms every 150 feet, while the ANSI standard requires that fixed ladders equipped with ladder safety systems have rest platforms at the same intervals (Section 4.1.4.2). OSHA received no comments on the proposed provision and finalizes it as discussed.

Final paragraph (b)(9)(iii), like proposed paragraph (b)(9)(ii)(C), applies during the gradual phase out of cages and wells. The final rule requires that employers ensure ladder sections that have cages or wells:

• Are offset from adjacent sections (final paragraph (b)(9)(iii)(A)); and

• Have landing platforms provided at maximum intervals of 50 feet (final paragraph (b)(9)(iii)(B)).

Final paragraph (b)(9)(iii) is the same as the ladder standard for construction (§ 1926.1053(a)(19)(iii)). ANSI/ASC A14.3–2008 requires that each section of multiple section ladders equipped with only cages or wells be horizontally offset from adjacent sections and have landing platforms to provide safe access/egress (Section 4.1.4.1). Figure 5a in the A14.3 standard specifies platform landings at intervals of at least 50 feet. The existing rule in § 1910.27(d)(2), however, requires landing platforms at 30-foot intervals if the fixed ladder has a cage or well, and at 20-foot intervals when there is no cage or well. OSHA based the existing rule on the ANSI A4.13–1956 rule in effect at the time. OSHA believes that making final paragraph (b)(9)(iii) consistent with the construction ladder requirements and the current ANSI A14.3–2008 standard will allow workers who perform both general industry and construction activities to use the same fixed ladders while cages and wells are being phased out. OSHA notes that once employers equip fixed ladders with a ladder safety or personal fall arrest system this provision no longer applies, even if the ladder also still has the cage or well.

David Hoberg, with DBM Consultants, supported the provision requiring that fixed ladders have landing platforms, stating:

> [H]aving climbed ladders of up to 125 feet and supervised persons using them, you would not believe the difference a landing makes. A hand cramping stops the climb. And try climbing a ladder as a first responder wearing 100 lbs. of gear where there is no landing to stage equipment or rest or take action (Ex. 206).

The provision is finalized with minor reorganization for clarity.

Final paragraph (b)(9)(iv) is a new provision OSHA added to the final rule that allows employers to use cages and wells in combination with personal fall arrest and ladder safety systems, provided the cages and wells do not interfere with the operation of the system. The proposed rule did not specifically address this issue, but ANSI A14.3–2008 (Section 4.1.6) allows the use of ladder safety systems in combination with a cage. OSHA is adding this provision to clarify that employers do not have to remove cages or wells when they install a required ladder safety or personal fall arrest system, provided the cage or well does not interfere with the operation of the required ladder safety or fall protection system. If a cage or well prevents a personal fall arrest or ladder safety system from operating properly, then the employer must remove the cage or well to protect workers from falling or otherwise incurring an injury.

OSHA received one comment about using ladder safety or personal fall arrest systems in combination with cages or wells. Ellis urged that OSHA prohibit the use of ladder safety devices inside ladder cages because the rear bars of ladder cages can ''pitch the body forward which is tantamount to free fall'' (Ex. 155). The Agency believes that the language addressing interference in final paragraph (b)(9)(iv) resolves Ellis' concern without limiting employer flexibility or compromising worker safety.

Outdoor advertising. Final paragraph (b)(10) addresses fall hazards on fixed ladders used in outdoor advertising (billboards). Final paragraph (b)(10), in combination with final paragraph (b)(9), revises the proposed rule to require that employers ensure their workers use fall protection while climbing fixed ladders that extend more than 24 feet above a lower level. This provision ensures that workers in outdoor advertising will have the same protection from fall hazards as other general industry workers who climb fixed ladders.

The effect of the final rule is to phase out the fall protection exception that OSHA established in the 1991 Gannett variance (56 FR 8801 (3/1/1991)) and the 1993 directive extending the variance to the entire outdoor advertising industry (Fixed Ladders Used on Outdoor Advertising Structures/Billboards in the Outdoor Advertising Industry, STD 01–01–014 (1/26/1993)). (Hereafter, the Gannett variance and OSHA directive are collectively referred to as ''outdoor advertising directive.'') The outdoor advertising directive excepted that industry from complying with existing requirements that fixed ladders have cages or wells (existing § 1910.27(d)(1)(ii)), and landing platforms (existing § 1910.27(d)(2)). The effect of the directive is that workers in the outdoor advertising industry may climb fixed ladders, in some situations, without conventional fall protection (*e.g.,* cages, wells, and ladder safety and personal fall arrest systems), provided employers ensure that:

• Each worker wears a safety belt or harness with an appropriate 18-inch rest lanyard when climbing up to 50 feet or heights up to 65 feet from grade on a combination ladder consisting of a portable ladder and a fixed ladder;

• Each worker keeps both hands free of tools or materials when climbing;

• Each worker uses a ladder safety system for climbs on fixed ladders that exceed 50 feet or when the ladder ascends to heights that exceed 65 feet above grade;

• Each worker who climbs fixed ladders equipped with ladder safety devices uses those devices properly and follows appropriate procedures for inspection and maintenance of those devices;

• The employer ensures proper maintenance and use of ladder safety devices that are installed on fixed ladders;

• Each worker uses an appropriate fall protection system after reaching the work position; and

• Each qualified climber receives training and demonstrates the physical capability to perform necessary climbs safely. In this regard, the employer must ensure that: The worker's physical condition is such that climbing will not impair the worker's health or safety; the worker completes training consisting of classroom training, observing an experienced qualified climber, and actual climbing under close supervision using redundant safety equipment; and the worker works without fall protection only after demonstrating the necessary ability and skill in climbing (STD 01–01–014).

The proposed rule would have codified the specifications contained in the outdoor advertising directive, thus allowing outdoor advertising workers to continue climbing fixed ladders without fall protection so long as they complied with all of the provisions the directive included.

The final rule, however, does not adopt the proposal. Instead, final paragraph (b)(10)(i) specifies that the fall protection requirements for fixed ladders in final paragraph (b)(9) also apply to fixed ladders used in outdoor advertising. This means that outdoor advertising employers must ensure, in accordance with final paragraph (b)(9)(i)(A), that fixed ladders are equipped with a ladder safety system, personal fall arrest system, cage, or well before November 19, 2018. In addition, they must follow the schedule in final paragraph (b)(9)(i) for gradually phasing in the installation of ladder safety and personal fall arrest systems on fixed ladders.

Final paragraph (b)(10)(i) also requires that employers in outdoor advertising follow other provisions in revised subparts D and I, such as the inspection and maintenance requirements in final § 1910.22, the training requirements in final § 1910.30, and the criteria for personal fall protection systems in § 1910.140.

Final paragraph (b)(10)(ii) establishes the requirements that outdoor advertising employers must follow during the phase-in period (two years) they have to install a cage, well, ladder safety system or personal fall arrest system. During this period when outdoor advertisers have not yet installed fall protection, employers must ensure that each worker:

- Receives training and demonstrates the physical capability to perform the necessary climbs in accordance with final § 1910.29(h) (final paragraph (b)(10)(ii)(A));
- Wears a body harness equipped with an 18-inch rest lanyard (final paragraph (b)(10)(ii)(B));
- Keeps both hands free of tools or material while climbing the fixed ladder (final paragraph (b)(10)(ii)(C)); and
- Is protected by a fall protection system upon reaching the work position (final paragraph (b)(10)(ii)(D)).

The requirements in final paragraph (b)(10)(ii) are limited and temporary. First, they only apply to fixed ladders used in outdoor advertising that are not equipped with any type of fall protection. Once a fixed ladder used for outdoor advertising is equipped with one of these systems, the requirements in final paragraph (b)(10)(ii) no longer apply. Instead, the requirements in final paragraphs (a) and (b)(9), final § 1910.29, and final § 1910.140 apply to outdoor advertising employers and fixed ladders used in outdoor advertising.

Second, final paragraph (b)(10)(ii) is only a temporary provision. It is applicable only before November 19, 2018. As of November 19, 2018, final paragraph (b)(9)(i)(A) requires that employers must ensure all existing fixed ladders, including those used for outdoor advertising activities, are equipped with a cage, well, ladder safety system, or personal fall arrest system. Thus, as of November 19, 2018, the requirements in final paragraph (b)(10)(ii) no longer apply and the provision, in essence, expires. In their place, as stated above, the requirements in paragraphs (a) and (b)(9), as well as other fall protection system requirements in the final rule, apply to outdoor advertising employers. OSHA notes that the requirements in final § 1910.29(h), which apply when workers climb fixed ladders without fall protection to perform outdoor advertising activities, also are temporary. As of November 19, 2018, the requirements in § 1910.29(h) no longer will apply since, in accordance with final paragraph (b)(9)(i)(A), all fixed ladders used for outdoor advertising will be required to be equipped with a personal fall arrest system, ladder safety system, cage, or well.

Final paragraph (b)(10)(ii)(A) requires that outdoor advertising employers ensure that each worker who climbs a fixed ladder that is not equipped with a personal fall arrest system, ladder safety system, cage, or well, receives training and demonstrates the physical ability to climb fixed ladders. Employers may comply with the training final paragraph (b)(10)(ii)(A) requires by ensuring that workers have completed a training or apprenticeship program, provided the program includes hands-on training on climbing ladders safely, performance observation combined with formal classroom or on-the-job training, and retraining as necessary (final § 1910.29(h)(2) and (3)).

OSHA notes that employers must ensure the requirement in final paragraph (b)(10)(ii)(A) to demonstrate physical capability must include either a physical examination or observation of the worker performing actual climbing activities (final § 1910.29(h)(1)). Final § 1910.29(h) discusses in detail the training and physical capacity requirements in final paragraph (b)(10)(ii)(A). OSHA notes that this training is in addition to the training outdoor advertising employers must provide to their workers under final § 1910.30.

Final paragraph (b)(10)(ii)(B) requires that outdoor advertising employers ensure workers who climb fixed ladders without fall protection wear body harnesses equipped with an 18-inch rest lanyard. OSHA's intention in requiring that outdoor advertising workers wear body harnesses with rest lanyards is that employers must ensure workers tie off to the fixed ladder when they need to rest during the climb.

The final rule differs from proposed (b)(10)(i) and outdoor advertising directive, both of which permit outdoor advertising employers to provide a body harness or body belt for workers to use for resting during a climb. However, as discussed in final § 1910.140, the final rule does not permit the use of body belts as a part of a personal fall arrest system; thus, OSHA deleted body belts from final paragraph (b)(10)(ii)(B). This revision also makes the final provision consistent with OSHA's construction industry rule, which also does not allow use of body belts for personal fall arrest (§ 1926.502(d)).

Final paragraph (b)(10)(ii)(C) requires employers to ensure that workers engaged in outdoor advertising keep both hands free of tools or material when climbing fixed ladders. This requirement ensures that workers use their hands exclusively for climbing and not carrying tools and material up and down fixed ladders. When workers climb fixed ladders without fall protection, it is essential that they maintain balance and body control. Carrying tools and materials in their hands while they climb may cause workers to lose their balance, which could result in a fall. Both the proposed rule at paragraph (b)(10)(vi) and the outdoor advertising directive include this requirement. In addition, it is consistent with final paragraphs § 1910.23(b)(12) and (13), the construction standard (§ 1926.1053(b)(21) and (22)), and ANSI A14.3–2008 (Section 9.2.1 and 9.2.2).

Final paragraph (b)(10)(ii)(D), like the proposed rule at paragraph (b)(10)(vii) and the outdoor advertising directive, requires outdoor advertising employers to provide workers who climb fixed ladders with, and ensure that they use, a fall protection system once they reach the work position/platform. Thus, when workers step onto the work platform, they must be tied off or otherwise protected from falling (*e.g.,* guardrails). OSHA believes this requirement is necessary because outdoor advertising employers typically install platforms at great heights. The final provision allows employers to use any type of fall protection system specified by final paragraph (b)(1) to protect workers from falling off an unprotected side or edge, including guardrail, safety net, travel restraint, positioning, or personal fall arrest systems.

OSHA requested comment in the proposed rule about eliminating the qualified climber exception for the outdoor advertising industry and instead require fixed ladders used in outdoor advertising to be equipped with the same fall protection as other fixed ladders under the general industry standard (75 FR 28869). In response, OSHA received many comments. A number of commenters, including several fall protection equipment manufacturers, safety organizations, and safety professionals who provide fall protection services, opposed retaining the qualified climber exception in the final rule (Exs. 155; 185; 198; 250). For several reasons, these commenters opposed including in the final rule a qualified climber exception for any industry. These reasons included the dangers of climbing without fall protection; the questionable need for the qualified climber exception in the outdoor advertising industry when compared to other industries; and the ready availability of feasible and easy to use fall protection (*e.g.,* Exs. 155; 185; 198; 205; 250). For example, American Society of Safety Engineers (ASSE) said:

The idea that it is somehow acceptable to climb high distances without fall protection contradicts OSHA's proposed fixed ladder standard requiring a ladder safety system or a cage/well when the total length of a climb exceeds 24 feet. Our members fail to understand why fixed ladders between 24–50 feet in height used in outdoor advertising should be different than other industry ladders used at the same heights. Further, the technology is readily available to provide protections for the fixed ladder (Ex. 127).

ISEA and CSG also voiced opposition to a qualified climber exception for outdoor advertising:

Their situation is not unique. Right now there are many systems available to provide fall arrest as soon as these workers leave the ground. In fact, this type of equipment is used today, so the burden on employers is slight.

OSHA asks about technological and economic feasibility of fall protection for this type of work. Because this industry is constantly improving its offerings and developing new solutions for employers and employees, it is safe to say there has been marked improvement in ladder systems over the past 20 years. In addition, ladder climbing systems are becoming increasingly common.

Finally, Assistant Secretary Michaels has been speaking about fostering a greater culture of safety in U.S. workplaces. Providing an exemption from use of fall protection for those working at dangerous heights seems to run counter to this message (Exs. 185; 198).

The Society of Professional Rope Access Technicians (SPRAT) agreed, saying:

[I]n light of advances in technology and accepted practices for safe alternatives such as Rope Access, twin lanyards, and lead climbing, elimination of the Qualified Climber provision may be timely and appropriate. Variations on these concepts are already accepted methodologies in international fall protection regulations, including ISO, BSA, and Australia. Granted, a 100% tie-off approach may be onerous to implement all at once, but implementation could be phased over several years to help ameliorate the impact (Ex. 205).

Ellis made a similar comment:

This concept of a safe climber who does not need fall protection on ladders or step bolts for climbing towers is a timeworn concept whose day has passed. Protection should be required. Use of rope access teams for work at heights . . . and always using fall protection is what has already arrived in many countries of the world including most of Europe, Australia and South Africa (Ex. 155).

Finally, Damon, Inc., opposed the qualified climber exception because it suggests that older, experienced workers climb better with age while data actually shows that ''older workers have a disproportionate share of fatal falls from ladders'' (Ex. 250).

Many commenters, primarily those in the outdoor advertising industry (Exs. 121; 260; 359; 369) and employees of Lamar Advertising (Lamar) (*e.g.,* Exs. 75; 80; 81; 82; 83; 84; 85; 86; 87; 88; 89; 90; 91; 92; 93; 94; 95; 99; 104; 105; 106; 128), supported codifying the outdoor advertising directive for fixed ladders used in outdoor advertising. For example, Clear Channel Outdoor, Inc. (CCO), and the Outdoor Advertising Association of America (OAAA) supported codifying the outdoor advertising directive because the industry has been operating under it for over two decades (Exs. 121; 329 (1/18/2011, pgs. 113–116)). Many Lamar employees also said they followed the requirements of the outdoor advertising directive for more than two decades and are familiar with the requirements. In this regard, Joseph Shopshear, a Lamar operations manager, said Lamar based its worker safety programs on the Gannett variance, and that ''[t]he Gannett Variance is a very important first step in our safety program and other safety related programs and has been since my employment began with Lamar'' (Ex. 81). Similarly, William DeVine, another Lamar operations manager, said the Gannett variance is the ''forefront'' of the company's safety meetings, the qualified climber qualifications, and the ''backbone'' of their training program (Ex. 94). Therefore, he:

[U]rge[s] OSHA to allow this variance to remain in effect. Any other legislation could immediately affect my job and others around me . . . I do support the Gannet[t] Variance wholeheartedly and request that it remain permanent in the newest legislation . . . The Gannett Variance as written will continue to protect me and my fellow climbers and provide the safest of work environments . . . (Ex. 94)

Several commenters said that OSHA should codify the qualified climber exception for outdoor advertising because they have not experienced any fatalities related to climbing fixed ladders without fall protection, and falls are ''extremely rare'' (Exs. 106; 260; 329 (1/18/2011, pgs. 113–19); 369). For example, Mike Gentile, another Lamar operations manager, said, ''There has been over a million climbs made by all billboard personnel in California in the past ten (10) years on fixed ladders. To date, I am not aware of one single fall'' (Ex. 106). CCO, which asserted in its comments on the proposed rule that ''CCO employees simply do not fall from fixed ladders'' (Ex. 121), expanded on this assertion in its post-hearing comments, stating:

The past eighteen years has clearly established that the Gannett Variance works very well for this industry. There have been zero fatalities and industry is aware of only one fall from a fixed ladder, one, despite literally millions of climbs. The hard evidence proves that the variance works and the numbers could only get worse if the variance is not codified into the new regulations (Ex. 369).

OAAA, reporting on information from industry members, said, ''From a safety standpoint, our companies report that no deaths due to falls from fixed ladders have occurred in the past five years; of the 15,840,000 climbs over the past 5 years, our companies are aware of only one fall from a fixed ladder'' (Ex. 260). OAAA estimated that its members, which it said comprise 90 percent of the market, have a total of 1,800 climbers.

The International Sign Association (ISA) also supported retaining the qualified climber exception because of the industry's safety record, noting, ''It is our understanding that the safety record of outdoor advertising professionals has been excellent over the last decade, and that changing the rule would impose unnecessary costs and technical requirements'' (Ex. 161).

CCO said it would be too costly to retrofit fixed ladders with fall protection (Exs. 121; 369). They claimed that it would cost the company in excess of $80 million to retrofit its 60,000 existing structures (Ex. 121).[55] In its post-hearing comments, CCO revised and supplemented its cost information on retrofitting fixed ladders with fall protection, noting, ''[T]he installation of cages and wells would cost approximately $1,400 for first 20 feet and $1,050 for each twenty foot section after. Accordingly the cost depends upon the height of the unit'' (Ex. 369). CCO stated further:

Clear Channel Outdoor is one of the largest outdoor advertising businesses in the USA. Many of the remaining companies are very small ''mom and pop'' types of operations. While Clear Channel has always met or exceeded regulatory requirements, the additional cost to comply would not only be a significant impact on the company, it could potentially put the smaller operations out of business due to additional financial burden to meet the new requirements.

Clear Channel Outdoor has in excess of 20,000 structures domestically. If one were to remove the structures greater than fifty feet that were address[ed] earlier in these

[55] CCO submitted a pre-hearing comment, Ex. 121, and a post-hearing comment, Ex. 369. In the earlier of CCO's two comments, the company appeared to be describing compliance costs for the entire set of billboard ''faces'' owned and operated by the company (60,000 structures, $80 million), whereas in the later comment the company appeared to be restricting its cost discussion to 20,000 billboard structures that reach elevations above a certain height and require a compliance response.

questions you would be left with approximately 16,000 structures. If one were to divide that number in half to allow for structures less than twenty-four feet of ladder climber and specialty structures without ladders, there would still be around 8,000 structures that would be affected by the proposed codification of the Gannett Variance with heights in excess of twenty-four feet of climb (twenty-five feet is the typical average mentioned in question 1). To install cages on this number of structures would be approximately $12,000,000. To install vertical fall protection would be approximately $2,200,000. While looking at the percentage of cost on new builds individually may not appear to be that much, to retrofit structures that are already in existence to meet new requirements would be extremely expensive.

Additionally, guardrails, cages and wells could potentially obscure advertising copy. This could result in a diminishment of sales and possibly have a catastrophic financial impact on all outdoor advertisers (Ex. 369).

Citizens for a Scenic Wisconsin, Inc. (CFSW), raised a similar concern about requiring fall protection on fixed ladders used for outdoor advertising. CFSW pointed out that the Federal Highway Administration allows catwalks or handrails for non-conforming billboards, and the Highway Beautification Act (HBA) of 1965 allows non-conforming billboards to remain in place until they are destroyed, abandoned, discontinued, or removed. CFSW concluded, ''If existing non-conforming billboards cannot be safely serviced then their advertising message will eventually become obsolete or so weathered and worn that it will become discontinued or abandoned, and ordered removed without compensation as the HBA intended'' (Ex. 217).

Two commenters supported applying the qualified climber option to industries other than outdoor advertising. For example, Verallia said limiting the qualified climber option only to outdoor advertising was ''too restrictive,'' and recommended that OSHA expand the qualified climber provision to other industries, stating:

There are many other tasks that are routinely performed in general industry that are comparable. Without attempting to provide a comprehensive list of such tasks, one example is the infrequent, but not uncommon, need to climb a ''smoke stack'' in order to perform emissions testing. The ''stack tester'' is only at the elevated level for a relatively short amount of time. This task, and surely many others, are comparable to that of the ''outdoor advertiser'' and should also come within the proposed standard at 1910.28(b)(10) (Ex. 171).

OSHA notes that neither CCO nor OAAA supported allowing existing fixed ladders used for outdoor advertising to remain in place and prospectively applying the fall protection requirements to fixed ladders erected in the future. OAAA said, ''It could be difficult to support a grandfather provision due to the fact that a new regulatory requirement could foster inconsistent application of climbing methods which ultimately could increase overall risk to climbers. Essentially a double standard is created'' (Ex. 359). OAAA stated further that ''[t]here is concern that two training systems will be required in the future, one for grandfather structures and another separate program for new structures and fixed ladders. Thus, this can be costly as well as potentially strain overall company safety efforts'' (Ex. 359). Finally, OAAA noted that ''[w]e concur with the use of new technologies to protect our workers and professional climbers,'' but ''recommend that OSHA not list specific equipment in the standard so as to give employers the flexibility to use new technologies as they become available'' (Ex. 260). A number of Lamar employees agreed, saying that listing fall protection system in the final rule would make the rule ''outdated as soon as it was published'' (*e.g.,* Exs. 75; 92; 93; 99; 101).

For a number of reasons, OSHA believes that it is necessary and appropriate to eliminate the qualified climber exception in the outdoor advertising industry. First, workers are at risk of death and injury climbing to elevated heights on fixed ladders without fall protection (no matter how often) and OSHA believes employers in outdoor advertising are aware of these risks. For example, CCO, one of the largest companies in the outdoor advertising industry, said they already have equipped a number of fixed ladders with fall protection systems (Ex. 369). CCO added that the average height at which those fall protection systems protect their workers is 18 feet, which is well below the height at which fall protection is required in the outdoor advertising directive. OSHA also notes that the outdoor advertising industry did not oppose the proposal's requirement that fixed ladders used in outdoor advertising be equipped with ladder safety systems or personal fall arrest systems when those ladders exceed 50 feet or for climbs that exceed 65 feet, which is an acknowledgement that workers climbing fixed ladders without fall protection are exposed to great risk.

As demonstrated in the FEA, falls from ladders are a significant cause of worker deaths and injuries. The FEA indicates that on average, falls kill 47 general industry workers and injure 10,716 workers each year. OAAA said their member companies reported no deaths and only one fall involving their 1,800 climbers for the years 2005 to 2010 (Ex. 260). OSHA's Integrated Management Information System (IMIS) data indicate that since the 1991 Gannett Variance there have been at least three falls from fixed ladders in the outdoor advertising industry, one of which resulted in death.[56]

The IMIS data also show a large number of falls, in servicing outdoor advertising structures; however, the data do not identify the location of the workers on the structures when they fell (Ex. 393). Therefore, OSHA cannot determine definitively whether the falls were from fixed ladders. However, OSHA believes that at least some of these falls could have occurred while workers were climbing the fixed ladder or transitioning from the fixed ladder to the work platform because the incident narratives state that workers were not using fall protection (or were not tied off) when they fell. Since the outdoor advertising directive requires that employers ensure their workers use fall protection at all times when they are on work platforms, OSHA believes that workers may have been on fixed ladders or transitioning from fixed ladders to the work platform when they fell. As such, OSHA believes that there may actually be more than the three falls (noted above) related to climbing without fall protection.

Second, OSHA believes that requiring outdoor advertising employers to ensure their workers use ladder safety systems or personal fall arrest systems when they are on fixed ladders will reduce the risk of falls when workers are transitioning from fixed ladders to work platforms (or from the work platform to the fixed ladder). Stakeholders, including many Lamar Advertising workers, admitted that transitioning from fixed ladders to work platforms is an ''important'' safety concern (*e.g.,* Exs. 85; 86; 90; 92; 103; 104; 105. *See also,* Ex. 329 (1/18/2011), p. 333). OAAA agreed, saying the final rule must ensure ''safe transitions'' from fixed ladders to landing surfaces (Ex. 260). IMIS data show falls occurred in the outdoor advertising industry when workers were

[56] OSHA derives IMIS data from investigations of employer accident reports. Since OSHA only requires that employers report accidents that involve a fatality or the hospitalization of three or more workers, the Agency believes that IMIS data may understate the number of non-fatal injuries. IMIS Fatality and Catastrophe Investigation Summaries are found on OSHA's Web site at: *http://www.osha.gov/pls/imis/accidentsearch.html.*

The referenced falls are in Ex. 393 under the following inspection numbers: 310696489; 126063924; and 126062694.

transitioning between the fixed ladder and the landing/work platform (Ex. 393). As such, OSHA finds that qualified climber training programs have not adequately addressed the significant risk associated with transitioning to/from fixed ladders without work platforms and the requirement that employers ensure workers use ladder safety systems or personal fall arrest systems while climbing fixed ladders is needed. Requiring that workers must be tied off at all times (both on the fixed ladder and work platform) will reduce the risk of worker falls during fixed ladder/platform transitions. For example, when workers leave the work platform they can slip or lose their balance when turning to climb back down the ladder. At this point the workers may not see the first rung on the ladder and must feel for a foothold as they transition from the platform to the fixed ladder. If workers are tied off, falls will be stopped even if their balance is lost, their foot slips off a ladder rung, or they lose their grip on the ladder or other hand hold.

Third, OSHA believes that requiring outdoor advertising employers to use fall protection on fixed ladders will help to ensure that their workers also continue to use fall protection (*i.e.,* be tied off) at all times when they are on outdoor advertising work platforms, which will reduce fatal falls from those platforms. The outdoor advertising directive, issued in 1993, requires that employers ensure their workers use fall protection at all times while on work platforms. However, IMIS data from 1993–2010 indicate that 23 falls from outdoor advertising work platforms occurred during that time because either employers did not provide fall protection for workers or did not ensure workers were properly tied off. Of those falls, 13 resulted in worker deaths (Ex. 393). OSHA believes if employers must provide and ensure workers use fall protection when they start climbing fixed ladders to work platforms that those workers will be more likely to remain tied off when they reach, and work on, the platforms.

OSHA notes that requiring that workers in outdoor advertising use fall protection when they climb fixed ladders makes the final rule consistent with the construction ladder standard (§ 1926.1053(a)(18) and (19)) and other standards the Agency recently revised (§§ 1910.269 and 1926.954). Those standards require that workers, including specially trained workers similar to qualified climbers in outdoor advertising, use fall protection while climbing fixed ladders, poles, towers, and similar structures. For example, the construction ladder standard requires that employers provide workers climbing fixed ladders above 24 feet with, and ensure that they use, ladder safety devices, self-retracting lifelines (*i.e.,* personal fall arrest system), cages, or wells (§ 1926.1053(a)(19)).

OSHA's revised general industry (§ 1910.269) and construction (29 CFR part 1926, subpart V) electric power generation standards added a requirement that qualified employees must use fall protection while climbing or changing locations on poles, towers, or similar structures, unless the employer can demonstrate that fall protection is not feasible or presents a greater hazard to the employees (§§ 1910.269(g)(2)(iv)(C)(*3*) and 1926.954(b)(3)(iii)(C))(79 FR 20315 (4/11/2014)). As originally adopted, § 1910.269 (adopted by OSHA in 1994) did not require that qualified employees use fall protection when climbing poles, towers, and similar structures unless conditions (*e.g.,* ice, high winds, presence of contaminants) could cause workers to lose their grip or footing. However, because of the incidence of fall fatalities and ready availability of personal fall protection systems (*e.g.,* personal fall arrest systems, pole straps), OSHA added a provision to § 1910.269 specifically requiring that qualified employees use fall protection (§ 1910.269(g)(2)(iv)(C)(*3*))(79 FR 20399–20401). OSHA believes the rationale for eliminating the qualified employee exception from § 1910.269 also is applicable to outdoor advertising.

OSHA is requiring that outdoor advertising employers provide fall protection on fixed ladders because it is clear that, like the utility industry, there are technologically feasible means of fall protection available that are currently in use to protect workers in outdoor advertising. Indeed, since 1993 the outdoor advertising directive has required that employers install ladder safety systems, and ensure that workers use them, when climbs on fixed ladders exceed 50 feet or when the fixed ladder ascends to a height of more than 65 feet above grade. During the period since OSHA issued the directive, manufacturers developed new types of personal fall protection systems, specifically personal fall arrest systems, for climbing fixed ladders, and these systems are readily available, effective, and easy to use (*e.g.,* Exs. 127; 185; 198). OSHA included these systems in the construction fall protection standard issued in 1994, and their use is commonplace today. As mentioned, OSHA also required the use of fall protection systems, such as personal fall arrest systems, in the 2014 revisions to § 1910.269 and § 1926.954. OSHA also notes that, in the current rulemaking, several stakeholders submitted information to the record about fall protection systems that are readily available and effective in protecting workers climbing fixed ladders (Exs. 127; 155; 185; 198; 205).

The record also shows that it is economically feasible for the outdoor advertising industry to comply with the final requirement to ensure that employers provide and ensure their workers use fall protection systems while climbing fixed ladders in outdoor advertising. Many, if not most, fixed ladders manufactured today have ladder safety systems or personal fall arrest systems (*i.e.,* self-retracting line or cable) that meet the requirements of final paragraph (b)(9) of this section and final § 1910.29. The FEA and the record for this rulemaking indicate that these systems are reasonably priced and economically feasible. In the FEA, OSHA estimates that the cost of purchasing and installing a ladder safety system or personal fall arrest system is about $1,050. In their post-hearing comments, CCO's cost estimates for installing ladder safety or personal fall arrest systems are lower than OSHA's cost estimates, suggesting that OSHA's estimate is conservative (Ex. 369).

OSHA also believes the fall protection requirement is economically feasible because the FEA estimates that employers will need to equip only a small percentage of existing outdoor advertising structures with fall protection. OAAA estimates there are approximately 450,000 existing structures (Exs. 260; 359; 369). Employers in outdoor advertising will not have to install fall protection on fixed ladders that do not extend more than 24 feet above a lower level (final paragraph (b)(9)(i)(A)) or that already are equipped with fall protection. As such, in the FEA, OSHA estimates that employers will need to equip only about 21,000 existing outdoor advertising structures with a fall protection system by November 19, 2018. In the Preliminary Economic Analysis (PEA) of the proposed rule, OSHA included a similar estimate (*i.e.,* 20,490 outdoor advertising structures extend more than 20 feet above a lower level); OAAA provided this estimate to OSHA based on their member comments and a survey (Ex. OSHA–2007–0072–0046, p. A–9). Neither OAAA nor any other employer in the outdoor advertising industry challenged OSHA's estimate. In fact, OAAA's and CCO's comments generally support OSHA's conclusion that employers will need to equip only a small percentage of existing outdoor advertising structures with fall protection systems (Exs. 260; 359; 369).

The framework of the final rule, when read in the context of final paragraph (b)(9)(i) of this section, provides employers with substantial control flexibility, which further ensures the final rule is economically feasible. Specifically, the final rule allows outdoor advertising employers to equip existing ladders (that have no fall protection) with a cage, well, ladder safety system, or personal fall arrest system (final paragraph (b)(9)(i)(A)), while the existing rule, absent the outdoor advertising directive, would require outdoor advertising employers to equip the fixed ladders with cages or wells (existing § 1910.27(d)(1)(ii)). As mentioned earlier in this preamble, this flexibility allows employers to equip fixed ladders with the least costly fall protection system, which the record indicates are ladder safety or personal fall arrest systems (Ex. 369; *see also* FEA). OSHA notes that CCO, one of the largest outdoor advertising companies, said it would cost approximately $12 million to install cages or wells on 8,000 existing fixed ladders, but only $2.2 million to install ladder safety systems or personal fall arrest systems (*i.e.,* ''vertical fall protection'') on those fixed ladders (Ex. 369).

In addition, giving employers in outdoor advertising two years to install a fall protection system on fixed ladders lessens the economic impact of the final rule and further shows the requirement is economic feasible. For example, it gives employers time to identify and evaluate various types of fall protection systems, negotiate with manufacturers and vendors to select the most cost-effective system that best satisfies their needs, and train workers in the use of that equipment. Moreover, OSHA notes that the final rule gives outdoor advertising employers two years to comply with the requirement that their workers use fall protection while climbing fixed ladders while revised § 1926.954 gave employers only one year to comply with the fall protection requirement.

Gradually phasing in over 20 years the requirement that fixed ladders be equipped with ladder safety systems or personal fall arrest systems also significantly lessens the economic impact on employers, including those in outdoor advertising. To illustrate, if outdoor advertising employers currently use fixed ladders equipped only with cages or wells, the final rule gives these employers 20 years to install ladder safety or personal fall arrest systems. This extended phase-in period allows employers to install fall protection systems as part of their normal replacement or business cycles rather than retrofitting fixed ladders immediately. In sum, OSHA believes the combination of flexibility to use controls that are less expensive than those the existing rule required, extended compliance time, and gradual phase-in of ladder safety systems and personal fall arrest systems ensures the final rule is economically feasible and will not threaten the industry's ''long-term profitability'' or substantially alter its competitive structure. (*Forging Indus. Ass'n* v. *Secretary of Labor,* 773 F.2d 1436, 1453 (4th Cir. 1985) (en banc) (*Noise*)).

Finally, OSHA believes requiring employers in outdoor advertising to provide and ensure that workers use fall protection when climbing fixed ladders is reasonable and appropriate because, as a number of commenters said, the outdoor advertising industry and the fixed ladders it uses are not unique with regard to fall protection (Exs. 155; 185; 198). Therefore, OSHA believes that it is no longer necessary or warranted for it to except the outdoor advertising industry from the requirements to use fall protection while climbing fixed ladders. Stakeholders in the outdoor advertising industry did not argue that the elevated heights encountered in outdoor advertising are not dangerous, or that fall hazards or work conditions in outdoor advertising are unique compared to other industries. Moreover, they did not argue that the fall protection systems used by workers in other industries when climbing fixed ladders will not work, or are not a feasible means of worker protection, in the outdoor advertising industry.

Regarding comments recommending that OSHA not list specific fall protection systems in the final rule because such a list would soon become outdated, OSHA notes that the Agency has dealt with issues like this in the past. If an employer has information about a new method of fall protection that will provide worker protection equivalent to the protection afforded to workers by the final rule, it can approach the Agency and seek permission to use it through a request for interpretation or a variance.

Stairways. Final paragraph (b)(11), which generally is consistent with existing §§ 1910.23(d)(1) and 1910.24(h) and proposed paragraph (b)(11), requires that employers protect workers from falling off stairway landings and the exposed sides of all stairways. Stairways, as defined in the final rule in § 1910.21(b)), include standard stairs, ship stairs, spiral stairs, and alternating tread-type stairs.

Final paragraph (b)(11)(i), like the proposal, requires that employers ensure each worker exposed to an unprotected side or edge of a stairway landing that is four feet or more above a lower level is protected by a guardrail [57] or stair rail system.[58] The final requirement is consistent with the requirements for stairway landings specified by the existing general industry standard in § 1910.24(h) and the construction standard in § 1926.1052(c)(12). The final provision is also consistent with A1264.1–2007 (Section 7.1), the National Fire Protection Association (NFPA) Life Safety Code—NFPA 101–2012 (Section 7.1.8), and the International Code Council International Building Code (IBC)—IBC–2012 (Section 1013.2). OSHA notes that NFPA and IBC require guards on open-sided walking surfaces located more than 30 inches above the floor or grade below. Unlike final paragraph (b)(1), which allows employers to protect workers using one of several fall protection options, final paragraph (b)(11)(i) requires that employers provide guardrails or stair rails on unprotected sides and edges of stairway landings and stairways. OSHA believes that limiting the fall protection options to stair rails or guardrails is necessary, because the other fall protection options in final paragraph (b)(1) (*i.e.,* safety net, travel restraint, and personal fall arrest systems) are not appropriate or practical to use on stairways, which workers use regularly and routinely to access workplace areas. Using the other options could prevent, or significantly encumber or impede, workers from using the stairways and freely moving around the worksite. By contrast, guardrail and stair rail systems provide continuous protection while allowing workers to freely access stairs and worksites.

Final paragraph (b)(11)(ii), consistent with existing § 1910.23(d)(1) and proposed paragraph (b)(11)(ii), requires that employers ensure each flight of stairs having at least three treads and at least four risers is equipped with a stair rail system and handrails as specified in Table D–2. Table D–2 specifies the type and number of stair rails and handrails employers must provide based on the width and configuration of the stairs.

[57] The final rule defines guardrail system as a barrier erected along an unprotected side, edge or other walking-working surface to prevent workers from falling to a lower level (final § 1910.21(b)).

[58] The final rule defines stair rail or stair rail system as a barrier erected along the exposed or open side of stairways to prevent workers from falling to a lower level (final § 1910.21(b)).

NFPA commented on the proposed table, saying that it was potentially misleading (Ex. 97). In particular, NFPA said the third column (''One open side'') did not clearly specify that, in addition to providing a handrail on the ''one open side,'' employers also must provide a handrail on the ''enclosed side'' (Ex. 97). NFPA noted that OSHA should not expect employers to know that they must meet the requirements for both the ''enclosed side'' and for ''one open side'' to be in compliance with the final rule. NPFA, therefore, made the following two recommendations to revise the third column of the proposed table: (1) For stairways that are 44–88 inches wide, NFPA recommended, ''One stair rail system with handrail on open side and one handrail on enclosed side''; and (2) for stairways that are greater than 88 inches, NFPA recommended, ''One stair rail system with handrail on open side, one handrail on enclosed side, and one intermediate handrail located in the middle of the stair.'' OSHA agrees that NFPA's recommendations clarify the information provided in the proposed table, and incorporates them in final Table D–2.

Final paragraph (b)(11)(iii), like the proposal, requires that employers ensure ship stairs and alternating tread-type stairs are equipped with handrails on both sides. Both of those types of stairs have slopes that are 50 to 70 degrees from the horizontal, and OSHA believes that workers need handrails on both sides to safely climb those stairs. This requirement is consistent with IBC–2012 (Section 1009.13 and .14) and NFPA 101–2012 (Section 7.2.11). OSHA did not receive any comments on the proposed provision and adopts paragraph (b)(11) with only minor changes for clarity.

Scaffolds and rope descent systems. Final paragraph (b)(12), like the proposal, requires that employers protect workers from falls who are working on scaffolds and who are using rope descent systems. The final rule defines a scaffold in part as a temporary elevated or suspended platform and its supporting structure, including anchorage points, that support workers, equipment, materials, and other items (final § 1910.21(b)). As defined in the final rule, a rope descent system, also known as controlled descent equipment or apparatus, is a suspension device that allows the worker to descend in a controlled manner, usually in a chair (seatboard) (final § 1910.21(b)).

Final paragraph (b)(12)(i), like the proposal, makes the general industry standard consistent with the construction standard by requiring the employer to ensure that workers on scaffolds are protected from falling in accordance with 29 CFR part 1926, subpart L. The final rule deletes the existing general industry scaffold provisions and, instead, requires that employers comply with the requirements in the construction scaffold standards. The requirements in the construction scaffold standard are more comprehensive and up to date than the existing rule, which OSHA adopted in 1971. OSHA notes the existing rule, like the construction standard, requires that employers provide fall protection when workers on scaffolds are 10 feet or more above a lower level (see *e.g.,* existing § 1910.28(b)(15), (c)(14), (d)(7), (f)(15), (g)(5), (h)(8), (k)(5), (m)(7), (o)(2), (p)(7); § 1926.451(g)(1)).

Final paragraph (b)(12)(ii), like the proposal, requires that employers ensure workers using rope descent systems four feet or more above lower levels are protected from falling by a personal fall arrest system. OSHA reminds employers that if they use vertical lifelines to protect workers using RDS, the lifeline must be attached to a separate anchorage (see final § 1910.140(c)(12)). The construction fall protection standard includes a similar requirement (§ 1926.502(d)(15)). OSHA did not receive any comments on the proposed provision and finalizes it with only minor editorial change.

Work on low-slope roofs. Final paragraph (b)(13) is a new provision that establishes fall protection requirements when employees perform work on low-slope roofs. OSHA is adding this provision to make the general industry standard more consistent with the construction fall protection standard, which includes a provision addressing roofing work performed on low-slope roofs (§ 1926.501(b)(10)). Many stakeholders urged OSHA to incorporate the construction provision in the final rule (see *e.g.,* Exs. 121; 124; 164; 171; 180; 189; 192; 207; 226; 251).

The final rule defines low-slope roof as ''a roof having a slope less than or equal to 4 in 12 (vertical to horizontal)'' (§ 1910.21(b); *see also* § 1926.500(b)). A ''4 in 12'' slope means, for example, the slope does not exceed a 4-foot vertical rise for every 12 feet in the horizontal length of the roof.[59]

Under paragraph (b)(13), the type of fall protection measures employers must use on low-slope roofs depends upon the distance they work from the roof edge.[60] The final rule divides work on low-slope roofs into three zones:

- Work performed less than 6 feet from the roof edge;
- Work performed 6 feet to less than 15 feet from the roof edge; and
- Work performed 15 feet or more from the roof edge.

Work performed less than 6 feet from the roof edge—Final paragraph (b)(13)(i), like the construction standard (§§ 1926.501(b)(10) and 1926.502(f)) requires that employers use conventional fall protection systems (*i.e.,* guardrail systems, safety net systems, personal fall protection systems) when they work less than 6 feet from the edge of a low-slope roof. OSHA believes that using a conventional fall protection system is necessary to protect workers from falling when they work that close to the roof edge, including the edge of low-slope roofs. Without conventional fall protection, an inadvertent slip or trip this close to the edge could propel the worker off the roof.

Work performed 6 feet to less than 15 feet from the roof edge—Final paragraph (b)(13)(ii), which applies when employees work at least 6 feet but less than 15 feet from the roof edge, requires that employers protect workers from falling by using:

- A conventional fall protection system; or
- A designated area, but only when the employer is performing work ''that is both infrequent and temporary.''

The final rule defines ''designated area'' as ''a distinct portion of a walking-working surface delineated by a warning line in which employees may perform work without additional fall protection'' (final § 1910.21(b)). The definition of designated area is similar to the construction standard's ''warning line system,'' defined as a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area in which roofing work may take place without the use of guardrail, body belt, or safety net systems to protect employees in that area (§ 1926.500(b)).

In the preamble to the construction fall protection standard, OSHA explained how warning line systems work:

[59] In the preamble to the proposed rule, OSHA mistakenly indicated that a ''4 in 12'' slope is a slope that is 10 degrees or less. NIOSH noted correctly in its comments that ''[a] slope of 10 degrees or less from the horizontal requires a slope of 2 in 12 (9.5 degrees)'' (Ex. 164). Therefore, for the purposes of this final rule, a low-slope roof has a slope of 4 in 12 or less, which is a slope of less than 20 degrees.

[60] OSHA notes that final paragraph (b)(13) only applies to unprotected ''edges'' of low-slope roofs. As such, employers must protect workers from holes on roofs, including skylights, in accordance with final paragraph (b)(3).

[A] warning line ''serves to warn and remind employees that they are approaching or working near a fall hazard by providing direct physical contact with the employee. The contact attracts the employee's attention, enabling the employee to stop in time to avoid falling off the roof'' (59 FR 40672, 40689 (8/9/1994)).

OSHA intends the use of designated areas and warning lines in the final rule to work in the same way.

The use of designated areas in the final rule is very limited. Final paragraph (b)(13)(ii), like the construction standard, only allows employers to use designated areas for work performed at least six feet from the roof edge. When work that is at least 6 feet from the edge of a low-slope roof, OSHA believes the use of fall protection alternatives is appropriate in certain situations. As far back as the 1990 proposed rule, OSHA said that working a ''six foot (1.8m) distance [from the edge of a low-slope roof] is sufficient to allow an employee to stop moving toward the fall hazard after realizing the perimeter has been contacted'' (55 FR 13360, 13376 (4/10/1990)).

That said, working as close as 6 feet from the edge of a roof, even a low-slope roof, may pose some risk of falling. To address that risk, the final rule further limits the use of designated areas at that distance to work that is ''both infrequent and temporary'' (final § 1910.28(b)(13)(ii)). The proposed rule limited designated areas to work ''of a temporary nature'' (proposed § 1910.29(d)(1)(ii)). In the preamble to the proposed rule, OSHA said, ''Designated areas may only be used for temporary, relatively infrequent work'' (75 FR 28895). OSHA believes the language in the final rule more clearly expresses OSHA's proposed intent.

For purposes of the final rule, ''temporary'' means that the duration of the task the worker performs is brief or short. Temporary and brief or short tasks generally include those that a worker is able to perform in less time than it takes to install or set up conventional fall protection. When the duration of a task is this short and the work is performed at least 6 feet from the edge of a low-slope roof, OSHA believes worker exposure to fall hazards is very limited. OSHA agrees with stakeholders who said that requiring employers to install conventional fall protection in these instances could increase worker exposure substantially (*e.g.,* Exs. 165). Conversely, when it takes more time to complete a job than it takes to install or set up conventional fall protection (*e.g.,* personal fall protection system), OSHA believes that the use of conventional fall protection is necessary because the duration of and potential for exposure to fall hazards is more significant; such exposure is extensive and prolonged.

Temporary tasks also include those that workers are able to complete at one time rather than repeatedly climbing up or returning to the roof or requiring more than one workshift to complete. When jobs take that long to complete or involve repeated exposure, OSHA believes the risk of falls increases significantly. For purposes of the final rule, OSHA intends that ''temporary'' tasks generally are limited to ''simple'' tasks and ''short-term . . . scheduled maintenance or minor repair activities'' (Ex. 165). OSHA agrees with SMACNA's comment that temporary and simple tasks are those that do not require ''significant equipment, personnel, and other resources'' or a level of exposure that ''long-term'' or ''complicated'' maintenance and repair work does (Ex. 165).

Although the final rule does not place a specific time limit on what constitutes a temporary task, OSHA agrees with SMACNA that short duration tasks generally are those that take less than ''1–2 hours'' to complete (Ex. 165; *see also* Exs. 124; 171; 236). Examples of temporary tasks include changing a filter in a roof-top HVAC system, replacing a part on a satellite dish, caulking or resealing the flashing around a skylight, or sweeping a chimney.

The term ''infrequent,'' for purposes of the final rule, means that the task or job is performed only on occasion, when needed (*e.g.,* equipment breakdown), on an occasional basis, or at sporadic or irregular intervals. Infrequent tasks include work activities such as annual maintenance or servicing of equipment, monthly or quarterly replacement of batteries or HVAC filters, and responding to equipment outage or breakdown. In these instances, the frequency of exposure to fall hazards is very limited.

By contrast, tasks performed or repeated on a daily, routine or regular basis are not infrequent activities within the meaning of the final rule. Infrequent jobs also do not include those that workers perform as a primary or routine part of their job or repeatedly at various locations during a workshift. A task may be considered infrequent when it is performed once a month, once a year, or when needed.

The designated area provision in final paragraph (b)(13)(ii) generally is modelled on the construction fall protection standard, which allows employers to use ''warning line systems'' when they perform roofing work at least six feet from the edge of a low-slope roof (§ 1926.501(b)(10)). However, the final rule also differs from the construction standard in several respects. The construction provision is limited to ''roofing work,'' which that standard defines as ''the hoisting, storage, application, and removal of roofing equipment and materials, including related insulation, sheet metal and vapor barrier work, but not the construction of roof decks'' (§§ 1926.500(b)). Roofing jobs typically take a significant amount of time to complete (hours or days). As a result, workers have prolonged exposure to fall hazards. Therefore, the construction standard requires that employers performing roofing work as close as 6 feet from the roof edge must use conventional fall protection systems, warning line systems used in combination with conventional fall protection, or warning line systems in combination with safety monitoring systems. The construction standard included alternative fall protection options for roofing work because the ''Agency recognized [conventional fall protection] systems could pose feasibility problems during roofing work; therefore, the rule allows other choices of fall protection methods'' (Letter to Mr. Anthony O'Dea (12/15/2003); 59 FR 40688–89).[61] Some stakeholders said the same feasibility issues are present in general industry (Exs. 192; 226; 236). Southern Company, for instance, said there are no suitable anchorage points for securing personal fall protection systems on some roofs (Ex. 192).

OSHA is including the designated area provision in final paragraph (b)(13)(ii) for work that is both temporary and infrequent primarily for other reasons. First, as mentioned, adding the designated area provision for work on low-slope roofs makes the final rule more consistent with the construction fall protection standard, which is one of the main goals of this rulemaking. In addition, making the general industry and construction standards more consistent will make compliance easier for employers who perform both general industry and construction activities. Many stakeholders supported including the designated area provision for this reason (*e.g.,* Exs. 121; 124; 164; 165; 171; 180; 189; 192; 195; 207; 226; 236; 251; 254).

Second, when the slope of the roof is low, workers are at least 6 feet from the

[61] OSHA letter to Mr. O'Dea available at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24682.*

roof edge, and their time in the area is both brief and infrequent, OSHA believes there is very limited exposure to fall hazards. As far back as the 1990 proposed rule, OSHA said ''it would be unreasonable to require employers to install guardrail systems in a designated area'' (55 FR 13375).

Third, when the duration of the task is very short, OSHA believes the physical reminder that warning lines provide can effectively alert and remind workers that they are approaching the roof edge and must not get any closer. Fourth, OSHA agrees with stakeholders that requiring employers to spend the time installing conventional fall protection in instances when the task is brief and infrequent may pose a greater risk of falling than the task itself (Exs. 124; 165; 171).

Fifth, allowing employers to use designated areas instead of conventional fall protection when they perform tasks that require less time to complete than installing conventional fall protection significantly limits the duration of the job, thereby increasing efficiency and cost-effectiveness. Allowing employers to use designated areas reduces the cost of the job and also makes it easier for them to assign one-person jobs, which a number of stakeholders do (*e.g.,* Exs. 150; 165).

Finally, the final rule allows the use of designated areas only in very limited situations. The proposed rule would have allowed greater use of designated areas. OSHA believes that the limitations incorporated in final paragraph (b)(13)(ii) (*i.e.,* work that is performed on low-slope roofs, that is performed at least 6 feet from the edge and that is both temporary and infrequent) ensures that designated areas are used only where the duration and frequency of exposure is extremely limited. In these situations, OSHA believes that the use of designated areas provides adequate protection and does not compromise worker safety.

OSHA believes the designated area provision in the final rule also is more protective than the construction standard. As mentioned, the construction standard allows employers to use warning line systems in combination with a safety monitoring system when performing roofing work (*i.e.,* work that involves prolonged exposure to fall hazards) 6 feet or more from the roof edge (§ 1926.501(b)(10)). The construction standard does not limit the use of warning line systems to work that is both temporary and infrequent. It also does not require employers to demonstrate that all conventional fall protection systems are infeasible in order to use a safety monitoring system. By contrast, the final rule does not permit employers to use safety monitoring systems unless the employer first demonstrates that all conventional fall protection systems are infeasible.

OSHA notes that some commenters (Exs. 124; 165; 171) opposed requiring employers to establish designated areas (*i.e.,* erect warning lines) for short duration jobs performed within 15 feet from the roof edge could (Ex. 171). Some stakeholders supported excepting work that is both temporary and infrequent from the requirement to use warning lines for work performed 6 feet to less than 15 feet from the roof edge (Exs. 165; 207). For example, SMACNA said:

> Where is the hazard if the HVAC work does not require the worker to be within 15 feet of the roof edge . . . and the worker is only on the roof for a specific purpose (repair or maintain equipment) and for a short time . . . ? (Ex. 165).

OSHA disagrees with SMACNA. When employers perform any work, including work that is both temporary and infrequent in nature, as close as 6 feet from the edge of a low-slope roof, the Agency believes that some protection is necessary because there is or may be some risk of falling.

SBA Office of Advocacy said requiring employers to erect warning lines for short duration tasks could ''present an independent hazard'' (Ex. 124). They reported, ''[Small business representatives] expressed concern about situations where employees are working on rooftops during simple, short-duration projects and would be required to construct physical barriers as 'Designated Areas' that may actually increase the risk of falls and introduce other safety hazards'' (Ex. 124; *see also* Ex. 171).

OSHA's experience with warning line systems in the construction industry does not support SBA Office of Advocacy's claim that using designated areas for brief tasks poses a greater hazard and the commenter did not provide any evidence to support their claim. Moreover, SBA Office of Advocacy recommended that OSHA make the final rule consistent with the construction fall protection standard, which, as mentioned, does not exempt ''short duration projects'' from providing any fall protection (conventional or designated areas) at this distance from the edge of low-slope roofs the requirements to provide fall protection. That said, OSHA believes the allowances that final paragraphs (b)(13)(ii) and (iii) include for employers who perform work that is both infrequent and temporary, provides substantial flexibility and should not pose any significant compliance difficulties.

Work performed 15 feet or more from the roof edge—Final paragraph (b)(13)(iii), which applies to work performed 15 feet or more from the edge of a low-slope roof, requires that employers protect workers from falling by:

- Using a conventional fall protection system or a designated area. If, however, the work is both infrequent and temporary, employers do not have to provide any fall protection (final paragraph (b)(13)(iii)(A)); and
- Implementing and enforcing a work rule prohibiting employees from going within 15 feet of the roof edge without using fall protection in accordance with final paragraphs (b)(13)(i) and (ii) (final paragraph (b)(13)(iii)(B)).

Final paragraph (b)(13)(iii) generally is consistent with OSHA's longstanding enforcement policy regarding construction work performed at least 15 feet from the edge of low-slope roofs (see *e.g.,* letter to Mr. Anthony O'Dea (12/15/2003);[62] letter to Mr. Keith Harkins (11/15/2002);[63] letter to Mr. Barry Cole (5/12/2000)[64]). OSHA set forth its policy in the letter to Mr. Barry Cole:

> At 15 feet from the edge [of a roof] . . . , a warning line, combined with effective work rules, can be expected to prevent workers from going past the line and approaching the edge. Also, at that distance, the failure of a barrier to restrain a worker from unintentionally crossing it would not place the worker in immediate risk of falling off the edge. Therefore, we will apply a *de minimus* policy for non-conforming guardrails 15 or more feet from the edge under certain circumstances. Specifically, we will consider the use of certain barriers that fail to meet the criteria falling-object a guardrail a *de minimus* violation of the guardrail criteria in § 1926.502(b) where all of the following are met:
>
> 1. A warning line is used 15 feet or more from the edge;
> 2. The warning line meets or exceeds the requirements in § 1926.502(f)(2);
> 3. No work or work-related activity is to take place in the area between the warning line and . . . the edge;
> 4. The employer effectively implements a work rule prohibiting the employees from going past the warning line.

[62] OSHA letter to Mr. O'Dea available at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24682.*

[63] OSHA letter to Mr. Harkins available at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24552.*

[64] OSHA letter to Mr. Cole available at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24802.*

In one respect, final paragraph (b)(13)(iii) differs from and provides more flexibility than the construction enforcement policy. When employers perform work that is both temporary and infrequent at least 15 feet from the roof edge, the final rule does not require them to provide any fall protection (using conventional fall protection or warning lines). OSHA believes this limited exception eases compliance for employers without compromising worker safety.

Comments in the record support an exception for work that is temporary and infrequent and performed at least 15 feet from the roof edge (Exs. 165; 207). For example, SMACNA said:

> [A] work procedure such as a simple filter change or belt adjustment to an HVAC system, especially if the unit is in the middle of a large roof does not warrant placement of a physical warning line (Ex. 165).

EEI noted, ''Some flat roofs in general industry settings could be the size of several football fields'' (Ex. 207). OSHA agrees that requiring employers to erect a warning line in that situation could take more time than simply performing a very brief task.

Many stakeholders supported the use of the use of designated areas ''where work is performed away from the immediate fall hazard, such as in the center of the rooftop'' (Ex. 180; *see also* Exs. 171; 207; 226). Verallia concurred, noting that less is needed to protect or warn workers the further the work area is from the roof edge (Ex. 171). EEI also said conventional fall protection was not necessary when workers are not near the roof edge, ''OSHA should not require protection from fall hazards on large flat roofs when the hazard can be controlled by keeping all workers a specified distance away from the roof edge'' (Ex. 207). AFSCME agreed, saying that air-handling systems and other equipment often are located in the middle of the roof (Ex. 226).

Other stakeholders, however, said OSHA should not require any fall protection, including a warning line, for any task performed ''a safe distance'' from the edge of a low-slope roof (Exs. 165; 207; 236; 254). For example, MCAA, whose member companies construct, install, and service mechanical systems (*e.g.,* HVAC systems), said:

> Most of the time, [HVAC] units are a safe distance from the edge of the roof and/or skylights, and can be accessed and serviced safely without the use of a ''designated area'' or other fall protection/prevention systems. Under this proposed rule . . . HVAC technicians would have to erect a temporary, designated area perimeter line to comply with the standard. MCAA believes that this requirement would create unintended hazards, which would be much more likely to cause injury or death to workers (Ex. 236).

MCAA's argument is not persuasive. MCAA did not provide any data or other information to support its claim that requiring employers to erect a warning would be more likely to cause injury or death than working without any protection. Moreover, MCAA recommended that OSHA make the final rule consistent with the low-slope roof provision in the construction standard. That provision requires employers to use designated area perimeter lines for all roofing work if the employer does not use conventional fall protection.

In conclusion, OSHA believes that the limitations on the use of designated areas in final paragraphs (b)(13)(i), (ii) and (iii), taken together, provide appropriate protection from fall hazards while affording employers greater control flexibility.

Slaughtering facility platforms. Final paragraph (b)(14) specifies new requirements OSHA added to the final rule addressing fall protection for work performed on the unprotected working side of platforms in slaughtering facilities. As mentioned in the discussion of final paragraph (b)(1)(ii) earlier in this preamble, the working side is the side of the platform where workers are in the process of performing a work operation.

Final paragraph (b)(14)(i) requires that employers protect workers from falling off the unprotected working side of slaughtering facility platforms that are four feet or more above a lower level. Employers must protect those workers by providing:

- A guardrail system (final paragraph (b)(14)(i)(A)); or
- A travel restraint system (final paragraph (b)(14)(i)(B)).

The proposed rule in § 1910.28 addressed slaughtering facility platforms, as well as the working sides of loading racks, loading docks, and teeming platforms, in paragraph (b)(1). Proposed paragraph (b)(1)(vi) required that employers provide guardrail systems on the working side of slaughtering house platforms unless they could demonstrate that providing guardrail systems was infeasible. If an employer could demonstrate infeasibility, workers could work on the working side of these platforms without guardrails or any other fall protection when: the work operation on the working side is in progress (see proposed paragraph (b)(1)(vi)(A)); the employer restricts access to the platform to authorized workers (proposed paragraph (b)(1)(vi)(B)); and the employer trained the authorized workers in accordance with proposed § 1910.30(b)(1)(vi)(C).

OSHA proposed the exception for the working sides of these platforms because information available to the Agency at the time indicated that there may be technological feasibility issues with using guardrail systems while workers are working on certain platforms. OSHA requested comment on this issue, including whether there are other feasible means to protect workers working on the unprotected side of platforms (see 75 FR 28889).

Commenters said employers often use travel restraint systems on the working side of slaughtering facility platforms, and, therefore, OSHA should not provide an exception. For example, Damon, Inc., said, ''I have worked with several packing houses that have successfully implemented restraint systems'' (Ex. 251). Likewise, the representative of the United Food and Commercial Workers Union (UFCW) commented:

> My gravest concern is with 1910.28(b)(vi), specifically OSHA's proposed exception to the requirement for guardrails or other fall protection on the working side of platforms in slaughtering facilities. This exception is inappropriate and not protective of the thousands of workers who would be affected. Work platforms in the meatpacking industry are becoming increasingly common and are built to greater heights. Many employers, including Cargill Meat Solutions in Dodge City, KS have successfully implemented travel restraint systems for use on these platforms. Just as there is no question about the feasibility of these systems, there should be no question about the compelling need for them. There is a compelling need in meatpacking plants. Falls from platforms in slaughtering facilities are especially dangerous because of the universal use of knives and other sharp instruments (Ex. 159).

These comments and other information in the record convince OSHA that using fall protection on the working side of slaughtering facility platforms is feasible. Therefore, to eliminate any confusion, OSHA decided to specify fall protection requirements for slaughtering facility platforms in a separate provision in the final rule.

Final paragraph (b)(14)(ii) specifies that when the employer can demonstrate it is infeasible to use guardrail or travel restraint systems, they can perform the work on slaughtering facility platforms without a guardrail or travel restraint system, provided:

- The work operation for which fall protection is infeasible is in process (final paragraph (b)(14)(ii)(A));
- The employer restricts access to the platform to authorized workers (final paragraph (b)(14)(ii)(B)); and

• The employer ensures authorized workers receive training in accordance with final § 1910.30 (final paragraph (b)(14)(ii)(C)).

The language in final paragraph (b)(14)(ii) is the same as the language in the exception for working sides of loading rack, loading dock, and teeming platforms (final paragraph (b)(1)(ii)).

Walking-working surfaces not otherwise addressed. Final paragraph (b)(15), like proposed paragraph (b)(13), applies to walking-working surfaces that other paragraphs in final § 1910.28(b) do not address specifically, such as ramps. Final paragraph (b)(15), like final paragraph (b)(1)), requires that employers must protect each worker on a walking-working surface not addressed elsewhere in final paragraph (b) or other subparts in 29 CFR part 1910 from falling four feet or more to a lower level using:

• Guardrail systems (final paragraph (b)(15)(i));

• Safety net systems (final paragraph (b)(15)(ii)); or

• Personal fall protection systems, such as personal fall arrest systems, travel restraint systems, and positioning systems (final paragraph (b)(15)(iii)).

Final paragraph (b)(15) does not retain the proposed fall protection measure of designated areas (proposed paragraph (b)(13)(ii)). However, final paragraph (b)(15) still gives employers the same level of control flexibility that proposed and final paragraph (b)(1)(i) provides for all unprotected sides and edges. The final rule also is consistent with the construction fall protection standard (§ 1926.501(b)(15)).

OSHA included this provision in the final rule to protect workers from all fall hazards in general industry regardless of whether final paragraph (b) in this section specifically mentions the particular walking-working surface or fall hazard. Therefore, this provision ensures that general industry employers will protect their workers from falling whenever and wherever a fall hazard is present in their workplaces. OSHA did not receive any comments on the proposed provisions and adopts it as discussed.

Paragraph (c)—Protection From Falling Objects

Final paragraph (c), like the proposed rule, requires that employers protect workers from being struck by falling objects, such as objects falling through holes or off the sides or edges of walking-working surfaces onto workers below. When workers are at risk of being struck by falling objects, the final rule requires that employers ensure that workers wear head protection meeting the requirements of 29 CFR part 1910, subpart I. In addition, final paragraph (c) requires that employers protect workers using one or more of the following:

• Erecting toeboards, screens, or guardrail systems to prevent objects from falling to a lower level (final paragraph (c)(1));

• Erecting canopy structures and keeping potential falling objects far enough from an edge, hole, or opening to prevent them from falling to a lower level (final paragraph (c)(2)); or

• Barricading the area into which objects could fall, prohibiting workers from entering the barricaded area, and keeping objects far enough from the edge or opening to prevent them from falling to the lower level (final paragraph (c)(3)).

Final paragraph (c) simplifies the rule by consolidating into a single paragraph all of the provisions that address falling objects in the existing standard (§ 1910.23(b)(5) and (c)(1)) and the proposed rule (paragraphs (b)(3)(iii), (b)(5)(i), (b)(14)(ii)). The final rule is consistent with the proposal and patterned on the construction standard (§ 1926.501(c)). OSHA did not receive any comments on the proposed protection from falling object requirements and adopts final paragraph (c) as discussed.

Section 1910.29—Fall Protection Systems and Falling Object Protection—Criteria and Practices

Final § 1910.29, like the proposed rule, establishes system criteria and work-practice requirements for fall protection systems and falling object protection specified by final § 1910.28, Duty to have fall protection systems and falling object protection,[65] and § 1910.140, Personal fall protection equipment.

As discussed earlier in this preamble, final §§ 1910.28, 1910.29, 1910.30, and 1910.140 establish new provisions that provide a comprehensive approach to fall and falling object protection in general industry. Final § 1910.28 specifies that employers must provide fall and falling object protection for workers exposed to fall and falling object hazards, and select a system that the final rule allows them to use in particular situations or operations.

[65] The final rule revised the title for § 1910.29 to state that it establishes criteria and practices for both fall protection systems and falling object protection. Although the proposed title only listed fall protection systems, it also included criteria and systems for protecting workers from falling objects. OSHA believes stakeholders understood the proposed rule covered both fall protection systems and falling object protection, the final rule makes it clear and explicit.

Final § 1910.29 requires that employers ensure the fall protection system and falling object protection they select meet the specified criteria and practice provisions. Finally, § 1910.30 requires that employers ensure workers exposed to fall and falling object hazards and who must use fall protection systems and falling object protection receive training on those hazards and how to use the required protection properly. OSHA notes that the final rule adds a requirement that employers provide training for personal fall protection systems to existing § 1910.132.

In general, OSHA patterned the system criteria and work practice requirements in final § 1910.29 to be consistent with its construction standards (§§ 1926.502 and 1926.1053). OSHA believes that making the general industry fall protection system and falling object protection criteria requirements consistent with the construction standards will make the final rule easier to understand than the existing general industry standard, and make compliance easier for employers who perform both general industry and construction activities. In many situations employers should be able to use the same fall protection systems and falling object protection for both activities, which helps to minimize compliance costs. As mentioned in the preamble to final § 1910.28, many commenters supported making the general industry fall and falling object protection requirements consistent with those in the construction industry.

Final § 1910.29, like the proposed rule, reorganizes the existing rule so that the format of the final rule is consistent with the format in the construction fall protection standard in § 1926.502. OSHA believes this reorganization will make the final rule easier to understand and follow because many employers already are familiar with and follow the construction requirements.

Final § 1910.29 also draws provisions from, and is consistent with, national consensus standards addressing personal fall protection systems and falling object protection, including:

• ANSI/ASC A14.3–2008, American National Standards for Ladders–Fixed (A14.3–2008) (Ex. 8);

• ANSI/ASSE A1264.1–2007, Safety Requirements for Workplace Walking/Working Surfaces and Their Access; Workplace, Floor, Wall and Roof Openings; Stairs and Guardrails Systems (A1264.1–2007) (Ex. 13); and

• ANSI/ASSE A10.18–2012, Safety Requirements for Temporary Roof and Floor Holes, Wall Openings, Stairways, and Other Unprotected Edges in

Construction and Demolition Operations (A10.18–2012) (Ex. 388); and

• National Fire Protection Association (NFPA) 101–2012, Life Safety Code (NFPA 101–2012) (Ex. 385).

Paragraph (a)—General Requirements

Final paragraph (a) establishes general requirements that are applicable to the fall protection systems and falling object protection covered by final 29 CFR part 1910.

In final paragraph (a)(1), OSHA specifies that employers ensure all fall protection systems and falling object protection that 29 CFR part 1910 requires meet the requirements in § 1910.29. Accordingly, the requirements of § 1910.29 apply to fall protection systems and falling object protection that other part 1910 standards require if those standards do not establish specific criteria and work practices. For example, final paragraph (a)(1) requires that ladder safety systems on fixed ladders used at sawmills (§ 1910.265)) must comply with requirements in § 1910.29(i) because § 1910.265 does not specify criteria that ladder safety systems must meet.

When employers elect to use a personal fall protection system, final paragraph (a)(1) specifies that employers must ensure those systems meet the applicable requirements in 29 CFR part 1910, subpart I, namely final §§ 1910.132, General requirements, and 1910.140, Personal fall protection equipment. Final § 1910.140 establishes personal fall protection system criteria and work practice requirements, while § 1910.132 establishes provisions that apply to all personal protective equipment (PPE), including personal fall protection systems. For example, § 1910.132(a) requires that employers provide, use, and maintain PPE, including personal fall protection systems, in a reliable condition, and § 1910.132(c) specifies that employers ensure that the design and construction of PPE is safe for the work the employee is performing. In addition, § 1910.132(d) requires that employers perform a hazard assessment and ''[s]elect PPE that properly fits each affected employee,'' while § 1910.132(h) requires, with a few exceptions, that employers must provide PPE, including personal fall protection systems, at no cost to the worker.

Final paragraph (a)(1) revises the proposed rule slightly by deleting the reference to ''body belts and body harnesses,'' because they are components of personal fall protection systems. OSHA did not receive any comments on proposed paragraph (a)(1) and adopts the provision with the change discussed.

Final paragraph (a)(2) specifies that employers must provide and install all fall protection systems and falling object protection required by final subpart D, and comply with all other applicable requirements of final subpart D, before any worker begins work that necessitates fall or falling object protection. Final paragraph (a)(2), requires that employers take a proactive approach to managing fall and falling object hazards by installing, for example, fall protection systems or components (*e.g.,* a vertical lifeline), so the systems are in place and available for use whenever there is potential worker exposure to fall hazards. OSHA believes that a proactive approach will encourage employers to anticipate and evaluate whether their workers may be on walking-working surfaces where a potential fall or falling object hazard exists and install systems (*e.g.,* guardrail systems, toeboards) or attachment (tie-off) points (*e.g.,* anchorages, tieback anchors) so that workers can use such protection readily when needed.

OSHA believes such proactive planning and action already are part of the standard operating procedures for many employers. OSHA also believes that such pre-planning will encourage and guide employers to use the most effective and protective measures to address fall and falling object hazards. OSHA did not receive any comments on proposed paragraph (a)(2) and adopts the provision with the clarification discussed above.

Paragraph (b)—Guardrail Systems

Final paragraph (b) contains system requirements employers must follow to ensure guardrail systems they use will protect workers from falling to lower levels. In developing final paragraph (b), OSHA carried forward, with some revision, many of the requirements from the existing rule (*e.g.,* existing § 1910.23), and also drew the requirements from the construction fall protection standard in § 1926.502(b).

The Agency believes that the revised guardrail requirements make the final rule easier to understand than the existing general industry rule, reflect current technology and work practices, and ensure consistency among guardrail requirements throughout general industry. For example, OSHA reorganized the final rule so the same guardrail system requirements (final paragraph (b)) apply uniformly to all walking-working surfaces, in turn making the requirement easier to understand than the existing general industry rule, which separately lists the guardrail requirements for floor holes, open-sided floors, platforms, runways, and stairways. In addition to the explanations below for each of the guardrail system requirements, OSHA notes that the preamble to § 1926.502 (59 FR 40733) also provides useful explanatory material for each of the guardrail system provisions in § 1926.502(b).

Final paragraph (b)(1) specifies requirements for the minimum and maximum height of guardrail systems. Final paragraph (b)(1) carries forward the existing requirement (existing § 1910.23(e)(1)) that employers must ensure the top edge of the top rails of guardrail systems is 42 inches above the walking-working surface, which is consistent with the proposal and the construction fall protection standard (§ 1926.502(b)(1)). The final rule allows the height of guardrails to deviate from the 42-inch required height by up to three inches, plus or minus, which also is consistent with the construction standard. Final paragraph (b)(1) clarifies in objective terms (''plus or minus 3 inches'') the language in the existing provision that the guardrail height may deviate from 42 inches by a ''nominal'' amount. OSHA believes that a deviation of no more than three inches from the 42-inch guardrail height constitutes a ''nominal'' deviation that will not compromise worker protection. The Agency believes that continuing this allowance provides flexibility for employers if they make changes to walking-working surfaces (*e.g.,* adding carpet, installing grating, and replacing flooring) that may slightly reduce the effective height of the guardrail (see 55 FR 13374).

Final paragraph (b)(1) also is consistent with A10.18–2012 (Section 4.1.2) and A1264.1–2007 (Section 5.4). A1264.1–2007 (Section 5.4) requires that guardrails have a minimum height of 42 inches, but does not specify a maximum height. A note to that standard explains that, generally, ''guardrails are 42 to 45 inches in height'' (Section E5.4).

Final paragraph (b)(1) also revises the existing rule (existing § 1910.23(e)(1)) to allow employers to erect guardrail systems that exceed the 45-inch height limit, provided the employer ensures that the higher guardrails comply with all other requirements in paragraph (b). The final rule is consistent with the requirement in the construction fall protection standard (§ 1926.502(b)(1)), which permits an increase in the top rail height ''when conditions warrant.'' OSHA believes that such conditions also exist in general industry, and that exceeding the 42-inch height requirement will not impact worker safety as long as employers comply with the other provisions of final paragraph (b). While the proposed rule allowed higher guardrail systems in these situations ''when conditions warrant,'' OSHA did not adopt that phrase in the final rule because the Agency concluded that no other conditions are necessary to ensure employee safety as long as the employer satisfies the other provisions of final paragraph (b). OSHA believes that adding this exception to the final rule will make compliance easier for employers who perform both general industry and construction activities. Neither the A10.18–2012 nor the A1264.1–2007 standards include this exception to the guardrail height limit. Ameren supported ''relaxing the 'maximum' '' height requirement for the reasons OSHA delineated (Ex. 189).

In the preamble to the proposed rule, OSHA said it was considering adding a provision that would allow employers to use barriers ''as the functional equivalent of guardrails'' (75 FR 28894). Such a provision would permit employers to use barriers as guardrails even if the height of the barriers is as low as 30 inches provided the total sum of the height and depth of the barrier is 48 inches. Using this formula, an employer could use a barrier with a height of 36 inches if the depth of the barrier were at least 12 inches. OSHA notes that the 1990 proposal, which the Agency did not adopt, included the provision as an alternative means of complying with the 42-inch guardrail height requirement (55 FR 13374). The preamble to the 1990 proposal explained that the National Bureau of Standards recommended a formula from its 1976 report, ''A Model Performance Standard for Guardrails.''

OSHA received one comment about the potential provision. Thomas Kramer, of LJB, Inc., supported incorporating the provision in the final rule, stating, ''This reference would allow a number of parapets associated with roof fall hazards to be used as a compliant physical barrier. It would have the added value of providing the building owner with a very low cost, if any cost at all, solution to protecting workers on a roof,'' and further commenting that ''[c]learly, this proposed revision is technologically feasible'' (Ex. 367).

For the following reasons, OSHA decided not to add a provision allowing the use of barriers as functional equivalents of guardrail systems. First, incorporating the provision would make the final rule inconsistent with the construction fall protection standard, which is contrary to a major goal of the rulemaking. Similarly, neither A10.18–2012 nor the A1264.1–2007 include the provision.

Second, the formula from the 1976 report ''A Model Performance Standard for Guardrails,'' which forms the basis for the potential provision, is almost 40 years old. The documents and codes the report references are even older. OSHA believes that industry practices over the last 40 years overwhelmingly complied with the 42-inch guardrail requirement in the existing rule as well as the construction fall protection and ANSI standards, eliminating the need for this alternative.

Finally, OSHA does not believe the provision will provide fall protection that is as effective as the final rule. The Agency believes there is a risk of workers falling over barriers that are one-half foot or more lower than the required 42-inch guardrail height. In particular, OSHA does not believe a barrier with a height of 36 inches provides adequate protection from falls even when the barrier depth is 12 inches. OSHA believes it would be too easy for workers to fall over barriers that are one-half foot lower than the required height, and that the 12-inch barrier depth would not provide adequate protection from going over the barrier. OSHA expressed much the same rationale when it decided not to propose a provision that would allow existing guardrails that are 36 inches in height. In the proposed rule OSHA said that it did not consider 36-inch high guardrails to be as safe as the required 42-inch high guardrails (75 FR 28894).

OSHA notes that the 1990 proposed rule would have allowed a 36-inch minimum height for existing guardrail systems instead of the required 42 inches (55 FR 13360 (4/10/1990)). In particular, the earlier proposal would have codified the 1981 OSHA directive classifying as a *de minimus* violation any existing guardrail having a height of 36 inches (STD 01–01–010). OSHA issued the directive because it recognized that employers likely erected guardrails under pre-OSHA building codes (55 FR 13373). As mentioned, however, OSHA did not propose allowing this alternative in the 2010 proposal because of safety concerns. In addition, due to those concerns, OSHA also announced that it was going to rescind the directive and previous interpretations treating 36-inch height guardrails as *de minimus* violations (see 75 FR 28894 n.2).

OSHA received several comments recommending that the Agency not rescind the directive and instead adopt a provision allowing employers to continue using existing guardrails that have a height of 36 inches. Mercer ORC questioned OSHA's statement in the proposal that guardrails 36 inches in height are not as ''equally safe'' as guardrails with a height of 42 inches (Ex. 254). However, they provided no evidence to support deviating from the height requirements in the construction fall protection standard and both A10.18–2012 and A1264.1–2007. Mercer ORC also said OSHA should estimate the costs associated with replacing the lower-height guardrails and the number of injuries prevented by having guardrails that are 39 inches in height (Ex. 254). Mercer ORC stated:

> Clearly, if people have been writing to OSHA to ask about guardrails that are less than the ''42 inches nominal'' in the existing rule, there are likely to be significant numbers of workplaces that have these non-standard guardrails in place. OSHA should either quantify the benefits and costs of this rule change or grandfather those guardrail installations that occurred prior to the effect date of the new rules (Ex. 254).

The New York City Department of Environmental Protection (NYCDEP) commented that requiring 42-inch guardrails would ''impact'' many NYCDEP facilities (Ex. 191). They said the 42-inch height requirement ''will not provide a benefit to our employees commensurate with the costs and will encumber funds that could be used for more efficacious health and safety initiatives.''

OSHA does not agree with Mercer ORC and NYCDEP that requiring guardrails to be 42 inches in height will impose significant costs to a substantial number of workplaces. They did not provide any evidence showing that a 36-inch guardrail height better effectuates the purposes of the OSH Act than the proposed 42-inch height. In fact, the requirement that employers ensure guardrails be 42 inches high (plus or minus 3 inches) has been in place since OSHA adopted the Walking-Working Surfaces standards in 1972 from then-existing national consensus standards (ANSI A12.1–1967, Section 7.1) (38 FR 24300 (9/6/1973)). Moreover, the guardrail height requirements in those consensus standards were adopted years before 1972. A1264.1–2007 and A10.18–2012 also require that guardrail heights be at least 42 inches.

OSHA points out the directive OSHA issued in 1981 allowing guardrails to have a minimum height of 36 inches instead of 42 inches only applied to guardrails existing at that time. OSHA believes that the vast majority of guardrails in use today are 42 inches (plus or minus 3 inches) in height. Therefore, OSHA does not believe that employers will experience significant difficulty bringing any remaining guardrails into compliance with this final standard. Accordingly, the final rule does not allow existing guardrails that are less than 39 inches in height. Moreover, OSHA hereby rescinds OSHA Directive STD 01–01–010 and all subsequent letters of interpretation allowing guardrails to have a minimum height of 36 inches.

Mr. M. Anderson raised a different point regarding the 42-inch guardrail height requirement, saying that the requirement will pose a problem for historic buildings, which often have low guardrails:

> This will present an infeasible-to-fix problem for historic sites. Many historic balustrades are less than the required 42 [inches]. In order to comply with this height requirement, balustrades will have to be replaced thereby changing the historic aesthetic of the building. This seems to go against the Historic Preservation Act (Ex. 139).

OSHA did not receive comments from any other stakeholders concerning historic buildings and historic preservation requirements. To the extent that any employer encounters such a problem, the employer may use one of the other means of fall protection authorized by § 1910.28 (*e.g.,* safety net systems or personal fall protection systems).

Final paragraph (b)(2), like the proposed rule, requires that employers install intermediate protective members, such as midrails, screens, mesh, intermediate vertical members, solid panels, or equivalent intermediate members between the walking-working surface and the top edge of the guardrail system when there is not a wall or parapet that is at least 21 inches (53 cm) high. Whatever intermediate protective member employers use, the final rule requires that employers install them as follows:

- Install midrails midway between the top edge of the guardrail system and the walking-working surface. Since the final rule requires that guardrail systems be 42 inches high (plus or minus three inches), employers must install midrails approximately 21 inches above the horizontal walking-working surface (final paragraph (b)(2)(i));
- Install screens, mesh, and solid panels from the walking-working surface to the top rail and along the entire opening between top rail supports (final paragraph (b)(2)(ii));
- Install intermediate vertical members, such as balusters, no more than 19 inches apart (final paragraph (b)(2)(iii)); and
- Install other equivalent intermediate members, such as additional midrails and architectural panels, so that openings are not more than 19 inches wide (final paragraph (b)(2)(iv)).

OSHA drew the requirements in final paragraph (b)(2) from the construction fall protection standard in § 1926.502(b)(2), which has almost identical requirements. The existing rule in § 1910.23(e)(1) and (e)(3)(v)(*c*) only address the installation of midrails. OSHA believes final paragraph (b)(2) provides more clarity and flexibility than the existing rule. Final paragraph (b)(2) includes examples of different types of intermediate members that employers may use, and identifies the placement/installation criteria for each type. In addition, the final rule does not require that employers install intermediate protective members when the guardrail system is on a wall or parapet that is at least 21 inches high, which is consistent with the construction fall protection standard. OSHA believes it is not necessary to install intermediate protective members where a wall or parapet reaches at least the same height as that required for a midrail.

OSHA received one comment on proposed paragraph (b)(2). Ellis Fall Safety Solutions (Ellis), recommended that guardrails made of wire cable use at least three wires so the space between cables does not exceed 19 inches (Ex. 155). OSHA does not believe it is necessary to add such language to the final rule. The requirements on ''intermediate members'' and ''other equivalent intermediate members'' include wire cables; thus, the final rule in paragraphs (b)(2)(iii) and (iv) already require that wire cable installed in a guardrail system leave no opening in the system that exceeds 19 inches.

OSHA added language to final paragraph (b)(2) to clarify that solid panels are an example of a protective intermediate member. This addition makes the final provision consistent with final paragraph (b)(5).

Final paragraphs (b)(3) and (4) are companion provisions that establish strength requirements for guardrail systems. Final paragraph (b)(3), like the proposed rule, requires that employers ensure guardrail systems are capable of withstanding, without failure, a force of at least 200 pounds applied in a downward or outward direction within two (2) inches of the top edge, at any point along the top rail. Final paragraph (b)(3) generally is consistent with the existing rule in §§ 1910.23(e)(3)(iv) and (e)(3)(v)(*b*). The final rule is almost identical to the construction fall protection standard in § 1926.502(b)(3), and consistent with A10.18–2012 (Section 4.1.4).

The term ''failure,'' as defined in final § 1910.21(b), means a load refusal (*i.e.,* the point at which the load exceeds the ultimate strength of a component or object), breakage, or separation of a component part. Conversely, ''without failure'' means a guardrail system must have adequate strength to withstand at least 200 pounds applied downward or outward within two inches of the top edge of top rail, without a load refusal, breakage, or separation of component parts. OSHA believes that if the guardrail system can withstand application of such force, even if the system has some minor deformation, it will be capable of preventing a worker from falling. OSHA believes minor deformation that does not affect the structural integrity or support capabilities of the guardrail system does not constitute failure as the final rule defines it.

OSHA also has removed the language in the existing standard that requires supporting posts to be spaced not more than 8 feet apart. OSHA believes the performance language of final paragraph (b)(3) is adequate, and also provides greater flexibility. In some cases an 8-foot distance between posts may not be adequate to meet the 200-pound strength requirement, while in other situations and with certain materials, the guardrail will maintain a 200-pound force with the supporting posts installed at distances greater than 8 feet apart. Employers must install supporting posts at whatever distance is necessary to meet the strength requirement of the final rule, without failure.

OSHA received two comments on proposed paragraph (b)(3). Peter Catlos recommended that the final rule, at a minimum, specify test methods or requirements for load concentrations and rates when applying the 200-pound test load (Ex. 203). Without specifying load concentrations and rates, or test methods, Mr. Catlos said the referenced 200-pound minimum load requirement ''is not definitive'' (Ex. 203).

Consistent with Section 6(b)(5) of the OSH Act, final paragraphs (b)(3) and (4) use a performance-based approach that establishes the strength objective employers must meet when testing a guardrail. The A10.18–2012 standard (Section 4.1.4) and the A1264.1–2007 standard (Section 5.6.1) follow a similar approach. As such, OSHA believes the strength requirement, which also is identical to the requirement in the construction fall protection standard, is protective, clear, and functional.

Final paragraph (b)(3) gives employers flexibility to use whatever test methods or manufacturer information they want so long as those methods and specifications meet the same strength requirement as the final rule. OSHA notes that A1264.1–2007 and American Society for Testing and Materials (ASTM) E985–00e1–2006 Standard Specification for Permanent Metal Railing Systems and Rails for Buildings, provide helpful guidance for meeting the 200-pound strength requirement.

The other commenter, Ellis, recommended that OSHA revise the 200-pound strength requirement to 276 pounds (*i.e.,* the 95th percentile for men) (Ex. 155). He said that, according to the National Health and Nutrition Examination Survey, the average weight of workers increased about 1½ to 2 pounds a year since the 1950s, adding, ''Heavier workers deserve to be protected and just because ANSI and OSHA have not updated their standards for effectively 40 years does not mean we should stay with out of date values'' (Ex. 155). OSHA does not believe the change Ellis proposes is necessary. The 200-pound strength requirement in A10.18–2012 (Section 4.1.4) and A1264.1–2007 (Section 5.6.1) is a minimum strength requirement.

Finally, Ellis said OSHA should prohibit using guardrail systems as anchorages for personal fall protection systems unless a registered structural engineer approves, marks, or labels the systems for such use. OSHA does not believe it is necessary to add Ellis' recommendation to the final rule because § 1910.140 requires that personal fall protection system anchorages be capable of supporting 5,000 pounds. However, final paragraph (b)(3) only requires that guardrail systems be capable of withstanding a force of at least 200 pounds, which means that guardrail systems are not capable of serving as anchorages unless they also meet the requirements anchorages in final rule § 1910.140. OSHA, received no other comments and is adopting in this final rule paragraph (b)(3) as discussed.

Final paragraph (b)(4), like the proposed rule, requires that employers ensure that when the 200-pound test load is applied in a downward direction, the top rail of the guardrail system does not deflect to a height of less than 39 inches above the walking-working surface. Deflection refers to the distance or degree a structure moves or displaces when a load is applied to the structure. To illustrate, employers must ensure that application of the required minimum test load to the top rail of a 42-inch guardrail system does not reduce its height by more than three inches. If the load or stress placed on a guardrail system, regardless of its height, reduces the height of the system to less than 39 inches, it is not likely to be tall enough to prevent workers from falling over the top rail. Therefore, final paragraph (b)(4) specifies that employers must ensure the height of their guardrail systems, deflected or not, is never less than 39 inches high.

Final paragraph (b)(4) is almost identical to the construction fall protection standard in § 1920.502(b)(4). The A10.18–2012 standard (Section 4.1.4) specifies that guardrails shall not deflect more than 3 inches in any direction. Since that standard does not allow any nominal deviation in the guardrail height, it means that standard limits the deflected height to not less than 39 inches high.

OSHA received comments from Mr. Catlos and Ellis on proposed paragraph (b)(4). Ellis opposed allowing the guardrail system to deflect as much as 3 inches, stating, ''[Three inches of] movement specified in 1926.502 is too great and 1.5 [inches] should be [the maximum] when over half the male worker [center of gravity] exceeds 39 [inches]'' (Ex. 155). OSHA believes that a guardrail system that has a height of at least 39 inches, as final paragraph (b)(4) requires (*i.e.,* ''42 inches, plus or minus 3 inches''), is adequate to protect a worker from falling over the top rail. OSHA drew final paragraph (b)(4) from the construction fall protection standard, and the Agency is not aware of any data indicating workers are falling over guardrail systems that have a height of at least 39 inches. OSHA also notes the final rule is consistent with A10.18–2012 (Section 4.1.4), indicating final paragraph (b)(4) has wide stakeholder acceptance.

Mr. Catlos raised concerns that the proposed language on deflection does not include a horizontal deflection allowance or limit (Ex. 203). He pointed out that proposed paragraph (b)(3) includes both vertical and horizontal load test requirements, and he said that, for consistency, final paragraph (b)(4) should include a horizontal load test and deflection allowance, in addition to the vertical allowance. OSHA disagrees with the commenter for the following reasons. First, the final rule focuses on ensuring that guardrail systems maintain a minimum height, so that if workers fall into or onto the guardrail they are protected from falling over the top rail.

Second, Mr. Catlos did not say what would constitute an appropriate horizontal load test deflection allowance and OSHA believes that allowing a horizontal deflection in addition to the vertical allowance, may result in failure of the guardrail system to protect workers from falling. For example it may break or permanently deform in a way that affects the structural integrity of the guardrail system. Such deformation may adversely affect the structural integrity or support capabilities of the system when workers lean on or fall into the top rail of a guardrail that is not perpendicular to the horizontal walking-working surface. In this regard, Mr. Catlos did not provide any data indicating that horizontal deflection of the guardrail system would not result in system failure. Additionally, OSHA is concerned that after repeated horizontal deflection, the guardrail could be reduced in height to below 39 inches, which is below the minimum height requirement that final paragraph (b)(1) requires.

Third, OSHA believes that allowing a horizontal deflection when vertical deflection already reduces the height of guardrail systems may put workers at risk of falling over the top rail. This is true especially when vertical deflection reduces the height of the top edge of a guardrail system to 39 inches. OSHA does not believe Mr. Catlos presented a compelling argument to support deviating from the construction fall protection standard § 1926.502(b)(4) by adding a horizontal deflection allowance to final paragraph (b)(4). Therefore, OSHA is adopting in this final rule paragraph (b)(4) as discussed.

Final paragraph (b)(5), like the proposal, requires that employers ensure midrails, screens, mesh, intermediate vertical members, solid panels, and other equivalent members, are capable of withstanding, without failure, a force of at least 150 pounds applied in any downward or outward direction at any point along the intermediate member.

The existing standard does not contain a strength requirement for midrails and this omission has resulted in confusion. OSHA drew the proposed requirement from the construction fall protection standard in § 1926.502(b)(5). In the preamble to that rule, OSHA explained that a strength test of 150 pounds was adequate for intermediate structures because they do not serve the same purpose as the top rails of guardrail systems (59 FR 40672, 40697 (8/9/1994)). Workers often place forces on top rails (*e.g.,* leaning over the top rail) that they do not place on intermediate members; if workers fall onto a guardrail, they most likely will strike the top rail, not the intermediate member. Therefore, OSHA believes that midrails and other intermediate members do not need deflection limits.

The A1264.1–2007 standard (Section 5.6.1) requires that intermediate members be capable of withstanding a slightly higher horizontal load limit (*i.e.,* 160 pounds) applied in a downward (*i.e.,* perpendicular) direction at the midpoint and mid-height. OSHA notes that A1264.1–2007 (Section 5.6.1) also includes a 3-inch horizontal deflection allowance. The A10.18–2012 standard does not include a load test for midrails and other intermediate members. Although the final rule only requires a 150-pound load test, OSHA believes, nonetheless, that the final rule is more protective than the A1264.1–2007 standard because it does not permit a 3-inch horizontal deflection allowance. OSHA did not receive any comments on the proposal and adopts it as discussed above.

Final paragraph (b)(6), like the proposed rule, requires that employers ensure guardrail systems are smooth-surfaced to protect workers from injury, such as punctures or lacerations, and to prevent catching or snagging of workers' clothing. The final rule is based on the existing requirement in § 1910.23(e)(1) and (e)(3)(v)(*a*), and A1264.1–2007 (Section 5.4). The final rule also is consistent with the construction fall protection standard in § 1926.502(b)(6), as well as A10.18–2012 (Section 4.1), which specifies that guardrails be free of ''sharp edges, splinters, or similar conditions.''

The Agency believes it is important that guardrail systems have smooth surfaces to prevent injuries. For example, workers can cut or puncture their hands or other parts of their bodies, when they grab or lean against guardrails that have protruding nails. Similarly, protruding nails can catch workers' clothing which can damage protective clothing or cause workers to trip or fall. OSHA did not receive any comments on the proposed rule and adopts it with the changes discussed above.

Final paragraph (b)(7), like the proposed rule, requires that employers ensure the ends of top rails and midrails do not overhang the terminal posts, except where the overhang does not pose a projection hazard for workers. Top and midrails that extend past the terminal post may cause a worker's clothing or tool belt to catch which could result in a fall. However, the final rule allows top rails and midrails to overhang the terminal posts provided they do not pose a projection hazard. For example, employers may shape top rails and midrails so snag hazards do not exist. The provision is almost identical to the existing rule in § 1910.23(e)(1) and the construction fall protection standard in § 1926.502(b)(7). The final rule is consistent with the A1264.1–2007 standard at Sections 5.4 and 5.6.3. OSHA did not receive any comments on the proposed provision and OSHA adopts the requirement as proposed.

Final paragraph (b)(8), like the proposed and construction fall protection standards(§ 1926.502(b)(8)), prohibits employers from using steel and plastic banding for top rails or midrails in guardrail systems. The preamble to the construction fall protection standard explained that although banding, particularly steel banding, often can withstand a 200-pound load, it also can tear easily if twisted (59 FR 40698). In addition, workers can cut their hands when they seize steel or plastic banding, especially in a fall, since banding often has sharp edges. OSHA notes that, like the construction fall protection standard, final paragraph (b)(8) does not prohibit the use of steel or synthetic rope on top rails and midrails because rope does not have sharp edges. OSHA reminds employers, as discussed in final paragraph (b)(15) and similar to the construction rule, that manila or synthetic rope used for top rails must be inspected as necessary to ensure the rope meets the strength requirements of this section. OSHA did not receive any comments on the proposed provision and adopts it as discussed above.

Final paragraph (b)(9), like the proposed rule, requires that employers ensure top rails and midrails of guardrail systems are at least one-quarter inch in diameter or thickness. The final rule applies to all top rails and midrails, regardless of the material employers use for those rails. The final rule uses both ''diameter'' and ''thickness'' because top rails and midrails may have different shapes (*e.g.,* cylindrical or rectangular).

OSHA based final paragraph (b)(9) on the construction fall protection standard (§ 1926.502(b)(9)). The final paragraph ensures that whatever material an employer uses for top rails or midrails, it is not so narrow that workers grabbing onto the top rail or midrail may cut their hands. Such injuries could occur if employers use narrow, high strength rope or wire for top rails or midrails. To eliminate the possibility of injury, employers must ensure that all top rails and midrails are at least one-quarter inch in diameter/thickness. OSHA did not receive any comments on the proposed provision and adopts it is discussed above.

Final paragraph (b)(10) requires that employers using guardrail systems at hoist areas place a removable guardrail section or, in the alternative, chains or a gate consisting of a top and midrail, across the access opening between guardrail sections when workers are not performing hoisting operations. This requirement ensures workers do not fall through an opening accidentally when materials are not being hoisted. It also gives employers flexibility in determining how to effectively guard access openings at hoist areas.

OSHA stresses that employers may use chains and gates as an alternative to removable guardrails, but only when the chains and gates provide a level of safety that is ''equivalent'' to the level of protection provided by removable guardrails. As defined in final § 1910.21(b), ''equivalent'' means that the alternative means ''will provide an equal or greater degree of safety.''

OSHA clarified final paragraph (b)(10) in response to comments stakeholders raised on several issues. First, in response to a comment from Mercer ORC (Ex. 254), the final rule clarifies that employers may use any of the following three alternatives to guard openings to hoist areas:

- Removable guardrail sections;
- Chains that provide protection at least at the top and midrail level; or
- A gate consisting of a top rail and midrail.

A typographical error (*i.e.,* missing comma) in the proposed rule made it appear that employers could only use a removable guardrail section or ''chain gate.'' However, OSHA believes that both chains and gates that include protection at the top rail and midrail levels provide protection at hoist areas that is equivalent to removable guardrail sections.

Second, on a related issue, Mercer ORC requested clarification about whether a ''chain gate'' must have one or two chains (Ex. 254). Final paragraph (b)(10) clarifies that any alternative the employer uses to guard the access area when workers are not performing hoisting operations must have a top rail and a midrail to provide workers with protection that is equivalent to a guardrail system. OSHA does not believe that a single bar or chain provides protection that is equivalent to a guardrail system. This clarification is consistent with OSHA's 1990 proposed rule and letters of interpretation on the use of gates and chains to protect workers from falling through access openings in hoist areas when they are not performing hoisting operations (*e.g.,* Letter to Mr. Stephen Hazelton (5/23/2005 [66]); letter to Mr. Erich Bredl (1/15/

[66] OSHA letter to Mr. Stephen Hazelton available at: *https://www.osha.gov/pls/oshaweb/*

Continued

1993)[67]). In the letter to Mr. Bredl, OSHA said ''employee protection at access openings [must] be equivalent to that of the guardrail system.''

Finally, Ellis opposed the use of chains to guard access openings at hoist areas (Ex. 155). He said chains ''cannot meet the sag requirements of the standard and an overbalance hazard can occur'' (Ex. 155). OSHA does not agree with Ellis' recommendation, noting that neither the proposed nor final rules establish a sag requirement for chains used at hoisting areas. In addition, OSHA notes that Ellis does not explain or provide any information about what constitutes an ''overbalance'' hazard. Nevertheless, OSHA clarified the language in final paragraph (b)(10) to indicate that chains and gates are alternatives that employers may use instead of removable guardrail sections when they provide a level of safety equivalent to guardrails. However, if chains sag so low that they do not meet the minimum guardrail height requirements (see final paragraph (b)(1)), or are not as effective as a removable guardrail section in preventing workers from falling through access openings, employers would have to use removable guardrail sections or a gate instead.

The final rule is almost identical to the proposed rule and construction fall protection standard in § 1926.502(b)(10), and OSHA adopts it with the clarifications discussed above.

Final paragraphs (b)(11) through (13) establish criteria for the use of guardrail systems to protect employees working near holes. Final paragraph (b)(11) requires that employers ensure that when guardrail systems are used around holes, they are installed on all unprotected sides or edges of the hole. As discussed earlier in this preamble, final § 1910.21(b) defines ''hole'' as ''a gap or open space in a floor, roof, horizontal walking-working surface, or similar surface that is at least 2 inches (5 cm) in its least dimension.''

The final rule consolidates into one provision the various requirements in the existing rule that pertain to criteria for protecting workers from falling through holes. Final paragraph (b)(11) is almost identical to the proposed rule, and OSHA's construction fall protection industry standard in § 1926.502(b)(11). OSHA did not receive any comments on the proposed provision and finalizes it as discussed.

Final paragraph (b)(12), like the proposed rule and construction fall protection standard (§ 1926.502(b)(12)), establishes requirements for guardrail systems erected around holes through which materials may be passed. The final rule requires:

- When workers are passing materials through a hole, employers must ensure that not more than two sides of the guardrail system are removed (final § 1910.29(b)(12)(i)); and
- When workers are not passing materials through the hole, employers must ensure a guardrail system is installed on all unprotected sides and edges, or close the hole with a cover (final § 1910.29(b)(12)(ii)).

The final rule reorganizes and revises the proposed provision to make it easier to understand and follow. Final paragraph (b)(12) also updates the existing rule in § 1910.23(a)(7), which does not contain a provision addressing guarding holes when workers pass materials through the holes. The final rule generally is consistent with A1264.1–2007 (Section 3.5) and A10.18–2012 (Section 7.1). OSHA notes the A1264.1 standard allows employers to use an attendant if a hole is uncovered and guardrails are removed. However, OSHA believes that requiring guardrails on all sides of the hole is more protective than using an attendant.

The final rule allows employers to remove guardrail sections on no more than two sides of a hole when materials are being passed through the hole (paragraph (b)(12)(i)). In other words, the final rule does not allow the other guardrail sections to be removed during the time materials are moving through the hole to protect other workers who may be in the area. Final paragraph (b)(12)(ii) also protects workers by requiring guardrails on all unprotected sides of the hole or covering it when workers are not passing materials through the hole. OSHA did not receive any comments on the proposed provision and finalizes it as discussed.

Final paragraph (b)(13), similar to the proposed rule and construction fall protection standard (§ 1926.502(b)(13)), requires that employers using guardrail systems around holes that are points of access, such as ladderway openings, protect workers from walking or falling into the hole by installing gates at the opening in the guardrail system (final paragraph (b)(13)(i)), or offsetting the opening from the hole so workers cannot walk or fall into the hole (final paragraph (b)(13)(ii)). The final rule also revises the proposed criteria for such gates by specifying that they:

- Must be self-closing;
- Must either slide or swing away from the hole; and
- Be equipped with top rails and midrails or equivalent intermediate members that meet the requirements in final paragraph (b) (final paragraph (b)(13)(i)).

The final provision is consistent with A1264.1–2007 (Section 3.2 and E3.2). The ANSI/ASSE standard requires that ladderway floor openings be guarded to prevent workers from falling into the hole and explicitly notes self-closing gates that swing away from the ladderway hole and offsets are two methods of guarding those openings.

OSHA revised the proposed criteria for guardrail opening gates for two reasons. First, the revisions make final paragraph (b)(13) consistent with final § 1910.28. As discussed, final § 1910.28(b)(3)(iv) replaced ''swinging gate'' with ''self-closing gate'' to give employers flexibility to use sliding gates at guardrail access openings. OSHA believes sliding gates that are self-closing are as effective as swinging gates that self-close and are readily available and in use today.

Second, the revisions in the final rule respond to stakeholder questions and recommendations urging OSHA to identify more clearly the criteria for access opening gates must meet (Exs. 68; 254; 366). For example, Eric Bredl, with Intrepid Industries Inc., a safety gate manufacturer, said the final rule needs to clarify and define ''safety gate (swinging gate)'' used at openings in guardrail systems used around points of access holes (*e.g.,* ladderways):

> There have been many interpretations as to what constitutes a safety gate. It is not well defined, nor has it been well defined for several years (Ex. 68).

Mr. Bredl also requested that OSHA clarify whether gates used at guardrail openings must be equipped with midrails:

> [T]he OSHA wording of this proposal does not clarify that the space to be protected must conform to the guardrail. Does OSHA want to allow a single member (chain or single bar) or two bars that are less than 19'' apart as adequate protection for ladderway openings? (Ex. 366).

Similarly, Mercer ORC said OSHA needs to define the ''specific type of gate'' it intends to require for gates used for guardrail openings near points of access holes, and answer the following questions about midrails:

> Must a ''swinging gate'' have both a top rail and midrail, like a standard railing? Or is a gate with only a top rail adequate to prevent an employee from walking ''directly into the hole''? The existing rule is silent on the issue, but OSHA implied in the 1990 proposal and,

owadisp.show_document?p_table=INTERPRETATIONS&p_id=25100.

[67] OSHA letter to Mr. Erich Bredl available at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=20991.*

in subsequent discussions and letters of interpretation, has stated that a two-rail configuration is required (Ex. 254).

Mercer ORC opposed requiring that guardrail opening gates be equipped with midrails, saying that several companies and a safety gate manufacturer indicated that OSHA's ''interpretation has not been accepted by a large number of employers'' (Ex. 254).

Although Mr. Bredl acknowledged that when OSHA first issued the 1990 proposed rule, which would have required that guardrail opening gates comply with guardrail requirements (*i.e.,* have tops rails and midrails), ''this was 'foreign' to industry'' (Ex. 366). However, he added that ''[s]ince then, a majority of protection devices have both a top rail and a midrail similar to that of the guardrail'' (Ex. 366).

The purpose of guardrail opening gates used around holes that serve as points of access (*e.g.,* ladderways) is, when open, to provide a means of access to holes, and, when closed, to provide guardrail protection that meets of the guardrail criteria in final paragraph (b). Accordingly, final paragraph (b) requires, among other things, that guardrails have both top rails and midrails or equivalent intermediate members, such as screens, solid panels, or intermediate vertical members, to ensure that closed access gates provide adequate guardrail protection.

OSHA believes that employers should not experience difficulty complying with the final rule. If an existing gate does not have a midrail or equivalent intermediate member, OSHA believes it is feasible for employers to add one. Therefore, OSHA adopts final paragraph (b)(13) with the revisions and clarification discussed above.

Final paragraph (b)(14), which is almost identical to the proposal, and the construction fall protection standard in § 1926.502(b)(14), requires that employers ensure guardrail systems on ramps and runways are installed along each unprotected side or edge. The existing rule in § 1910.23(c)(2) and A1264.1–2007 (Section 5.2) contain similar requirements for runways, but do not specifically address guarding ramps. OSHA believes it is appropriate to apply this provision to ramps as well as runways because both walking-working surfaces can have open sides. In addition, like runways, ramps can have open sides that are four feet or more above a lower level, which presents a fall hazard to workers. OSHA did not receive any comments on the proposal and adopts it as discussed above.

Final paragraph (b)(15), similar to the proposed rule, requires that employers ensure manila and synthetic rope[68] used for top rails or midrails of guardrail systems are inspected as frequently as necessary to ensure that the rope continues to meet the strength requirements in final paragraphs (b)(3) (top rails) and (b)(5) (midrails) of this section. OSHA believes inspecting manila and synthetic rope is important to ensure that it remains in serviceable condition, and that workers are not at risk of harm due to damage or deterioration. OSHA drew this requirement from the Agency's construction fall protection standard in § 1926.502(b)(15). The existing rule does not include a similar provision.

OSHA received two comments on the proposed provision. The National Institute for Occupational Safety and Health (NIOSH) recommended that OSHA incorporate in final paragraph (b)(15) the strength requirements for midrails (final paragraph (b)(5)) in addition to the strength requirements for top rails (final paragraph (b)(3)) (Ex. 164). OSHA agrees and incorporates the midrail strength requirements in final paragraph (b)(15).

Peter Catlos opposed allowing employers to use manila, plastic, or synthetic rope for top rails and midrails. He pointed out, ''Based on the mechanical characteristics of these materials, such as high elongation and high elastic recovery, guardrails could be constructed that meet the requirements of the § 1910.29(b) as written, yet offer no practical restraint whatsoever, thereby creating an unsafe condition'' (Ex. 203). OSHA believes that requiring employers to inspect ropes ''as necessary'' helps to ensure that the top rails and midrails made of such rope will continue to comply with the strength requirements in final § 1910.29(b)(3) and (5).

Final paragraph (b) includes an informational note that OSHA proposed as paragraph (b)(16). The note reminds employers that criteria and practice requirements for guardrail systems on scaffolds used in general industry are in the construction scaffold standards (29 CFR part 1926, subpart L, Scaffolds). This provision is a companion to final § 1910.28(b)(12)(i), which requires that employers protect employees working on scaffolds in accordance with the construction scaffold standards. These companion provisions ensure that employers who use scaffolds to perform both general industry and construction activities will have one consistent set of requirements to follow. OSHA believes this approach will increase understanding of, and promote compliance with, the final rule, a conclusion Ameren supported because it would promote consistent application for employers who use scaffolds to perform both general industry and construction activities (Ex. 189). OSHA did not receive any comments opposing the proposed provision and adopts the note as discussed.

Ellis recommended OSHA include additional guardrail criteria in the final rule (Ex. 155). He recommended prohibiting guardrails from being used as personal fall protection anchorages unless approved and marked by a registered structural engineer, and that horizontal rails in wood guardrails be attached on the inside of the posts so the nails are not pushed out in a fall.

With regard to using guardrails as personal fall protection anchorages, final § 1910.140 requires that anchorages be capable of supporting 5,000 pounds. Therefore, unless the guardrail is designed to meet all the requirements for anchorages in final § 1910.140, they already are prohibited from such use.

Although OSHA agrees with Ellis on the placement of wood rails, the Agency does not believe it is necessary to regulate guardrail systems to this detail. Employers are responsible for ensuring that guardrail systems are erected to meet the strength requirements specified in the final rule.

Paragraph (c)—Safety Net Systems

Final paragraph (c), like the proposed rule, requires that general industry employers ensure all safety net systems they use meet the criteria and practice requirements in 29 CFR part 1926, subpart M, Fall protection. Neither the existing subpart D nor other provisions in 29 CFR part 1910 address safety net systems.

Final § 1910.28 allows employers to use safety net systems to protect workers on several types of elevated walking-working surfaces, including unprotected sides and edges, wall openings, and low-slope roofs. To ensure that the requirements for safety net systems used in general industry are consistent with, and are as protective as, the construction requirements, OSHA requires employers working in general industry to follow the construction criteria and practice requirements for safety net systems. Incorporating by reference the construction safety net system requirements also eliminates unnecessary repetition of the construction requirements.

[68] Synthetic rope includes plastic rope, therefore, OSHA does not carry forward in the final rule the term ''plastic.''

OSHA received two comments on this requirement, both of which supported making the general industry requirements for safety net system criteria and practices as protective as those in the construction fall protection standard in § 1926.502(c) (Exs. 155; 226). The American Federation of State, County and Municipal Employees (AFSCME) said the requirements for safety net systems used in general industry should be ''no less'' protective than the provisions in the construction standard (Ex. 226). In the same comment, AFSCME raised an issue about the difference in testing requirements for safety net systems and personal fall arrest systems and anchorages, saying the 400-pound drop-test requirement for safety net systems is ''stricter'' than the requirement for personal fall arrest systems and anchorages (Ex. 226). OSHA notes the 400-pound drop-test requirement is consistent with the construction fall protection standard in § 1926.502(c)(4)(i).

OSHA agrees with the commenters that the safety net system requirements in the final rule should be as protective as the requirements in the construction fall protection standard. In addition, OSHA believes that making the general industry and construction requirements consistent will make the rule easier to understand and follow for those employers who perform both general industry and construction operations.

In the proposal, OSHA also requested comment about whether the final rule should require that employers meet the requirements for safety net systems in the construction fall protection standard or list the specific construction safety net system requirements in the final rule (75 FR 28895). Ellis supported incorporating the construction standard by reference (Ex. 155). AFSCME, however, recommended that OSHA include the specific safety net system criteria and practice requirements in final § 1910.29(c), stating, ''Referencing the construction standard, CFR § 1926.502(c), may not be helpful to employers who normally do not use the construction standards; therefore information on the requirements and testing of the safety net systems should be covered in the General Industry Standard'' (Ex. 226).

After reviewing the record, OSHA decided to incorporate by reference into this final rule the safety net system requirements in the construction fall protection standard. OSHA notes that the final rule also incorporates by reference the construction scaffold requirements. OSHA does not agree with AFSCME that general industry employers who do not use construction standards will have a difficult time obtaining them. OSHA's construction standards are readily available online at *www.osha.gov*, along with other guidance materials, which will facilitate obtaining, and complying with, the construction safety net provisions. In addition, OSHA believes that having a single set of safety net system requirements to follow should make compliance easier for employers who perform both general industry and construction activities.

Ellis raised another issue about safety nets. He recommended that the final rule allow the use of ''platform nets'' in general industry, provided those nets also complied with the requirements in the construction standard in § 1926.502(c). He observed, ''[Platform nets] are not only for catching falling workers they are also for working from if the mesh or fabric is tight enough to prevent the foot from going through. These nets . . . are finding considerable use around the world for construction and maintenance work and provide both access and a walking-working surface'' (Ex. 155).

The final rule does not prohibit the use of platform nets. However, if employers also use platform nets for fall protection, the nets must meet the criteria and practice requirements in the construction fall protection standard.

Paragraph (d)—Designated Areas

Final paragraph (d), like the proposed rule, establishes criteria and practices for ''designated areas,'' which the final rule in § 1910.21(b) defines as ''a distinct portion of a walking-working surface delineated by a warning line in which employees may perform work without additional fall protection.'' Designated areas are non-conventional controls for addressing fall hazards.

As mentioned earlier in this preamble, final § 1910.28(b)(13) limits the use of designated areas to one situation: Work on low-slope roofs. The final rule in § 1910.21(b) defines ''low-slope roof'' as ''a roof that has a slope less than or equal to a ratio of 4 in 12 (vertical to horizontal).'' Final § 1910.28(b)(13) limits the use of designated areas to work on low-slope roofs performed at least six (6) feet from the roof edge and requires that employers use conventional controls (*e.g.,* guardrail systems, safety net systems, personal fall arrest systems) if workers are less than six (6) feet from the roof edge. In the area that is 6 feet to less than 15 feet from the edge, employers may use designated areas when their employees perform work that is both temporary and infrequent. Where employers perform work that is 15 feet or more from the edge, they also can use a designated area for any work (*i.e.,* without regard to frequency or duration of the work). In addition, the final rule does not require that employers provide any fall protection or use a designated area when employees perform work that is both temporary and infrequent and the work is 15 feet or more from the roof edge.

Proposed § 1910.28(b)(1), (7), and (13) allowed general industry employers to use designated areas in additional situations: On unprotected sides and edges of walking-working surfaces, at wall openings, and on walking-working surfaces the final rule does not specifically address. However, as discussed in the preamble to § 1910.28, OSHA believes that employers must use designated areas, like warning line systems in the construction fall protection standard, only in ''a few, very specific situations'' (see, *e.g.,* letter to Mr. Keith Harkins (11/15/2002)[69]). Allowing the use of designated areas only on low-slope roofs makes the final rule consistent with limited use specified by the construction standard for non-conventional controls. (See further the discussion of designated areas in the preamble to final § 1910.28(b).)

Final paragraph (d)(1) establishes general criteria and practice requirements for the use of designated areas on low-slope roofs. Final paragraph (d)(1) revises the proposed requirements by deleting, as unnecessary, the language in proposed paragraph (d)(1)(iii) requiring employers use designated areas only on ''surfaces that have a slope from horizontal of 10 degree or less,'' since that is now contained in the definition of a low-slope roof.

Final paragraph (d)(1)(i), like the proposed rule, requires that employers ensure workers remain within the designated area during work operations. Going outside of the designated area will increase the risk of a worker falling off the roof edge. If workers must go outside the designated area, they must be protected by conventional fall protection systems. OSHA did not receive any comments on the proposed requirement and finalizes it as discussed.

Final paragraph (d)(1)(ii), similar to the proposed rule, requires that employers delineate the perimeter of designated areas with a warning line.

[69] Letter to Mr. Keith Harkins available on OSHA's Web site at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24552.*

The final rule in § 1910.21(b) defines ''warning line'' as ''a barrier erected to warn employees that they are approaching an unprotected side or edge, and which designates an area in which work may take place without the use of other means of fall protection.''

Final paragraph (d)(1)(ii) also specifies warning lines may consist of ropes, wires, tape, or chains that employers ensure meet the requirements of final paragraphs (d)(2) and (3). Final paragraphs (d)(2) and (3) contain specific requirements for warning lines, for example, they must be installed so the lowest point of the line, including sag, is not less than 34 inches (86 cm) and not more than 39 inches (99 cm) above the walking-working surface (final paragraph (d)(2)(i)).

The final rule generally is consistent with the requirements for warning line systems in the construction fall protection standard in § 1926.502(f)(1).

Northrop Grumman Shipbuilding (NGS) recommended that OSHA give employers more flexibility to demarcate designated areas by using materials other than ropes, wires, tape, chains, and supporting devices, stating:

> [W]e recommend that a contrasting color marking on the floor or roof surface be another acceptable means of delineating the designated area. Note that this is similar to the options provided in proposed 1910.28(b)(8) for pits. Colored markings are the best means to permanently mark pathways and work areas for maintenance of rooftop equipment, thus eliminating the hazards associated with getting stanchions and rope or chain to the job site. Stanchions typically cannot be permanently attached to rooftops because they will damage the roof surface and they cannot be left in place because they pose a projectile hazard in the event of high winds (Ex. 180).

OSHA agrees that using warning line materials made of contrasting colors, such as brightly-colored ropes or tape makes the line ''clearly visible,'' which final paragraph (d)(2)(iv) requires. However, OSHA believes that painting the surface of the roof instead of attaching warning line materials to supporting devices does not provide a clearly visible perimeter throughout the designated area as required by final paragraph (d)(2)(iv). To be clearly visible, OSHA believes materials used to demarcate a designated area need to be high enough above the walking-working surface to be visible from a distance at least 25 feet away, as well as anywhere within the designated area, and not obscured by materials, tools, and equipment that may be in the designated area.

NGS also pointed out that the proposed rule would allow employers to apply floor markings, instead of erecting warning lines, to demarcate vehicle repair, services, and assembly pits (see proposed and final § 1910.28(b)(8)(ii)). OSHA does not consider the working conditions on low-slope roofs to be similar enough to the working conditions at vehicle repair, service, and assembly pits to permit the use of floor markings. OSHA allows employers to apply floor markings to delineate vehicle repair, service, and assembly pits that are less than 10 feet deep because the pits often are so close together that using warning lines would impede movement of vehicles and equipment around and over the pits, which is not true for work on low-slope roofs.

Final paragraph (d)(2) establishes criteria and practice requirements for warning lines. As part of these requirements, final paragraph (d)(2)(i) specifies that employers ensure warning lines have a minimum breaking strength of 200 pounds. The proposed rule in paragraph (d)(2)(ii) would have required that employers ensure the warning line has a 500-pound minimum breaking or tensile strength and, after being attached to the stanchions, is capable of supporting the loads applied to the stanchions as prescribed in proposed paragraph (d)(2)(i). Proposed paragraph (d)(2)(i) also would have required that stanchions be capable of resisting, without tipping over, a force of at least 16 pounds applied horizontally against the stanchion. The force would have been required to be applied 30 inches above the work surface. OSHA drew the proposed requirement from the construction warning line system requirements for roof work performed on low-slope roofs (see § 1926.502(f)(2)(iv)). OSHA explained in the proposal that the requirement would ensure the warning line is ''durable and capable of functioning as intended, regardless of how far apart the stanchions are placed'' (75 FR 28896). In addition, OSHA said the proposed strength requirement would ensure that employers use substantial materials for warning lines, such as chains, ropes, or heavy cord. OSHA also requested comment on the appropriateness of requiring warning lines to have a tensile strength of 500 pounds (similar to construction warning line system requirements), which ''assures the line is made of material more substantial than string'' (75 FR 28896).

Several stakeholders indicated carrying stanchions that meet the proposed strength requirement would be infeasible or create a greater hazard for workers (Exs. 165; 171; 296). For example, the National Chimney Sweep Guild (NCSG) said, ''The technician would be exposed to a greater fall hazard while transporting numerous stanchions weighing over 50 pounds to the roof.'' Later, NCSG stated, ''Stanchions would not meet the specified stability criterion unless they were either weighted to the point where they create an unacceptable fall hazard or attached to the roof'' (Ex. 296). The Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) agreed, stating, ''The placement of a designated area by the construction of a barrier system (rope, wire or chain supported by stanchions meeting specific design criteria) would create more safety hazards due to the transporting of barrier materials up to the roof'' (Ex. 165). Verallia recommended that OSHA also reconsider the companion requirement in proposed paragraph (d)(2)(i) addressing the stability of stanchions, noting:

> With respect to the specified size of the stanchions, 16 pounds resistance may be insufficient in some cases, while . . . completely unnecessary in others. The further the area is from the unprotected edge, the less is required to adequately protect (or warn) the affected employees.
>
> The size and form of stanchions (or comparable barriers) should be left to the discretion of the employer, as long as they are effective in putting the employee on notice that a fall hazard may exist. . . . Moreover, there is an additional concern that the use and handling of 16-pound resistant stanchions could itself present an independent hazard and/or cause damage to roofs or working surfaces (Ex. 171).

After analyzing the entire rulemaking record on designated areas, OSHA has determined that the proposed 500-pound breaking strength requirement is not necessary to warn workers they are approaching a fall hazard on a low-slope roof. Therefore, in the final rule OSHA replaces the proposed requirement with a 200-pound minimum breaking strength requirement, which is consistent with the requirement for control lines in controlled access zones in the construction fall protection standard in § 1926.502(g)(3)(iii). OSHA believes that the strength requirement in the final rule, combined with the other requirements in final paragraph (d)(2), will ensure that the delineation of designated areas is sturdy and provides adequate warning to workers.

In addition, in response to these commenters, the final rule also deletes the stanchion stability requirement specified by proposed paragraph (d)(2)(i), which would have required that employers ensure stanchions are ''capable of resisting, without tipping over, a force of at least 16 pounds (71

N) applied horizontally against the stanchion,'' The Agency drew proposed paragraph (d)(2)(i) from the construction warning line system requirements in § 1926.502(f)(2)(iii). OSHA believes this deletion will give employers greater flexibility in selecting supporting devices to delineate designated areas. OSHA will consider employers who erect designated area warning lines that meet the requirements of proposed paragraphs (d)(2)(i) and (d)(2)(ii) (*i.e.,* using stanchions that meet the 16-pound force resistance) to be in compliance with the final rule; however, OSHA notes the final rule does not require that stanchions meet those requirements.

Final paragraph (d)(2)(ii), like proposed paragraph (d)(2)(iv), requires that employers install warning lines so the lowest point, including any sag, is not less than 34 inches or more than 39 inches above the walking-working surface. The final rule is consistent with the warning line system requirement in the construction fall protection standard in § 1926.502(f)(2)(ii).

NGS recommended that the final rule permit employers to use contrasting color marking on the floor or roof instead of erecting warning lines at 34 to 39 inches above the walking-working surface (Ex. 180). As discussed above, the final rule does not include NGS' recommendation. OSHA believes the warning line height specified in the final rule is necessary to adequately warn workers that they are approaching the boundary of a designated area. At a height of between 34 to 39 inches, warning lines will be more visible than if employers paint them on the surface of the roof. Moreover, at the height the final rule requires, warning lines will be visible even if equipment, tools, or objects are near the warning line.

OSHA also rejects NGS's recommendation because painting warning lines on surfaces makes them permanent, thus suggesting that employers may use designated areas for any operation regularly or routinely performed on a low-slope roof, rather than performing work in these areas that is both temporary and infrequent. As discussed earlier in this preamble, employers must provide conventional fall protection for routine, regular, or frequent work performed within 15 feet of the edge of low-slope roofs.

Final paragraph (d)(2)(iii) requires that employers ensure warning lines are supported in such a manner that pulling on one section of the line will not result in slack being taken up in any adjacent sections causing the line to fall below the limit of 34 inches at any point, as specified in (d)(2)(ii). Proposed paragraph (d)(2)(iii) and the construction fall protection standard in § 1926.502(f)(2)(v) require that taking up slack in adjacent sections of a warning line must not cause the supporting devices to tip over. The final rule revises the proposed provision for two reasons. First, the revised language ensures that the warning line will be visible at all times because it will remain at the height specified in final paragraph (d)(2)(ii). Second, the revisions ensure employers remain in compliance with final paragraph (d)(2)(ii). OSHA did not receive any comments on the proposal and adopts the requirement with the revisions discussed above.

Final paragraph (d)(2)(iv) requires that employers ensure warning lines are clearly visible from a distance of 25 feet away and anywhere within the designated area. The final rule clarifies proposed paragraph (d)(2)(v) by recasting the provision in plain language that is easier to understand than the proposed paragraph.

The proposed rule would have required that employers ensure the warning line is clearly visible from any unobstructed location within the designated area up to 25 feet away, or at the maximum distance a worker may be positioned away from the warning line, whichever is less. The final rule states more clearly than the proposed provision that employers must erect warning lines that are clearly visible within the designated area, regardless of where the employee is working in that area. That is, the warning line must be clearly visible when the worker is approaching the line. Whether the designated area is large or small, the final rule also requires that the warning line be visible at least 25 feet away. For large designated areas, requiring that warnings lines be visible at least 25 feet away ensures that workers have adequate warning when approaching fall hazards. Such warning is particularly necessary when workers use mobile mechanical equipment that can cover distances quickly. If workers cannot clearly see warning lines until the mobile equipment they are operating is near the boundary of the designated area, they may not be able to stop in time to prevent going past the boundary or over the edge of the roof. For designated areas that are small and close to the roof edge (*e.g.,* 6 feet from the edge), the 25-foot minimum visibility range adequately prepares workers for approaching the hazard zone.

As the proposal noted, there is a possibility that a portion of the warning line could be obstructed. This remains true in the final rule. As long as the boundaries of the designated area are clearly visible within 25 feet and anywhere within the area, obstructions of some portion of the line are permissible.

The construction fall protection standard in § 1926.502(f)(2)(i) and (g)(3)(i) requires employers to flag warning lines with high-visibility material at least every 6 feet to ensure that the lines are visible. OSHA believes there is a greater need for visibility aids in construction operations because the work may be at leading edges or other areas close to the roof edge. Also, construction work is more likely than work in general industry to shift from one part of the roof to another because construction work often involves performing tasks that are not temporary and infrequent. Therefore, OSHA believes that it is appropriate to give general industry employers greater flexibility to select the measures they believe will make the warning line ''clearly visible.'' Accordingly, employers are free to comply with the final rule by flagging warning lines.

Final paragraph (d)(2)(v), like proposed paragraph (d)(3)(i), requires that employers erect warning lines as close to the work area as the task permits. This provision, like final paragraph (d)(2)(iv), helps to make warning lines as clearly visible as possible without interfering with the work employees perform. It also eases compliance for employers. Instead of placing warning lines 6 feet or 15 feet around the entire roof, employers can simply erect the warning line around the specific area where employees are working. This will make compliance easier for many employers, one of whom said, ''Some flat roofs in general industry settings could be the size of several football fields'' (Ex. 207).

Finally, OSHA believes the performance-based approach in the final rule gives employers flexibility to determine the distance that makes the warning line most clearly visible, without interfering with the work being performed. OSHA did not receive any comments on the proposed requirement and adopts it with the clarification discussed above.

Final paragraph (d)(2)(vi), similar to proposed paragraph (d)(3)(ii), requires that employers erect warning lines not less than 6 feet (1.8 m) from the roof edge for work that is both temporary and infrequent, or not less than 15 feet (4.6 m) for other work. OSHA believes the minimum distance of six feet for work that is temporary and infrequent provides an adequate safety zone that allows workers to stop moving toward the fall hazard after reaching or contacting the perimeter line of the designated area and provides an adequate safety zone should a worker trip and fall at the edge of the designated area. This final provision is almost identical to the six-foot safety zone required for warning line systems in the construction fall protection standard in § 1926.502(f)(1)(i). OSHA added the requirement that warning lines not be erected less than 15 feet from the roof edge for other work to be consistent with final paragraph § 1910.28(b)(13)(iii) and OSHA's enforcement policy discussed above. OSHA did not receive any comments on the proposed requirement and adopts it as discussed.

Final paragraph (d)(3), like proposed paragraph (d)(3)(iii), establishes minimum distances from an unprotected side or edge for erecting warning lines when workers use mobile mechanical equipment to perform work that is both temporary and infrequent in a designated area. In such cases, the final rule requires that employers erect warning lines: (1) Not less than 6 feet from the unprotected side or edge that is parallel to the direction in which workers are using the mechanical equipment; and (2) not less than 10 feet from the unprotected side or edge that is perpendicular to the direction in which workers are operating the mechanical equipment. When mobile mechanical equipment is used to perform other work, a warning line must be erected at least 15 feet from the roof edge.

The purpose of this final provision is to provide additional distance for the worker to stop the mechanical equipment from moving toward an unprotected side or edge. The 10-foot minimum distance provides a safety zone that takes into account the momentum of the equipment workers may be using. Final paragraph (d)(3), which OSHA renumbered in the final rule to make it easier to follow, is consistent with the construction fall protection standard in § 1926.502(f)(1)(ii). OSHA did not receive any comments on the proposed provision and finalizes it as discussed above.

Proposed paragraph (d)(4), which the final rule does not retain, required that employers provide clear access paths to designated areas. The proposal specified that the path have warning lines on both sides attached to stanchions that comply with the strength, height, and visibility requirements in proposed paragraph (d)(2). OSHA drew the proposed rule from the warning line system requirements in the construction fall protection standard in § 1926.502(f)(1)(iii) and (iv).

OSHA requested comment on whether the proposed requirement is necessary to protect general industry workers when they travel to and from designated areas. AFSCME supported the proposed requirement, stating, ''We believe that such an access path to the designated area is absolutely necessary for work on roofs when other fall protection is not provided'' (Ex. 226). Other commenters recommended that OSHA give employers more flexibility in delineating access paths to designated areas (Exs. 180; 189). In this regard, NGS recommended allowing employers to use contrasting color markings painted on the roof to designate access paths (Ex. 180), while Ameren said OSHA should consider allowing employers to use rubber mats for access paths (Ex. 189).

Several commenters recommended that OSHA delete the proposed requirement. Ameren urged OSHA to delete the proposed requirement because it ''could be burdensome if the path of travel to a work area on a roof is down the center of the roof especially if the delineation must be along the entire route and not just around the 'work area' '' (Ex. 189). Clear Channel Outdoor, Inc. (CCO) said the proposed requirement was not necessary:

> Based upon CCO's experience that employees do not trip or fall when traversing to and from the access ladder, CCO does not believe that installing an access path with safety cables or stations adds to safety in any measurable way. Accordingly, CCO supports the designated work area concept, but does not believe that a designated access path is necessary (Ex. 121).

Some commenters said the proposed access path requirement was not necessary because most of the work they perform on low-slope roofs is not near the edge of the roof (Exs. 165; 189; 236).

Based on stakeholder comments and other information in the record, OSHA decided not to retain proposed paragraph (d)(4) in the final rule. OSHA agrees with commenters that the proposed access path requirement is not necessary, especially on large roofs that require employers to erect long access paths. Evidence in the record suggests that many low-slope roofs in general industry are quite large. For example, Edison Electric Institute (EEI) commented that ''[s]ome flat roofs in a general industry setting could be the size of several football fields'' (Ex. 207). Although OSHA is deleting the proposed access path requirement, the Agency stresses that employers still must train workers, in accordance with final § 1910.30, about the potential fall hazards in the work area, which includes accessing the work area, and the proper set-up and use of designated areas.

Paragraph (e)—Covers

Final paragraph (e) addresses criteria and practices for covers that employers use to protect workers from falling into a hole in a walking-working surface, including holes in floors, roofs, skylights, roadways, vehicle aisles, manholes, pits, and other walking-working surfaces. The final rule consolidates and updates the cover criteria and practice requirements in the existing rule (*e.g.,* existing §§ 1910.23(a)(5), (8), and (9), and 1910.23(e)(7) and (8)). In addition, the final rule consolidates the proposed cover requirements, which are similar to those in the construction fall protection standard in § 1926.502(i).

Final paragraph (e)(1) requires that employers ensure any cover they use to prevent workers from falling into a hole in a walking-working surface is capable of supporting, without failure, at least twice the maximum intended load that may be imposed on the cover at any one time. The final rule clarifies and simplifies the proposed rule, and makes it consistent with other provisions in the final rule, by replacing the proposed language with ''maximum intended load,'' which OSHA consistently uses throughout the final rule. The final rule in § 1910.21(b) defines ''maximum intended load'' as the total load (weight and force) of all employees, equipment, vehicles, tools, materials, and other loads the employer reasonably anticipates to be applied to a walking-working surface at any one time; in this case, the walking-working surface is a cover. The final rule is consistent with A10.18–2012 (Section 7.1.1.4), which requires that trench and manhole covers support at least twice the maximum intended load.

The language in the final rule differs from the proposal, the construction fall protection standard, and the existing rule. The proposed and construction rules require that covers in roadways and vehicle aisles be capable of supporting ''twice the maximum axle load of the largest vehicle expected to cross over the cover'' (see proposed paragraph (e)(1) and § 1926.502(i)(1)), and that all other covers support ''twice the weight of employees, equipment, and materials imposed on the cover at any one time'' (proposed paragraph (e)(2)). The existing rule in § 1910.23(e)(7) states that trench, conduit, and manhole covers must support a truck rear-axle load of at least

20,000 pounds, and that floor-opening covers consist of ''any material that meets the strength requirements.'' [70]

OSHA believes that using the single, uniform term ''maximum intended load'' makes the final rule easier to understand than the proposed rule, and is consistent with a number of other requirements in the final rule. In addition, the term clearly states that covers must be capable of supporting twice the weight and force expected to be placed on them. By using the term ''maximum intended load,'' which includes the weight and force of all vehicles, equipment, tools, materials, workers, and other loads, OSHA consolidates the cover requirements into a single provision that applies the same, uniform criteria to all covers. OSHA also believes that establishing a uniform standard for all covers eliminates potential confusion and needless repetition.

Ellis commented that the proposed rule did not define the ''adequacy and walkability'' of covers (Ex. 155). The Agency believes that paragraph (e)(1) of the final rule establishes ''adequacy'' criteria using performance-based measures (*i.e.,* support twice the maximum intended load), which is consistent with the OSH Act at Section 6(b)(5). OSHA believes this performance-based approach also gives employers flexibility in selecting the material for a cover that they believe best meets the requirement in final paragraph (e)(1). Thus, employers may use covers made of the materials Ellis suggests so long as the cover supports twice the maximum intended load. In this regard, Ellis noted:

> A cover may be a plywood board or perhaps OSB or temporarily and more dangerously a section of drywall to keep out dust and weakens when wet. The new to America Platform Nets should be accommodated for maintenance work to allow walkable fabric covers to be used for walking across holes and open spaces (Ex. 155).

OSHA notes that Appendix A of A10.18–2012 (Ex. 388) provides information on hole covers, including material used for them, that provide additional guidance on the issue Ellis raises. As for ''walkability,'' if the employer anticipates that an employee will walk across a hole cover, the cover must meet the requirements of final § 1910.22.

Final paragraph (e)(2) (proposed paragraph (e)(3)) requires that employers secure covers to prevent accidental displacement. Accidental displacement of hole covers can occur due to a number of factors. For example, weather conditions such as wind, floods, snow, and ice can cause covers to become displaced. Heavy equipment running back and forth over covers also can loosen or displace them.

The final rule expands and revises both the existing and proposed rules. The final rule expands existing § 1910.23(a)(9), which only applies to ''floor holes,'' to include holes in any walking-working surface that employers protect with covers. Final paragraph (e)(2) expands and revises the proposed rule in two ways. First, the final rule eliminates, as unnecessary, the examples in proposed paragraph (e)(3) of conditions that may cause displacement of covers. Second, the final rule revises the proposed language to make clear that employers must keep covers firmly secured at all times. The proposed rule in paragraph (e)(3), like the construction fall protection standard in § 1926.502(i)(3), only specified that employers secure covers firmly ''when installed.'' However, in light of Ellis' comment that ''[l]ong-term covers which are acknowledged to be weak or degrade in the elements should have minimum requirements to follow for safety and structural inspection'' (Ex. 155), OSHA believes it is important to clarify that employers ensure that covers remain firmly secured after installation.

The final rule does not retain proposed paragraphs (e)(4) and (5). Proposed paragraph (e)(4) required that employers ensure covers were color coded or marked with the word ''HOLE'' or ''COVER'' to warn workers of the hazard. Proposed paragraph (e)(5) specified that proposed paragraph (e)(4) did not apply to cast-iron manhole covers or steel grates, such as those on streets and roadways. OSHA drew both proposed requirements from the construction fall protection standard in § 1926.502(i)(4).

In the proposed rule, OSHA requested comment on the need to include proposed paragraph (e)(4) in the final rule and information on the extent to which employers already mark or color code covers. OSHA received one comment on the proposed requirement. NGS said the proposed requirement was not necessary because ''[t]he proposed standard already requires that covers be properly designed, constructed and secured, thus engineering out the hazard'' (Ex. 180). OSHA agrees with this comment; the requirements in final paragraphs (e)(1) and (2), that employers ensure covers are strong enough to support the weight to be placed on them and are secured in place at all times, eliminates the need to also color code or label them as a hazard. Covers that meet the requirements of the final rule are not hazards. Therefore, OSHA deletes proposed paragraph (e)(4) because it is unnecessary.

Since the final rule does not carry forward the proposed marking requirement, proposed paragraph (e)(5) exempting certain covers from that requirement is no longer necessary. NGS also said that proposed paragraph (e)(5) is not necessary (Ex. 180). They pointed out that ''[m]anhole covers and steel grates are already exempt from the marking requirement'' (Ex. 180). OSHA agrees. Final paragraphs (e)(1) and (2) provide adequate protection; therefore, the Agency is not carrying forward the provision in the final rule.

Paragraph (f)—Handrails and Stair Rail Systems

Final paragraph (f) sets criteria and practice requirements for handrails and stair rail systems. These requirements cover height, finger clearance, surfaces, stair rail openings, handholds, projection hazards, and strength. The final rule in § 1910.21(b) defines ''stair rail system'' as a barrier erected along the exposed or open side of stairways to prevent workers from falling to a lower level, while ''handrails'' are rails used to provide workers with a handhold for support.

In final paragraph (f)(1), which addresses handrail height criteria, OSHA revised the language on measuring height criteria to make it uniform and consistent throughout final paragraph (f)(1). For example, final paragraph (f)(1) incorporates uniform terminology (*i.e.,* leading edge, top surface) and simplifies how to measure handrail height. The final rule adopts the method in A1264.1–2007, which specifies that handrails be measured from the leading edge of the tread to the top of the handrail (paragraph (f)(1)(i)). New Figures D–12 and D–13 show how to make this measurement.

Final paragraph (f)(1)(i) requires that employers ensure each handrail is not less than 30 inches and not more than 38 inches high, as measured from the leading edge of the stair tread to the top surface of the handrail. The height criteria in final paragraph (f)(1)(i) differs from the handrail height in both the existing and proposed rules. Existing § 1910.23(e)(5)(ii) requires that handrails be between 30 and 34 inches in height. The proposed rule required the height of handrails to be between 30 and 37 inches as measured from the upper surface of the top rail to the surface of the tread, in line with the face of the riser at the forward edge of the tread, which is consistent with both the

[70] OSHA notes that A10.18–2012 (Section 7.1.1.3) is consistent with the proposed rule.

construction stairways standard in § 1926.1052(c)(6) and A10.18–2012 (Section 6.2). The A1264.1–2007 standard, on the other hand, specifies that the handrail height must be not less than 34 inches or not more than 38 inches as measured from the tread to the top of the handrail.

OSHA revised the final rule in response to a comment from the National Fire Protection Association (NFPA), which pointed out that the NFPA 101 Life Safety Code, an ''ANSI-accredited national expert code,'' permits a 38-inch maximum handrail height (Ex. 97). NFPA recommended that the final rule also allow a 38-inch handrail height so handrails built in accordance with the NFPA 101–2012, Life Safety Code (Ex. 385) would not be ''non-compliant'' (Ex. 97). NFPA also said that their recommendation was ''technically sound as borne out by the research of Jake Pauls while he was on staff at the National Research Council Canada in the 1970s and 1980s'' (Ex. 97). In addition, NFPA appeared to suggest a 38-inch maximum handrail height would provide support for a broader range or workers (*i.e.,* taller workers) without compromising the protection of any worker (Ex. 97).

OSHA agrees that handrails built in accordance with NFPA 101 are acceptable, and is adopting this recommendation in the final rule; therefore, in the final rule the Agency increased the maximum handrail height by one inch, from 37 inches to 38 inches, which Figure D–12 illustrates. Since both the existing and proposed handrail height requirements come within revised final paragraph (f)(1)(i), OSHA does not expect that employers will have any problems complying with the final rule. The final rule simply provides employers with greater compliance flexibility.

Final paragraph (f)(1)(ii) establishes the height requirement for stair rail systems. Employers must ensure:

• The height of stair rail systems installed *before* the effective date of the final rule, which is January 17, 2017, is not less than 30 inches as measured from the leading edge of the stair tread to the top surface of the top rail (paragraph (f)(1)(ii)(A)); and

• The height of stair rail systems installed *on or after* the effective date is not less than 42 inches as measured from the leading edge of the stair tread to the top surface of the top rail (paragraph (f)(1)(ii)(B)).

The final rule revises the requirements in both the existing and proposed rules. The existing rule in § 1910.23(e)(2) requires that the height of a stair railing be not less than 30 inches nor more than 34 inches as measured from the upper surface of the stair tread to the top edge of the top rail. The final rule eliminates the maximum height requirement for existing stair rail systems.

The proposed rule would have raised the minimum height of new and replacement stair rails to 36 inches. The final rule, however, requires that new and replacement systems be at least 42 inches in height. In the proposed rule, OSHA explained that a 36-inch minimum height would make the general industry requirement consistent with the construction stairways standard in § 1926.1052(c)(3), and would afford a reasonable level of safety to workers (75 FR 28897). However, OSHA also discussed a University of Michigan study indicating that the minimum stair rail system height should be 42 inches, and also suggested that even 42 inches may not be adequate (Ex. OSHA–S041–2006–0666–0004). OSHA also noted that A1264.1–2007 (Section 5.5) establishes a 42-inch maximum stair rail system height. The Agency requested comment about raising the minimum stair rail system height to 42 inches.

OSHA received one comment. NFPA recommended raising the minimum height of stair rail systems to 42 inches, which would make the final rule consistent with the NFPA 101 Life Safety Code (Ex. 97). NFPA indicated that a 42-inch minimum stair rail system height would be more protective than the proposed height, and that research supported the 42-inch minimum height. Accordingly, NFPA stated, ''A minimum 42-inch high guard is needed to prevent a ninety-fifth percentile male from falling over the rail upon striking the side of a stair. This was documented in Jake Pauls' work of the 1970s and 1980s while he was on staff at the National Research Council Canada'' (Ex. 97). NFPA also said that the University of Michigan study supported raising the minimum stair rail system height. OSHA agrees that NFPA's recommendation would make the final rule more protective for a broader range of workers than the proposed rule and, therefore, requires that stair rail systems installed on or after the effective date of the final rule be at least 42 inches as measured from the leading edge of the stair tread to the top surface of the top rail. OSHA notes A10.18–2012 (Sections 4.1.2 and 5.2) requires that stair rail systems be 42 inches, plus or minus three inches.

OSHA also requested comment about whether the final rule should establish a maximum height for stair rail systems like A1264.1–2007. In the preamble to the proposal, OSHA said the purpose of stair rail systems is to prevent workers from falling over the edge of open-sided stairways, and that eliminating a maximum height would give employers greater flexibility to install stair rail systems they considered to be safer (75 FR 28897).

OSHA notes that the 42-inch stair rail height (final paragraph (f)(1)(ii)(B)) is prospective. It only applies to new and replacement stair rail systems installed on or after January 17, 2017.

Under the proposed rule, the new height requirements would have taken effect 90 days after the effective date, and Ameren recommended lengthening the phase-in period, saying, ''Lead time for material orders are often quite longer than three months often up to years to order material for large capital projects.'' Ameren stated later, ''Stipulations of 'ordered' material should be imposed in regard to the date of the final rule because the time between ordering and placing into service is often greater than 90 days'' (Ex. 189).

However, OSHA believes 60 days gives employers adequate time to come into compliance with the final rule and to change the specifications of any stair rail systems they have on order. The NFPA 101 Life Safety Code has been in place for a number of years, and the NFPA said that today stair rail systems ''are being installed at a minimum 42-inch height for compliance with nationally-recognized, expert model codes like NFPA 101 Life Safety Code'' (Ex. 97). Accordingly, OSHA believes most employers already are in compliance with the final rule, and the remainder will be able to comply with this prospective requirement when the final rule becomes effective. The final rule will not affect existing stair rail systems; therefore, there is no requirement to retrofit stair rail systems. The final rule will continue to allow stair rails installed before the new requirement takes effect to meet the existing requirement.

Finally, OSHA deleted the proposed note to paragraphs (f)(1)(i) and (ii) because it is unnecessary. The proposed note explained the criteria for measuring the height of handrails and stair rail systems. The final rule includes the measurement criteria in final paragraphs (f)(1)(i) and (ii). OSHA believes this deletion makes the final rule easier to read and follow than the proposal.

Final paragraph (f)(1)(iii) permits employers to use the top rail of stair rail systems as a handrail only when:

• The height of the stair rail system, which Figure D–13 illustrates, is not less than 36 inches and not more than

38 inches as measured at the leading edge of the stair tread to the top edge of the top rail (final paragraph (f)(1)(iii)(A)); and

- The top rail of the stair rail system meets the other handrail requirements in final paragraph (f) of this section (final paragraph (f)(1)(iii)(B)).

The proposed provision was consistent with the construction stairways standard in § 1926.1052(c)(7), which also allows employers to use top rails of stair rail systems as a handrail under specified conditions. OSHA believes a top rail of a stair rail system, under some conditions, may effectively and safely perform the function of both a stair rail system and handrail. Allowing employers to use stair rail top rails as handrails under these conditions provides employers with compliance flexibility without compromising worker safety when employers comply with the required conditions of use.

In response to NFPA's comments, OSHA revised final paragraph (f)(1)(iii) in three ways. First, for the reasons discussed final paragraph (f)(1)(i), the final rule raises the required height of stair rail top rails used as handrails to not less than 36 inches, but not more than 38 inches, from the proposed height of not less than 36 inches, but not more than 37 inches. This change makes the final rule consistent with the NFPA 101 Life Safety Code, and will protect a broader range of workers (Ex. 97).

Second, because the final rule requires that all stair rail systems installed on or after the effective date, which is January 17, 2017, must be at least 42 inches in height, final paragraph (f)(1)(iii)(A) is only applicable to stair rail systems installed before the effective date. Third, OSHA adds to the final rule the requirement that employers may use stair rails as handrails only if the stair rails also meet the other requirements in paragraph (f). NFPA recommended that OSHA allow the use of stair rails as handrails only if they also meet the handhold requirements in proposed paragraph (f)(5). NFPA recommended an addition to the proposed provision, stating:

> [The addition] recognize[s] the stair rail as an acceptable handrail not only based on height but if it additionally provides the handhold required of a handrail. The user would not otherwise know that the stair rail needs graspability as the provision of 1910.29(f)(5) is written to have applicability to handrails, not specifically to stair rails that are at an appropriate height so as to serve as a handrail (Ex. 97).

OSHA agrees with NFPA that the final standard should only allow employers to use stair rail top rails as handrails if the top rail ''has the shape and dimension necessary so employees can grasp it firmly to avoid falling'' (see final paragraph (f)(5)). However, OSHA also believes that employers can use stair rails as handrails only if the stair rails also meet other handrail requirements such as having smooth surfaces (see final paragraph (f)(3)) and no projection hazards (see final paragraph (f)(6)). OSHA revises the final rule accordingly.

Final paragraph (f)(2) requires that employers ensure there is a finger clearance of at least 2.25 inches between handrails (including the top rail of a stair rail system being used as handrails) and any other object (such as a wall). Workers need adequate clearance space so they are able to maintain a firm grasp on the handrail while they go up and down workplace stairs.

The proposed rule would have required a three-inch minimum clearance for handrails and stair rails. OSHA explained that the proposed minimum clearance would make the general industry rule consistent with the construction stairways standard (§ 1926.1052(c)(11)), which also requires a minimum clearance of three inches for handrails that will not be a permanent part of the structure being built.

In 1990, OSHA first proposed revising the existing three-inch finger clearance requirement to a minimum of 1.5 inches. OSHA explained that the revision would make the rule consistent with local building codes; ANSI A12.1–1973, Safety Requirements For Floor and Wall Openings, Railings, and Toeboards; draft revised A1264.1; and ANSI A117.1–1986, Providing Accessibility and Usability for Physically Handicapped People (Ex. OSHA–S041–2006–0666–0054). The A1264.1–2007 (Section 5.9) standard eventually adopted a 2.25-inch minimum finger clearance.

In the 2010 proposal, OSHA said it proposed to retain the existing three-inch minimum clearance so the general industry rule would be consistent with the construction stairways standard, thereby facilitating compliance for employers who perform both general industry and construction activities. OSHA also said the difference between the three-inch minimum clearance in the proposed, existing, and construction standards and the 2.25-inch minimum clearance in A1264.1–2007 was not ''significant'' (75 FR 28897). Nonetheless, OSHA asked for comment on whether the Agency should adopt the 2.25 inch requirement instead.

NFPA submitted a comment recommending that OSHA adopt a 2.25-inch minimum clearance for handrails, which the NFPA 101 Life Safety Code requires, for the following reasons:

> (1) for consistency among the model codes [which require only a 2.25-inch finger clearance], (2) so that owners operators are not surprised with a violation after complying with the model codes, and (3) because there is no technical basis for requiring more than 2¼ inches in order to provide a usable handrail. Remember that for years and years the model codes' minimum finger clearance was 1½ inches but concerns over users skinning their knuckles on rough wall surfaces led to research that identified the 2¼ inch criterion as necessary and adequate (Ex. 97).

NFPA also disagreed with the Agency's characterization of the difference between OSHA's existing and proposed three-inch minimum finger clearance and the 2.25 clearance in A1264.1–2007 as ''not significant,'' stating:

> Where a 3-inch finger clearance is used for handrails at both sides of a stair in place of a 2¼-inch finger clearance, the stair's rated egress capacity drops by 5 persons. Owners of new buildings want to maximize egress capacity with respect to the space allotted to a stair, and the loss of egress credit for 5 persons is significant. So compliance with the proposed OSHA requirement will add cost (Ex. 97).

With the exception of NFPA's claim that a three-inch clearance will increase building construction costs, OSHA finds convincing NFPA's reasons for recommending a 2.25-inch minimum clearance space. A 2.25-inch minimum finger clearance will make the final rule consistent with NFPA 101 as well as ANSI/ASSE A1264.1–2007, and the International Building Code–2012 (IBC–2012). OSHA believes that following those consensus standards will prevent confusion and ensure the final rule complies with section 6(b)(8) of the OSH Act. In addition, since 2.25 inches is a minimum clearance, employers may continue to use a three-inch clearance. Therefore, OSHA believes the 2.25-inch minimum clearance in the final rule provides greater compliance flexibility for employers.

Final paragraph (f)(3) requires that employers ensure handrails and stair rail systems are smooth-surfaced to protect workers from injury, such as punctures or lacerations, and to prevent catching or snagging of clothing, including protective clothing. OSHA revises the final provision to make it consistent with final (b)(6), for guardrail systems.

The final provision is consistent with the existing rules for stair rails in § 1910.23(e)(3)(v)(*a*) and handrails in § 1910.23(e)(5)(i), as well as the construction stairways standard in

§ 1926.1052(c)(8). The A10.18–2012 standard (Section 5.2) also contains a similar requirement that stairways ''shall be free of sharp edges, splinters, or similar conditions.'' OSHA did not receive any comments on the proposed provision and adopts it as discussed.

Final paragraph (f)(4), like the proposed rule, requires that employers ensure no opening in a stair rail system exceeds 19 inches at its least dimension. Final § 1910.21(b) defines ''stair rail system'' as a barrier erected along the ''exposed or open side of stairways to prevent employees from falling to a lower level.'' Stair rail systems, like guardrail systems, need to limit the openings in the exposed or open sides of stairways to prevent workers from falling through to a lower level. Limiting the openings also can prevent objects from falling through the opening and hitting workers who are below, although openings that are 19 inches apart may not prevent some objects from falling.

The final provision is consistent with the construction fall protection and stairways standards in §§ 1926.502(b)(2)(iii) and (iv) and 1926.1052(c)(4)(iii) and (iv), respectively, for openings in stair rail and guardrail systems. The existing rule in § 1910.23(e)(1) requires a midrail ''approximately halfway between the top rail and the [walking-working surface].'' OSHA did not receive any comments on the proposed provision and adopts it as discussed above.

Final paragraph (f)(5), like the proposed rule, requires that employers ensure handrails (including top rails of stair rail systems serving as handrails (final paragraph (f)(1)(iii)), have the shape and dimension necessary so workers can grasp the handrail firmly. The final rule is similar to the construction stairways standard in § 1926.1052(c)(9). The existing rule at existing § 1910.23(e)(5)(i) requires that handrails be of a rounded or other section that furnishes an adequate handhold to avoid falling. Similarly, the A1264.1–2007 standard (Section 5.8) requires that handrails be rounded with a cross sectional design that furnishes an adequate handhold for anyone grasping it to avoid failing. A10.18–2012 (Section 6.3) also requires a handhold to grasp to avoid falling.

OSHA received a comment from NFPA saying the proposed requirement was too vague. In its comment, NFPA stated:

> The provision . . . requires someone to judge whether a handrail's shape and dimensions provide a firm handhold for employees. The requirement is too performance-based without providing guidance as to what is intended with respect to a 'firm' handhold. Its enforcement will be subjective (Ex. 97).

NFPA recommended that OSHA instead adopt the following language on handhold criteria from the NFPA 101 Life Safety Code:

> Handrails conforming with one of the following features are deemed to comply with the requirement for handhold: (i) The handrail has a circular cross section with an outside diameter of not less than 1¼ in. (3 cm) and not more than 2 in. (5 cm), or (ii) the handrail has a shape that is other than circular with a perimeter dimension of not less than 4 in. (10 cm), but not more than 6¼ in. (16 cm), and with the largest cross-sectional dimension not more than 2¼ in. (6 cm)(Ex. 97).

OSHA does not believe it is necessary to add to final paragraph (f)(5) the specification language NFPA recommends. Requirements on handrail and stair rail system handholds have been in place for many years, and OSHA is not aware of any employers experiencing difficulties in ensuring handrails, and top rails serving as handrails, are of the size and dimension that provide a handhold that workers can grasp firmly. OSHA also believes that retaining the performance-based language gives employers flexibility to select the shape and size of handrail that will provide the most effective handhold in particular workplace situations. For example, the performance-based language allows employers to take advantage of anthropometric testing and research to select the size and shape of handrails that provide a firm grasp for the broadest range of workers. Although OSHA is not adopting the language NFPA recommends, the Agency notes that employers who install handrails and top rails of stair rails systems that meet the specification of the NFPA 101 Life Safety Code will be in compliance with final paragraph (f)(5).

Final paragraph (f)(6), like the proposed rule, requires that employers ensure the ends of handrails and stair rail systems do not present any projection hazard. OSHA drew the final provision from the existing general industry rule in § 1910.23(e)(5)(i) and the construction stairways standard in § 1926.1052(c)(10). The final rule also is consistent with A1264.1–2007 (Section 5.8).

OSHA believes it is necessary to prevent or eliminate projection hazards so workers do not walk or fall into a protruding handrail or stair rail system and get injured. Projection hazards also can snag or catch workers' clothing or equipment and cause workers to lose their balance and fall on, or down, the stairway. A fall on a stairway could seriously injure, or even kill, a worker. OSHA did not receive any comments on the proposed rule and adopts the provision as discussed above.

Final paragraph (f)(7), similar to the proposed rule, requires that employers ensure handrails, and the top rails of stair rail systems, are capable of withstanding, without failure, a force of at least 200 pounds applied in any downward or outward direction within 2 inches of any point along the top edge of the rail.

OSHA believes it is necessary that handrails and top rails on stair rail systems be able to withstand a force of at least 200 pounds to protect workers from falling to a lower level when they lean on or over handrails and top rails, or if they fall against a rail. If handrails and top rails cannot support a 200-pound force, workers could receive serious injuries or die from falling over the open or exposed side of the stairway.

The proposed rule required that handrails and top rails be capable of withstanding the specified test load ''without permanent deformation or a loss of support.'' The final rule replaces the proposed language with the term ''without failure.'' Final § 1910.21(b) defines ''failure'' as a load refusal, breakage, or separation of component parts. It is the point at which the ultimate strength is exceeded which encompasses loss of support. Failure does not include all ''permanent deformation,'' but rather deformation that reduces the structural integrity or support capability of a part or member. OSHA believes the term ''without failure'' clearly reflects the type of deformation the final rule addresses. In addition, OSHA uses the term ''without failure'' throughout the final rule (*e.g.,* final paragraphs (b)(3), (b)(5), (e)(1), and (i)(6)), which should facilitate understanding of the final rule, and help to ensure consistent interpretation of the final rule.

The final rule is almost identical to the construction stairways standard in § 1926.1052(c)(5). The existing general industry rule included strength-criteria requirements (''200 pounds applied in any direction at any point'') for ''completed'' stair rail systems (see existing § 1910.23(e)(3)(iv)) and handrail mountings (see existing § 1910.23(e)(5)(iv)). Similarly, the A1264.1–2007 standard (Section 5.6.1) specifies that completed railing systems must be able to withstand a concentrated load of 200 pounds ''applied in any direction, except up, at the midpoint between posts without exceeding maximum allowable deflection.'' OSHA did not receive any comments on the proposed provision and adopts it with the revised language discussed above.

Paragraph (g)—Cages, Wells, and Platforms Used With Fixed Ladders

Final paragraph (g) establishes criteria and practice requirements for cages, wells, and platforms used with fixed ladders. As discussed above in this preamble, final § 1910.28 limits, and eventually phases out, the use of cages and wells as a means of fall protection on fixed ladders. After the final phase-out deadline, employers must ensure all fixed ladders have ladder safety systems or personal fall arrest systems to protect workers from falling to a lower level. Final paragraph (g) includes an informational note reminding employers that final § 1910.28 establishes the requirements that employers must follow on the use of cages and wells as a means of fall protection. OSHA notes that the requirements in final paragraph (g) do not apply once a ladder safety system or personal fall arrest system has been installed on the fixed ladder as required by final § 1910.28(b)(9).

Final paragraph (g)(1), similar to the proposed rule, requires that employers ensure cages and wells installed on fixed ladders are designed, constructed, and maintained to permit easy access to, and egress from the ladder that they enclose. The final rule divides the other proposed requirements into separate provisions, which makes the final rule easier to understand and follow.

Consistent with the OSH Act (29 U.S.C. 655, 6(b)(5)), final paragraph (g)(1) replaces the specification requirements for cages and wells in existing § 1910.27(d) with performance-based language that specifies the performance objective of the final rule (*e.g.,* to permit easy access and egress). The existing rule, on the other hand, specifies that cages extend down the ladder to a point not less than 7 feet nor more than 8 feet above the base of the ladder, and flare not less than 4 inches at the bottom. The existing rule also requires that the cages extend a minimum of 42 inches above the top of the landing a fixed ladder is served by. OSHA believes that the final rule's performance-based approach also provides flexibility to employers. OSHA includes Figure D–15 in the final rule, which provides an example of acceptable cage construction and dimensions.

Final paragraph (g)(1) adds language specifying that employers ensure cages and wells, in addition to being designed and constructed to provide easy access to and egress from the fixed ladder, are maintained in that condition. This language reinforces the general maintenance and safe access and egress requirements in final § 1910.22. OSHA did not receive any comments on the proposed rule and adopts the provision with the clarifications discussed above.

Final paragraph (g)(2), like proposed paragraph (g)(1), requires that employers ensure cages and wells are continuous throughout the length of the fixed ladder, except for access, egress, and other transfer points. Requiring that cages and wells cover the entire length of the fixed ladder is necessary to ensure that cages and wells are effective in containing and directing workers to a lower landing.

Final paragraph (g)(2) recasts into plain language two provisions in the existing general industry rule and is consistent with the construction ladder standards that address the length of cages on fixed ladders. Both the existing general industry and construction standards require that cages extend along the fixed ladder to a point that is not less than seven feet nor more than eight feet above the base of the ladder (see existing § 1910.27(d)(1)(iv) and § 1926.1053(a)(20)(vii)). These standards also require that the tops of cages extend at least 42 inches above the top of the platform or the point of access at the top of the ladder (see existing § 1910.27(d)(1)(iii) and § 1926.1053(a)(20)(viii)). A14.3–2008 (Sections 6.1.2.4 and 6.1.2.5) also includes similar requirements. OSHA did not receive any comments on the proposed rule and adopts it with the revised performance-based language discussed above.

Final paragraph (g)(3), similar to proposed paragraph (g)(1), requires that employers ensure cages and wells are designed, constructed, and maintained so they contain workers in the event of a fall and direct them to a lower landing. Like final paragraph (g)(1), and consistent with the OSH Act (29 U.S.C. 655, 6(b)(5)), final paragraph (g)(3) replaces detailed specification requirements in the existing rule in § 1910.27(d) with performance-based language. OSHA believes the performance-based language gives employers greater flexibility in designing, constructing, and maintaining cages and wells than the existing standard. OSHA did not receive any comments on the proposed provisions and finalizes the provision as discussed above.

Final paragraph (g)(4), like existing § 1910.27(d)(2)(ii) and proposed paragraph (g)(2), requires that employers ensure landing platforms used with fixed ladders provide workers with a horizontal surface that is at least 24 inches by 30 inches. The final rule is consistent with ANSI A14.3–2002.

OSHA notes that fixed ladder platforms, like other walking-working surfaces, also must comply with the load requirements in final § 1910.22(b). That is, fixed ladder platforms must be capable of supporting the maximum intended load that employers will impose on them. OSHA did not receive any comments on the proposed requirement and adopts it as discussed.

Paragraph (h)—Outdoor Advertising

Final paragraph (h) establishes temporary criteria and practice requirements for employers engaged in outdoor advertising (billboard) operations (hereafter referred to as ''outdoor advertising operations'' and ''outdoor advertising employers''). As final § 1910.28(b)(9) and (10) specify, and the note to this paragraph reinforces through its reference to § 1910.28, outdoor advertising employers may allow their workers [71] to climb fixed ladders without fall protection until November 19, 2018, which is two years after publication of the final rule. After that date, outdoor advertising employers must provide fall protection in accordance with final § 1910.28(b)(9), Fixed ladders, and the requirements in this paragraph no longer apply.

The effect of final § 1910.28(b)(9) and (10) is to phase out the exception to the fall protection requirements that apply to climbing fixed ladders that OSHA provided in a variance granted in 1991 to Gannett Outdoor (56 FR 8801 (3/1/1991)), and extended to all outdoor advertising operations in a 1993 OSHA directive (Fixed Ladders Used on Outdoor Advertising Structures/Billboards in the Outdoor Advertising Industry, STD 01–01–014 (1/26/1993)) (Ex. 51).

Final paragraph (h) specifies the requirements that apply during the phase out period. OSHA drew the requirements in proposed and final paragraph (h) from the 1993 outdoor advertising directive. OSHA stresses that during the phase out period, outdoor advertising employers must: (1) Ensure workers climbing fixed ladders wear a body harness equipped with an 18-inch rest lanyard (final § 1910.28(b)(10)(ii)(B)); and (2) ensure workers are protected by a fall

[71] The proposed rule in § 1910.21(b) referred to these workers as ''qualified climbers,'' which the proposal defined as workers engaged in outdoor advertising operations who, by virtue of their physical capabilities, training, work experience, and job assignment, the employer authorizes to climb fixed ladders without using fall protection. Since the final rule phases out the use of qualified climbers in two years, on November 19, 2018, OSHA does not use the term in this final rule.

protection system once they reach the work position (final § 1910.28(b)(10)(ii)(D)).

Final paragraph (h)(1), like the proposed rule, requires that outdoor advertising employers ensure that each worker who climbs fixed ladders without fall protection is physically capable to perform those duties that employers may assign. To ensure that workers are physically capable, final paragraph (h)(1) requires that employers either observe workers performing actual climbing activities, or ensure workers undergo a physical examination.

Final paragraph (h)(1) clarifies the proposed rule by making explicit that the determination of a worker's physical capability, whether demonstrated by actual observation of climbing or by physical examination, must include whether workers are physically capable of climbing fixed ladders without fall protection as a regular part of their job duties. OSHA believes the key aspect of physical capability is the ability to climb without using fall protection. Such climbing requires particular strength, agility, and vigilance to prevent falling. Although most employers ensure workers are physically capable to do the job, OSHA believes that the additional language clarifies that the physical examination also must consider whether the worker has the physical ability to climb fixed ladders without fall protection. OSHA added the phrase ''including climbing fixed ladders without using fall protection'' to the final provision to clarify that one of the duties that workers in the outdoor advertising industry may be assigned is climbing fixed ladders that are not equipped with a ladder safety system or personal fall arrest system. Only after demonstrating the necessary ability and skill in climbing may employers allow workers to climb without using fall protection (see discussion in final § 1910.28(b)(10)).

OSHA received one comment on the proposed provision. Ellis said OSHA should eliminate the outdoor advertising exception ''unless medical qualification is added;'' however, he did not provide any explanation to support the recommendation (Ex. 155). If Ellis is recommending that physical examinations include a ''medical qualification'' component, OSHA believes that the vast majority of all standard physical examinations include medical tests. In addition, OSHA believes that appropriate physical examinations to determine physical ability to climb fixed ladders without fall protection include medical tests such as blood pressure, electrocardiogram, blood, pulmonary, vision, balance, reflex, and other similar medical examinations. As such, OSHA does not believe it is necessary to specify required medical tests in the final rule.

Ellis appears to be recommending that employers must ensure workers have both a physical examination and perform actual climbing activities to demonstrate they are physically capable of climbing fixed ladders without fall protection. OSHA believes the current requirement does not need to be changed because the Agency is phasing out climbing fixed ladders without fall protection. OSHA notes, however, that outdoor advertising employers are free to provide their workers with both a physical examination and have them perform actual climbing activities to demonstrate physical capability.

Final paragraphs (h)(2) and (3) are companion requirements that specify what training employers must provide (final paragraph (h)(2)) and how they must provide it (final paragraph (h)(3)) to ensure workers have the necessary skills to climb fixed ladders without fall protection. OSHA notes that the training outdoor advertising employers must provide in final paragraphs (h)(2) and (3) is in addition to the training they must provide under final § 1910.30.

Final paragraph (h)(2), similar to the proposed rule, requires that outdoor advertising employers ensure their workers who climb fixed ladders without fall protection (1) successfully complete a training or apprenticeship program that includes hands-on training for the safe climbing of ladders, (including fixed ladders without fall protection and portable ladders); and (2) receive retraining as necessary to ensure they maintain necessary skills.

Successful completion of a training or apprenticeship program means workers are proficient in all aspects of the job, including climbing without fall protection. For example, workers who successfully finish their training or apprenticeship program will know at least (1) how to safely transition from fixed ladders to work platforms and portable ladders; (2) the correct angle for safely climbing portable ladders; (3) how to properly attach to ladder safety systems and personal fall arrest systems at certain ladder heights and when transitioning to work platforms; and (4) the impacts of various environmental conditions on safely climbing fixed ladders without fall protection and what action to take. These training tasks address particularly dangerous climbing conditions, and OSHA believes completion of training or an apprenticeship program is only successful if workers are proficient in these types of tasks. If an employer observes, or has reason to believe, that workers are no longer proficient in climbing fixed ladders without fall protection, final paragraph (h)(2) requires that they provide retraining to restore the worker's proficiency.

OSHA notes that final paragraph (h)(2), like the proposal includes language specifying that employee training on safe climbing must include ''hands-on'' training. OSHA believes that workers must have opportunities to train on ladders and with the equipment they will use to perform their work (*e.g.,* rest lanyards) in order to become proficient in climbing fixed ladders without fall protection. OSHA did not receive any comments on proposed paragraph (h)(2) and adopts it with only minor editorial change.

Final paragraph (h)(3), like the proposed rule, requires that outdoor advertising employers ensure workers possess the skill to climb ladders safely as demonstrated through:

• Formal classroom training or on-the-job training; and

• Performance observations.

To develop the necessary skills and proficiency to climb fixed ladders without fall protection, OSHA believes that worker training must consist of two components: Formal classroom training or on-the-job training on safe climbing of ladders, and worker demonstration of proficiency of ladder climbing skills. Employers must ensure workers receive formal classroom or on-the-job training, and then are personally observed demonstrating their skills and proficiency before considering a training or apprenticeship program to be ''successfully completed.'' OSHA stresses that workers must successfully complete the training and demonstration of climbing skills and proficiency before employers may allow or assign workers to climb ladders unsupervised as part of their job. The same is true for on-the-job training, which is not ''learn as you work'' training. The purpose and structure of on-the-job training must be to teach workers and help them develop, through observation and practice, the necessary skills and proficiency to climb fixed ladders without fall protection before assigning them to perform regular climbing jobs unsupervised. OSHA did not receive any comments on the proposed provision and adopts it as discussed above.

Final paragraph (h)(4), like the proposed rule, requires that employers permit workers to climb fixed ladders without fall protection only if such climbing is part of their routine work activities. As OSHA explained in the preamble to the proposed rule, it is essential that workers regularly perform climbing tasks so they retain knowledge of proper climbing practices and maintain climbing proficiency, including physical capabilities (75 FR 28898).

Ellis recommended eliminating ''qualified climbers'' unless OSHA requires that employers supervise all climbing on fixed ladders (Ex. 155). OSHA does not believe Ellis' recommendation is needed. The final rule requires that outdoor advertising workers who climb fixed ladders without fall protection receive extensive training before employers assign them to perform regular climbing activities. That training includes classroom or hands-on training plus observation of worker climbing proficiency. In addition, employers must train those workers in fall and equipment hazards, and provide retraining as necessary (see final § 1910.30). OSHA believes the training requirements in the final rule are adequate to ensure that outdoor advertising workers have the skills necessary to climb fixed ladders unsupervised without fall protection during the phase-out period. Therefore, OSHA did not adopt the commenter's recommendation.

Paragraph (i)—Ladder Safety Systems

Final paragraph (i) establishes criteria and practice requirements for ladder safety systems permanently attached to fixed ladders or immediately adjacent to such ladders. A ladder safety system is a system designed to eliminate or reduce the possibility of falling from a ladder (see definition of ''ladder safety system'' in final § 1910.21(b)). According to this definition, it usually consists of the following:

- A carrier, also called ''a lifeline,'' which is a rigid or flexible track attached to or adjacent to the fixed ladder;
- A safety sleeve, which is moving component that travels on the carrier;
- A lanyard;
- Connectors; and
- A body harness.

Although the existing rule (§ 1910.21(e)(13)) defines ''ladder safety devices,'' which serve the same purpose as ladder safety systems, the existing rule does not specify criteria or practice requirements for those devices. As a result, OSHA drew many of the proposed ladder safety system criteria and practice requirements from the construction ladder standard (§ 1926.1053(a)(22) and (23)).[72] OSHA also drew ladder safety system criteria and practice from A14.3–2008.

Final paragraph (i)(1) requires that employers must ensure each ladder safety system allows workers to climb up and down the fixed ladder with both hands free for climbing. The final rule also specifies that the design of the ladder safety system must be such that it does not require that workers continuously hold, push, or pull any part of the system while they are climbing. Final paragraph (i)(1) is consistent with the construction ladder standard in § 1926.1053(a)(22)(ii) and A14.3 (Section 7.3.1).

In commenting on the proposed rule, NGS pointed out:

> Some forms of ladder safety systems (*i.e.* rope grabs) may require the employee to periodically hold up a lever to adjust the position of the grab on the rope. This is not continual and the employee can make this adjustment while in a stationary position on the ladder. Once the grab is re-positioned, the employee can climb before stopping and re-adjusting the grab (Ex. 180).

The purpose of the proposed provision was to ensure that the ladder safety system allows workers to use both hands while they are in the process of climbing up and down the fixed ladder; it does not prohibit them from using their hands to position or adjust components of the ladder safety system, such as rope grabs, while stopping and standing in place at certain points along the ladder. OSHA believes the ladder safety system lanyard will protect workers from falling to a lower level in these situations; however, their hands must be free when they resume climbing. The final rule clarifies the provision by adding the term ''continuously'' in place of ''continually.'' OSHA believes this change reinforces clearly that workers need to hold onto the ladder with both hands while climbing, but they may perform tasks when they stop climbing.

Final paragraph (i)(2), like the proposed rule, requires that employers ensure the connection between the carrier or lifeline and the point of attachment to the body harness or belt does not exceed 9 inches in length. The purpose of this provision is to limit the length of any fall and resulting arrest forces. The final rule ensures that no fall exceeds 18 inches, which will limit the arresting forces. The final rule is almost identical to the construction ladder standard in § 1926.1053(a)(22)(iv). The A14.3–2008 standard (Section 7.3.3) also limits the lanyard length to 9 inches.

Ellis commented that OSHA should prohibit the use of body belts with ladder safety systems, and pointed out that the A14.3–2008 standard specifies harnesses instead of body belts as part of a ladder safety system (Ex. 155). He added that ''[a]ll manufacturers have changed at this stage to harness[es] for this climbing device'' (Ex. 155). OSHA agrees that most employers provide body harnesses for use with ladder safety systems because harnesses distribute arresting forces across a broader portion of the body, which makes them safer than body belts. However, since the final rule limits the lanyard length to 9 inches, the maximum free fall will be 18 inches. OSHA believes a maximum free fall of 18 inches will not put an excessive arresting force on workers even if they are using body belts instead of harnesses. As such, like the construction ladder standard, OSHA does not believe it is necessary to prohibit the use of body belts with ladder safety systems.

Final paragraph (i)(3), like the proposed rule, requires employers to ensure that mountings for rigid carriers are attached at each end of the carrier, with intermediate mountings spaced, as necessary, along the entire length of the carrier so the system has the strength to stop worker falls. The requirements in the final rule are consistent with the construction ladder standard (§ 1926.1053(a)(23)(i)). The A14.3–2008 standard (Section 7.3.4) also requires that rigid carriers on ladder safety systems have mountings at the end of each carrier and intermediate mountings along the carrier. However, that standard establishes specification requirements for intermediate mountings instead of the performance-based language in the final rule. A14.3–2008 requires intermediate mountings spaced along the carrier in accordance with manufacturer's recommendations, and installed within one foot below each splice on the carrier, with at least one mounting every 25 feet.

The purpose of final paragraph (i)(3) is to ensure the ladder safety system carrier remains in place and supports the worker, if a fall occurs, by attaching the carrier (or lifeline) firmly to the fixed ladder throughout the length of the ladder. To ensure that the carrier has the strength necessary to hold a falling worker, the final rule requires that employers install an adequate number of mountings spaced ''as necessary'' along the entire carrier length. OSHA believes that manufacturer's instructions likely identify the number

[72] The construction standard allows the use of body harnesses or body belts with ladder safety systems.

and spacing of intermediate mountings they believe are necessary to firmly secure the carrier. However, some carriers may need additional mountings to ensure they are able to support the arresting forces of a falling worker. For example, as the standard indicates, if a carrier consists of several sections, employers may need to use additional intermediate mountings. Therefore, the final rule requires that employers put intermediate mountings at those places along the carrier (*e.g.,* by any splice on the carrier) where they are necessary to ensure the carrier has the strength to stop workers from falling to a lower level. OSHA believes requiring that employers install and space the mountings ''as necessary'' will ensure that employers inspect and evaluate where intermediate mountings are needed when they install ladder safety systems. OSHA did not receive any comments on the proposed provision and adopts it as explained above.

Final paragraph (i)(4), similar to the proposed rule, requires that employers ensure flexible carriers have mountings attached at each end of the carrier. The final rule also requires the installation of cable guides for flexible carriers at least 25 feet apart, but not more than 40 feet apart, along the entire length of the carrier. The final rule is consistent with both the construction ladder standard (§ 1926.1053(a)(23)(ii)) and A14.3–2008 (Section 7.3.5). The purpose of the requirement is to ensure the system has the strength necessary to stop worker falls and, as the construction ladder standard indicates, to prevent wind damage to the ladder safety system and its components. OSHA did not receive any comments on the proposed provision and finalizes it with the clarifications discussed above.

Final paragraph (i)(5), like the proposed rule, reinforces final paragraphs (i)(3) and (i)(4) by requiring employers to ensure that the design and installation of mountings and cable guides do not reduce the design strength of the ladder. The final rule is consistent with both the construction ladder standard in § 1926.1053(a)(23)(iii) and A14.3–2008 (Section 7.1.4). OSHA did not receive any comments on the proposed provision and adopts it with a minor change for clarity.

Final paragraph (i)(6), like the proposed rule, requires that employers ensure ladder safety systems and their support systems are capable of withstanding, without failure, a drop test consisting of an 18-inch drop of a 500-pound weight. This drop test, therefore, must arrest and suspend the 500-pound weight without damage to or failure of the ladder safety system and its support system and without the test weight hitting a lower level (such as the ground). The final rule is consistent with both the construction ladder standard in § 1926.1053(a)(22)(i) and A14.3–2008 (Section 7.1.3).

Ellis recommended that the final rule include a test to determine whether horizontal thrust will cause the ladder safety system to fail (Ex. 155). He also recommended that the final rule incorporate the program of eight tests Great Britain's Health and Safety Executive established. OSHA notes the A14.3 Committee did not adopt those tests, and footnote 7 in the A14.3–2008 standard states there is no scientific determination currently available (in 2008) on this issue to support any action. Ellis did not provide any evidence to support adopting his recommendation.

Ameren recommended that OSHA only require that employers comply with the ladder safety systems criteria and practice requirements when they install new or replacement fixed ladders and ladder safety systems, stating, ''It could very easily be financially burdensome for an employer to replace safe, operating systems to meet proposed requirements'' (Ex. 189). The final rule basically follows the approach Ameren recommends. The final rule (final § 1910.28(b)(9)) does not require that employers immediately install ladder safety systems (or personal fall arrest systems) on existing fixed ladders (*i.e.,* ladders installed before November 19, 2018) that have a cage or well. The final rule requires those employers to install a ladder safety system or personal fall arrest system: (1) When the employer replaces the fixed ladder or a section of it; or (2) by November 18, 2036, which is the final deadline for installing ladder safety systems (or personal fall arrest systems) on all fixed ladders.

Paragraph (j)—Personal Fall Protection Systems

Final paragraph (j), like the proposed rule, requires that body belts, body harnesses, and other components used in personal fall arrest systems, work positioning systems, and travel restraint systems, meet the applicable requirements in final § 1910.140. The final § 1910.140 preamble discusses the criteria and practice requirements for those personal fall protection systems, and addresses stakeholder comments.

Paragraph (k)—Protection From Falling Objects

As discussed earlier in this preamble, the final rule in § 1910.28(c) requires that employers protect workers from being hit by falling objects by keeping objects, including tools, materials, and equipment, far enough away from the exposed edge to prevent them from falling to a lower level, and by using one or more of the following falling object protection measures: (1) Toeboards, screens, or guardrail systems; (2) canopy structures; or (3) barricading the area and prohibiting workers from entering the barricaded area.

Final paragraph (k) establishes criteria and practice requirements for the measures that final § 1910.28(c) requires. The existing rule in § 1910.23(e)(4) contains limited requirements for toeboards and guardrails, and OSHA drew criteria and practice requirements for these measures from the construction fall protection standard in § 1926.502(j), A10.18–2012 (Section 4.1.5), and A1264.1–2007 (Section 5.7).

Final paragraph (k)(1) establishes criteria and practice requirements for toeboards, which the final rule in § 1910.21(b) defines as a low protective barrier that is designed to prevent materials, tools, and equipment from falling to a lower level. The final definition also specifies that toeboards protect workers from falling to a lower level.

Final paragraph (k)(1)(i), similar to proposed paragraph (k)(1), requires that employers ensure toeboards, when used for falling object protection, are erected along the exposed edge of the overhead walking-working surface for a length that is sufficient to protect workers below. In determining how much of the walking-working surface must have toeboards, employers not only must provide toeboards where objects are placed or piled, but also take into account that objects may move or roll on a walking-working surface before going over an exposed edge. In addition, employers must consider where employees may be working on a lower level. The final rule is consistent with the construction fall protection standard in § 1926.502(j)(1). OSHA did not receive any comments on the proposed provision and adopts it as proposed, with minor editorial revisions.

Final paragraph (k)(1)(ii), like proposed paragraph (k)(2)(i), requires that employers ensure the minimum vertical height of toeboards is 3.5 inches, as measured from the top edge of the toeboard to the level of the walking-working surface. The existing rule in § 1910.23(e)(4) requires a four-inch nominal vertical toeboard height, but does not indicate the permissible deviation from that height. However, to make the provision consistent with the construction fall protection standard, OSHA proposed and adopts a 3.5-inch minimum vertical toeboard height. The final rule also is consistent with A1264.1–2007 (Section 5.7) and A10.18–2012 (Section 4.1.5).

OSHA stresses that, like the construction fall protection standard in § 1926.502(j)(3), the required 3.5-inch toeboard height is the minimum height. If employers have objects or materials near the toeboard that are higher than the toeboard, they must ensure the toeboard height is sufficient to prevent the objects from falling over the edge to a lower level, as specified in final paragraph (k)(2). OSHA notes that when objects are piled higher than the toeboard, final paragraph (k)(2) requires employers to erect guardrail systems that have paneling or screening installed from the top edge of the toeboard to the top rail or midrail of the guardrail system. (See further discussion of final paragraph (k)(2) below.) OSHA did not receive any comments on the proposed requirement and finalizes it as discussed above.

Final paragraph (k)(1)(iii), similar to existing § 1910.23(e)(4) and proposed paragraph (k)(2)(i), requires that employers ensure toeboards do not have an opening or clearance of more than 0.25 inches above the walking-working surface. This is measured from the walking-working surface to the bottom of the toeboard. The purpose of this requirement is to ensure that objects cannot fall off the walking-working surface through any drainage openings in the toeboard. The final rule is consistent with the construction fall protection standard (§ 1926.502(j)(3)), A10.18–2012 (Section 5.7), and A1264.1–2007 (Section 4.1.5).

Final paragraph (k)(1)(iv) is a companion provision to final paragraph (k)(1)(iii). Like proposed (k)(2)(i), it requires that employers ensure toeboards are solid or, if they have openings, the openings do not exceed 1 inch at their greatest dimension. OSHA acknowledges that the toeboards employers use in outdoor work areas may need drainage openings to prevent water from collecting on the walking-working surface, resulting in slips and falls. Therefore, this provision, along with final paragraph (k)(1)(iii), requires employers to ensure that such drainage openings do not exceed a height of ¼ inch or a length of 1 inch. These provisions are substantively the same as the proposed language. However, the final rule (paragraphs (k)(1)(iii) and (iv)) simplifies and clarifies the proposed provision. The final rule separates the requirements into two provisions, which makes them easier to understand, and removes unnecessary language (*e.g.,* ''vertical''). The final rule also clarifies the requirements by specifying more clearly than the proposal that no opening in the toeboard shall exceed 1 inch in length (final paragraph (k)(1)(iv)) and 0.25 inches in height (final paragraph (k)(1)(iii)). These maximum dimensions will ensure that objects cannot fall through any opening in a toeboard.

OSHA did not receive any comments on the requirements in proposed paragraph (k)(2)(i) and adopts final paragraphs (k)(1)(iii) and (iv) as discussed above.

Final paragraph (k)(1)(v), like proposed paragraph (k)(2)(ii), requires that employers ensure toeboards used around vehicle repair, service, and assembly pits (pits) have a minimum height of 2.5 inches. The height is measured from the walking-working surface to the top edge of the toeboard. The final rule also includes an exception, which specifies that employers do not have to erect toeboards along the exposed edges of a pit if they can demonstrate the toeboard would prevent access to a vehicle that is over the pit.

The final rule recognizes that shorter toeboards are adequate to protect workers from being hit by falling objects when vehicles are over the pit because the space between the toeboard and the vehicles is small enough to prevent most objects from falling into the pit. When vehicles are not over the pit, toeboards are not necessary because employees are not working in the pit and, thus, not exposed to a falling object hazard. Therefore, the exception is necessary because toeboards, even short ones, would prevent workers from accessing the vehicle to perform repair, service, or assembly work.

The final rule clarifies the proposed toeboard exception in two respects. First, the final rule states more clearly than the proposal that the toeboard exception applies only when ''employers can demonstrate'' that erecting toeboards would prevent access to a vehicle. In the preamble to the proposal, OSHA explained that employers have the duty to show that toeboards would prevent vehicle access (75 FR 28899). The final rule adds that language to the regulatory text to clarify this requirement.

Second, the final rule clarifies that the exception is limited. It only applies to those parts and sections of exposed edges where erecting toeboards would prevent access to a vehicle that is over a pit. The final rule still requires that employers erect toeboards at other exposed edges. OSHA did not receive any comments on the proposed provision and exception, and finalizes them with the clarifications explained above.

Final paragraph (k)(1)(vi), like proposed paragraph (k)(4), requires that employers ensure toeboards are capable of withstanding, without failure, a force of at least 50 pounds, applied in any downward or outward direction at any point along the toeboard. OSHA drew the requirement from the construction fall protection standard in § 1926.502(j)(2). The existing rule in § 1910.23(e)(4) does not include this requirement; rather, the existing provision specifies that employers securely fasten toeboards and they be made of ''any substantial material.''

As defined in final § 1910.21(b), ''failure'' means a load refusal (*i.e.,* the point at which the load exceeds the ultimate strength of a component or object), breakage, or separation of component parts. Therefore, ''without failure'' means a toeboard must have adequate strength to remain in place and intact after applying 50 pounds in a downward or outward direction at any point along the toeboard. OSHA believes that the language in final rule and the construction fall protection standard is clearer, and provides employers with better guidance on compliance, than the existing rule. OSHA did not receive any comments on the proposed requirement and finalizes it as discussed above.

Final paragraph (k)(2)(i), like proposed (k)(3), establishes criteria and practice requirements where tools, equipment, or materials are piled higher than the toeboard. Where such items are piled higher than the toeboard, the employer must install paneling or screening from the toeboard to the midrail of the guardrail system and for a length that is sufficient to protect employees below. If the items are piled higher than the midrail, the employer must install paneling or screening to the top rail of the guardrail and for a length that is sufficient to protect employees below.

The final provision uses the same approach as the construction fall protection standard in § 1926.502(j)(4) when objects are piled higher than the toeboard. The construction standard requires that employers install paneling or screening from the walking-working surface or toeboard to the top of the guardrail or midrail. In addition to requiring that employers use guardrail systems in such cases, final § 1910.28(c)(2) requires that employers must protect workers from falling objects by keeping objects far enough from the exposed edges to prevent them from falling to a lower level. OSHA believes that this two-pronged approach provides effective redundancy that will prevent falling objects from injuring or killing workers on lower levels. In addition, OSHA believes that following a similar approach to that in the construction standard will make compliance easier for employers who perform both general industry and construction activities.

OSHA notes final paragraph (k)(2)(i) requires that employers use guardrail systems equipped with ''paneling or screening'' rather than vertical members specified in final § 1910.29(b). Even though the final rule requires that the distance between vertical members must not exceed 19 inches, OSHA believes that some items, such as heavy tools, can fall through those openings. Paneling, such as solid paneling, or screening will prevent piled objects from falling through the guardrail system to a lower level.

Final paragraph (k)(2)(i), like proposed paragraph (k)(5), also requires that employers ensure the paneling or screening they install extends for a distance along the guardrail system that is sufficient to protect workers below from falling objects. The final rule is consistent with the guardrail requirement in final paragraph (b)(2) of this section, and the construction fall protection standard in § 1926.502(j)(4). Final paragraph (k)(2)(i) also is consistent with existing § 1910.23(e)(4). The A1264.1–2007 standard (Section 5.7) allows employers to use guardrail systems equipped with screening or additional toeboards, to protect workers from falling objects.

Final paragraph (k)(2) consolidates into one provision the proposed criteria and practice requirements for guardrail systems used as falling object protection (see proposed paragraphs (k)(3) and (5)). OSHA believes this consolidation makes the final rule easier to understand and follow than the proposal.

OSHA notes that, except when specified elsewhere, guardrail systems used for falling object protection also must meet the guardrail requirements in final paragraph (b) of this section, such as the strength requirements for paneling and screening (see final paragraph (b)(5)).

OSHA received one comment on the proposed rule. Ellis supported the proposed requirement to install barriers to prevent objects from falling through openings (Ex. 155). He also recommended that materials used for paneling or screening include sheet metal, gratings, and netting (Ex. 155). OSHA notes that A1264.1–2007 (Section 5.7) requires that paneling or screening used for falling object protection have at least 18-gauge thickness. Although the final rule uses performance-based language, OSHA notes that paneling or screening that meets the ANSI/ASSE standard would comply with final paragraph (k)(2).

Final paragraph (k)(2)(ii), like proposed paragraph (k)(5), requires that employers ensure openings in guardrail systems are small enough to prevent objects from falling through the openings. The final rule is consistent with the construction fall protection standard in § 1926.502(j)(5). OSHA is adopting the proposed rule with only minor editorial change.

Final paragraph (k)(3) establishes requirements for using canopies as falling object protection. Like proposed paragraph (k)(6), the final rule establishes a performance-based provision requiring that employers ensure canopies are strong enough to prevent collapse and penetration when struck by any falling object. The final rule adds language clarifying that the strength requirements in final paragraph (k)(3) only apply to canopies that employers use to protect workers from falling objects, not to all canopies. OSHA did not receive any comments on the proposed measure and finalizes the provision with the editorial change discussed above.

Paragraph (l)—Grab Handles

Final paragraph (l) specifies criteria and practice requirements for grab handles that employers provide, such as at a hoist area. Workers often use grab handles when they lean through or over the edge of the access opening to facilitate hoisting operations. The final rule in § 1910.21(b) defines a ''hoist area'' as any elevated access opening to a walking-working surface through which equipment or materials are loaded or received.

The final rule does not retain a portion of proposed § 1910.28(b)(2)(ii), which required that employers provide a grab handle on each side of the access opening at hoist areas whenever guardrail systems, gates, or chains are removed to facilitate a hoisting operation and a worker must lean through the opening or over the edge of the access opening. However, if employers do provide grab handles, final paragraph (l) requires that they must ensure the grab handles meet the criteria and practice requirements in final paragraph (l). The existing rule requires that employers provide grab handles on each side of wall openings and holes, and on ''extension platforms onto which materials can be hoisted for handling'' (see existing § 1910.23(b)(1)(i) and (ii)), and also establishes criteria that wall opening grab handles must meet (see existing § 1910.23(e)(10)). Neither the construction fall protection standard in § 1926.501 nor any national consensus standard requires the use of grab handles at hoist areas.

OSHA decided to retain the criteria and practice requirements in final paragraph (l) to clarify that employers who provide grab handles must ensure those handles are safe and effective. Moreover, retaining the criteria and practice requirements addresses Ameren's recommendation that OSHA explain what qualifies as a grab handle in the final rule, requesting that OSHA ''be specific as to not cause confusion or misinterpretation'' (Ex. 189).

Final paragraph (l)(1), like the proposed rule, requires that grab handles employers provide must be at least 12 inches in length. This final provision is consistent with the existing rule in § 1910.23(e)(10). OSHA believes that 12-inch handles will provide workers with an adequate grip space.

Final paragraph (l)(2), similar to existing § 1910.23(e)(10) and the proposed rule, specifies that grab handles employers install at hoist access openings must provide at least three inches of clearance from the framing or opening. OSHA believes a three-inch clearance is essential to ensure workers have adequate space to wrap their hands around the handle and grip it firmly, if they lean out of the opening during hoisting operations, thereby preventing falls.

Final paragraph (l)(3), like the proposed rule, specifies that grab handles employers provide must be capable of withstanding a maximum horizontal pull-out force equal to two times the maximum intended load or 200 pounds, whichever is greater. The existing rule in § 1910.23(e)(10) has similar language requiring that grab handles be capable of withstanding 200 pounds applied horizontally at any point along the handle. OSHA believes the required strength criteria will ensure that grab handles remain in place when workers hold onto them and lean their bodies out of an access opening. OSHA is adopting final paragraph (l) with the clarifications discussed.

Section 1910.30 Training Requirements

Final § 1910.30, like the proposed rule, adds training requirements to 29 CFR part 1910, subpart D (subpart D). OSHA drew most of the new training requirements from the construction fall protection standard (29 CFR 1926.503). Final § 1910.30 requires training on fall and equipment hazards and, in certain situations, retraining. The final training requirements are performance based, and give employers flexibility to tailor the requirements and training methods to their workforce and workplace.

Some commenters said that employers are not providing fall protection training, which puts employees at significant risk of injury (Exs. 329 (1/19/2011, p. 86); 329 (1/20/2011, p. 99)). One worker testified that he received no training at any company where he worked, saying, ''It was learn as you go'' (Ex. 329 (1/19/2011, p. 86)).

OSHA believes that the new training requirements are necessary, and effective worker training is one of the most critical steps employers can take to prevent employee injuries and fatalities. Generally, commenters supported adding training requirements to subpart D (Exs. 53; 73; 96; 127; 172; 189; 205; 216; 222; 226; 329 (1/19/2011, pgs. 22, 24); 364). For example, the AFL–CIO said, ''[T]raining requirements are necessary to ensure that workers can identify the fall hazards they face in their workplaces and understand how they can be protected'' (Ex. 172). The American Society of Safety Engineers (ASSE) agreed, saying, ''[A]ppropriate training is a key element of managing every kind of workplace safety risks'' (Ex. 127).

The National Grain and Feed Association (NGFA) stated, training ''programs are vital, first and foremost, to safeguard lives and prevent injuries'' (Ex. 329 (1/20/2011, p. 248)). Sam Terry, president of Sparkling Clean Window Company, and Dana Taylor, executive vice president of Martin's Window Cleaning, also stressed that proper training is critical to reduce workplace injuries and illnesses (Exs. 222; 362). Mr. Terry said, ''The lack of proper training is probably the most significant contributor to accidents and incidents when suspended work is performed'' (Ex. 362). He added that most, if not all, of the accidents involving rope descent systems and suspended scaffolding since 1977 that he reviewed ''could have been prevented if the employees had received proper training'' (Ex. 163). Similarly, Mr. Russell Kendzior, president of the National Floor Safety Institute (NFSI), stated, ''Approximately 8 percent of all slips, trips and falls are directly caused by improper or lack of employee training'' (Ex. 329 (1/21/2011, p. 204)). The International Window Cleaning Association (IWCA), which has spent years researching and analyzing accident data and industry practices, told OSHA that ''inadequate training'' was one of the leading causes of accidents among window cleaners (Ex. 364).

Some commenters, however, opposed the proposed training requirements. Mr. Charles Lankford, of Rios & Lankford International Consulting, opposed the application of some training requirements because they do not exempt employers who rely exclusively on guardrails or safety net systems. He said, ''[Those] systems . . . are completely passive in their protective characteristics and do not require any special knowledge on the part of the protected employees'' (Ex. 368). OSHA does not agree with the commenter. Regardless of whether a fall protection system is passive, it will be effective only if it is installed, inspected, used, maintained, and stored properly and safely. OSHA believes that workers need special and specific knowledge to perform these tasks correctly. For example, to ensure that safety net systems protect employees in the event of a fall, employees must know, or be able to calculate, how much weight the net will hold in the particular situation. Therefore, OSHA believes that workers who use any type of fall protection system must receive proper training. (See discussion of final paragraph (b)(1) for additional explanation.)

The National Chimney Sweep Guild (NCSG) opposed the proposed training requirements for workers who use personal fall protection systems, saying that they duplicated and overlapped the personal protective equipment (PPE) training that § 1910.132(f) requires:

> This would place an inappropriate and unnecessary burden on employers, employees and compliance personnel in sorting out the confusion presented by the redundant, overlapping and varying provisions addressing the same issues. Furthermore, unless the rule would allow sweeps to receive generic hazard training (rather than site-specific training), this requirement would be economically infeasible for sweeps (Ex. 150).

As explained in the proposal, OSHA acknowledges that some of the training requirements in § 1910.30 may overlap those in § 1910.132. To the extent that any provisions do overlap, OSHA does not believe that it burdens employers because training that complies with one standard satisfies the employer's obligation under the other standard. That said, OSHA believes that the training requirements in final §§ 1910.30 and 1910.132(f) complement each other and, therefore, ensure that workers receive comprehensive training. For example, final § 1910.30(a)(3)(i) requires that employers train workers how to recognize the need for PPE while § 1910.132(f)(1)(i) requires that employers train employees to know what PPE is necessary and fits. Also, § 1910.30(a)(iii) requires that employers train workers in the correct and safe use of personal fall protection systems, while § 1910.132(f)(1)(iv) requires training on the limitations of those systems.

The final rule does not require that training be site-specific; that is, provided the site where employees are performing the job. However, to be effective the training that employers provide needs to address the hazards which their employees may be exposed. OSHA believes that NCSG already may be providing this training. For example, NCSG said they provide shop classes at individual businesses as well as on-the-job training. In addition NCSG said the chimney sweep training program lasts six to 12 months and during that training workers are ''exposed to a lot of different situations'' (Ex. 329 (1/18/2011), p. 274).

Commenters also supported OSHA's performance-based approach to the training requirements. For example, the National Cotton Ginners' Association (NCGA) (Ex. 73) and the Texas Cotton Ginners' Association (TCGA) (Ex. 96) both said, ''We believe it is most beneficial to keep this section general so that each employer may review their own operation to determine which employees need to receive specific training.''

Paragraph (a)—Fall Hazards

Final paragraph (a), like the proposed rule, contains training requirements related to fall hazards.[73] Final paragraph (a)(1), like the proposal, requires that employers train each employee who uses a personal fall protection system. Final § 1910.21(b) defines personal fall protection system as ''a system an employee uses to provide protection from falling or to safely arrest an employee's fall if one occurs.'' Personal fall protection systems include personal fall arrest, travel restraint, and positioning systems (§ 1910.21(b)).

Final paragraph (a)(1) also requires that employers train each worker required to receive training under subpart D. Subpart D requires worker training in several situations, including:

- When employees use a rope descent system (RDS) (§ 1910.27(b)(2)(iii));
- When employees work on an unguarded working side of a platform

[73] The final rule defines fall hazard as ''any condition on a walking-working surface that exposes an employee to a risk of harm from a fall on the same level or to a lower level'' (final § 1910.21(b)). However, for the purposes of final paragraph (a), ''fall hazards'' refers to the risk of falling four (4) feet or more to a lower level, except for falling into or onto dangerous equipment; for this exception, there is no limit to the distance an employee may fall to a lower level.

used on slaughtering facilities, loading racks, loading docks, or teeming platforms (§ 1910.28(b)(1)(iii)(C) and (b)(14)(ii)(C)); and

- When employees operate motorized equipment on dockboards not equipped with fall protection (*e.g.,* guardrails) (§ 1910.28(b)(4)(ii)(C)).

In the proposed rule, OSHA invited comment on whether the final rule should expand the scope of the fall hazard training in paragraph (a)(1) to cover all fall hazards over four feet (including ladders); training on the safe use of ladders; and training to avoid slips, trips, and falls on the same level of a walking-working surface (75 FR 28900). Some commenters urged OSHA to expand the scope of the training requirements. For instance, Mr. Bill Kojola of the AFL–CIO said, ''It is our view that the training requirements in the final rule need to be expanded to include training for all workers exposed to fall hazards over 4 feet (including those using ladders), those using portable guardrails, and for all workers using portable and fixed ladders'' (Ex. 172; *see also* Ex. 329 (1/20/2011, p. 221)). He pointed out that the construction fall protection standard (§ 1926.503(a)(1)) requires that employers train each employee ''who might be exposed to fall hazards,'' noting further that ''[i]f OSHA is committed to harmonizing its fall protection standards across industries . . . it needs to expand the final [rule] . . . and provide training for all workers who are exposed to fall hazards'' (Ex. 172).

Mr. Kojola also urged OSHA to expand training to cover ''the hazards of falls on the same level'' (Ex. 363). He cited the testimony of Mr. Kendzior (NFSI) who said that the current annual cost of falls to the same level ''tops more than 80 billion dollars a year'' (Ex. 363, citing Ex. 329 (1/21/2011, p. 201)).

The American Federation of State, County and Municipal Employees (AFSCME) also supported expanding the scope of paragraph (a)(1), stressing the importance of training for employees who use ladders:

> Training should not be limited to workers who used a specific fall protection system. All workers should have hazard recognition training that includes prevention of falls from any height or surface. Because ladders are so common in the workplace, they are often considered ''safe.'' Yet many incident reports include injuries or near misses using a ladder. Any worker who is required to use a ladder in his/her work duties should get basic information on use, care, and limitations of ladders (Ex. 226).

Ellis Fall Safety Solutions also supported adding ladder training to the final rule (Ex. 155).

On the other hand, some commenters opposed expanding the scope of the training requirements. NCGA and TCGA both said:

> It is a difficult task to predict where falls may occur in an individual operation and it becomes an insurmountable task to predict where falls are most likely to occur on a general industry basis. Having a more prescriptive list of instances in this section may lead an employer to focus on the list, rather than focusing on the areas of highest risk in his individual facility (Exs. 73; 96).

After analyzing the comments and other information in the record, OSHA decided to adopt the proposed fall hazard training scope without substantive change. For several reasons, OSHA believes that the scope of final paragraph (a)(1) is appropriate, and it is not necessary to expand the paragraph's scope. First, the scope of final § 1910.30(a)(1) is broad. It requires that employers train all workers who use personal fall arrest systems, travel restraint systems, and positioning systems. The final rule, like the proposal, gives employers great flexibility in selecting what type of fall protection system to use, and OSHA believes that many employers will use personal fall protection systems to protect their workers from fall hazards.

Second, in addition to the workers who must receive training under final paragraph (a)(1), final § 1910.30(b) requires that employers also train each worker who uses equipment covered by subpart D in the proper use, inspection, care, maintenance, and storage of that equipment. The equipment includes, but is not limited to, ladder safety systems, safety net systems, portable guardrails, and mobile ladder stands and platforms. Thus, as AFL–CIO, AFSCME, and other commenters recommended, employers must train each worker who uses fixed ladders equipped with ladder safety systems so they know the proper use, inspection, care, maintenance, and storage of that equipment.

Third, employees are also protected by the inspection, control, work practice, and design requirements in subpart D. For instance, final § 1910.23 specifies many design and work practice requirements for portable ladders. Under the final rule, employers are responsible for providing portable ladders that comply with the design requirements, as well as for ensuring that their workers understand and follow the work practices in § 1910.23. OSHA believes that the measures in the final rule, taken as a whole, establish an effective plan to protect workers from slip, trip, and fall hazards.

In final paragraph (a)(1), OSHA added language to clarify the date by which employers must train workers who use personal fall protection systems or who are required to be trained on fall hazards as specified elsewhere in subpart D. Additionally, the Agency added language to the final rule requiring employers to train workers before the worker can be exposed to the fall hazard. As noted in the preamble to the proposed rule, OSHA intended to include this language in the regulatory text (75 FR 28899). Accordingly, employers must train their current workers after OSHA publishes the final rule, and train newly-hired workers before initially assigning them to a job where they may be exposed to a fall hazard. To give employers adequate time in which to develop and provide initial training, OSHA is allowing employers six months, on or before May 17, 2017, to train their workers in the requirements specified in § 1910.30(a).

Edison Electric Institute (EEI) said OSHA should not require employers to provide initial training if they have previously trained workers:

> The proposed regulation should allow employers to consider previously delivered training as compliant. Employers should not be required to retrain employees just because the new regulation is finalized. Work practices by many employers will not be changed by the new regulation and they should not be required arbitrarily to retrain employees (Ex. 207).

OSHA agrees with EEI's comment. An employer whose workers have received training, either from the employer or another employer, that meets the requirements of final § 1910.30(a) will not need to provide additional initial training. However, many of the training requirements in final § 1910.30 are new, and if the initial training workers already have received does not meet all of the requirements in the final rule, employers will need to provide initial training on those requirements.

OSHA does not think the requirement to provide training for workers whose previous training does not meet the final rule or to provide initial training for new workers will pose significant difficulties for employers. Many commenters said that they train workers annually or continually (Ex. 329 (1/19/2011, pgs. 25, 45, 240, 413); 329 (1/20/2011, p. 284)). Since the final rule allows employers six months to provide initial training that complies with final § 1910.30, OSHA believes that most employers will be able to work the required training into their existing annual or continuing training schedule.

Finally, in final paragraph (a)(1), OSHA deleted the second sentence of the proposed paragraph, and moved to it to final paragraph (a)(3). That sentence specified topics that training must cover (*i.e.,* recognize the hazards of falling and understand the procedures to be followed to minimize the hazards), and OSHA believes it is most appropriate to group these topics with the other training topics in final paragraph (a)(3).

Final paragraph (a)(2), like the proposed rule, requires that employers ensure a qualified person trains each worker in the requirements specified in § 1910.30(a). Final § 1910.21(b) defines ''qualified'' as a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project. OSHA believes that having a person who has a degree, certificate, or professional standing (hereafter ''degree'') or extensive knowledge, training, and experience (hereafter ''extensive knowledge'') in fall hazards, and who demonstrates ability to solve problems related to fall hazards, will help to ensure that employees receive effective training. Moreover, to stress the importance of this requirement and its application to all the training that § 1910.30 requires, OSHA made a separate provision for this requirement in the final rule.

OSHA notes that the construction fall protection standard, instead of specifying that a qualified person must train workers, requires that employers ensure that a competent person is qualified to train workers in each of the items and topics specified in § 1926.503(a)(2)(i)–(viii). Despite the difference in language between final §§ 1910.30(a)(2) and 1926.503(a)(2), OSHA believes the standards are consistent. OSHA believes that competent persons [74] ''qualified'' to train workers in all of the subjects and topics in the § 1926.503, or final § 1910.30, must have the capabilities of qualified persons. Accordingly, they must have capabilities (*i.e.,* extensive knowledge and demonstrated ability to solve or resolve issues) beyond those capabilities specified for competent persons (*i.e.,* to identify hazards and take corrective measures).

[74] A ''competent person,'' is defined by the construction rule (§ 1926.32(f)), as one who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

For purposes of the final rule, a trainer must have, at a minimum, a ''degree'' that addresses, or ''extensive knowledge'' of: The types of fall hazards, how to recognize them, and the procedures to minimize them; the correct procedures for installing, inspecting, operating, maintaining, and disassembling personal fall protection systems; and the correct use of personal fall protection systems and other equipment specified in § 1910.30(a)(1). Because of the breadth of knowledge and demonstrated ability trainers in the final rule must have, OSHA believes that specifying that qualified persons must train workers best describes the capabilities necessary for training workers in the subjects § 1910.30(a) requires.

OSHA received several comments about the ''qualified'' person requirement in proposed paragraph (a)(2). Some commenters supported the proposed requirement. For instance, Mark Reinhart, owner of Award Window Cleaning Services (AWCS), said, ''[T]raining must be by a person or persons that are experienced in the correct training procedures and competent in each area of training'' (Ex. 216). He told of a company where he worked that used a veteran window cleaner to train a worker who, in turn, trained another worker:

> The problem was they were all trained to be risk takers—no safety lines, no three points of contact on ladders, no safety for the public, nothing at all about fall protection. So my employer put me at risk without knowing or researching the industry to find best practices or rules governing the window cleaning industry (Ex. 216).

Mr. Andrew Horton, safety training coordinator with Service Employees International Union (SEIU) Local 32BJ, recommended OSHA require that only approved outreach trainers conduct training (Ex. 329 (1/19/2011, p. 26)).

On the other hand, some commenters opposed the ''qualified'' person requirement in proposed (a)(2). One commenter said the requirement was ''too stringent and restrictive'' (Ex. 329 (1/20/2011, p. 298)). Mr. Lankford said that requiring qualified persons to train workers meant that trainers would have to be ''a specialist in fall protection, such as a vendor, manufacturer or consultant-trainer'' and not a ''crew chief, foreman, operations person or similar positions, even if knowledgeable'' (Ex. 368). Based on his interpretation of proposed paragraph (a)(2), Mr. Lankford concluded, ''There is no convincing argument that the training would not be equally effective if provided by a competent person'' (Ex. 368).

OSHA believes Mr. Lankford's interpretation of proposed paragraph (a)(2) is not accurate. The definition of ''qualified'' in the final rule (§ 1910.21(b)) allows employers to have crew chiefs, supervisors, operations personnel, or other individuals train workers, provided they have the necessary ''degree'' or ''extensive knowledge'' outlined in the definition of qualified, and specified in final § 1910.30(a). Final § 1910.30(a)(2) does not require that trainers possess a degree if they have the necessary knowledge, training, and experience. In fact, OSHA believes that many employers will draw upon the extensive knowledge and experience of their staffs to provide effective training. OSHA also notes that final § 1910.30(a)(2) does not require that employers use qualified persons who are employees. Employers are free to use outside personnel to train workers.

Mr. Lankford and EEI also raised concerns that requiring a qualified person to train workers would prohibit employers from using different training formats and technologies (Exs. 207; 368). Mr. Lankford said, ''The [qualified person] requirement seems to exclude the use of audio-visual or computer-based-training for the purpose of complying with this requirement'' (Ex. 368). Addressing the same issue, EEI said:

> The OSHA regulation should allow employers to use technology to deliver training. Stand up training by a qualified person is not the only effective method of training. The OSHA regulation should allow employers to use computer based training, web based training, and video training to meet fall protection training requirements (Ex. 207).

Final paragraph (a)(2) does not require or prohibit a specific format for delivering training to workers. OSHA supports the use of different formats (*e.g.,* classroom, audio-visual, demonstration, practical exercises, field training, written) and new technology (*e.g.,* online, interactive computer-based, web-based) to train workers in accordance with § 1910.30. Thus, final paragraph (a)(2) allows employers to use video-based training and computer-based training, provided that:

- A qualified person, as defined in § 1910.21(b), developed or prepared the training;
- The training content complies with the requirements in final § 1910.30; and
- The employer provides the training in a manner each worker understands (§ 1910.30(d)).

OSHA discusses this issue in further detail in the explanation of final paragraph (d) below.

OSHA notes that employers may provide training using a format that is web based or interactive computer-based. In such cases, a qualified person must be available to answer any questions workers may have to comply with final paragraph § 1910.30(a)(2).

Final paragraph (a)(3) specifies the minimum subjects and topics that fall hazard training must cover. Final paragraph (a)(3) requires that employers provide training in at least the following topics:

- The nature of fall hazards in the work area and how to recognize them (final paragraph (a)(3)(i));
- The procedures that must be followed to minimize the hazards (final paragraph (a)(3)(ii));
- The correct procedures for installing, inspecting, operating, maintaining, and disassembling the personal fall protection systems that the worker uses (final paragraph (a)(3)(iii)); and
- The correct use of personal fall protection systems and equipment, including, but not limited to, proper hook-up, anchoring, and tie-off techniques, and methods of equipment inspection and storage as specified by the manufacturer (final paragraph (a)(3)(iv)).

OSHA drew most of the requirements in final paragraph (a)(3) from the construction fall protection standard (§ 1926.503(a)(1) and (2)). However, OSHA revised final paragraph (a)(3) in several ways. First, as discussed above under final paragraph (a)(1), OSHA added to final paragraph (a)(3) the requirements to train workers in hazard recognition and the procedures to minimize fall hazards, which were in proposed paragraph (a)(1).

Second, OSHA revised final paragraph (a)(3)(iv), proposed paragraph (a)(2)(iv), to eliminate training employees on the ''limitations'' of personal fall protection systems. OSHA believes it is not necessary to include that requirement in final paragraph (a)(3) because § 1910.132(f)(1)(iv) already requires training that addresses the limitations of PPE, which includes personal fall protection systems.

Third, final paragraph (a)(3) does not include the proposed requirement that employers train workers in the use and operation of ''guardrail systems, safety net systems, warning lines used in designated areas, and other protection'' (proposed paragraph (a)(2)(iii)). OSHA does not believe this provision is necessary because final paragraph (b) already addresses most of these fall protection systems and measures.

Finally, OSHA changed the word ''erecting'' to ''installing'' in final paragraph (a)(3)(ii) (proposed paragraph (a)(2)(ii)). OSHA believes this clarification more accurately expresses the intent of the proposed paragraph.

Although commenters generally supported the required worker training topics and subjects outlined in final paragraph (a)(3) (Exs. 53; 189; 216; 226), others said OSHA should increase or eliminate some of the training requirements. Mr. Horton said that window cleaners need more detailed training than what OSHA proposed (Ex. 329 (1/19/2011, p. 22)). The Society of Professional Rope Access Technicians (SPRAT) recommended that OSHA specify ''at least topics for knowledge, skills, and capabilities for each level of employee,'' and require specific training and certification by an industry organization for rope access (Ex. 205). OSHA did not incorporate SPRAT's recommendations in the final rule. The Agency believes that the performance-based language in the final rule provides flexibility for employers, and does not prohibit employers from providing more specialized training or requiring certification or demonstration of the employee's knowledge, skills, and capabilities.

Ameren Corporation opposed requiring training to install and disassemble personal fall protection systems. Ameren said such training was not always necessary because some employees may not perform these tasks (Ex. 189). OSHA agrees that employers need not train employees in tasks that they do not perform. However, under the final rule, if a worker has to install and disassemble personal fall protection systems, the employer must ensure the worker knows how to perform those tasks safely and correctly before beginning the work.

Paragraph (b)—Equipment Hazards

Final paragraph (b), like the proposed rule, contains training requirements related to equipment hazards. The provisions require that employers ensure workers are trained in the following:

- The proper care, inspection, storage, and use of equipment covered by subpart D (final paragraph (b)(1));
- How to properly place and secure dockboards to prevent unintentional movement (final paragraph (b)(2));
- How to properly rig and use a rope descent system (RDS) (final paragraph (b)(3)); and
- How to properly set up and use designated areas (final paragraph (b)(4)).

Final paragraph (b)(1) applies to the extent that workers use equipment covered by subpart D. Under this provision employers must train workers in equipment as well as fall protection systems that final paragraph (a) does not cover. Therefore, as mentioned above, training in final paragraph (b)(1) must cover equipment such as safety net systems, ladder safety systems, warning lines, portable guardrails, and motorized materials handling equipment used on dockboards.

EEI said that OSHA should not require training in portable guardrails because ''the purpose and use of these devices is obvious'' (Ex. 207). While some workers may know how to set up and use portable guardrails, the same is not true for all workers, particularly new workers. Thus, final paragraph (b)(1) must cover portable guardrails to protect all workers from falls.

OSHA added language to final paragraph (b)(1) to clarify the date by which employers must train workers in equipment hazards. Accordingly, employers must train their current workers after OSHA publishes the final rule, and train newly hired workers before initially assigning them to a job where they may be exposed to a fall hazard. To give employers adequate time in which to develop and provide initial training, OSHA is allowing employers six months, until May 17, 2017, to provide the required training.

Like final paragraph (a), employers whose workers have received training, either from the employer or another employer, that meets the requirements of final § 1910.30(b) will not need to provide additional initial training to those workers. However, the training requirements in final § 1910.30 are new, and if the initial training workers already have received does not meet all of the requirements in the final rule, employers will need to provide initial training on those requirements.

Final paragraph (b)(2) requires employers to train workers who use dockboards on how to properly place and secure them to prevent unintentional movement. The Agency believes training in the proper positioning of dockboards (*e.g.,* adequate overlap, secure position) to avoid unintentional movement is needed to help prevent worker injury. OSHA did not make any substantive changes to proposed paragraph (b)(2) and did not receive any comments. OSHA has adopted paragraph (b)(2) with only minor revisions for clarity.

Final paragraph (b)(3) requires employers to train workers who use RDS in the proper rigging and use of the equipment, in accordance with § 1910.27. The final rule eliminates the retraining requirement specified for RDS in proposed paragraph (b)(3) because final paragraph (c) of final § 1910.30

already requires retraining. A number of commenters supported OSHA's RDS training requirements, particularly in the window cleaning industry (Exs. 65; 66; 76; 137; 222; 362; 364). Gerard McEneaney, business representative of the Window Cleaners Division of SEIU Local 32BJ, also supported the RDS training requirements, stating, ''RDS relies heavily on training, workplace practices, and administrative controls to overcome its inherent dangers'' (Ex. 329 (1/19/11, p. 17)). OSHA notes that workers using RDS are exposed to fall hazards and must use personal fall arrest systems; therefore, employers must train them as required by final § 1910.30(a).

Paragraph (b)(4) is a new paragraph that OSHA added to the final rule requiring employers to train each worker who uses a designated area in the proper set up and use of the area. OSHA inadvertently left this training requirement out of the proposed rule. But OSHA intended to include this requirement in the proposed rule, and the preamble noted that ''it is essential for authorized employees in designated areas'' to be trained (75 FR 28889). Under the final rule in some situations OSHA permits employers to protect workers from ''unprotected sides and edges'' on low-slope roofs by using designated areas, which final § 1910.21(b) defines as ''a distinct portion of a walking-working surface delineated by a warning line in which work may be performed without additional fall protection.''

Designated areas are not conventional fall protection systems or engineering controls. Designated areas are alternative fall protection methods that are effective only when set up and used correctly and safely. This alternative method relies heavily on employers properly delineating the designated area and successfully keeping workers within that area. To ensure workers follow the requirements for designated areas, OSHA believes it is important that employers train them so they know when they can use designated areas and how to set up designated areas and work in them safely.

Paragraph (c)—Retraining

Final paragraph (c), like the proposal, requires that employers retrain workers when they have reason to believe that those workers do not have the understanding and skill that final paragraphs (a) and (b) require. In particular, final paragraph (c) requires that employers retrain workers in situations including, but not limited to, the following:

- When workplace changes render previous training obsolete or inadequate (final paragraph (c)(1));
- When changes in the types of fall protection systems or equipment workers use renders previous training obsolete or inadequate (final paragraph (c)(2)); or
- When inadequacies in a worker's knowledge or use of fall protection systems or equipment indicate that the worker does not have the requisite understanding or skill necessary to use the equipment or perform the job safely (final paragraph (c)(3)).

The training requirements in this section impose an ongoing responsibility on employers to maintain worker proficiency. As such, when workers are no longer proficient, the employer must retrain them in the requirements of final paragraphs (a) and (b) before workers perform the job again. Examples of when retraining is necessary include:

- When the worker performs the job or uses equipment in an unsafe manner;
- When the worker or employer receives an evaluation or information that the worker is not performing the job safely; or
- When the worker is involved in an incident or near-miss.

Several commenters supported the proposed retraining requirements. For example, Andrew Horton, representing the SEIU Local 32BJ Window Cleaning Apprentice Training Program, said retraining is ''imperative whenever there are changes in the working conditions, or there is an indication that prior training has not been effective'' (Ex. 329 (1/19/2011, p. 24)).

OSHA received only one comment opposing retraining. Mr. Steve Smith of Verallia said the proposed retraining requirement was ''too subjective and vague to allow for consistent application and/or enforcement.'' He recommended that OSHA require ''training upon initial employment and annually thereafter,'' which OSHA's portable fire extinguisher standard requires (§ 1910.157) (Ex. 171).

OSHA disagrees that the performance-based language in proposed paragraph (c) is too vague and subjective. OSHA believes that final paragraph (c) specifies clearly when retraining is necessary. The language in final paragraph (c) is similar to the retraining provisions in other OSHA standards, including the PPE (§ 1910.132(f)(3)), lockout/tagout (§ 1910.147(c)(7)(iii)), and powered industrial truck standards (§ 1910.178(l)(4)). Those standards have been effective in ensuring that workers receive additional training when necessary. OSHA also believes that the performance-based retraining requirements in final paragraph (c) provide greater flexibility for employers than requiring annual retraining.

OSHA also disagrees with Mr. Smith's recommendation that OSHA limit the final rule to ''training upon initial employment and annually thereafter.'' This language appears to require that employers must train new workers, but would not have to train current employees after OSHA publishes the final rule. As discussed above, OSHA believes that employers need to provide retraining to current workers in accordance with final § 1910.30 when previous training is obsolete or inadequate. Finally, OSHA believes that identifying the specific situations when employers must provide retraining more precisely targets the real need for additional training than does an inflexible requirement such as annual training. Therefore, OSHA believes the final rule will be more effective, and will provide employers with more flexibility, than the alternative Mr. Smith recommends.

Paragraph (d)—Training Must Be Understandable

Final paragraph (d), like the proposed rule, requires that employers provide information and training to each worker in a manner that the employee understands. This language indicates that employers must provide information and instruction in a manner that workers receiving the training are capable of understanding so they will be able to perform the job in a safe and proper manner.

The final rule makes clear that training must account for the specific needs and learning requirements of each worker. For example, if a worker does not speak or adequately comprehend English, the employer must provide training in a language that the worker understands. Also, if a worker cannot read, employers will need to use a format, such as audio-visual, classroom instruction, or a hands-on approach, to ensure the worker understands the training they receive. Similarly, if a worker has a limited vocabulary, the employer must provide training using vocabulary the worker comprehends.

An increasing number of employers are using computer-based and web-based training (Exs. 207; 329 (1/20/2011, p. 191); 368). In such situations, final paragraph (d) requires that employers ensure that workers have adequate computer skills so they can operate the program and understand the information presented. Moreover, to ensure that employees ''understand'' computer-based training, as well as other types of training, OSHA believes it may be necessary for employers to ensure that a qualified person is available to answer questions and clarify information. For example, when employers use computer-based training, they could make a qualified person ''available'' through an interactive computer program (*e.g.,* WebEx), or have a qualified person present to answer questions. (For additional information on making training understandable, see OSHA's Training Standards Policy Statement).[75]

OSHA believes that employers should not have difficulty complying with final paragraph (d), or any other provision in § 1910.30. Many industry, labor, and professional organizations; training consultants; vendors; and manufacturers already provide employers with training and training materials to ensure that workers understand how to perform the job and use equipment correctly and safely (Exs. 329 (1/18/2011, pgs. 82, 117, 186, 258); 329 (1/20/2011, pgs. 182, 287); 329 (1/21/2011, pgs. 9, 92, 200, 206)).

A number of commenters said they already provide bi-lingual or multi-lingual training (Exs. 329 (1/19/2011, pgs. 118, 241, 319, 352, 413, 416, 462)). In addition, training and professional organizations have bi-lingual training materials available. For instance, the International Window Cleaning Association Safety Certification Program provides a bi-lingual study curriculum (Ex. 222).

Many commenters said they already use different formats (*e.g.,* classroom, audiovisual, demonstration, practical exercises, field training, written) and new technology (*e.g.,* interactive computer-based, web-based) to ensure that training is understandable (Ex. 329 (1/18/2011, pgs. 148, 258)). Commenters also said they use testing and training evaluation to ensure employees understand training (Ex. 329 (1/20/2011, p. 318)). Some commenters also supported certification of employee training by independent groups (*e.g.,* professional organizations) (Exs. 205; 222; 364).

Some commenters said they are using ''interactive training'' to make training understandable. For instance, SEIU Local 32BJ said their window cleaner training programs are ''highly interactive'' (Ex. 329 (1/19/2011, pgs. 120–121)), and they support requiring ''interactive'' training. Diane Brown, senior health and safety specialist with AFSCME, agreed, stating, ''Training should be as interactive as possible. We support . . . [adopting] training methods that ensure workers get the information they need'' (Ex. 226). Eric Frumin, health and safety director with Change to Win, stated:

> [I]t's not sufficient for OSHA to simply require employers to provide training in a language that workers understand. . . . It's one of the most important advances in OSHA rulemaking, to assure that the training is not only done in a language the workers understand, but that it's interactive, that workers have a chance to ask questions (Ex. 329 (1/19/2011, p. 119)).

Some commenters said OSHA should require that employers use specific training methods and techniques. For example, SEIU said training should include ''some combination of hands-on and classroom training methods that have been so successful in our training'' (Ex. 329 (1/19/2011, pgs. 25–26)). Ellis Fall Safety Solutions said that training methods must include the following:

> [T]here has to be a written curriculum, a presentation and written or recorded tests [that] see if the material has been picked up and the final thing is to check by observing discretely if the work is being done to the proper methodology that was taught. All these are subject to verification by a CSHO (Ex. 155).

Some commenters said that supervision is necessary to ensure training is successful. For instance, Mr. Frumin said, ''You can't take the chance that someone didn't understand the training. You've got to supervise them,'' (Exs. 329 (1/19/2011, pgs. 122–23); 329 (1/21/2011, p. 21)).

OSHA agrees that many of the training methods and elements the commenters recommend can help to make workplace training understandable, and generally supports their use. The Agency also believes that the final rule should give employers flexibility to develop training programs and use those training methods that best fit the needs of their workers and workplace. Therefore, OSHA finalizes paragraph (d) with only minor revisions for clarity.

OSHA also received comment on other training issues, including whether the final rule should require a minimum amount of time for worker training. Mr. Horton of SEIU Local 32BJ urged that OSHA mandate that training be a ''minimum number of hours to prevent any inadvertent or negligent training failures'' (Ex. 329 (1/19/2011, p. 25)). In contrast, Mr. Robert Miller, senior safety supervisor with Ameren Corporation, said OSHA should not set time requirements for providing training because it would interfere with the performance-based approach in the proposed rule (Ex. 189). Proposed § 1910.30 did not require that training meet a minimum time requirement, and there is no minimum time requirement for training in final § 1910.30. OSHA notes that the preliminary and final economic analysis include times for training, but the Agency notes that it included those times only for the purpose of the estimating the costs of the final rule.

Finally, ASSE suggested that § 1910.30 include a specific reference to the ANSI/ASSE Z490.1 consensus standard (Criteria for Accepted Practices in Safety, Health and Environmental Training) as a source of guidance information for employers (Ex. 127). That voluntary standard establishes criteria for safety, health, and environmental training programs. OSHA agrees that the consensus standard may be a valuable source of information about training programs. However, it does not address walking-working surfaces or fall and equipment hazards and OSHA has decided to not reference the standard in the final rule.

B. Final § 1910.140

OSHA is adding a new section to subpart I Personal Protective Equipment (PPE) (29 CFR 1910, subpart I) to address personal fall protection systems, which include personal fall arrest, travel restraint, and positioning systems (29 CFR 1910.140). The new section establishes requirements for the design, performance, use, and inspection of personal fall protection systems and system components (*e.g.,* body harnesses, lifelines, lanyards, anchorages).

OSHA also is adding two non-mandatory appendices that provide information to help employers select, test, use, maintain, and inspect personal fall protection equipment (Appendix C) and examples of test methods for personal fall arrest and positioning systems to ensure that they meet the requirements of § 1910.140 (appendix D).

In the final rule, OSHA adapts many provisions from its other fall protection standards, primarily Powered Platforms for Building Maintenance (29 CFR 1910.66, appendix C); Personal Fall Arrest Systems in Shipyard Employment (29 CFR 1915.159); Positioning Device Systems in Shipyard Employment (29 CFR 1915.160); and Fall Protection in Construction (29 CFR part 1926, subpart M). These adaptations ensure that OSHA fall protection rules are consistent across various industries. OSHA notes that other standards also require the use of

[75] OSHA's Training Standards Policy Statement is available from OSHA's website at: *https://www.osha.gov/dep/standards-policy-statement-memo-04-28-10.html.*

personal fall protection systems (Vehicle-Mounted Elevating and Rotating Work Platforms (Aerial Lifts) (29 CFR 1910.67(c)(2)(v)); Telecommunications (29 CFR 1910.268(g)); and Electric Power Generation, Transmission, and Distribution (29 CFR 1910.269(g)); however, the requirements and criteria in those standards generally are not comprehensive or broadly applicable.

Similar to the final rule revising 29 CFR part 1910, subpart D, final § 1910.140, when appropriate, also draws from national consensus standards addressing personal fall protection systems. Those standards include:

- ANSI/ALI A14.3–2008, American National Standards for Ladders—Fixed (A14.3–2008) (Ex. 8);
- ANSI/ASSE A10.32–2012, Personal Fall Protection Used in Construction and Demolition Operations (A10.32–2012) (Ex. 390);
- ANSI/ASSE Z359.0–2012, Definitions and Nomenclature Used for Fall Protection and Fall Arrest (Z359.0–2012) (Ex. 389);
- ANSI/ASSE Z359.1–2007, Safety Requirements for Personal Fall Arrest Systems, Subsystems, and Components (Z359.1–2007) (Ex. 37);
- ANSI/ASSE Z359.3–2007, Safety Requirements for Positioning and Travel Restraint Systems (Z359.3–2007) (Ex. 34);
- ANSI/ASSE Z359.4–2013, Safety Requirements for Assisted-Rescue and Self-Rescue Systems (Z359.4–2013) (Ex. 22);
- ANSI/ASSE Z359.12–2009, Connecting Components for Personal Fall Arrest System (Z359.12–2009) (Ex. 375); and
- ANSI/IWCA I–14.1–2001, Window Cleaning Safety (I–14.1–2001) (Ex. 10).

The final rule adopts a number of the provisions in proposed § 1910.140 with only minor, non-substantive technical or editorial changes. For many of these provisions, OSHA did not receive any comments from the public. Other provisions in the final rule include revisions based on information in the record and comments OSHA received. OSHA also revised provisions in the proposed rule to clarify the final rule, thereby making it easier for employers, workers, and others to understand.

Section 1910.140—Personal Fall Protection Systems

Paragraph (a)—Scope and Application

Paragraph (a) of the final rule specifies that employers must ensure each personal fall protection system that part 1910 requires complies with the performance, care, and use criteria specified in § 1910.140. This section defines ''personal fall protection system'' as a system that workers use to provide protection from falling, or safely arrest a fall if one occurs (§ 1910.140(b)). As mentioned earlier, personal fall protection systems include personal fall arrest, travel restraint, and positioning systems.

OSHA notes that not only does § 1910.140 apply to the new and revised requirements in subpart D, but also it applies to existing requirements in part 1910 that mandate or allow employers to protect workers from fall hazards using personal fall protection systems (§§ 1910.66; 1910.67; 1910.268; and 1910.269).

OSHA believes that the scope of final § 1910.140 and the requirements the final rule establishes are necessary. Importantly, OSHA did not receive any comments opposing the scope and application in paragraph (a). OSHA believes that without establishing design and performance criteria, there is risk that personal fall protection systems, particularly personal fall arrest systems, may fail and put workers at risk of harm. Such failure can occur for a number of reasons, including using:

- The wrong or inadequate system (especially one that is not strong enough for the particular application in which it is being used);
- A system not tested or inspected before use;
- A system not rigged properly;
- A system that does not have compatible components; or
- A system on which workers are not properly trained.

For several reasons, OSHA believes that employers should not experience significant difficulty complying with the final rule. Most of the requirements in the final rule come from OSHA's existing fall protection standards, as well as national consensus standards addressing fall protection, which also have been in place for years and represent industry best practices. Accordingly, OSHA believes that virtually all personal fall protection systems manufactured today meet the requirements in those standards as well as final § 1910.140. In addition, to assist employers in complying with the rule, OSHA includes an appendix in the final rule to provide employers with readily accessible information that will help them comply with final § 1910.140.

Paragraph (b)—Definitions

Final paragraph (b) defines terms that are applicable to final § 1910.140. OSHA believes that defining key terms will make the final rule easier to understand and, thereby, will increase compliance.

OSHA drew most of the definitions in paragraph (b) from existing OSHA and national consensus standards on fall protection. For instance, many of the terms in this paragraph also are found in the Powered Platforms standard (§ 1910.66(d) and appendix C); construction standards (§§ 1926.450(b), 1926.500(b) and 1926.1050(b)), and the shipyard employment PPE standard (§ 1915.151). OSHA believes that having consistent definitions across the Agency's standards will increase understanding of OSHA's fall protection rules, decrease the potential for confusion, and enhance worker safety. Having consistent definitions also will help to increase understanding and compliance for workers engaged in more than one type of work, such as general industry and construction activities.

Final paragraph (b) differs from the proposed rule in several respects. First, the final rule does not retain the proposed definitions for the following terms because OSHA does not use these terms in final § 1910.140: ''buckle'' and ''carrier.'' Second, final paragraph (b) adds two new terms to the proposed definitions: ''carabiner'' and ''safety factor.'' Third, the final rule also substantially modifies the definition of ''competent person'' from the proposed rule. OSHA believes that additional revisions, particularly those made in response to commenter suggestions, clarify the meaning of the terms, and ensure that they reflect current industry practice.

OSHA carries forward the following terms and definitions from the proposed rule without change, or with mostly minor editorial and technical changes. In revising final paragraph (b), OSHA used plain and performance-based language. The Agency believes these types of revisions make the terms and definitions easy for employers and workers to understand. OSHA believes many of the remaining definitions are ''terms of art'' universally recognized by those who use personal fall protection systems. Even so, OSHA still received comments on a number of the definitions, as discussed below.

Anchorage. The final rule, like the proposal, defines ''anchorage'' as a secure point of attachment for equipment such as lifelines, lanyards, or deceleration devices. The definition in the final rule is consistent with the one in OSHA's Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66, appendix C, Section I(b); 1915.151(b); 1926.500(b)) as well as the definition in

A10.32–2012 (Section 2.4) and Z359.0 (Section 2.5).

OSHA notes that the anchorage definition in the Powered Platforms standard requires that the anchorage must be ''independent of the means of supporting or suspending the employee.'' The final rule also includes this requirement in § 1910.140(c)(12), discussed below. OSHA did not receive any comments on the proposed definition.

Belt terminal. As defined in the final rule, this term means an end attachment of a window cleaner's positioning system used to secure the body harness or belt to the window cleaner's belt anchor. The term is specific to fall protection for window cleaning operations.

Neither existing OSHA fall protection standards nor I–14.1–2001 define the term. Although OSHA believes the meaning of ''belt terminal'' is clear, the Agency is including the definition in the final rule to clarify the system or criteria of requirements for window cleaner's positioning systems (see discussion of § 1910.140(e)). OSHA did not receive any comments or opposition to including the definition, and adopts the definition as proposed.

Body belt. The final rule defines ''body belt'' as a strap with means both for securing it about the waist and for attaching it to other components such as a lanyard used with positioning, travel restraint, or ladder safety systems. The definition of ''body belt'' in final rule generally is consistent with OSHA's Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66, appendix C, Section I(b); 1915.151(b); 1926.500(b)). However, those definitions do not specify with which systems employers may use body belts. The final rule clarifies that employers may use body belts only with positioning, travel restraint, and ladder safety systems, and the final rule adds language specifying that employers cannot use body belts with personal fall arrest systems (see discussion in § 1910.140(d)(3)). Including this language makes the final definition consistent with the definition in A10.32. That standard defines ''body belt,'' which it also refers to as a safety or waist belt, as ''support which is used for positioning, restraint or ladder climbing only'' (A10.32–2012, Section 2.8).

The Z359.0 standard uses the term ''body support'' instead of body belt, and defines it as ''an assembly of webbing arranged to support the human body for fall protection purposes, including during and after fall arrest'' (Section 2.17). A note to the definition explains that body support generally refers to a harness (full body, chest, chest-waist) or body belt. OSHA did not receive any comments on the definition and adopts the definition as proposed.

Body harness. The final rule defines ''body harness'' as straps that secure about a worker in a manner that distributes fall arrest forces over at least the worker's thighs, pelvis, waist, chest, and shoulders should a fall occur. The final rule specifies that a body harness also is a means for attaching it to other components of a personal fall protection system.

The final rule is nearly identical to the definition of ''body harness'' in OSHA's Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66, appendix C, Section I(b); 1915.151(b); 1926.500(b)), as well as the definition of ''body support'' in A10.32 (Section 2.9). The Z359.0 standard includes definitions of various types of body harnesses, including chest harnesses, chest-waist harnesses, evacuation harnesses, full-body harnesses, and positioning harnesses. The definition in the final rule is consistent with the ''full body harness'' definition in Z359.0 (Section 2.83).

In the proposal, OSHA requested comment on whether the Agency should define other types of harnesses in the final rule, specifically those harnesses that do not have a waist strap or component (75 FR 28903). ISEA (Ex. 185) and CSG (Ex. 198) both said that ISEA-member companies reported that it was more common for body harnesses not to have waist straps. They said this type of harness distributes fall arrest forces over the entire torso and has assemblies that prevent the shoulder straps from separating to the extent that the worker could fall out of the harness. OSHA concludes that this type of harness meets the definition of ''body harness,'' and it is not necessary to revise the term. However, in the final rule, OSHA did not include the other specific types of body harnesses (*e.g.,* chest-waist, chest) listed in Z359.0. The other types of harnesses do not spread fall arrest forces across a broad area of the body, and the final rule does not permit their use.

With one exception, the definition in the final rule also is consistent with I–14.1–2001. The definition of ''body harness'' in I–14.1–2001 permits the distribution of fall arrest forces over ''any combination'' of the thighs, pelvis, waist, chest, and shoulders, rather than across all of those parts of the worker's body combined (Section 2). The final rule, by contrast, does not incorporate the ''any combination'' language in I–14.1. OSHA believes that adopting the language from I–14.1–2001 would allow employers to use harnesses that concentrate fall arrest forces in a small anatomical area, rather than across the entire torso and thighs. The dangers of concentrating fall arrest forces in a limited anatomical area (*e.g.,* waist and chest only) are well documented. In the proposed rule, OSHA discussed research of Dr. Maurice Amphoux, *et al.* conducted on the use of thoracic harnesses for personal fall arrest. Their study concluded that such harnesses are not suitable for personal fall arrest because the forces transmitted to the body during post-fall suspension constricted the rib cage and could cause asphyxiation (75 FR 28903). The proposed rule also identified an increased danger of falling out of chest-waist harnesses. Therefore, OSHA believes that the definition of ''body harness'' in the final rule is more protective than the one in I–14.1–2001.

Carabiner. The final rule defines carabiner as a connector comprised generally of a trapezoidal or oval-shaped body with a closed gate or similar arrangement that may be opened to attach another object. When released, the carabiner gate automatically closes to retain the object. There are generally three types of carabiners:

- Automatic locking, with a self-closing and self-locking gate that remains closed and locked until intentionally unlocked and opened for connection or disconnection;
- Manual locking, with a self-closing gate that must be manually locked by the user and that remains closed and locked until intentionally unlocked and opened by the user for connection or disconnection; and
- Non-locking, with a self-closing gate cannot be locked.

Commenters recommended that OSHA apply to carabiners the same criteria applicable to snaphooks (Exs. 185; 198). For example, the International Safety Equipment Association (ISEA) said that applying the snaphook performance criteria to carabiners would ensure that the final rule specifically covers the two most common types of connectors (Ex. 185). OSHA agrees, and added a definition of carabiner to the final rule that is almost identical to the one in Z359.0–2012 (Section 2.20) and A10.32–2012 (Section 2.12). Those definitions note that there are three types of carabiners: Automatic locking (*i.e.,* self-closing and self-locking), manual locking, and non-locking. The final rule, like Z359.0 and A10.32, only allows the use of automatic-locking carabiners and snaphooks.

Competent person. In the final rule, OSHA defines a ''competent person'' as a person who:

- Is capable of identifying existing and predictable hazards in any personal fall protection system or component as well as in their application and uses with related equipment; and
- Has the authorization to take prompt corrective measures to eliminate the identified hazards.

The definition in the final rule differs from the proposed definition in two ways. First, the final rule requires that the competent person be capable of identifying both ''existing and predictable hazards,'' while the proposal specified that the competent person identify existing ''hazardous or dangerous conditions.'' Second, the final rule adds language specifying that competent persons must have authority to take prompt, corrective actions to eliminate the hazards that they identified. These changes expand the definition of competent person and make the final rule consistent with the definition applicable to OSHA's construction standards (§ 1926.32), as well as the definition in Z359.0–2012 (Section 2.30) and A10.32–2012 (Section 2.16).

Under the final rule employers must ensure that the worker(s) they select to be the competent person(s) have the capability and competence to identify existing hazards and predictable hazards (*i.e.,* hazards likely to occur when using personal fall protection systems, components, and related equipment). Competent persons working with personal fall protection systems in construction already must be able to identify both existing and predictable hazards. OSHA believes that requiring the same of competent persons in general industry establishments that also perform construction activities should not pose a problem, especially since they may be the same person.

OSHA added the language requiring that competent persons have authority to take prompt corrective action in response to the large number of commenters who urged OSHA to adopt that language from OSHA's construction standards (§ 1926.32), Z359.0, and A10.32. OSHA did not include the language in the proposed rule because the Agency believed that competent persons dealing with personal fall protection systems in general industry were likely to serve a different function than competent persons in the construction industry (75 FR 28904). In the preamble to the proposed rule, OSHA said that the competent person in general industry most likely would be an outside contractor who specializes in fall protection systems, designs fall protection systems, and/or provides fall protection training. OSHA said it would be unlikely that employers would grant an outside contractor authority over work operations. In addition, OSHA said it did not believe the definition of competent person in § 1926.32 was widely recognized and accepted in general industry. Thus, in the proposed rule OSHA used the definition of competent person from appendix C of § 1910.66.

By contrast, when OSHA promulgated the construction fall protection standards, the Agency applied the definition of ''competent person'' in § 1926.32 because the Agency found that the construction industry widely recognized the term, which OSHA adopted in 1971 pursuant to Section 6(a) of the OSH Act (29 U.S.C. 655(a)). However, commenters on the proposed rule said that the construction industry definition is as widely known, accepted, and used in general industry as it is in the construction industry (Exs. 74; 122). They urged OSHA to incorporate the construction industry definition of competent person in § 1910.140.

Many commenters who disagreed with the proposed definition said that it is essential that the competent person have authority to take prompt corrective action when they find hazards (Exs. 69; 74; 185; 190; 198; 226). They argued that the duty of the competent person is to ensure that personal fall protection systems, components, and related equipment are safe, and they cannot carry out that duty without having the ability to take corrective action to keep the system working properly and the workplace safe. In addition, they said that employers, workers, fall protection equipment suppliers, and national consensus standards all operate with the expectation that a competent person will have authority to take action when needed to correct problems. The American Foundry Society, for instance, pointed out:

> Without any such authority, a competent person under this definition will be put in the position of being able to recognize the hazard, but likely not be able [to] do anything about it. That is not a truly competent person and does not reflect the needed level of competence to help ensure worker safety (Ex. 190).

Similarly, ISEA said that OSHA's proposed definition amounted to a subject matter expert rather than a competent person. They asserted that the rule must define a competent person as one who is on site; has authority to shut down work operations if there are imminent hazards; and take PPE, including personal fall protection systems, out of service if needed (Ex. 185).

The American Federation of State, County and Municipal Employees (AFSCME) (Ex. 226) also supported giving the competent person authority to take prompt, corrective action. AFSCME said that many employers may seek outside assistance in assessing the risks and types of fall protection systems, but that no outside party should be an employer's competent person:

> It is more likely that an internal supervisor would be given the responsibility for ensuring the employer's fall protection systems are in place, equipment is inspected, and that employees are trained and using equipment properly. This person or persons should be competent in the meaning of the standard, and should have the authority to correct hazards when found (Ex. 226).

ISEA made a similar point, saying that it was in the best interest of worker protection to have an on-site accountable decision maker because the competent person would be able to examine the personal fall protection systems, components, and related equipment and know firsthand the risks involved. Armed with that knowledge, ISEA said an on-site competent person would be less likely to take risks with workers' lives. ISEA said that manufacturers and other knowledgeable sources who are not on-site will not have the knowledge to make service-life decisions about fall arrest equipment. Capital Safety Group (CSG) (Ex. 198) agreed, saying that on-site, accountable decision makers who are fully aware of the risks associated with fall protection equipment are less likely to put workers' lives in jeopardy. Access Rescue (Ex. 69) and Extreme Access, Inc. (Ex. 74), expressed similar concerns.

OSHA agrees with commenters that, to ensure workers have safe personal fall protection systems, components, and related equipment the competent person must have authority to take necessary corrective action when they identify hazards. In addition, adding the language to the final rule will make the definition consistent with the widely known term in OSHA's construction standard and national consensus standards, which should increase employer compliance.

OSHA also agrees with commenters that, to carry out their role, competent persons should be on-site. With appropriate training and experience, OSHA believes that a worker at the worksite can function as the competent person.

Connector. The final rule, like the proposal, defines ''connector'' as a device used to couple or connect together parts of a personal fall protection system. Examples of connectors include snaphooks, carabiners, buckles, and D-rings.

The definition in the final rule is derived from OSHA's Powered Platforms, construction, and shipyard employment fall protection standards, as well as Z359.0–2012 (Section 2.36) and A10.32–2012 (Section 2.18). The definition of ''connector'' in those standards includes information explaining that connectors may be independent components of a personal fall protection system or integral parts sewn into the system. Since the final rule permits employers to use connectors that are either independent or integral components of a personal fall protection system, OSHA does not believe it is necessary to include the explanatory material in the final definition of ''connector.'' OSHA did not receive any comments and adopts the definition as proposed.

D-ring, as used in the final rule, is a connector used in:

- Harnesses, as an integral attachment element or fall arrest attachment;
- Lanyards, energy absorbers, lifelines, or anchorage connectors as an integral connector; or
- A positioning or travel restraint system as an attachment element.

''Integral'' means the D-ring cannot be removed (*e.g.,* sewn into the harness) from the body harness without using a special tool. The final rule is consistent with A10.32–2012, which defines ''integral'' to mean ''[n]ot removable from the component, subsystem or system without destroying or mutilating any element or without use of a special tool'' (Section 2.30).

Although OSHA's existing fall protection standards do not define ''D-ring,'' the final rule is consistent with Z359.0–2012 (Section 2.41). The A10.32–2012 standard does not explicitly define ''D-ring,'' but the definition of ''connector'' includes D-ring as an example of an integral component of a body harness. The definition also says a D-ring is a connector sewn into a body harness or body belt (Section 2.18). OSHA did not receive any comments on the proposed definition and has adopts the definition with minor editorial revisions.

Deceleration device, like in the proposed rule, is defined as any mechanism that serves to dissipate energy during a fall. The final rule is similar to the definition in OSHA's Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66, appendix C, Section I(b); 1915.151(b); 1926.500(b)), and almost identical to the definition in A10.32–2012 (Section 2.19). The definition in those standards also provides examples of deceleration devices that employers may use to dissipate energy during a fall, including rope grabs, rip-stitch lanyards, specially woven lanyards, tearing or deforming lanyards, and automatic self-retracting lifelines or lanyards.

Although the Z359.0 standard does not define ''deceleration device,'' it includes definitions for ''energy (shock) absorber,'' ''fall arrester,'' and ''self-retracting lanyard'' (Sections 2.46, 2.60, 2.159). In the Powered Platforms and construction fall protection rulemakings, commenters recommended replacing ''deceleration device'' with those terms. OSHA also received similar recommendations in this rulemaking (Exs. 121; 185; 198). For instance, ISEA (Ex.185) and CSG (Ex. 198) recommended defining ''fall arrester'' and ''energy absorber'' because they said ''deceleration device'' is not a commonly used term. Clear Channel Outdoor, Inc. (Ex. 121), also supported replacing ''deceleration device'' with the terms in Z359.0 ''to increase consistency.'' By contrast, Ameren said ''deceleration device'' was ''standard verbiage'' in OSHA fall protection standards, and removing the term was not necessary ''[a]s long as there is no confusion with the terms'' (Ex.189).

OSHA agrees with Ameren that using the term ''deceleration device'' makes the final rule consistent with OSHA's other fall protection standards and would eliminate, rather than generate, confusion. In the preamble to the final construction fall protection standard, OSHA explained why the Agency was not adding definitions for ''fall arrester'' and ''energy absorber,'' stating:

> It was suggested that [deceleration device] be eliminated and replaced with three terms, ''fall arrester,'' ''energy absorber,'' and ''self-retracting lifeline/lanyard'' because the examples listed by OSHA in its proposed definition of deceleration device serve varying combinations of the function of these three suggested components. In particular, it was pointed out that a rope grab may or may not serve to dissipate a substantial amount of energy in and of itself. The distinction that the commenter was making was that some components of the system were ''fall arresters'' (purpose to stop a fall), others were ''energy absorbers'' (purpose to brake a fall more comfortably), and others were ''self-retracting lifeline/lanyards'' (purpose to take slack out of the lifeline or lanyard to minimize free fall). OSHA notes, however, that it is difficult to clearly separate all components into these three suggested categories since fall arrest (stopping) and energy absorption (braking) are closely related. In addition, many self-retracting lifeline/lanyards serve all three functions very well (a condition which the commenter labels as a ''subsystem'' or ''hybrid component''). OSHA believes that the only practical way to accomplish what is suggested would be to have test methods and criteria for each of the three component functions. However, at this time, there are no national consensus standards or other accepted criteria for any of the three which OSHA could propose to adopt.
>
> In addition, OSHA's approach in the final standard is to address personal fall arrest equipment on a system basis. Therefore, OSHA does not have separate requirements for ''fall arresters,'' ''energy absorbers,'' and ''self-retracting lifeline/lanyards'' because it is the performance of the complete system, as assembled, which is regulated by the OSHA standard. OSHA's final standard does not preclude the voluntary standards writing bodies from developing design standards for all of the various components and is supportive of this undertaking (59 FR 40672 (8/9/1994) (citing 54 FR 31408, 31446 (7/28/1989))).

OSHA believes the preamble discussion in the earlier rulemakings holds true today and supports only including the definition of ''deceleration device'' in the final rule. Accordingly, the final rule adopts the definition of ''deceleration device'' specified in the proposal.

Deceleration distance. The final rule, like the proposal, defines ''deceleration distance'' as the vertical distance a falling worker travels before stopping, that is, the distance from the point at which the deceleration device begins to operate to the stopping point, excluding lifeline elongation and free fall distance. The final rule also states that ''deceleration distance'' is the distance between the location of a worker's body harness attachment point at the moment of activation of the deceleration device during a fall (*i.e.,* at the onset of fall arrest forces), and the location of that attachment point after the worker comes to a full stop.

The definition in the final rule is almost identical to the definition in OSHA's Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66, appendix C, Section I(b); 1915.151(b); 1926.500(b)), but does not reference body belts because the final rule prohibits the use of body belts in personal fall arrest systems. The final rule also is consistent with A10.32–2012 (Section 2.20) and with the definition and explanatory note in Z359.0–2012 (Section 2.40). OSHA did not receive any comments on the proposed definition of ''deceleration device'' and adopts the proposed definition.

Equivalent. The final rule defines ''equivalent'' as alternative designs, equipment, materials, or methods that the employer can demonstrate will provide an equal or greater degree of safety for workers compared to the designs, equipment, materials, or methods the final rule specifies. The definition in the final rule is essentially the same as the definition in OSHA's Powered Platforms, shipyard employment, and construction fall protection standards (§§ 1910.66(d) and appendix C, Section I(b); 1915.151(b); 1926.500(b)). A crucial element of the definition is that the employer has the burden to demonstrate that the alternative means are at least as protective as the designs, materials, or methods the standard requires.

Verallia (Ex. 171) commented that the proposed definition was ''too subjective and vague to allow for consistent application and/or enforcement.'' Verallia also said the proposal outlined the skill set necessary to be a ''qualified'' person, and that it should be sufficient if a qualified person selects the alternative designs, equipment, materials, or methods. OSHA disagrees with Verallia's characterization of the proposed definition. Since 1974, OSHA used the same definition of ''equivalent'' in various standards (*e.g.,* §§ 1910.21(g)(6); 1926.450(b)). Over this period, the Agency experienced no problems achieving consistent application of the definition, and employers did not report that the term is too vague. To the contrary, OSHA believes that employers support the definition of ''equivalent'' because it gives them flexibility in complying with the final rule, provided that they can show that their selected methods, materials, or designs provide equal or greater level of safety for workers. Accordingly, the final rule adopts the proposed definition with only minor changes for clarity.

Free fall, like in the proposed rule, is defined as the act of falling before the personal fall arrest system begins to apply force to arrest the fall. The final definition is almost the same as the definition in OSHA's Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66, appendix C, Section I(b); 1915.151(b); 1926.500(b)). It also is identical to the definition in Z359.0–2012 (Section 2.73), and is consistent with the definition in A10.32–2012 (Section 2.26). OSHA did not receive any comments on the proposed definition and finalizes it as proposed.

Free fall distance means the vertical displacement of the fall arrest attachment point on the worker's body harness between the onset of the fall and just before the system begins to apply force to arrest the fall. The distance excludes deceleration distance, lifeline and lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before the devices operate and fall arrest forces occur.

The definition in the final rule is essentially the same as the definition in OSHA's Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66 appendix C, Section I(b); 1915.151(b); 1926.500(b)). In addition, the final rule is consistent with the definition in Z359.0–2012 (Section 2.74) and A10.32–2012 (Section 2.27). OSHA did not receive any comments on the proposed definition.

Lanyard, like in the proposed rule, is defined as a flexible line of rope, wire rope, or strap that generally has a connector at each end to connect a body harness or body belt to a deceleration device, lifeline, or anchorage. The definition in the final rule is almost identical to the Powered Platforms standard (§ 1910.66(b) and appendix C, Section I(b)), and consistent with the definition in OSHA's construction and shipyard employment fall protection standards (§§ 1915.151(b) and 1926.500(b)). The definition in the final rule also is consistent with Z359.0–2012 (Section 2.94) and A10.32–2012 (Section 2.31), although the definition in A10.32 does not include body belts. OSHA did not receive any comments on the proposed definition, and adopts the definition as proposed.

Lifeline. The final rule, like the proposal, defines ''lifeline'' as a component of a personal fall protection system that connects other components of the system to the anchorage. A lifeline consists of a flexible line that either connects to an anchorage at one end to hang vertically (a vertical lifeline), or connects to anchorages at both ends to stretch horizontally (a horizontal lifeline).

The final rule is consistent with the definition of lifeline in Z359.0–2012 (Section 2.96) and A10.32–2012 (Section 2.33), however, it differs slightly from OSHA's Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66(b) and appendix C, Section I(b); 1915.151(b); 1926.500(b)). OSHA's existing standards only apply to personal fall arrest systems, and define ''lifeline'' as a component of such a system. The final definition specifies that a lifeline is a component of a personal fall protection system, which includes fall arrest, positioning, and travel restraint systems. The final definition also includes some minor editorial revisions. OSHA did not receive any comments on the proposed definition and adopts the definition as discussed.

Personal fall arrest system, like the proposed rule, is defined as a system used to arrest a worker's fall from a walking-working surface. As the final rule specifies, a personal fall arrest system consists of a body harness, anchorage, and connector. The means of connecting the body harness and anchorage may be a lanyard, deceleration device, lifeline, or suitable combination of these means. In the final rule, OSHA fully details what the components of personal fall arrest systems include, specifically, the various means of connecting body harnesses and anchorages (*i.e.,* lanyards, deceleration devices, lifelines, or a suitable combination of these means). OSHA believes that fully clarifying the components will help employers and workers better understand the personal fall arrest system requirements in the final rule.

The definition in the final rule is consistent with OSHA's Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66(b) and appendix C, Section I(b); 1915.151(b); 1926.500(b)). Those OSHA standards, however, specify that a fall arrest system may consist of either a body harness or a body belt. Since the time OSHA promulgated those standards, the Agency phased out the use of body belts in personal fall arrest systems due to safety concerns. Effective January 1, 1998, OSHA banned the use of body belts as part of personal fall arrest systems in the construction and shipyard employment standards (§§ 1926.502(d); 1915.159), and this final rule also prohibits their use in personal fall arrest systems.

The final rule is consistent with Z359.0–2012 (Section 2.115) and A10.32–2012 (Section 2.38). The consensus standards, like the final rule and OSHA's existing standards, require the use of body harnesses in personal fall arrest systems, and prohibit body belts.

Personal fall protection system, as defined in the final rule, means a system (including all components) that employers use to provide protection for employees from falling or to safely arrest a fall if one occurs. The final definition identifies examples of personal fall protection systems, including personal fall arrest systems, positioning systems, and travel restraint systems. Neither existing OSHA fall protection standards nor national consensus standards define personal fall protection system.

Some commenters (Exs. 155; 185; 198) said that OSHA should not use ''personal fall protection system'' because employers could interpret the term to include passive devices such as guardrails. They suggested using only the term ''personal fall arrest system.'' In addition, Ellis Fall Safety Solutions (Ellis) (Ex. 155) recommended that the term ''personal fall protection system'' only include systems that use body harnesses; in other words, limited to personal fall arrest systems.

OSHA does not believe that employers will mistake the term ''personal fall protection system'' to include passive fall protection devices such as guardrails and safety nets. The Z359.0–2012 standard includes two types of fall protection systems: Active and passive. Z359.0 defines ''active fall protection system'' as a fall protection system that requires workers ''to wear or use fall protection equipment'' (Section 2.2), and lists fall restraint, fall arrest, travel restriction, and administrative controls as examples. The Z359.0 standard, however, defines ''passive fall protection system'' as one ''that does not require the wearing or use of fall protection equipment,'' such as safety nets and guardrail systems (Section 2.113). Like the distinction that the Z359.0 standard draws between active and passive fall protection systems, OSHA believes that using the term ''personal fall protection system'' establishes the same type of distinction. That is, a personal fall protection system is one that employers must ensure that workers actively use to protect them, while a passive fall protection system, such as a guardrail, is one that does not require any action by workers to be safe, so long as employers maintain the system properly. OSHA believes this distinction is helpful, and that the regulated community recognizes and understands the distinction. Therefore, the term is carried forward in the final rule.

OSHA revised the final definition to expressly clarify the Agency's intent in the proposed rule that personal fall protection systems include all components of those systems.

Positioning system (*work-positioning system*). The final rule, like the proposal, defines ''positioning system'' as a system of equipment and connectors that, when used with a body harness or body belt, allows an employee to be supported on an elevated vertical surface, such as a wall or window sill, and work with both hands free. Positioning systems also are called ''positioning system devices'' and ''work-positioning equipment.''

The definition in the final rule is essentially the same as the definition in OSHA's construction and shipyard employment fall protection standards (§§ 1915.151(b), 1926.500(b)). The final rule also is similar to A10.32–2012 (Section 2.39, 2.40) and Z359.0–2012 (Section 2.120). Weatherguard Service, Inc. (Ex. 168) supported the proposed definition.

A note to the definition in Z359.0 explains that ''a positioning system used alone does not constitute fall protection,'' and that a separate system that provides backup protection from a fall is necessary (Section E2.120). Ellis (Ex. 155), who also commented on OSHA's positioning system requirements, supported adding such a requirement to the final rule. OSHA did not incorporate this recommendation (see discussion in final paragraph (e) (positioning systems)). OSHA adopts the proposed definition with minor editorial changes.

Qualified, like in the proposed rule, describes a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training,[76] and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, work, or project. This definition is identical to the one in final § 1910.21(b). The final definition is almost identical to the definition applicable to OSHA's construction standards (§ 1926.32(m)), and similar to the definition in the shipyard employment fall protection standard (§ 1915.151(b)). In addition, the definition in the final rule is consistent with the definition used in A10.32–2012 (Section 2.41).

The final rule, however, differs from the definition in the Powered Platforms standard (§ 1910.66, appendix C, Section I(b)) and Z359.0–2012. Those standards require that qualified persons have a degree, certification, or professional standing, *and* extensive knowledge, training and experience. OSHA explained in the proposed rule that to require qualified persons to meet the definition in the Powered Platforms standard would mean that the qualified person ''would most likely need to be an engineer'' (75 FR 28905).

Several commenters opposed the proposed definition of ''qualified'' and supported the definition of qualified in § 1910.66 and Z359.0 (Exs. 155; 193; 367). They also recommended revising the definition to specifically require that only engineers could serve as qualified persons. For example, Ellis said:

> In America, anchorages are mostly guesswork and this does not do justice to ''the personal fall arrest system'' term that OSHA is seeking to establish unless the engineering background is added. Furthermore the design of anchorages can easily be incorporated into architects and engineers drawings but is presently not because there is no requirement for an engineer. This simple change may result in saving over one half the lives lost from falls in the USA in my opinion (Ex. 155).

Penta Engineering Group added:

> OSHA proposes to require that horizontal lifelines be designed, installed and used under the supervision of a qualified person and that they be part of a complete fall arrest system that maintains a factor of safety of two. To allow a person without an engineering degree and professional registration would not only be dangerous but would be contradictory to every current requirement for other building systems as required by the building codes. Further, in this specific instance, the design of a horizontal lifeline presents specific engineering challenges that should not be performed by anyone without the professional standing and experience to do so (Ex. 193).

Thomas Kramer of LJB, Inc., agreed, stating:

> We take exception with the change from ''AND'' to ''OR.'' A person with a structural engineering degree does not necessarily know the full requirements (clearances, proper PPE selection, use and rescue procedures, etc.) of a personal fall arrest system. That knowledge can be obtained only through special training or experience in the subject matter. Vice versa, someone with knowledge of the system requirements may not know how to properly design an anchorage support and can only gain this knowledge through a professional degree. As stated in our previous comments, many building codes only allow a professional engineer to design and stamp a building design or changes to the loading of a structure. The explanation to make 1910 consistent with the existing construction and shipyard employment standard is not a good enough reason in our opinion. OSHA states that personal fall protection systems will ''in some cases, [may] involve their design and use.'' By using the word ''OR,'' the proposed regulation eliminates the need for an engineer's involvement. The ANSI/ASSE Z359.0–2007 standard uses ''AND''. These consensus standards are developed with a considerable level of thought and consideration and were recently vetted by the industry, so we suggest OSHA reconsider this change (Ex. 367).

OSHA did not adopt the commenters' recommendations for several reasons. First, as discussed in the proposed rule, OSHA based the definition of ''qualified'' on the definitions in its construction and shipyard employment fall protection standards (§§ 1915.151(b); 1926.500(b)). For years, those definitions have been effective because they specify that employers must ensure the design, installation, and

[76] ''Training'' may include informal, or on-the-job, training.

use of components of personal fall protection systems (such as lifelines) protect workers from falls. Adopting the same definition as OSHA's other fall protection standards and final § 1910.21(b) also ensures consistency, which OSHA believes will increase both employer understanding and compliance with the requirement.

Second, the Agency believes the performance-based definition in the final rule gives employers flexibility in selecting a qualified person who will be effective in performing the required functions. The performance-based definition also allows employers to select the qualified person who will be the best fit for the particular job and work conditions. Employers are free to use qualified persons who have professional credentials and extensive knowledge, training, and experience, and OSHA believes many employers already do so.

Finally, the workers the employer designates or selects as qualified persons, the most important aspect of their qualifications is that they must have ''demonstrated ability'' to solve or resolve problems relating to the subject matter, work, and project. Having both professional credentials and knowledge, training, and experience will not protect workers effectively if the person has not demonstrated capability to perform the required functions and solve or resolve the problems in question.

When the person the employer designates as a qualified person has demonstrated the ability to solve or resolve problems, which may include performing various complex calculations to ensure systems and components meet required criteria, the qualifications of that person are adequate. OSHA also notes that an employer may need to select different qualified persons for different projects, subject matter, or work to ensure the person's professional credentials or training, experience, and knowledge are sufficient to solve or resolve the problems associated with the subject matter, work, or project. For example, the employer may determine that an engineer is needed for a particular project, and the final rule provides the employer with that flexibility. Accordingly, OSHA adopts the definition of qualified as proposed.

OSHA disagrees with Ellis' assertion that architects and engineers are not designing anchorages into drawings because, according to Ellis, § 1910.140 does not require qualified persons to be engineers. OSHA believes that building owners and others work with engineers and architects in the planning stage to design anchorage points into buildings and structures so that the anchorages will effectively support personal fall protection systems used to perform work on the building. OSHA also believes that the number of building owners consulting engineers about the design of anchorages will increase under the final rule. Section 1910.27 of the final rule requires that, when employers use rope descent systems (RDS), building owners must provide information to employers and contractors ensuring that a qualified person certify building anchorages as being capable of supporting at least 5,000 pounds (29 CFR 1910.27(b)(1)). OSHA believes that building owners will likely consult and work with engineers to ensure that all building anchorages, including anchorages that support RDS and personal fall protection systems, meet the requirements in § 1910.27. Thus, OSHA does not believe it is necessary to limit the definition of ''qualified'' person to engineers to ensure that building owners include building anchors in building design plans.

Rope grab, like the proposed rule, is defined as a deceleration device that travels on a lifeline and automatically, using friction, engages the lifeline and locks to arrest a worker's fall. A rope grab usually employs the principle of inertial locking, cam or lever locking, or both.

The final rule is essentially the same as the definition in OSHA's Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66, appendix C, Section I(b); 1915.151(b); 1926.500(b)). The A10.32 and Z359.0–2012 standards do not define ''rope grab,'' but the definition of ''fall arrester'' in Z359.0 (Section 2.60) is similar to the definition in this final rule. In addition, the explanatory note to the ''fall arrester'' definition identifies a ''rope grab'' as an example of a fall arrester. The A10.32–2012 standard requires rope grabs to automatically lock (Section 5.4.3). OSHA did not receive any comments on the proposed definition of ''rope grab,'' and the final rule adopts it as proposed.

Safety factor. The final rule adds a definition for safety factor, also called a factor of safety. OSHA defines safety factor as the ratio of the design load and ultimate strength of the material. Generally, the term refers to the structural capacity of a member, material, equipment, or system beyond actual or reasonably anticipated loads; that is, how much stronger the member, material, equipment, or system is than it usually needs to be to support the intended load without breaking or failing. A safety factor is an additional or extra margin of safety that provides assurance the system or equipment is able to support the intended load (*e.g.,* a safety factor of two).

The new definition is the same as the one proposed in subpart D and is consistent with the one in § 1926.32(n). OSHA believes that adding this term will increase employer understanding and compliance with the requirements in this section.

Self-retracting lifeline/lanyard (SRL) is also a type of deceleration device. The final rule, like the proposal, defines an SRL as containing a drum-wound line that a worker can slowly extract from, or retract onto, a drum under slight tension during normal movement. At the onset of a fall, the device automatically locks the drum and arrests the fall.

The definition in the final rule is consistent with OSHA's Powered Platforms and construction fall protection standards (§§ 1910.66, appendix C, Section I(b); 1926.500(b)) and with Z359.0–2012 (Section 2.159) and A10.32–2012 (Section 2.46). There were no comments on the proposed definition, and the final rule adopts it as proposed.

Snaphook. The final rule, like the proposal, defines ''snaphook'' as a connector comprised of a hook-shaped body with a normally closed gate, or a similar arrangement, that the user may open manually to permit the hook to receive an object. When the user releases a snaphook, it automatically closes to retain the object. Opening a snaphook requires two separate actions, meaning the user must squeeze the lever on the back before engaging the front gate.

The final definition, like the proposal, identifies two general types of snaphooks—an *automatic-locking* type (also called self-locking or double locking), which the final rule permits employers to use, and a *non-locking* type, which the final rule prohibits. An automatic-locking type snaphook has a self-closing and self-locking gate that remains closed and locked until intentionally unlocked and opened for connection or disconnection. By contrast, a non-locking type has a self-closing gate that remains closed, but not locked until the user intentionally opens it for connection or disconnection (see discussion of § 1910.140(c)(9)).

The definition in the final rule is the same as the definition in OSHA's Powered Platforms and construction fall protection standards (§§ 1910.66, appendix C, Section I(b); 1926.500(b)). It also is consistent with Z359.0–2012 (Section 2.168) and A10.32–2012 (Sections 2.50, 2.50.1, 2.50.2). OSHA received two comments on the snaphook definition, from CSG (Ex. 198) and ISEA (Ex. 185), both of which supported the proposed definition. OSHA adopts the definition as proposed.

Travel restraint (tether) line is a component of a travel restraint system. Specifically, the final rule, like the proposal, defines it as a rope or wire rope used to transfer forces from a body support to an anchorage or anchorage connector in a travel restraint system. The purpose of a travel restraint (tether) line is to secure workers in such a way as to prevent them from reaching an unprotected edge and falling off the elevated surface on which they are working.

The definition in the final rule is the same as the definition in OSHA's shipyard employment fall protection standard (§ 1915.151(b)). The definition in § 1915.151(b) notes that manufacturers do not necessarily design travel restraint lines to withstand forces resulting from a fall. OSHA did not receive any comments on the proposed definition, and the final rule adopts the definition as proposed.

Travel restraint system is a type of personal fall protection system that consists of a combination of an anchorage, anchorage connector, lanyard (or other means of connection), and body support that an employer uses to eliminate the possibility of a worker going over the edge of a walking-working surface. The final rule revises the proposed definition in two ways. First, the final rule defines ''travel restraint system'' to specify that it is a system a worker uses to eliminate the possibility of falling from the unprotected edge of an elevated walking-working surface. The proposed definition said the purpose of travel restraint systems was to ''limit travel to prevent exposure to a fall hazard.'' OSHA believes the final definition more clearly explains the ultimate purpose of travel restraint systems than the proposed definition.

Second, the final definition deletes the second sentence of the proposed definition, which stated that a travel restraint system ''is used such that it does not support any portion of the worker's weight; otherwise the system would be a positioning system or personal fall arrest system.'' OSHA believes the revised language in the final definition is sufficient to convey this requirement. In addition, OSHA addresses this issue in the discussion of § 1910.140(c)(14) below.

The definition in the final rule is consistent with the definition in Z359.0–2012 (Section 2.204) and A10.32–2012 (Sections 2.53). The definition in A10.32 stresses that the purpose of a travel restraint system is to limit travel in such a manner that the user is not exposed to a fall hazard. OSHA did not receive comments on the proposed definition and finalizes the definition as discussed.

Window cleaner's belt, as defined in the final rule, is a component of a window cleaner's positioning system. It is a positioning belt that consists of a waist belt, an integral terminal runner or strap, and belt terminals.

The final rule revises the proposed definition to explicitly clarify that a window cleaner's belt is a component of a window cleaner's positioning system, and thus is designed to support the window cleaner on an elevated vertical surface. OSHA notes that a window cleaner's belt differs from a window cleaner's tool belt, which holds the window cleaner's tools and materials used for performing the job. Employers use the tool belt mainly for convenience of the window cleaner and not as safety equipment. The only commenter on the proposed definition, Weatherguard (Ex. 168), supported the proposed definition. Accordingly, the final rule adopts the definition with the revision discussed above.

Window cleaner's belt anchor (window anchor), as defined in the final rule, is a specifically designed fall-preventing attachment point permanently affixed to a window frame or a part of a building immediately adjacent to the window frame, for direct attachment of the terminal portion of a window cleaner's belt. Workers attach the terminals of the window cleaner's belt to the window anchors to prevent falling while cleaning windows.

OSHA based the final definition on the one in I–14.1–2001 (Section 2). OSHA's existing fall protection standards do not specifically address window cleaning operations, and do not define terms related to those operations. Weatherguard (Ex. 168), the only commenter, supported including the definition in the final rule. The final rule adopts the definition as proposed.

Window cleaner's positioning system, as defined in the final rule, is a system that consists of a window cleaner's belt secured to window anchors. The definition is similar to the general definition of positioning system in the final rule. Weatherguard (Ex. 168), the only commenter, supported the proposed definition and the definition is adopted as proposed.

Paragraph (c)—General Requirements

Paragraph (c) of the final rule specifies the general requirements employers must ensure that each personal fall protection system meets. The general requirements in paragraph (c) are criteria for the common components of personal fall protection systems, such as connectors, anchorages, lanyards and body harnesses. Paragraphs (d) and (e) contain additional requirements for personal fall arrest systems and positioning systems, respectively.

The provisions in final paragraph (c) are drawn from or based on requirements in OSHA's personal fall protection standards, including Powered Platforms (§ 1910.66, appendix C), construction (§ 1926.502), and shipyard employment (§ 1915.160). They also are drawn from national consensus standards addressing fall protection, including Z359.1–2007, Z359.3–2007, A10.32–2012, and I–14.1–2001.

Paragraph (c)(1) of the final rule requires that employers ensure connectors used in personal fall protection systems are made of drop-forged, pressed or formed steel, or equivalent material. Final paragraph (c)(2) requires connectors to have corrosion-resistant finishes, as well as smooth surfaces and edges to prevent damage to interfacing parts of the personal fall protection system.

The requirements in paragraphs (c)(1) and (2) will ensure that connectors retain the necessary strength characteristics for the life of the fall protection system under expected conditions of use, and that the surfaces and edges do not cause damage to the belts or lanyards attached to them. Employers must not allow workers to use personal fall protection equipment if wear and tear reaches the point where equipment performance might be compromised. For example, corroded or rough surfaces can cause wear and tear on connectors and other components of personal fall protection system, which may reduce their strength.

Final paragraphs (c)(1) and (2) are consistent with OSHA's other fall protection standards, including Powered Platforms (§ 1910.66, appendix C, section I, paragraphs (c)(1) and (c)(2)); construction (§ 1926.502(d)(1), (d)(3), and (e)(4)); and shipyard employment (§ 1915.159(a)(1) and (2)). The Z359.1–2007 standard also contains similar requirements. There were no comments on the proposed provisions and OSHA adopts them without substantive change.

When employers use vertical lifelines, paragraph (c)(3) of the final rule requires that employers ensure each worker is attached to a separate lifeline. OSHA believes that allowing more than one worker on the same vertical lifeline would create additional hazards. For example, if one worker falls, another attached worker might be pulled off balance and also fall. The final rule is consistent with OSHA's other fall protection standards (§§ 1910.66, appendix C, section I, paragraphs (c)(3) and (e)(5); 1926.502(d)(10); 1915.159(b)(1)). There were no comments on the proposed provision and it is adopted with only minor editorial changes.

Paragraphs (c)(4) and (5) of the final rule set minimum strength requirements for lanyards and lifelines used with personal fall protection systems. Paragraph (c)(4) requires that employers ensure lanyards and vertical lifelines have a minimum breaking strength of 5,000 pounds. Breaking strength refers to the point at which a lanyard or vertical lifeline will break because of the stress placed on it.

The final rule requires the same strength requirements for vertical lifelines and lanyards as OSHA's other fall protection standards (§§ 1910.66, appendix C, section I, paragraphs (c)(4); 1926.502(d)(9); 1915.159(b)(3)). The strength requirement also is the same as Z359.1–2007. OSHA believes the strength requirements in all of these standards provide an adequate level of safety. (OSHA notes that the final rule also requires that travel restraint (tether) lines be capable of supporting a minimum tensile load of 5,000 pounds (see discussion of paragraph (c)(14)).

The lanyards and vertical lifelines requirement in paragraph (c)(4) also includes self-retracting lifelines/lanyards (SRL) that allow free falls of more than 2 feet, as well as ripstitch, tearing and deforming lanyards. The proposed rule addressed those lifelines and lanyards in paragraph (c)(6); however, that paragraph duplicated paragraph (c)(4), and OSHA removed it from the final rule. Proposed paragraph (c)(4) also included a note, which OSHA re-designated as paragraph (c)(6) of the final rule (see discussion of § 1910.140(c)(6)).

Paragraph (c)(5) of the final rule, like the proposed rule, provides an exception to the 5,000-pound strength requirement for SRL that automatically limit free fall distance to 2 feet or less. The final provision allows a lower strength requirement because the fall arrest forces are less when free falls are limited to 2 feet. These lifelines and lanyards must have components capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position. Tensile load means a force that attempts to pull apart or stretch an object, while tensile strength means the ability of an object or material to resist forces that attempt to pull apart or stretch the object or material.

Final paragraph (c)(5) is the same as OSHA's other fall protection standards (§§ 1910.66, appendix C, section I, paragraphs (c)(5); 1926.502(d)(13); 1915.159(b)(4)) and Z359.1–2007 (Section 3.2.8.7) and A10.32–2012 (Section 5.3.1). OSHA received comments on the proposed strength requirements in paragraphs (c)(4) and (5). As far back as the 1990 proposal, one commenter said that the strength requirements for lanyards and vertical lifelines were too high and would be difficult to maintain (75 FR 28907). OSHA acknowledged in the proposed rule that wear and deterioration to personal fall protection systems inevitably would occur from normal use of lanyards and lifelines, and that ultraviolet radiation, water, and dirt also can reduce the strength of lanyards and lifelines.

That said, OSHA believes that employers are able to purchase and maintain personal fall protection system and components that consistently meet the strength requirements in the final rule. These strength requirements have been in place for many years, and virtually all personal fall protection systems manufactured in or for use in the United States meet the requirements in paragraphs (c)(4) and (5). Since 1990, OSHA has not received any information indicating that the strength requirements should not be maintained. However, to ensure that lifelines and lanyards continue to comply with the requirements in paragraph (c)(5), paragraph (c)(18) of the final rule requires that employers inspect personal fall protection systems before each use and immediately remove worn or deteriorated systems and components from service. In addition, § 1910.132(a) requires that employers maintain personal protective equipment in reliable condition.

ISEA and CSG commented on the orientation of SRL with regard to lanyard and lifeline strength requirements. ISEA said:

> [T]he horizontal or vertical orientation of a [self-retracting lanyard] is important because SRL used in a generally horizontal orientation rather than overhead may be subject to higher loadings and greater exposure to sharp or abrasive surfaces. Because the devices are typically anchored at waist height or below, free fall potential is greater (Ex. 185).

CSG agreed, adding that the higher loading of SRL used in horizontal positions reinforced the need for additional training considerations for horizontally oriented SRL (Ex. 198). Both CSG and ISEA added that manufacturers generally include extra provisions for absorbing energy and protecting the lifeline from damage from building edges if the SRL will be used in a horizontal position. OSHA agrees that employers and competent persons should consider the horizontal or vertical orientation of a SRL in selecting and inspecting personal fall protection systems and training workers (§ 1910.30). OSHA notes that appendix C to § 1910.140 addresses the commenters' points so employers will be aware of the issue. OSHA also notes that paragraph (c)(11) of the final rule sets specific requirements when using horizontal lifelines. Neither commenter suggested that OSHA change the language of paragraph (c)(4) or (5). Accordingly, OSHA believes it is not necessary to revise either paragraph in the final rule.

Proposed paragraph (c)(6) also included a provision to establish strength requirements for SRL that do *not* limit free fall distance to not more than 2 feet, as well as for ripstitch, tearing, and deforming lanyards. OSHA proposed to require those types of lanyards and lifelines also be capable of sustaining minimum tensile loads of 5,000 pounds applied to the device when the lifeline or lanyard is in a fully extended position. The proposed provision was identical to requirements in OSHA's Powered Platforms (§ 1910.66, appendix C, Section I, paragraph (c)(5)), shipyard employment (§ 1915.159(b)(4)), and construction (§ 1926.502(d)(13)) fall protection standards. However, Z359.1–2007 and A10.32–2012 do not have a separate provision addressing self-retracting lifelines/lanyards that do not limit free fall distances.

OSHA requested comment on whether proposed paragraph (c)(6) was necessary, or whether paragraph (c)(4) of the final rule adequately addressed the issue (75 FR 28907). The Society of Professional Rope Access Technicians (SPRAT) said it would be acceptable to adopt either proposed provisions (c)(4) through (6) or the requirements in Z359.1 (Ex. 205). However, ISEA and CSG said proposed paragraph (c)(6) was not necessary, and, if OSHA retained the provision in the final rule, the Agency should remove SRL from it (Exs. 185; 198). OSHA believes that paragraph (c)(4) adequately addresses the issue of SRL that do not limit the free fall to a maximum of 2 feet plus ripstitch, tearing, and deforming lanyards; therefore, proposed paragraph (c)(6) is not necessary. Accordingly, OSHA deleted proposed paragraph (c)(6) from the final rule.

In final paragraph (c)(6), OSHA replaces proposed paragraph (c)(6) with the requirement that a competent or qualified person must inspect each knot in lanyards and vertical lifelines, before a worker uses the lanyard or lifeline, to ensure that they still meet the minimum strength requirements in paragraphs (c)(4) and (5). This new requirement is based on the note OSHA included in proposed paragraph (c)(4) warning employers that the use of knots ''may significantly reduce the breaking strength'' of lanyards and vertical lifelines. The debate about whether knots should be permitted in lanyards and lifelines has been ongoing for at least 20 years. Although the proposal did not ban the use of knots, the Agency considered it, noting that Z359.1–2007 prohibits them: ''No knots shall be tied in lanyards, lifelines, or anchorage connectors. Sliding-hitch knots shall not be used in lieu of fall arresters'' (Section 7.2.1). The A10.32–2012 standard also prohibits the use of knots in lifelines, lanyards or other direct-impact components and also prohibits knots used for load-bearing end terminations (Sections 4.5.4 and 5.5.1.3).

As far back as the 1990 proposal, OSHA received comments supporting and opposing the use of knots. In the preamble to that proposed rule, OSHA said available information indicated that knots could be used safely in some circumstances, and that employers should be allowed the flexibility to use them as long as they verify that the strength requirements of the rule continue to be met. OSHA also noted that strength reduction can be a concern because the use of knots in lanyards and vertical lifelines can reduce breaking strength (75 FR 28907).

In this proposed rule, OSHA invited comment on whether the Agency should allow or prohibit the use of knots, or require a competent person to inspect all knots (75 FR 28907). Several commenters said OSHA should prohibit knots in personal fall arrest systems, noting they generally are no longer used in modern fall arrest applications (Exs. 185; 198; 251). Other commenters, including Martin's Window Cleaning Corp. (Martin's) (Ex. 222) and SPRAT (Ex. 205), opposed a prohibition on the use of knots. Martin's said, ''A properly tied knot is much stronger than a swedge or splice,'' which the proposed rule did not prohibit (Ex. 222). SPRAT said appropriately tied knots were useful at the end and throughout rope spans, and cited Cordage Institute data indicating knots commonly used in life-safety systems had an efficiency range of 75–90 percent (Ex. 205). SPRAT also said their employers require that competent persons inspect all knots tied in industrial rope access systems. They added that the rule must require that workers be trained in uses, limitations, and proper inspection techniques of knots and hitches.

At the hearing on the proposed rule, the American Wind Energy Association (AWEA) also opposed banning the use of knots. Grayling Vander Velde, an AWEA member, said, ''Knots are widely used in industrial rope access for competent persons trained and certified in their proper use and limitations,'' and ''line failure due to installation of knots has not shown to be the cause of mainline or backup line failures'' (Ex. 329 (1/21/2011, pgs. 19–20)). He stated that ropes used for fall arrest must meet the 5,000-pound minimum strength requirement in the final rule. Also, he noted that SPRAT's training covers the issue of possible strength reduction in knotted lanyards.

After considering the record as a whole, OSHA continues to believe that knots can be used safely in certain situations, and that the worker making the knot must be adequately trained to know the strength of the rope being used and take into consideration any strength reduction that may occur if a knot is used. As the commenters pointed out, any rope that has a knot must still meet the strength requirements in final paragraphs (c)(4) and (5) to ensure that workers have an appropriate level of safety (Ex. 205). To ensure that lanyards and vertical lifelines that have knots are safe, OSHA added a new requirement in paragraph (c)(6) of the final rule specifying that a competent or a qualified person must inspect each knot to ensure that it meets the minimum strength requirements before any worker uses the lanyard or lifeline. OSHA believes the additional requirement will preserve employer flexibility while providing an adequate level of safety.

Paragraphs (c)(7) through (10) of the final rule establish criteria for D-rings, snaphooks, and carabiners, which are devices used to connect or couple together components of personal fall protection systems. OSHA added ''carabiners'' to these final paragraphs because they are a type of connector commonly used in currently-manufactured personal fall protection systems. Paragraph (c)(7) of the final rule requires that D-rings, snaphooks, and carabiners be capable of sustaining a minimum tensile load of 5,000 pounds. OSHA believes these devices, like lanyards and vertical lifelines, must be able to sustain 5,000-pound loads to ensure worker safety. If the connectors cannot sustain the minimum tensile load, it makes no difference what strength requirements the other components of the system can meet because the system may still fail.

Final paragraph (c)(7) is the same as the strength requirements in OSHA's other fall protection standards (§§ 1910.66, appendix C, Section I, paragraph (d)(6); 1915.159(a)(3); 1926.502(d)(3)). OSHA did not receive any comments on the proposed provision and is adopting it as discussed.

Paragraph (c)(8) of the final rule requires that D-rings, snaphooks, and carabiners be proof tested to a minimum tensile load of 3,600 pounds without cracking, breaking, or incurring permanent deformation. OSHA also added a new requirement to final paragraph (c)(8) specifying that the gate strength of snaphooks and carabiners also must be proof tested to 3,600 pounds in all directions. Since proof testing has been the industry standard since 2007 (Z359.1–2007, Section 3.2.1.7), OSHA believes that connectors of this type already in use meet the requirements of paragraph (c)(8) and no grandfathering is necessary.

The 3,600-pound strength requirement ensures that D-rings, snaphooks, and carabiners meet a safety factor of at least two when used with body harnesses. This strength requirement will, in turn, limit maximum fall arrest forces to 1,800 pounds. Final paragraph (c)(8) is similar to requirements in OSHA's Powered Platform, construction, and shipyard employment fall protection standards (§§ 1910.66, appendix C, Section 1, paragraph (c)(7); 1915.159(a)(4); 1926.502(d)(4)), but those standards do not require proof testing gate strength. The Z359.12–2009 standard is the same as proposed paragraph (c)(8).

A number of commenters supported the proposed requirement (Exs. 155; 185; 198). Several commenters also recommended that OSHA include two additions to the proposed requirement: (1) Proof testing the gate strength of carabiners and snaphooks; and (2) proof testing the gate strength in all directions (Exs. 155; 185; 198). ISEA and CSG said that past interpretations of snaphook strength requirements led to confusion, and that including a gate strength requirement would help to clarify this issue (Exs. 185; 198).

Ellis said adding a requirement that the gate strength of snaphooks and carabiners also be proof tested to 3,600 pounds would make paragraph (c)(8) consistent with the Z359.12–2009 standard, and be more protective than the A10.32–2004 standard, which prescribes a lower gate strength (Ex. 155). Ellis noted that including the recommended additions also would help employers ''avoid incidents from bent hook gates to loose gate fly-by to jamming open scenarios that have plagued the industry for decades when the strength is 220 lbs/350 lbs as in the A10.32–2004'' (Ex. 155). OSHA agrees that the addition will provide greater protection for workers.

Ellis also recommended that OSHA require proof testing snaphook and carabiner gate strength ''in all directions'' (Ex. 155). The purpose of proof testing gate strength in all directions is to ensure that no matter in which direction the pressure is applied, the connector gate will not fail. Such proof testing will provide greater protection for workers, therefore, OSHA added the requirement to proof test the gate strength of snaphooks and carabiners in all directions. Since this testing has been industry practice for several years (see Z359.1–2007, Section 3.2.1.7), OSHA does not believe that employers will have difficulty complying with the new requirement in paragraph (c)(8).

Paragraph (c)(9) of the final rule requires employers to use automatic locking snaphooks and carabiners in personal fall protection systems. Automatic locking snaphooks and carabiners require at least two separate, consecutive actions to open, which reduce the danger of ''rollout'' (*i.e.,* inadvertent opening and disconnecting of components). Non-locking snaphooks are prohibited in a personal fall protection system.

Final paragraph (c)(9) is consistent with OSHA's shipyard employment and construction fall protection standards (§§ 1915.159(a)(5); 1926.502(d)(5)). In addition, Z359.12–2009 (Section 3.1.1.3) and A10.32–2012 (Sections 2.12 and 2.50.1) both require the use of locking snaphooks and carabiners for personal fall protection systems.

In the proposed rule, OSHA explained that as far back as the 1990 proposed rule, commenters expressed widespread support for prohibiting non-locking snaphooks (75 FR 28908). In OSHA's rulemaking on fall protection in the construction industry, several commenters said the rule should mandate the use of locking snaphooks, citing the rollout problems experienced with non-locking (single-action) snaphooks (59 FR 40672, 40705 (8/9/1994)). Those commenters also provided information indicating that locking snaphooks are superior to non-locking snaphooks in minimizing rollout. Based on that and other information in that rulemaking record, OSHA determined that it was necessary to require the use of locking snaphooks in personal fall protection systems used in the construction industry, finding that ''in general, locking snaphooks provide a higher level of protection to workers than the single-action (non-locking) type of snaphooks'' (59 FR 40705).

Likewise, OSHA has determined that locking snaphooks and carabiners are necessary to protect employees in general industry. In the proposed rule, OSHA asked for comment on whether the requirement should be phased in, but received no comment on the issue. OSHA does not believe it is necessary to provide a phase-in period, because the construction rule has been in place since 1998. Accordingly, OSHA believes that manufacturers currently are making personal fall protection systems available with automatic locking snaphooks and carabiners, and most employers already are using snaphooks and carabiners that comply with the final rule.

Paragraph (c)(10) of the final rule prohibits employers from using snaphooks or carabiners for certain connections unless they are designed for that connection. Accordingly, the final rule specifies that employers may connect snaphooks or carabiners to the following objects *only* if the snaphooks and carabiners are designed to be connected:

- Directly to webbing, rope, or wire rope;
- To each other;
- To a D-ring to which another snaphook, carabiner, or connector is attached;
- To a horizontal lifeline; or
- To any object that is incompatibly shaped or dimensioned in relation to the snaphook or carabiner such that unintentional disengagement could occur when the connected object depresses the snaphook or carabiner gate and allows the components to separate.

Final paragraph (c)(10) is the same as OSHA's construction and shipyard employment fall protection standards (§§ 1915.159 (a)(6); 1926.502(d)(6)). The Powered Platforms standard addresses the connection compatibility issue a little differently than this final rule, requiring that snaphooks ''be sized to be compatible with the member to which they are connected so as to prevent unintentional disengagement'' of the snaphook (§ 1910.66, appendix C, Section I, paragraph (d)(8)). Similarly, the Z359.1–2007 standard requires: ''Snaphooks and carabiners shall be compatibly matched to their associated connectors to reduce the possibility of rollout . . . Snaphooks and carabiners shall not be connected to each other'' (Section 7.2.2.). Explanatory notes accompanying this provision state that multiple connections (*e.g.,* two snaphooks, snaphook and webbing) into a single ring are not recommended (Section E7.2.2).

OSHA believes that the final rule will help to reduce the potential of rollout. Certain connections, such as ones that are incompatibly sized or dimensioned, increase the likelihood of rollout, and OSHA believes the provision is needed to provide adequate assurance of worker safety. Accordingly, OSHA adopts the proposed provision, with the addition of ''carabiners,'' a commonly used connector.

In paragraph (c)(11) of the final rule, like the proposal, OSHA establishes two requirements for horizontal lifelines. The provision specifies that employers must ensure horizontal lifelines are: (1) Designed, installed, and used under the supervision of a qualified person (paragraph (c)(11)(i)); and (2) are part of a complete personal fall arrest system that maintains a safety factor of at least two (paragraph (c)(11)(ii)).

Paragraph (c)(11) is the same as OSHA's Powered Platforms (§ 1910.66, appendix C, Section I(c)(9)) and construction fall protection standards (§ 1926.502(d)(8)). In addition, A10.32–2012 contains similar requirements (Section 4.4). Although Z359.1–2007 does not address horizontal lifelines specifically, it provides: ''A PFAS [personal fall arrest system] which incorporates a horizontal lifeline (outside the scope of this standard) shall be evaluated in accordance with acceptable engineering practice to determine that such system will perform as intended'' (Section 3.1.4).

OSHA believes the requirements in paragraph (c)(11) are necessary because horizontal lifelines present unique safety issues. For example, horizontal lifelines may be subject to greater impact loads than the loads imposed by other attached components. Horizontal lifelines also result in potentially greater fall distances than some other fall protection devices. Even a few additional feet of free fall can increase fall arrest forces significantly, possibly to the point of exceeding the strength of the system. In addition, forces applied in a perpendicular direction to a horizontal lifeline create much larger forces at the anchorages. The potential for increased fall arrest forces and impact loads associated with horizontal lifelines explains the need for employers to ensure that personal fall arrest systems used with horizontal lifelines maintain a safety factor of at least two. (See discussion of horizontal lifelines in appendix C to § 1910.140, section (j).)

OSHA received one comment on the proposed provision. Ellis said OSHA should require that horizontal lifelines be positioned overhead when the personal fall arrest system is made ready for use because of increased forces when the line is at waist level. He added, ''Due to stretch the fall factor increases fall distance when the line is below shoulder height'' (Ex. 155). OSHA recognizes that using horizontal lifelines at waist level may be unavoidable in some circumstances. Requiring that a qualified persons design, install, and supervise the use of horizontal lifelines with personal fall arrest systems helps to ensure that issues such as the positioning of horizontal lifelines will be properly considered and resolved before the personal fall arrest system is used.

Paragraph (c)(12) of the final rule, like the proposed rule, requires that employers ensure anchorages used to attach to personal fall protection equipment are independent of any anchorage used to suspend workers or work platforms. This requirement ensures that if the anchorage holding other equipment (such as a powered platform or RDS) fails, the worker will still be protected by the separate, independent anchorage to which the personal fall protection system is secured. The purpose of the requirement, which the shipyard employment and construction fall protection standards also require (§§ 1915.159(a)(8); 1926.502(d)(15)), is to ensure that anchorages used to suspend workers or work platforms are not the anchorages that workers use for their personal fall protection system.

The Industrial Truck Association (ITA) said the provision was not a workable requirement for mobile work platforms such as those on powered industrial trucks:

> On powered industrial trucks that have elevating platforms, such as high-lift order pickers, the anchorage for the lanyard that comprises part of the personal fall protection equipment is necessarily a part of the overhead guard or some other structural member that elevates with the operator platform and through the same mechanism (the lift chains) as the platform. This is inherent in mobile equipment, which cannot depend on some separate fixed anchorage point for the personal fall protection equipment. The concern is that the anchorage used for attaching the personal protective equipment, since it moves up and down with the operator platform, could be considered not ''independent'' of the anchorage being used to support the platform. Since OSHA obviously did not intend by the proposed revision to eliminate the use of high-lift order pickers or other powered industrial truck platforms, it appears that 1910.140(c)(12) requires a clarification for mobile equipment (Ex. 145).

OSHA agrees with the issue the commenter raised and exempts mobile work platforms on powered industrial trucks from the requirement in final paragraph (c)(12) that anchorages be independent. Therefore, OSHA has added language to the final rule to address anchorages used to attach to personal fall protection equipment on mobile work platforms on powered industrial trucks. The new language specifies that those anchorages must be attached to an overhead member of the platform, at a point located above and near the center of the platform. OSHA modeled this language on the anchorage requirements in the national consensus standard on powered industrial trucks (ANSI/ITSDF B56.1–2012, Safety Standard For Low Lift and High Lift Trucks (Ex. 384; Section 7.37)).

Paragraph (c)(13) of the final rule adopts strength requirements for anchorages for personal fall protection systems, and includes a performance-based alternative. The final provision, like the proposal, requires that anchorages either (1) be capable of supporting at least 5,000 pounds for each worker attached, or (2) be designed, installed, and used under the supervision of a qualified person as part of a complete personal fall protection system that maintains a safety factor of at least two. The anchorage strength requirement applies to personal fall arrest, travel restraint, and positioning system anchorages, but not to window cleaner's belt anchors, which are addressed separately in paragraph (e).

Paragraph (c)(13) is the same as the personal fall protection system anchorage requirement in OSHA's Powered Platforms, shipyard employment and construction fall protection standards (§§ 1910.66, appendix C, Section (c)(10); 1915.159(a)(9); 1926.502(d)(15)). The A10.32–2012 standard also contains similar requirements (Section 5.1.1). Although the anchorage requirements in Z359.1–2007 and I–14.1–2001 are similar to the final rule, they differ to some extent. For example, the Z359.1 standard requires:

> Anchorages selected for [personal fall arrest systems] shall have a strength capable of sustaining static loads, applied in the directions permitted by the PFAS, of at least: (a) Two times the maximum arrest force permitted on the system, or (b) 5,000 pounds (22.2kN) in the absence of certification. When more than one PFAS is attached to an anchorage, the anchorage strengths set forth in (a) and (b) above shall be multiplied by the number of personal fall arrest systems attached to the anchorage (Section 7.2.3).

The I–14.1 standard requires that all components of personal fall arrest systems, including anchorages, comply with the Z359.1 standard, with some exceptions, such as window cleaner's belts (Section 9.2.2(a)).

OSHA did not receive any comments opposing proposed paragraph (c)(13), and Ameren specifically supported the performance language alternative: ''Ameren agrees with this language so as to allow use to determine suitable anchorage points because of capacity and not be restricted due to other designations of the equipment'' (Ex. 189).

As discussed above, OSHA believes that all of the strength requirements in the final rule are necessary to provide a reasonable margin of safety for workers. At the same time, the final rule gives employers flexibility in meeting the anchorage strength requirement in specific circumstances. The final rule does not require a 5,000-pound anchorage point in every situation. An employer may use an anchorage that meets a different strength, provided that (1) the anchorage is part of a complete fall protection system, (2) the personal fall protection system maintains a safety factor of at least two, and (3) the anchorage is designed, installed, and used under the supervision of a qualified person.

The Agency anticipates that even employers who cannot achieve 5,000-pound anchorage strength should have no difficulty meeting the alternative 2:1 safety factor. For example, I–14.1–2001 requires that anchorages for positioning systems be capable of supporting 3,000 pounds or at least twice the potential impact load of a worker's fall, whichever is greater (Section 9.2.3(b)). The I–14.1 requirement has been in place for more than 10 years, and employers are familiar with the standard.

Ellis recommended that OSHA require employers using the alternate anchorage strength procedures in (c)(13) to document the anchorage ''with at least a sketch or engineering drawing'' because ''anchorages are mostly guesswork'' (Ex. 155). OSHA believes that the requirement in paragraph (c)(13), that qualified persons design, install, and supervise the use and maintenance of anchorages, is sufficient, and will be more effective in protecting workers than documentation by a person who may not have the qualifications of a qualified person. Qualified persons, as paragraph (b) specifies, must possess the type of qualifications (*i.e.,* recognized degree, certificate, or professional standing or extensive knowledge, training, and experience) that makes them capable of designing anchorages that successfully meet the requirements of the final rule. Or, the qualified person must have demonstrated ability to solve and resolve the issues relating to the subject matter, work, or work project. Final paragraph (c)(13) requires that the qualified person supervise the use of the anchorages, which will ensure the qualified person oversees maintenance of the anchorages so they remain in safe and useable condition. OSHA believes this supervision will go further in providing worker protection than anchorage sketches or drawings.

OSHA notes that an employer may use more than one qualified person to comply with the final rule. For example, some employers may choose to have an outside qualified person design the anchorages to meet the requirements of the final rule and an in-house, on-site qualified person to supervise their installation and use.

Paragraph (c)(14) of the final rule, like the proposed rule, requires that restraint lines in travel restraint systems be capable of sustaining a tensile load of at least 5,000 pounds. OSHA's existing fall protection standards do not include any requirements that specifically address travel restraint systems or lines. The requirement is drawn from two national consensus standards: (1) The A10.32–2012 standard specifies that component parts of travel restraint systems be designed and manufactured to meet the standard's requirements for personal fall arrest systems (Section 4.6.1); and (2) the Z359.3–2007 standard requires that positioning and travel restraint lanyards be capable of sustaining a minimum breaking strength of 5,000 pounds (Section 3.4.8).

OSHA believes the strength requirement for travel restraint lines in final paragraph (c)(14) is necessary for several reasons. First, the requirement ensures that the restraint line provides adequate protection if a restraint line is ever used as a lifeline. For example, if a travel restraint system is not rigged properly or is inadvertently used with a personal fall arrest system, and the worker falls off the walking-working surface, the restraint line essentially becomes a lifeline. Because of this possibility, OSHA believes it is necessary that travel restraint lines have the same 5,000-pound minimum breaking strength required of personal fall protection system lifelines and lanyards (see paragraph (c)(4)).

Second, according to CSG (Ex. 329 (1/18/2011, p. 110)) and Mine Safety Appliances (MSA) (Ex. 329 (1/18/2011, p. 199)) travel restraint systems (including lines and lanyards) currently are designed and manufactured to support a 5,000 pound load. Further, MSA said they were not aware of any company that still manufacturers travel restraint lines that support only 3,000 pounds.

Finally, setting the strength requirement at 5,000 pounds for travel restraint lines makes the provision consistent with other strength requirements in § 1910.140 for components of personal fall protection systems (*e.g.,* D-rings, snaphooks, carabiners, anchorages (paragraphs (c)(7) and (13))). OSHA adopts the provision as discussed.

Paragraph (c)(15) of the final rule requires that employers ensure lifelines are not made of natural fiber rope. Natural fiber rope of the same size is weaker than its synthetic counterpart and may burn under friction. When the employer uses polypropylene rope, the final rule requires that it must contain an ultraviolet (UV) light inhibitor. Final paragraph (c)(15) is consistent with OSHA's Powered Platforms, shipyard employment, and construction fall protection standards (§§ 1910.66, appendix C, Section (c)(11); 1915.159(c)(2); 1926.502(d)(14)). Those standards specify that ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses be made from synthetic fibers or, with the exception of the construction standard, wire rope; however, those standards do not require that lifelines made of polypropylene rope contain a UV light inhibitor.

The final rule provision also is consistent with Z359.1–2007 and with A10.32–2012, which provide useful guidance to help employers meet the requirement in final paragraph (c)(15). For example, the Z359.1 standard provides: ''Rope and webbing used in the construction of lanyards shall be made from synthetic materials of continuous filament yarns made from light and heat resistant fibers having strength, aging, and abrasion resistant characteristics equivalent or superior to polyamides'' (Section 3.2.3.1). The A10.32 standard specifies, ''Harnesses, lanyards, lifelines and other load-bearing devices shall not be made of natural fibers (including, but not limited to, cotton, manila and leather)'' (Section 4.5.5). The I–14.1–2001 standard requires that all personal fall arrest systems used in window cleaning operations comply with Z359.1, and prohibits ropes made entirely of polypropylene (Sections 6.8, 9.2.2(a)). In addition, the standard requires that all rope and webbing used in suspending RDS seat boards be made of synthetic fiber, preferably nylon or polyester (Section 14.3(d)).

Like the Z359.1 standard, OSHA recognizes that degradation due to exposure to ultraviolet light can be a serious problem, especially for polypropylene rope. However, OSHA believes that polypropylene rope has certain advantages compared to other synthetic materials. Polypropylene rope is strong and flexible, and may be less costly than rope made of other materials. Moreover, many newer polypropylene ropes are made with UV light inhibitors, so employers can use polypropylene rope without the risk of degradation from UV light. The Agency believes the final rule provides adequate protection for workers while embracing technological advances that give employers greater flexibility in complying with paragraph (c)(15). Additionally, OSHA removed ''carriers'' from the final provision. Carriers are used exclusively in ladder safety systems, which are covered in § 1910.23, and not in personal fall protection systems. OSHA did not receive any comments on the proposed provision, and adopts it as discussed.

Paragraph (c)(16) of the final rule, like the proposed rule, requires that all personal fall protection systems and components be used only for worker fall protection. Paragraph (c)(16) also prohibits personal fall protection systems from being used for any other purpose, such as hoisting materials or equipment. The final rule applies to all personal fall protection systems, including personal fall arrest systems, positioning devices and travel restraint systems and components such as anchorages, harnesses, connectors, and lifelines.

The final rule is similar to OSHA's Powered Platforms, shipyard employment and, construction fall protection standards (§§ 1910.66, appendix C, Section I, paragraph (c)(6); 1915.159(c)(9); 1926.502(d)(18)).

OSHA received one comment on the proposed requirement. Although Verallia ''agree[d] with OSHA's goal of using . . . personal fall protection equipment only for its intended purpose,'' they said:

> [A]nchorage points—while clearly performing a function related to the use of personal fall protection—fall outside the intended goal of preserving intact the equipment itself. In other words, anchorage points are designed for and have many uses outside of fall protection in industrial settings. Their occasional use for tasks other than personal fall protection is consistent with their design (Ex. 171).

OSHA agrees anchorages have uses other than for personal fall protection. Anchors are used for suspended work platforms, rope descent systems, and other equipment. For example, using a structural beam as an anchorage does not mean the structural beam can never be used as a structural member. OSHA intends this provision to apply to those components that would typically be found in a personal fall protection kit, *i.e.,* a body harness, lanyards, and connectors. Structural members used as anchorage points will obviously continue to be structural members and do not fall under this provision. However, for example, if a worker is using appropriate webbing tied around a structural member as an anchor point for personal fall protection, that webbing must be used only for personal fall protection, both at that time, and in the future. The webbing (and harness, lanyard, and connectors) must not be used for any other purpose at any other time, such as hoisting materials and equipment.

Paragraph (c)(17) of the final rule, like the proposed rule, requires that any personal fall protection system or its component subjected to impact loading must be removed from service immediately. This requirement applies to impact loading due to a free fall, but not to impact loading during static load testing. The final rule also specifies that the employer must not use the system or component again until a competent person inspects the system or component and determines that it is not damaged and is safe to use for worker personal fall protection.

The final rule is the same as the Powered Platforms, shipyard employment and construction fall protection standards (§§ 1910.66, appendix C, Section I, paragraph (e)(7); 1915.159(c)(6); 1926.502(d)(19)). The Z359.1–2007 (Section 5.3.4) and A10.32–2012 (Section 3.4) standards also require that impact loaded systems and components be removed from service; however, neither standard specifies requirements that allow or prohibit reuse of such equipment.

OSHA believes that paragraph (c)(17) will ensure that employers implement procedures for inspection and evaluation of impact-loaded personal fall protection systems and components to prevent reuse of damaged equipment. OSHA believes that the requirements in paragraph (c)(17), as well as the other requirements in the final rule, provide sufficient safeguards to allow the reuse of impact-loaded personal fall protection systems after the competent person inspects and repairs or replaces the damaged components.

The final rule provides the following safeguards to ensure the dangers of impact-loaded personal fall protection systems are addressed properly before reuse:

- Paragraph (c)(18) of the final rule, discussed below, requires that employers ensure personal fall protection systems are inspected for damage before each use, and remove defective components from service;
- Section 1910.30 of the final rule requires that each worker be trained in the proper inspection of fall protection equipment; and
- Appendix C to § 1910.140 provides useful information on inspecting fall protection equipment and components.

OSHA requested comment on whether the proposed approach provides adequate protection. In particular, OSHA asked for comment on whether the final standard should require destruction of ropes, lanyards, belts, and harnesses subjected to impact loading (75 FR 28909). Impact loading can cause damage to fibers that cannot be discovered easily. OSHA notes these components are relatively inexpensive to replace.

OSHA received comments supporting the proposed requirement (Exs. 185; 198; 251). ISEA (Ex. 185) and CSG (Ex. 198) both said that manufacturers commonly indicate in user instructions and product labels how to handle personal fall protection equipment after an impact, and recommended that: ''OSHA should err on the side of worker protection and recommend that when components of personal fall arrest systems such as ropes, lanyards, or harnesses are impact loaded, they should be permanently taken out of service and disposed of'' (Ex. 185). ISEA and CSG pointed out that some fall protection components have an impact load indicator that alerts users when a product must be taken out of service (Exs. 185; 198). This device makes it easy for employers to know when they need to remove personal fall protection systems and components from service and replace them. One commenter on the 1990 proposed rule said that only manufacturers should inspect systems to determine if they are suitable for reuse (Ex. OSHA–S057–2006–0680–0048).

By contrast, Edison Electric Institute (EEI) opposed requiring removal of equipment subjected to impact loading. EEI said, ''Inspection by a competent person is adequate to determine whether the component is still functional'' (Ex. 207). Similarly, SPRAT opposed the destruction of equipment that is ''retired'' (Ex. 205).

OSHA believes that impact loading may adversely affect the integrity of personal fall protection systems, but also recognizes that many other factors can affect a system's potential capability for reuse after impact loading. These factors include the type of deceleration device used, and the length of the fall. For example, a short fall of one foot may not damage the harness, but a long fall, such as six feet or more, may damage or even destroy the harness. OSHA believes that if an impact-loaded system or component is damaged or fails the employer must remove it from service immediately so a competent person can inspect the system or component and determine whether it can be reused for worker fall protection. However, when a competent person's careful inspection of the entire system and evaluation of the factors involved in the fall indicates no damage has occurred, and the personal fall protection system or component continues to meet the strength requirement and other criteria necessary for continued use, OSHA does not believe it is necessary that employers permanently remove the system or component from use. OSHA notes that the employer should be allowed to reuse such system and components. In addition, OSHA believes that a competent person, as defined in paragraph (b) of the final rule, has the ability to carefully inspect the personal fall protection system and its components, evaluate the various factors involved in the fall, and make a determination about whether the equipment is safe for reuse. Moreover, the competent person has the authority to take prompt corrective action, including prohibiting the reuse of the equipment or any component that may have been damaged.

Paragraph (c)(18) of the final rule, like the proposal, requires that before initial use during each workshift, personal fall protection systems must be inspected for mildew, wear, damage, and other deterioration. The provision also requires that employers remove from service any defective component.

Final paragraph (c)(18) clarifies two key terms: ''before each use'' and ''defective component.'' Proposed paragraph (c)(18) specified that workers must inspect personal fall protection systems ''before each use.'' The final rule expressly clarifies that OSHA's intention in the proposed rule was that workers inspect their personal fall protection systems before initial use during each workshift. Thus, if the personal fall protection system is used in more than one workshift during a day, the system must be reinspected at the start of each of those workshifts.

OSHA also clarifies that the term ''defective component,'' which appendix C to § 1910.140 refers to as a ''significant defect,'' means damage or deterioration that affects the function or strength of the system or component.

The final rule is generally consistent with OSHA's Powered Platforms, construction, and shipyard employment standards (§§ 1910.66, appendix C, Section I(f); 1915.159(c)(5); 1926.502(d)(21)), as well as with Z359.1–2007 (Section 6.1) and A10.32–2012 (Section 4.1).

OSHA believes that paragraph (c)(18), like paragraph (c)(17), will ensure that employers have a procedure in place for inspecting personal fall protection systems and components and removing defective, damaged, or weakened components from service. Appendix C to § 1910.140 provides useful information to help employers with the inspection requirement in the final rule, including a list of the types of defects that can require removal. (See appendix C to § 1910.140, Section (g)).

OSHA received only one comment on inspection of personal fall protection systems. Verallia recommended that OSHA require ''prior to use, each employee must visually inspect the anchorage points for wear and obvious deformities'' (Ex. 171). OSHA does not believe it is necessary to add the language in Verallia's recommendation because paragraph (c)(18) already requires that employers inspect anchorage points. Paragraph (c)(18) requires that employers inspect personal fall protection systems. The definition of personal fall protection system in the final rule identifies personal fall arrest systems, positioning systems, and travel restraint systems as examples of personal fall protection systems. The definitions of each of those systems explain that they consist of various components (''a system of equipment''), including anchorages. Therefore, employers must ensure that the inspection covers every component of the personal fall protection system, including anchorages, so the entire system is safe to use.

Paragraph (c)(19) of the final rule requires employers to ensure that ropes, lanyards, harnesses, and belts used for personal fall protection are compatible with the connectors being used. Although the final rule does not define ''compatible,'' Z359.0–2012 defines compatible as follows:

> Capable of orderly, efficient integration and operation with other elements or components in a system, without the need of special modification or conversion, such that the connection will not fail when used in the manner intended (Section 2.29).

OSHA believes compatibility between personal fall protection components and connectors is essential to prevent hazards such as rollout, exceeding system strength, and long free fall distances that can increase fall arrest forces significantly. For example, a lifeline or harness can disengage from a connector if its size or dimension is incompatibly sized or configured for use with the connector.

In addition, the Agency has found that it is common practice for employers to interchange or replace components of personal fall protection systems (*e.g.,* lanyards, connectors, lifelines, deceleration devices, body harnesses, body belts) with components produced by other manufacturers. Final paragraph (c)(19) gives employers flexibility to continue this practice when they need to replace personal fall protection components. At the same time, the final rule ensures that workers are protected from rollout and other fall hazards regardless of whether the employers uses replacement components from the same or a different manufacturer.

Appendix C to final § 1910.140 provides important information to help employers ensure they maintain compatibility when replacing personal fall protection components. For example, the appendix cautions: ''Any substitution or change to a personal fall protection system should be fully evaluated or tested by a competent person to determine that it meets applicable OSHA standards before the modified system is put to use'' (§ 1910.140, appendix C, Section (d)). OSHA notes that final paragraph (c)(19) and appendix C are consistent with Z359.1–2007 (Section 7.1.7), which requires that connectors, regardless of whether they are integral elements of the personal fall protection system, individual components, or replacements produced by the same or different manufacturers, must be suitably configured to interface compatibly with associated connectors which will be attached to them.

Final appendix C to § 1910.140 states the ideal way for employers to ensure the compatibility of components of personal fall protection systems is to supply workers with complete systems (appendix C to § 1910.140, Section (d)).

The final rule is similar to the shipyard employment fall protection standard, which requires that system components be compatible with ''their hardware'' (§ 1915.159(c)(3)). Both Z359.1–2007 and A10.32–2012 include similar compatibility requirements. For example, A10.32 specifies: ''All equipment used in a fall protection system shall be compatible to limit force levels, maintain system strength, and prevent accidental disengagement'' (Section 1.4.3; *see also* Z359.1–2007 (Section 7.1.1)). These national consensus standards also require that competent persons ensure personal fall protection systems comprised of components and subsystems produced by different manufacturers are compatible (Z359.1–2007 (Section 7.1.10); A10.32–2012 (Section 7.4)).

Commenters raised two concerns about proposed paragraph (c)(19). First, ISEA and CSG seem to imply that the compatibility requirement in final paragraph (c)(19) is not necessary (Exs. 185; 198). For support, they point out that Z359.12 (Section 7.1) requires that snaphooks and carabiners be designed to prevent ''forced rollout,'' which ISEA and CSG appear to believe is an adequate solution without requiring that employers also comply with paragraph (c)(19). In addition, ISEA and CSG pointed out that manufacturers currently are designing connectors to prevent forced rollout. However, the explanatory note in Z359.12 states:

> While connectors which are compliant with ANSI/ASSE Z359.12 reduce the possibility or risk of failure as a result of incompatible connections, they do not eliminate it (Z359.12–2009 (Section E7.1)).

Moreover, OSHA notes that rollout is not the only hazard that component incompatibility can cause. The A10.32–2012 standard specifies that components of personal fall protection systems must be compatible in order ''to limit force levels, maintain system strength, and prevent accidental disengagement'' (Section 1.4.3). Accordingly, OSHA believes the component compatibility requirement in final paragraph (c)(19) is necessary because it will protect workers from all of those hazards.

Second, ASSE argues that it is not feasible to eliminate incompatible connections:

> The reality is that there are too many non-certified anchorages and structural variations where gate loading or pressure on the connector will occur.
>
> It is not enough just to require a locking type snap hook. Connectors that have significantly stronger gates are readily available and have been for many years to the point where ANSI has made it a requirement for construction and design of connectors. Connectors tested and approved to the ANSI Z359.12 standard provide workers with an additional level of security that would help prevent fatalities (Ex. 127).

OSHA does not agree with, and national consensus standards do not support, ASSE's argument. The Z359.12–2012 and A10.32–2012 standards include component compatibility requirements. In addition, the final rule addresses the conditions that ASSE identifies as making the elimination of incompatible connections infeasible. For example, like the ANSI/ASSE standards, the final rule requires that anchorages, connectors, and other components be capable of supporting 5,000 pounds (§ 1910.140(c)(4), (c)(7), and (c)(13)(i)). In addition, final § 1910.27(b)(1) requires that anchorages be certified as meeting the 5,000-pound requirement. The final rule also incorporates a number of other provisions in Z359.12–2012 to ensure workers have ''an additional level of security that would help prevent fatalities.''

ASSE also maintains that the requirement in proposed (c)(19) is not feasible because ''we continue to see fatalities related to incompatible connections and gate failure'' after OSHA included a connector compatibility requirement in § 1910.66, appendix C, and the construction fall protection standard (29 CFR part 1926, subpart M) (Ex. 127). OSHA does not agree with ASSE's conclusion. The fact that accidents, fatalities, injuries, or illnesses may occur after OSHA implements a standard does not mean that the controls the standard requires are not feasible. Rather, it is more likely that those incidents are the result of noncompliance with the connector compatibility requirements in § 1910.66 and the construction fall protection. Accordingly, the final rule adopts the proposed requirement that employers must ensure ropes, belts, lanyards, and harnesses used for personal fall protection are compatible with all connectors used, regardless of whether the components are integral elements of the personal fall protection system, individual components, or replacements produced by the same or different manufacturers.

Paragraph (c)(20) of the final rule, like the proposal, requires that employers ensure all ropes, lanyards, lifelines, harnesses, and belts used for personal fall protection systems are protected from being cut, abraded, melted, or otherwise damaged. OSHA believes that these components of personal fall protection systems need to be protected from the specified hazards, which could cause damage and deterioration that results in components losing strength and failing.

Final paragraph (c)(20) is broader than the requirements in OSHA's shipyard employment and construction fall protection standards (§§ 1915.159(c)(4), 1926.502(d)(11)), which only address protecting lanyards and lifelines from damage. By contrast, Appendix C of the Powered Platforms standard specifies that any component of a personal fall arrest system with any significant defect which might affect its efficiency must be withdrawn from service immediately, or destroyed (§ 1910.66, appendix C, Section III(f)). The Z359.1–2007 and A10.32–2012 standards contain several provisions requiring lifelines, lanyards, ropes, webbing, and other fall protection system components to be protected from the types of damage the final rule specifies.

In addition to protecting fall protection equipment components from cuts, abrasions, and melting, the final rule requires that employers protect fall protection equipment from other damage (*i.e.,* ''otherwise damaged''). Although the final rule does not define ''otherwise damaged,'' OSHA's other fall protection standards and the national consensus standards provide useful guidance about the types of damage that employers need to consider. For example, the shipyard employment standard requires equipment be protected from ''cuts, abrasions, burns from hot work operations and deterioration from acids, solvents, and other chemicals'' (§ 1915.159(c)(4)). Appendix C to the Powered Platforms standard lists a number of hazards: ''Any components with any significant defect, such as cuts, tears, abrasions, mold, or undue stretching; . . . damage due to deterioration; contact with fire, acids, or other corrosives; . . . wearing or internal deterioration of ropes alterations'' (§ 1910.66, appendix C, Section III(f)).

The A10.32–2012 standard requires that employers protect fall protection equipment from abrasion, cutting, welding, electrical, and chemical hazards (Section 7.5). Similarly, Z359.1 requires that fall protection equipment be made of ''abrasive and heat resistant materials'' (Sections 3 and 5). OSHA did not receive any comments on the proposed provision, and adopts paragraph (c)(20) with the minor revisions mentioned above. In addition, appendix C to § 1910.140 includes many hazards employers should consider when inspecting personal fall protection systems (appendix C to § 1910.140, Section (g)).

Paragraph (c)(21) of the final rule, like the proposed rule, requires that employers provide for the prompt rescue of workers in the event of a fall. This requirement is necessary because workers suspended after a fall are in danger of serious injury due primarily to suspension trauma.

The final rule is consistent with the rescue requirements in OSHA's Powered Platforms, shipyard employment, and construction fall protection standards (§§ 1910.66, appendix C, Section I(e)(8); 1915.159(c)(7); 1926.503(d)(20)). Those standards require that employers ''provide for prompt rescue of employees in the event of a fall or shall assure the self-rescue capability of employees'' (Powered Platforms (§ 1910.66, appendix C, Section I(e)(8)).

The final rule also is drawn from three national consensus standards. The A10.32–2012 standard specifies that employers develop a ''project-specific'' rescue plan that provides an appropriate form of employee rescue (Section 7.2.2.). The standard also requires that the rescue plan include providing adequate rescue equipment and training workers in self-rescue or alternate means. The Z359.4–2007 standard provides useful information to assist employers in planning for rescues in the event of a fall. Finally, Z359.1–2007 requires that worker training address fall rescue (Section 7.3.2).

Paragraph (c)(21) of the final rule sets forth two fundamental points: (1) Employers must provide for the rescue of workers when a fall occurs, and (2) the rescue must be prompt. With regard to the first point, the final rule requires that employers must ''provide'' for rescue, which means they need to develop and put in place a plan or procedures for effective rescue. The plan needs to include making rescue resources available (*i.e.,* rescue equipment, personnel) and ensuring that workers understand the plan.

Appendix C to § 1910.140 provides guidance to employers on developing a rescue plan (appendix C to § 1910.140, Section (h)) as does Z359.4–2007. For example, appendix C recommends that employers evaluate the availability of rescue personnel, ladders, and other rescue equipment, such as mechanical devices with descent capability that allow for self-rescue and devices that allow suspended workers to maintain circulation in their legs while they are awaiting rescue. OSHA's Safety and Health Bulletin on Suspension Trauma/Orthostatic Intolerance identifies factors that employers should consider in developing and implementing a rescue plan, including recognizing the signs and symptoms of suspension trauma and factors that can increase the risk of trauma, rescuing unconscious workers, monitoring suspended and rescued workers, providing first aid for workers showing signs and symptoms of orthostatic intolerance (see SHIB 03–24–

2004, updated 2011).[77] ISEA supported requiring employers to have a rescue plan and make available equipment and personnel to provide for prompt rescue after a fall (Ex. 185).

OSHA notes that although an increasing number of employers provide devices that allow workers to rescue themselves, where self-rescue is not possible, the employer must ensure that appropriate rescue personnel and equipment is available for prompt rescue. For example, unconscious workers will not be able to move so they cannot pump their legs to maintain circulation or relieve pressure on their leg muscles. Workers who are seriously injured or in shock also may have difficulty effecting self-rescue.

On the second point, the final rule requires that employers provide ''prompt'' rescue of workers who are suspended after a fall. A number of commenters asked OSHA to clarify the meaning of ''prompt'' rescue, for example, asking whether it means ''immediately'' or ''quickly'' (Exs. 145; 185; 198). ISEA and CSG urged OSHA to require that suspended workers be rescued ''quickly,'' pointing out the life-threatening dangers of suspension trauma and orthostatic intolerance (Exs. 185; 198). In 2000, OSHA adopted the language ISEA and CSG recommends in answering the question of prompt rescue as it applies to the construction fall protection standard: ''[T]he word ''prompt'' requires that rescue be performed quickly—in time to prevent serious injury to the worker'' (Letter to Mr. Charles E. Hill, August 14, 2000).[78]

OSHA's definition of ''prompt'' is performance based. Employers must act quickly enough to ensure that the rescue is effective; that is, to ensure that the worker is not seriously injured. If the worker is injured in the fall, the employer must act quickly enough to mitigate the severity of the injury and increase the survivability of the worker. OSHA's performance-based definition recognizes, and takes into account, the life-threatening dangers of prolonged suspension:

> Orthostatic intolerance may be experienced by workers using fall arrest systems. Following a fall, a worker may remain suspended in a harness. The sustained immobility may lead to a state of unconsciousness. Depending on the length of time the suspended worker is unconscious/immobile and the level of venous pooling, the resulting orthostatic intolerance may lead to death. . . . Unless the worker is rescued promptly using established safe procedures, venous pooling and orthostatic intolerance could result in serious or fatal injury, as the brain, kidneys, and other organs are deprived of oxygen.
>
> Prolonged suspension from fall arrest systems can cause orthostatic intolerance, which, in turn, can result in serious physical injury, or potentially, death. Research indicates that suspension in a fall arrest device can result in unconsciousness, followed by death, in less than 30 minutes (SHIB 03–24–2004).

Because of the potential for severe and even fatal injuries from prolonged suspension, OSHA believes that employers can ensure their rescue operations are effective if they model them on their first-aid plans. To illustrate, in the final rule revising general workplace conditions in shipyard employment (29 CFR part 1915, subpart F), which requires that employers provide ''readily accessible'' first aid, OSHA defined ''readily accessible'' as ''capable of being reached quickly enough to ensure that medical service interventions are effective,'' and noted that ''medical services and first aid must be provided in a timeframe that will ensure their effectiveness in treating an injured or ill employee. Medical services that can be delivered quickly enough to the employee to be effective would be considered readily accessible'' (76 FR 24576, 24600 (5/2/2011)). (For a detailed discussion of effective emergency aid and first aid, see the preamble of the shipyard employment standard (76 FR 24599–664)).

OSHA also finds that the emergency-aid and first-aid response needs to be available within a few minutes ''in workplaces where serious accidents such as those involving falls . . . are possible'' (Letter to Mr. Charles Brogan, January 16, 2007).[79] As ISEA pointed out, the Z359.4–2007 standard recommends that contact be made within six minutes of a fall.

In summary, prompt rescue means employers must be able to rescue suspended workers quickly enough to ensure the rescue is successful—quickly enough to ensure that the worker does not suffer physical injury, such as injury or unconsciousness from orthostatic intolerance, or death. Many employers provide self-rescue equipment so workers can rescue themselves quickly after a fall, ensuring that the rescue is prompt and risks associated with prolonged suspension are minimized. OSHA believes the performance-based approach in the final rule ensures prompt rescue of workers after a fall, while also giving employers flexibility to determine how best to provide prompt and effective rescue in the particular circumstance.

OSHA also received several comments on what the final rule requires to protect workers from orthostatic intolerance. ITA requested that OSHA clarify whether the final rule requires workers to carry self-rescue equipment (Ex. 145). ISEA and CSG recommended that OSHA require employers to equip workers with suspension-relief devices and revise the definition of ''personal fall arrest system'' to include those devices. They said there are widely available devices that permit a suspended worker to relieve pressure from the harness and to ''maintain circulation in the large muscles of legs, reducing the potential for suspension trauma until help arrives'' (Exs. 185; 198). According to ISEA and CSG, the devices are lightweight, portable, and low cost, and workers can carry them as part of the personal fall arrest system. OSHA agrees that the benefits these devices offer are promising, and recommends that employers provide them, particularly in those situations where self-rescue may not be possible.

Paragraph (c)(22) of the final rule requires that workers wear personal fall protection systems with the attachment point of the body harness in the center of the worker's back near shoulder level. The final rule includes one exception—the attachment point may be located in the pre-sternal position if the free fall distance is limited to 2 feet or less.

The final rule differs from OSHA's Powered Platforms, construction, and shipyard employment fall protection standards, which do not permit the attachment point to be located in the pre-sternal position (§§ 1910.66, appendix C, Section I(e)(4); 1915.159(c)(1)(i); 1926.502(d)(17)). OSHA drew the exception for pre-sternal positioning in final paragraph (c)(22) from Z359.1–2007, which permits a front-mounted attachment point when the maximum free fall distance is two feet and the maximum arrest force is 900 pounds (Section 3.2.2.5a). A note to that section explains: ''The frontal attachment element is intended for the use in rescue, work position, rope access, and other ANSI/ASSE Z359.1 recognized applications where the design of the systems is such that only a limited free fall of two feet is permitted'' (Section E3.2.2.5a). The I–14.1–2001 standard incorporates this requirement from Z359.1 (Section 9.2).

[77] Available from OSHA's Web site at: *https://www.osha.gov/dts/shib/shib032404.html*.

[78] Available from OSHA's Web site at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24110*).

[79] Available from OSHA's Web site at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=25627*.

The final rule differs from the proposed rule in two respects. First, the language ''or above the employee's head'' has been eliminated from the first sentence of the proposed provision because OSHA believes this language is inaccurate. A properly sized and adjusted harness should not allow the attachment point to be above the wearer's head. Second, the proposal would have required that front-mounted attachment points be limited to situations where the maximum fall arrest force does not exceed 900 pounds. OSHA deleted this requirement in this final rule because the Agency does not believe that the requirement is necessary. Final paragraph (c)(22) permits pre-sternal attachment only when the maximum free fall limit is two feet. OSHA believes this limit is sufficient to ensure fall arrest forces are reduced significantly in the event of a fall. ISEA (Ex. 185) and CSG (Ex. 198) opposed the 900-pound fall arrest requirement, which they said was ''too prescriptive and restrictive.''

Several commenters supported allowing a front-mounted attachment in certain situations, and OSHA did not receive any comments opposing its use. ISEA (Ex. 185) and CSG (Ex. 198) supported allowing front-mounted attachment points because it allowed workers to ''conduct a variety of tasks, such as rotating and leaning.'' AWEA also supported pre-sternal connection points, noting, ''Rope access workers around the world have been employing this technique for decades with excellent results'' (Ex. 329 (1/21/2011, p. 22)).

OSHA believes that allowing pre-sternal attachment when the free fall distance is limited to two feet will have only a minimal effect on the distribution of fall arrest forces, thereby reducing the risk of serious neck and back injury. Such use will make self-rescue easier in specific situations, such as confined spaces, window cleaning, and climbing activities because it is easier to work in front of the body than work behind one's body. In addition, permitting a front-mounted attachment point provides greater flexibility for employers in certain activities, such as climbing or using rope descent systems for window washing. Accordingly, the final rule retains the proposed exception for front-mounted attachment points when the maximum free fall distance is two feet.

Paragraph (d)—Personal Fall Arrest Systems

Paragraph (d) of the final rule establishes specific requirements for using personal fall arrest systems. A personal fall arrest system is one type of personal fall protection system. The final rule defines a personal fall arrest system as a system used to arrest a worker in a fall from a walking-working surface. A personal fall arrest system consists of a body harness, anchorage, and a connector. The means of connection may include a lanyard, deceleration device, lifeline, or a suitable combination of these. OSHA notes that the provisions in paragraph (d) apply in addition to those provisions in paragraph (c), which apply to all types of personal fall protection systems.

Paragraph (d) of the final rule includes some changes in the regulatory text from the proposal that clarify and simplify the language. Those changes do not affect the meaning or purpose of the provisions in paragraph (d). OSHA believes that the changes make the requirements in paragraph (d) easier for employers to understand, which should increase worker safety, and compliance with the final rule. Paragraph (d) consists of two primary components: Paragraph (d)(1) establishes performance criteria for personal fall arrest systems, while paragraph (d)(2) addresses the use of personal fall arrest systems. OSHA based the requirements for personal fall arrest systems on OSHA's Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66, appendix C; 1915.159; 1926.502(d)), as well as on several national consensus standards, including Z359.1–2007, A10.32–2012, and I–14.1–2001.

System performance criteria. The requirements in final paragraph (d)(1), with one exception, are almost identical to the requirements in OSHA's Powered Platforms, shipyard employment, and construction fall protection standards (§§ 1910.66, appendix C, Section I(d)(1); 1915.159(b)(6); 1926.502(d)(16)).[80]

Paragraph (d)(1)(i) of the final rule requires that employers ensure personal fall arrest systems limit the maximum fall arrest forces on a worker to 1,800 pounds. OSHA discussed the requirement extensively in the preamble to the Powered Platforms final rule, noting that the Agency proposed ''a force limit of 10 times the worker's weight or 1,800 pounds (8 kN) whichever is less'' (54 FR 31450). OSHA explained that the Powered Platforms proposed rule was consistent with ANSI A10.14–1975 and a report by the National Bureau of Standards (now the National Institute for Science and Technology) (54 FR 31450). In addition, OSHA said comments from the United States Technical Advisory Group, an advisory group representing both government and private interests, also supported the 1,800-pound maximum fall arrest limit for personal fall arrest systems.

When the Z359.1 standard was first published in 1992, it also incorporated the 1,800-pound maximum fall arrest force for personal fall arrest systems used with body harnesses, and retained the requirement in every update since 1992. The updated versions of Z359.1 (1992, 2002, and 2007) each explained the basis for the 1,800-pound maximum arresting force (MAF) limit as follows:

> The 1,800 pound (8 kN) MAF criteria included in this standard is based on the following considerations. In the mid-1970's medical information developed in France confirmed earlier United States research which observed that approximately 2,700 pounds (12 kN) is the threshold of significant injury incidence for physically fit individuals subjected to drop impacts when wearing harnesses. The French arbitrarily halved the above force and established 1,350 pounds (6 kN) as their national standard for MAF in PFAS. Canada's Ontario Ministry of Labor reviewed this information and elected to establish 1,800 pounds (8 kN) for MAF. This MAF has been in effect since 1979 in the Ontario Provincial standard. Since that time there have been no reported deaths or serious injuries associated with the arresting of accidental falls of individuals. In addition, ISO/TC94/SC4, in working drafts, has established the 1,800 pounds (8 kN) limit on MAF. On the basis of this information, 1,800 pounds (8 kN) is considered the appropriate MAF for inclusion in this standard where harnesses are to be used in arresting falls (Section E3.1.2).

Based on this research, OSHA believes that the 1,800 pound fall arrest force will adequately protect workers. OSHA did not receive any comments opposing the proposed provision, and is adopting it in the final rule with only minor editorial changes.

Paragraph (d)(1)(ii) limits the maximum deceleration distance to 3.5 feet. This requirement pertains only to the operation of the deceleration device itself and not to the 6-foot free fall distance specified in paragraph (d)(2)(ii). The 3.5-foot deceleration distance in this paragraph is in addition to the 6-foot free fall distance. Accordingly, once the free fall ends and the deceleration device begins to

[80] OSHA first promulgated these performance requirements in the Powered Platforms rulemaking (54 FR 31407 (7/28/1989)). In the preamble to that final rule, OSHA said that it intended to apply a future rule to all uses of personal fall arrest systems in general industry, including powered platforms, and that Appendix C to that rule would be superseded by the new rule (54 FR 31445–46). This final rule, like the proposal (75 FR 29146), removes appendix C to OSHA's Powered Platform rule (§ 1910.66). Final § 1910.140 addresses personal fall arrest systems used in all general industry, including powered platforms.

operate, the personal fall arrest system must bring the worker to a complete stop within 3.5 feet. Combining the free fall distance with the deceleration distance means that the total maximum distance a worker may travel during a fall could be 9.5 feet.

The final rule is the same as the requirement in the Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66, appendix C, Section I (d)(1)(iii); 1915.159(b)(6)(iii); 1926.502(d)(16)(iv); also see 54 FR 31450 and 59 FR 40708). Paragraph (d)(1)(ii) also is consistent with Z359.1–2007 (Section 3.1.2). In addition, the 3.5 deceleration distance has been an industry and manufacturer standard for years. OSHA did not receive any comments on the proposed requirement, and the final rule is adopting it as proposed with only minor changes.

Paragraph (d)(1)(iii) requires personal fall arrest systems to have sufficient strength to withstand twice the potential impact energy of the worker free falling a distance of 6 feet, or the free fall distance permitted by the system. In the final rule, OSHA has clarified the provision by removing the proposed language ''whichever is less.'' Both ways of meeting the standard are acceptable and the removed language is unnecessary. OSHA notes that the alternative free fall distance is the one the manufacturer lists in the instructions or specifications for the specific personal fall arrest system.

Compliance with this requirement ensures that the personal fall arrest system will not fail even if subjected to twice the design shock load. For example, a personal fall arrest system harness that just meets the maximum permitted arresting force allowed in final paragraph (d)(1)(i) must be able to withstand an impact force of 3,600 pounds, which is twice the 1,800-pound potential arresting force of a worker using the system falling up to 6 feet. The Agency determined that a safety factor of two is necessary to ensure that the personal fall arrest system will not fail even if there is unavoidable wear on the system as a result of normal use. In practice, fall arrest forces should never approach the design shock load because the free fall distance likely will be 6 feet or less, and because lifelines which absorb energy, often will be used. OSHA also determined that a safety factor of two provides adequate protection and makes the final rule consistent with the approach in OSHA's Powered Platforms, construction, and shipyard employment fall protection standards.

Paragraph (d)(1)(iv) is a new paragraph added to the final rule requiring that fall arrest systems be capable of sustaining the worker within the system or strap configuration without making contact with the worker's neck and chin area. The National Institute for Occupational Safety and Health (NIOSH) recommended adding this provision, saying: ''[S]tudies have shown that during suspended condition, the chest strap and ring of the harness can ride up on the worker's neck if the harness does not fit properly, posing a risk of injury to the worker [Hsiao et al., 2007; Hsiao et al., 2009]'' (Ex. 164).

NIOSH also noted that ''individuals with soft hip and thigh musculature are at increased risk of chest and neck strap interference to the neck and chin area when suspended after a successful arrest of fall'' (Ex. 164). OSHA agrees with NIOSH that a specific requirement is needed to ensure workers are not injured while using a personal fall arrest system. If employers select personal fall arrest systems that do not fit workers properly or fail to train workers in how to use systems properly, the system may not keep the worker safe within the strap configuration or body harness if a fall occurs, or may injure the worker's neck and chin area.

OSHA does not believe that adding the requirement imposes any new burden on employers, but rather reinforces other requirements with which the employer must comply. Specifically, the general requirements that apply to all PPE, including personal fall arrest systems, require that employers ''[s]elect PPE that properly fits each affected employee'' (29 CFR 1910.132(d)(1)(iii)). If the personal fall arrest system does not fit properly, the worker may not be protected adequately if a fall occurs. OSHA also notes that applicable training requirements in its PPE standard require employers to train workers in ''[h]ow to properly don, doff, adjust, and wear PPE'' (29 CFR 1910.132(f)(1)(iii)).

Final paragraph (d)(1)(v), proposed as a note to paragraph (d)(1), makes clear that personal fall arrest systems meeting the criteria and protocols set out in appendix D to § 1910.140 will be deemed to be in compliance with the requirements of paragraphs (d)(1)(i) through (iii) when used by a worker who has a combined tool and body weight of less than 310 pounds. Appendix D provides one method that will allow employers to evaluate the ability of the personal fall arrest system to meet the necessary criteria. However, appendix D is restricted to situations in which the total body and tool weight is less than 310 pounds because the test methods were designed for that weight. If a personal fall arrest system needs to support a greater weight, the test methods in appendix D may still be used, provided the employer modifies them to account for the additional weight, such as by using a heavier or lighter test weight to reflect the heavier or lighter weight of the worker. Ellis supported using the 310-pound weight in final paragraph (d) and in the test methods specified by appendix D to § 1910.140 (Ex. 155).

System use criteria. Final paragraph (d)(2) establishes criteria for the use of personal fall arrest systems. In paragraph (d)(2)(i), OSHA requires that, for horizontal lifelines that may become vertical lifelines, the device used to connect to the horizontal lifeline must be capable of locking in both directions on the lifeline. OSHA believes this requirement is necessary because a horizontal lifeline could become a vertical lifeline if the support lines on one end of a suspended scaffold or similar work platform fail. In this case, if the rope grab does not lock in both directions on the now vertical lifeline, it could fail to hold, allowing the worker to fall. OSHA drew this requirement from the Powered Platforms standard (§ 1910.66, appendix C, Section (I)(e)(2) and the construction standard (§ 1926.502(d)(7)). OSHA did not receive any comments on the proposed provision and is adopting it without substantive change.

Paragraph (d)(2)(ii) requires the personal fall arrest system to be rigged so that a worker cannot free fall more than 6 feet, nor contact a lower level.[81] The system strength and deceleration criteria for personal fall arrest systems are based on a maximum free fall distance of 6 feet. OSHA based this provision on the Powered Platforms, construction, and shipyard employment fall protection standards (§§ 1910.66, appendix C, Section (I)(e)(3);

[81] In subpart M, Interpretations and Clarifications—Fall Protection, OSHA stated that if the employer has documentation to demonstrate that these maximum arresting forces are not exceeded and that the personal fall arrest system will operate properly, OSHA will not issue a citation for violation of the free fall distance.

U.S. manufacturers of fall protection equipment test their equipment in accordance with test procedures prescribed in ANSI standards (ANSI A10.32 and ANSI Z359) which calls for equipment to be tested based on a 6-foot free fall distance. Unless the equipment has been tested for a free fall greater than 6 feet, the results are unknown. Therefore, if an employer must exceed the free fall distance, the employer must be able to document, based on test data, that the forces on the body will not exceed the limits established by the standard, and that the personal fall arrest system will function properly.

See interpretation M–3 on OSHA's Web site: *http://www.osha.gov/Publications/Const_Res_Man/1926m_interps.html.*

1915.159(b)(6)(i); 1926.502(d)(16)(iii)). The final rule also is similar to Z359.1–2007 (Section 7.2) and A10.32–2012 (Section 5.2.1).

In the final rule, OSHA added an exception that permits a free fall to be more than 6 feet provided the employer can demonstrate the manufacturer designed the system to allow a free fall of more than 6 feet and tested the system to ensure a maximum arresting force of 1,800 pounds is not exceeded. If the system is not designed for such a purpose, allowing a longer free fall distance could mean the strength and deceleration criteria are not adequate to protect the worker. This added language is consistent with OSHA's interpretation of 29 CFR part 1926, subpart M.[82] OSHA did not receive any comments on the proposed provision and is adopting it as discussed.

Body belts. Paragraph (d)(3) of the final rule prohibits employers from using body belts as part of a personal fall arrest systems. The final provision is consistent with A10.32–2012 (Section 1.4.1). OSHA notes that both the construction industry and shipyard employment standards already prohibit the use of body belts as part of personal fall arrest systems (§§ 1915.159; 1926.502(d)). Since 1998, those fall protection standards have prohibited the use of body belts in personal fall arrest systems because, as discussed in the final rule to § 1926.502, workers wearing them have been seriously injured by the impact loads transmitted and by the pressures imposed while suspended after fall arrest. OSHA does not believe that employers will have any difficulty complying with this provision because virtually all personal fall arrest systems manufactured and in use in the United States are equipped with body harnesses, not body belts. ISEA, the only commenter on this provision, supported the ban (Ex. 185) and the Agency adopts the provision as proposed.

Paragraph (e)—Positioning Systems

Paragraph (e) establishes specific requirements for positioning systems, including window cleaner's positioning systems. These requirements apply in addition to the general requirements in paragraph (c), which apply to all types of personal fall protection systems. Positioning systems, which sometimes are called ''work-positioning systems,'' are a type of personal fall protection system. The final rule defines positioning system as a system of equipment and connectors that, when used with its body harness or body belt, allow a worker to be supported on an elevated vertical surface (*e.g.,* wall, window sill, utility pole) and work with both hands free.

OSHA received several general comments on the proposed requirements for positioning systems. For example, Ellis recommended that workers who use positioning systems should have additional fall protection (Ex. 155). OSHA notes that workers using positioning systems are attached to two separate anchor points. If one anchor were to fail, the worker would still be protected from falling by the attachment to the other anchor.

Weatherguard said, ''If OSHA does not want to promulgate the preciseness that is required to accomplish this, a reference to the I–14 Standard would direct readers to what they need to have for compliance'' (Ex.168). Regarding Weatherguard's recommendation, OSHA notes that the Agency drew a number of requirements from I–14.1–2001, and this preamble explains those provisions so employers know what action is necessary to comply with the final rule.

The Tree Care Industry Association (TCIA) expressed concern that workers in their industry would not be allowed to use positioning systems as these systems were defined in the proposed rule (Ex. 174). OSHA notes that the TCIA is commenting on the proposed revision to § 1910.67(c)(2)(v), which permits workers to use positioning systems or personal fall arrest systems when working in aerial lifts. TCIA said:

> Line clearance tree trimmers and other arborists often work in aerial lifts that are elevated to work positions directly *above* high voltage wires, trees, buildings and other structures to trim trees. Notably, this work position is not typical for a lineman either building or maintaining some part of an electrical system. There is a unique and unavoidable job hazard intrinsic in the typical work position of the line clearance tree trimmer that is inadequately addressed by OSHA's current fall protection proposal. To best address this hazard and obtain the greatest protection of affected workers and also to allow for the self-rescue of an aerial lift operator who has fallen, OSHA should allow the use of a body belt and two- to three-foot lanyard. This PPE combination provides for the shortest overall fall distance, and thus provides the greatest protection against fatally dropping into nearby electric wires and secondarily, any other potentially injurious object at a lower level. The short lanyard minimizes free fall, thereby reducing the arresting force in the system. Finally, the attachment at the operator's waist allows for the possibility of self-rescue.
>
> A narrow requirement governing all situations, such as the one OSHA has proposed, does not promote worker safety to the extent that it could or should. It is important for OSHA to preserve the performance-based nature of subpart I requirements and allow the employer to assess the hazards and choose the fall protection that in its estimation will provide the greatest measure of safety in a given situation. The hazard we have illustrated could be addressed with a simple note under 1910.67(c)(2)(v): ''NOTE: If the employer can demonstrate that a greater hazard to the aerial lift operator is created by contact with structures or electrical conductors below the elevated lift, then a body belt and lanyard of up to three feet in length may be employed for fall protection'' (Ex. 174).

Positioning systems, as defined in § 1910.140(b), cannot be used in aerial lifts because the workers are not on a vertical surface such as a wall, but rather on the horizontal surface of the aerial lift bucket. Therefore, OSHA is revising the requirement in § 1910.67(c)(2)(v) to allow workers to use either travel restraint or personal fall arrest systems.

OSHA also addressed the issue of fall protection systems for workers performing construction activities in aerial lifts in a memorandum dated August 22, 2011.[83] That memorandum established the same policy regarding fall protection for construction workers in aerial lifts as the requirement specified by this final rule for general industry workers in aerial lifts. The applicable portion of that memorandum states:

> As has been the Agency's longstanding policy, an employer may comply with OSHA's fall protection requirements for aerial lifts in one of three ways:
>
> 1. Use of a body belt with a tether anchored to the boom or basket (fall restraint system),
> 2. Use of a body harness with a tether (fall restraint system), or
> 3. Use of a body harness with a lanyard (fall arrest system).

Ellis said that OSHA's policy provided a more complete answer to the issue of fall protection for workers in aerial lifts, and recommended that OSHA add the language to the final rule (Ex. 155). OSHA does not believe such a revision is necessary because the final rule already makes clear that personal fall arrest systems can only be used with a body harness and that travel restraint systems may use a body harness or body belt.

System performance requirements. Final paragraph (e)(1) establishes performance criteria for positioning systems. Paragraph (e)(1)(i), like the proposed rule, requires employers to

---

[82] See interpretation M–3 on OSHA's Web site: *http://www.osha.gov/Publications/Const_Res_Man/1926m_interps.html.*

[83] Available from OSHA's Web site at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=27731.*

ensure that positioning systems, except window cleaner's positioning systems, are capable of withstanding, without failure, a drop test consisting of a 250-pound weight dropped 4 feet. Although the Z359.3–2007 standard requires a 4-foot drop test with a 300-pound weight, OSHA is maintaining the 250-pound weight in order to make the final rule consistent with OSHA's construction industry rule. Many employers use the same personal fall arrest system for performing both general industry and construction activities. If OSHA were to adopt the weight that Z359.3–2007 incorporates, employers may not be able to use the same equipment for both types of activities. OSHA believes this could lead to confusion and non-compliance. OSHA did not receive any comments on the proposed provision and finalizes the provision as proposed.

Paragraph (e)(1)(ii)(A) of the final rule, like the proposed rule, requires employers to ensure that window cleaners' positioning systems are capable of withstanding, without failure, a drop-test consisting of a 6-foot drop of a 250-pound weight. Paragraph (e)(1)(ii)(B) requires that these systems limit the initial fall arresting force on the falling worker to not more than 2,000 pounds, with a duration not exceeding 2 milliseconds, and any subsequent fall arrest forces do not to exceed 1,000 pounds. Window cleaners' positioning systems have a potential for greater free fall distances. As such, the final rule requires a more rigorous drop test for these systems than for other positioning devices. The rigorous drop test for window cleaners' positioning systems, combined with the limit on initial arresting forces ensures workers will not be injured if a free fall occurs. The final rule uses the same approach for positioning systems as the shipyard employment standard (29 CFR 1915.160(b)(2)).

Final paragraph (e)(1)(iii), proposed as a note, is applicable to paragraphs (e)(1)(i) and (ii) and explains that positioning systems, including window cleaners' positioning systems, meeting the tests methods and procedures outlined in appendix D to § 1910.140 are considered to be in compliance with these provisions. The proposed rule included two notes and, for simplicity, the final rule combined these notes into one provision in the actual regulatory text.

Weatherguard recommended that OSHA reference the I–14.1–2001 standard in the final rule (Ex. 168). The final rule uses provisions from that standard both as a basis for a number of requirements and in the reference section as a resource for further information. There were no other comments and the provisions are finalized as discussed.

Paragraph (e)(1)(iv) addresses criteria applicable to lineman's body belt and pole strap systems. Although positioning equipment used in electric power transmission and distribution work is not to be used as insulation from live parts, when a worker is working near live parts, it is possible that the lineman's body belt and pole strap systems may come into contact with them. As such, it is important that these systems provide some level of insulation.

Paragraphs (e)(1)(iv)(A) through (C) require employers to ensure that a lineman's body belt and pole strap system be capable of passing dielectric and leakage current tests, as well as a flammability test. The requirements in paragraphs (e)(1)(iv)(A) and (B), like the proposed rule, are consistent with those in §§ 1910.269(g)(2)(iii)(G) and 1926.954(b)(2)(vii). OSHA notes that the voltages listed in these paragraphs are alternating currents. OSHA included these tests in the final rule because the Agency believes that requiring positioning straps to be capable of passing the electrical tests in final paragraphs (e)(1)(iv)(A) and (B) will provide an additional measure of protection to workers, for example, if a conductor or other energized part slips and lands on the strap or if the strap slips from the worker's hand and lands on an energized part. The requirements of final paragraphs (e)(1)(iv)(A) and (B) are the same as those in revised § 1910.269 (79 FR 20316 (4/11/2014)). Additionally, the tests in the final rule are equivalent to the ones ASTM F887–12e1 (Section 15.3.1 and Note 2) requires.

Paragraph (e)(1)(iv)(C) is a new paragraph that OSHA added to the final rule requiring that lineman's body belt and pole strap systems meet the flammability test in Table I–7. This test is equivalent to the one in 29 CFR 1926, subpart V. The flammability test in Table I–7 specifies the step-by-step process employers must ensure is followed when lineman's body belt and pole strap systems are tested. The table also includes the specific criteria the strap must meet to pass the flammability test.

OSHA added the flammability test to the final rule because employees working near energized parts must be provided with the same level of protection regardless of whether they are performing general industry or construction activities. OSHA believes lineman's body belt and pole strap systems already meet these requirements, so the final rule will not impose additional costs and burdens on employers.

The proposal contained notes indicating that positioning straps which passed direct current tests at equivalent voltages would be considered to be in compliance with paragraphs (e)(1)(iii)(A) and (B). Because these notes were more in the nature of guidance, OSHA did not carry them forward in the final regulatory text. Nonetheless, this is still a way that employers may demonstrate compliance with the requirements of paragraphs (e)(1)(iii)(A) and (B) of the final rule.

System use criteria for window cleaners' positioning systems. The requirements in paragraph (e)(2) of the final rule, like the proposed rule, contain criteria applicable only to window cleaners' positioning systems and components (*i.e.,* window cleaners' belts and window cleaners' belt anchors). There are no specific requirements for this type of personal fall protection system in existing OSHA standards. Currently, OSHA enforces the general requirement to have fall protection under § 1910.132 (Personal Protective Equipment) as well as under section 5(a)(1) (''general duty clause'') of the OSH Act (29 U.S.C. 654) while performing window cleaning operations and relies on national consensus standards for criteria that such systems need to meet. OSHA believes that including requirements specific to window cleaners' positioning systems in this final rule will enhance compliance by clarifying exactly what requirements apply to these systems.

OSHA drew the requirements in paragraph (e)(2) from the I–14.1–2001 standard that addresses the design, strength, and installation of window cleaners' positioning systems. OSHA believes that these criteria, in conjunction with the general requirements in paragraph (c) that are applicable to all personal fall protection systems, provide a reasonable and necessary level of safety for workers using these systems. OSHA believes that window cleaners' positioning systems and their associated anchors are not used as commonly as they once were. However, since these systems are still used on some buildings, OSHA finds that these minimum requirements are still necessary to ensure workers are protected during window cleaning operations.

Final paragraph (e)(2)(i)(A) requires the employer to ensure that window cleaners' belts are designed and constructed so belt terminals will not pass through the fastenings on the body belt or harness if a terminal comes loose from the window anchor. OSHA believes this requirement is necessary because, if the belt terminal comes loose from the window anchor, the worker will likely fall if the belt is not designed to keep the belt terminals from pulling through the fastenings on the waist belt. There were no comments on the proposed provision and it is finalized with only minor revisions for clarity.

Final paragraph (e)(2)(i)(B), like the proposed rule, requires the employer to ensure that window cleaners' belts be designed and constructed so the length of the runner from the tip of one terminal end to the tip on the other end does not exceed eight feet. This requirement is consistent with I–14.1–2001 (Section 10.2.9(c)) and OSHA believes it is necessary to limit the length of runners to 8 feet so that workers are not leaning too far back from the window they are cleaning. Leaning too far back may cause the worker to lose balance and become inverted, possibly striking the building and becoming injured. There were no comments on the proposed provision and it is finalized without revision.

Final paragraph (e)(2)(ii) requires the employer to ensure that window anchors used for attaching window cleaners' belts are installed in the side of window frames or mullions at a height not less than 42 inches and not more than 51 inches above the window sill. This requirement is consistent with I–14.1–2001 (Section 10.2.5) and OSHA believes it is widely accepted within the industry. Prior to the I–14.1 standard, the provision was also present in the ANSI/ASME A39.1 standard, which dates back to 1933. There were no comments on the proposed provision and it is finalized with only minor revisions for clarity.

Final paragraph (e)(2)(iii) requires that employers ensure window anchors are capable of supporting a minimum load of 6,000 pounds. It is consistent with I–14.1–2001 (Section 10.2.4). The final provision is similar to the proposal but it does not include the proposed requirement that the structures to which window anchors are attached also must support a 6,000-pound minimum load requirement.

Weatherguard opposed the proposed requirement, saying:

> [This requirement was] not consistent with the current codes and standards. The requirement that has been in place for at least the last 60 years is that the anchor be capable of supporting a 6,000-pound load without fracture in the direction that it may be loaded. The structure to which it is attached does not have that requirement (Ex. 168).

OSHA agrees with Weatherguard. In order for the anchor to support the minimum 6,000 pound load, so must the structure to which it is attached. Therefore, OSHA removed the language because it is not necessary.

Final paragraph (e)(2)(iv) like proposed paragraph (e)(2)(vi), requires employers to ensure that window anchors are not used for any purpose other than attaching window cleaners' belts. Window anchors are built for the specific purpose of supporting a worker using a window cleaner's positioning system and OSHA believes they must only be used for their intended purpose. Using the anchors for other purposes may cause deterioration that could result in failure of the anchor when window cleaners then use the anchors. The requirement is consistent with I–14.1–2001 (Section 10.2.1). There were no comments on this provision and it is finalized with only minor editorial revisions for clarity.

Final paragraph (e)(2)(v), like the proposed rule, requires employers to ensure window anchors that have damaged or deteriorated fastenings or supports are removed, or the window anchor head is detached so the anchor cannot be used. If damaged or deteriorated anchors are not removed and replaced, the anchor may fail or break when a window cleaner's positioning system is attached, which could lead to the worker falling and being seriously injured or killed. There were no comments on this provision and it is finalized with editorial revisions for clarity.

Final paragraph (e)(2)(vi), like proposed paragraph (e)(2)(iv), requires employers to ensure rope that has wear or deterioration that affects its strength is not used. OSHA believes that deterioration or wear that significantly reduces a rope's strength may lead to worker death or injury if that rope fails. OSHA realizes that some minimal wear may occur on the sheath of modern kernmantle rope during normal use. That type of wear is expected during the life of the rope, however, if the sheath is so damaged as to expose the core of the rope (which could lead to damage), or other such damage affects the strength of the rope, that rope must be retired and no longer used by workers. There were no comments on this provision and it is finalized with minor editorial revisions for clarity.

Final paragraph (e)(2)(vii), like the proposed rule, requires employers to ensure both terminals of the window cleaner's belt are attached to separate window anchors during any cleaning operation. When the worker is moving into position, entering, or exiting the building or structure before or after cleaning, or traversing to another window, it is not always possible to have both terminals attached to separate window anchors; however, while cleaning the window the terminals must be attached to separate anchors. This requirement is consistent with I–14.1–2001 (Section 5.3.9). There were no comments on this provision and it is carried forward to the final rule with only minor editorial changes.

Final paragraph (e)(2)(viii) requires employers to ensure that no employee works from a window sill or ledge on which there is snow, ice, or any other slippery condition, or one that is weakened or rotted. As in other OSHA requirements (*e.g.,* § 1910.22(a), (b), and (d)) the Agency believes that clean, dry, and firm footing is essential to avoiding slips and falls that may cause injury to workers. This final provision is consistent with I–14.1–2001 (Section 5.3.2). There were no comments on this provision and it is adopted with minor revisions to provide more clarity.

Final paragraph (e)(2)(ix) of the final rule prohibits employers from allowing window cleaning work on a window sill or ledge unless:

- The sill or ledge is a minimum of 4 inches wide and slopes no more than 15 degrees below horizontal (final paragraph (e)(2)(ix)(A)); or,
- The 4-inch minimum width of the sill or ledge is increased 0.4 inches for every degree the sill or ledge slopes beyond 15 degrees, up to a maximum of 30 degrees (final paragraph (e)(2)(ix)(B)).

OSHA believes that this requirement presents the minimum sill or ledge width necessary for workers using window cleaners' positioning systems to safely perform their tasks. This provision is consistent with the A39.1 standard (Section 3.8). No comments were received on this provision and it is adopted with minor revisions for clarity.

Final paragraph (e)(2)(x) requires employers to ensure that the worker attaches at least one belt terminal to a window anchor before climbing through the window opening, and keeps at least one terminal attached until completely back inside the window opening. This provision ensures that the worker is securely attached to at least one anchor before going outside the building and being exposed to a fall. This provision has been revised from the proposed rule for clarity and is also consistent with I–14.1–2001 (Section 5.3.8 and 5.3.10). No comments were received on this provision and it is adopted as discussed.

Final paragraph (e)(2)(xi), like proposed paragraph (e)(2)(xi)(A), requires that employers ensure workers travel from one window to another by returning inside the window opening and repeating the belt terminal attachment procedures at each window as described in final (e)(2)(x), except as provided in paragraph (e)(2)(xii). OSHA believes that it is safer for workers to return to the inside of the building after cleaning a window and re-exit the building at the next window to be cleaned (when using a window cleaner's positioning system) in the vast majority of circumstances. In certain circumstances, the Agency allows travel outside the building, which are described in final paragraph (e)(2)(xii). This provision has been revised from the proposed rule for clarity and also is consistent with I–14.1–2001 (Section 5.3.11). OSHA notes that final paragraph (e)(2)(xii), discussed below, allows workers to move from one window to another while outside the building in certain circumstances. OSHA did not receive any comments on the proposed rule and adopts it with editorial clarifications.

Final paragraph (e)(2)(xii), similar to proposed paragraph (e)(2)(xi)(B), specifies that employers may allow workers to move from one window to another while outside of the building provided:

- At least one window cleaner's belt terminal is attached to a window anchor at all times (final paragraph (e)(2)(xii)(A));
- The distance between window anchors does not exceed 4 feet horizontally. The distance between window anchors may be up to 6 feet horizontally if the window sill or ledge is at least 1 foot wide and the slope is less than 5 degrees below horizontal (final paragraph (e)(2)(xii)(B));
- The sill or ledge between windows is continuous (final paragraph (e)(2)(xii)(C)); and
- The width of the window sill or ledge in front of the mullions is at least six inches wide (final paragraph (e)(2)(xii)(D)).

OSHA believes that all of these conditions must be present and requirements must be met to ensure workers are protected from falling when they move from window to window on the outside of the building. These requirements, for example, ensure that workers always have a continuous walking-working surface (*i.e.,* window sill or ledge) when they move from one window to another and the width and angle of that surface is sufficient so workers are able to maintain firm footing while traversing between windows. The final rule is consistent with I–14.1–2001 (Section 5.3.11).

Final paragraph (e)(2)(xii) differs from the proposed rule in two respects. First, the final rule deletes the proposed requirement prohibiting workers from moving from one window to another on the outside of the building if a window unit is not ''readily accessible.'' Final paragraph (e)(2)(xii)(B) more clearly specifies what OSHA intends by window units being readily accessible; therefore, OSHA does not believe the proposed provision is necessary. Second, the final rule reorganizes and restates the proposed requirement so it is easier for employers to understand and follow. OSHA did not receive any comments on the proposed rule and adopts as discussed.

Appendices to § 1910.140 (Non-Mandatory)

OSHA added two appendices to § 1910.140 that provide information, guidance, and examples pertaining to the types of personal fall protection systems this section regulates. These appendices are not mandatory; *i.e.,* they do not establish any additional obligations, nor impose or detract from any obligations, in § 1910.140.

Appendix C provides information and guidance concerning the use of personal fall protection systems. The information includes considerations for planning, selection of personal fall protection systems, worker training, and maintenance and inspection of personal fall protection systems. Appendix D provides test methods for personal fall arrest and positioning systems.

OSHA drew the appendices from the OSHA construction fall protection standards (29 CFR part 1926, subpart M), which the Agency issued in 1994. OSHA based the appendices in the construction fall protection standards on national consensus standards. In addition, experts on OSHA's construction staff, including engineers, assisted in developing the guidance and test methods in the appendices.

OSHA revised the proposed appendices for several reasons. First, some of the language and terms in the proposed appendices were geared to the construction industry. For example, the proposed appendices used ''rebar hooks,'' which are not used in general industry. OSHA revised the appendices to incorporate language and terms that are familiar to general industry employers and workers and are used in the regulatory text of § 1910.140.

Second, OSHA updated the proposed appendices with information that has become available since OSHA published the construction fall protection standard. For example, Appendix C includes information about the danger of orthostatic intolerance due to prolonged suspension in a personal fall protection system.

Third, OSHA also made changes to the proposed appendices to incorporate recommendations commenters suggested. Those additions are discussed below.

Fourth, OSHA reorganized some of the sections of Appendix C so they follow the same order as the regulatory text of § 1910.140. The Agency believes this reorganization will help employers locate more quickly the information they need to comply with the final rule.

Finally, OSHA made revisions to the appendices to comply with the goals of the Plain Writing Act of 2010 (PWA) (Pub. L. 111–274, enacted January 5, 2010). It was only after OSHA published the proposed rule and appendices that the requirements of the PWA applied to the Agency. The PWA requires that OSHA use plain writing in every ''covered document'' of the Agency that it issues or substantially revises (Pub. L. 111–274, sec. 4(b)). The PWA defines covered documents as ''any document that explains to the public how to comply with a requirement that the Federal Government administers or enforces'' (Pub. L. 111–274, sec. 3(2)(iii)). Since the purpose of these non-mandatory appendices is to help employers comply with the new rule, they meet the PWA's definition of ''covered documents.'' OSHA believes the revisions to the proposed appendices will make them easier to understand and use, thereby increasing compliance with the final rule.

Appendix C to Subpart I of Part 1910—Personal Fall Protection Systems Non-Mandatory Guidelines

OSHA requested comment on whether any of the provisions in appendix C should be included in the regulatory text of § 1910.140, and whether the appendices should include other information.

NIOSH recommended that OSHA consider adding the following information to appendix C regarding harness sizes: ''The employer should ensure sufficient body harness sizes and configurations to accommodate diverse body sizes and shapes in the workforce.'' NIOSH added:

> There have been significant changes in body dimensions among the U.S. civilian population over the last several decades. The diverse workforce in the construction workforce by gender and ethnicity showed a greater variation in range of body dimensions and shapes compared to that in the 1970s and 1980s [citations omitted]. The modern full body harness has evolved to become a more comfortable, easy-to-use body support system that offers a high level of security for a variety of work tasks at height [citations omitted]. Sufficient body harness sizes and configurations to accommodate diverse body

sizes and shapes in the workforce are a critical step to reduce the risk of injury that results from poor user fit and improper size selection. The overall combination of a worker's body dimensions governs the best fit body harness size; body weight and stature alone do not define the best fit (Ex. 164).

OSHA agrees with NIOSH's suggestion and added information to Appendix C recommending that employers consider a broader anthropometric range when selecting personal fall protection systems, including harnesses.

Many commenters from the outdoor advertising industry (Exs. 75; 80; 81; 82; 87; 90; 92; 102; 104; 119; 120; 143) opposed including a list of ''approved equipment'' in Appendix C because employers should be able to use newer or improved safety devices as they become available rather than waiting for devices to be approved in a ''lengthy bureaucratic process.'' For example, Chris McGinty said:

[T]here is some consideration of the creation of a ''list'' of approved equipment. I suggest that this would be an error due to the reality of a safety products industry that is constantly designing, testing and introducing improved or enhanced safety devices. . . . By trying to control the exact brands and models allowable, such a program would invariably be months behind technology and might indirectly lead to losses (Ex. 143).

Appendices C and D do not include a list of approved equipment, systems, components, or devices. In 1999, the Agency reiterated its long held position regarding equipment approval:

OSHA does not approve, endorse, or recommend any particular manufactured product because the manufacturer cannot ensure how the product will be used. The final determination of compliance with OSHA's standards must take into account all factors pertaining to the use of such product at a particular worksite with respect to employee safety and health. This must include an evaluation, through direct observation, or employee work practices and all conditions in the workplace. Therefore, under the Occupational Safety and Health Act of 1970, only the employer is responsible for compliance with the Act and for the safe use of any product by their employees (letter to Ron Oxentenko from Richard Fairfax, Directorate of Compliance Programs, September 17, 1999).[84]

The final rule lists the requirements that employers are responsible for ensuring their personal fall protection systems meet. Appendices C and D both provide guidance that employers may use in evaluating whether the personal fall protection system they are considering will meet the requirements in the final rule.

Regarding paragraph (h) of appendix C, ITA expressed concern about mentioning self-rescue equipment (*e.g.,* equipment with descent capability). ITA was concerned that referring to such equipment would emphasize employee rescue in the design of PPE when, for example, PPE used on powered industrial truck platforms does not currently include self-rescue equipment. ITA believes any mention of self-rescue equipment in Appendix C would have a significant impact in the market, and cautioned OSHA to ensure that such an impact would not occur (Ex. 145).

OSHA does not agree that mentioning self-rescue equipment will cause a significant impact on the market. This equipment has been marketed and readily available for a number of years. OSHA's Powered Platforms standard, issued in 1989, requires that employers provide for prompt rescue or ''shall assure the self-rescue capability of employees'' (§ 1910.66, appendix C, Section I(e)(8)). The construction (1994) and shipyard employment (1996) standards contain the same requirement (§§ 1926.502(d)(20); 1915.159(c)(7)).

In 2000, OSHA responded to an inquiry from Mr. Charles Hill with Southwestern Bell Telephone Company, chair of the National Telecommunications Safety Panel, about whether employers must provide self-rescue equipment when working in bucket trucks and aerial lifts. In 2004, OSHA published a Safety and Health Information Bulletin on Suspension Trauma/Orthostatic Intolerance (SHIB 3–24–2004, updated 2011) that identified self-rescue equipment. The proposed rule also discussed self-rescue equipment for personal fall protection systems (75 FR 28910).

OSHA believes that employers, including members of ITA, are aware of self-rescue equipment and likely have been aware of such equipment for some time. In the past decade, OSHA has not seen any data suggesting that employer awareness of self-rescue equipment has resulted in an adverse impact on the market, nor did ITA provide such data in its comment. Therefore, OSHA does not believe there is likely to be an adverse impact now.

ITA also requested OSHA ''clarify the circumstances when [self-rescue equipment is] deemed to be necessary'' (Ex. 145). OSHA stresses that neither the final rule nor the appendices require that employers provide self-rescue equipment. Rather, the final rule requires that employers provide for ''prompt rescue'' of workers in the event of a fall. To ensure rescue is prompt, employers may use self-rescue equipment, but they also may provide prompt rescue through other means (see detailed discussion of ''prompt'' rescue in the explanation of § 1910.140(c)(21) above).

With regard to paragraph (i) of Appendix C on ''Tie-off considerations'', Ellis suggested that OSHA ''point out the drastic consequences of allowing a SRL [self-retracting lifeline or lanyard] cable or web that passes over almost any edge except wood will break unless there is an energy absorber at the hook end'' (Ex. 155). OSHA agrees that the potential for breakage is greater in the circumstance Ellis describes and believes the language of paragraph (i)(2) of appendix C adequately addresses his concern. OSHA believes that system manufacturers also include such a warning in their instructions and recommendations.

Regarding paragraph (j) of appendix C, Verallia commented that recommending use of ''extreme care'' for horizontal lifelines is ''too subjective and vague'' to be consistently applied or enforced, and that OSHA should clarify or remove the language. OSHA disagrees with this comment. The paragraph on horizontal lifelines says employers should use extreme care in doing a specific task, using multiple tie-offs in horizontal lifelines. The paragraph then explains specifically why employers need to use extreme care (*i.e.,* the movement of one employee falling from a horizontal lifeline may cause other employees to fall). OSHA also explains what employers should do to minimize the hazard. Finally, because of the hazards associated with horizontal lifelines, OSHA explains that qualified persons must design, install, and supervise the use of personal fall protection systems that use horizontal lifelines (§ 1910.140(c)(11)(i)). OSHA believes the appendix and standard are clear, and that employers will be able to understand and comply with the requirements on horizontal lifelines in § 1910.140(c)(11).

In addressing paragraph (n) of appendix C, Verallia asserted that the statement in this paragraph notifying employers that they should ''be aware'' that a personal fall protection system's maximum fall arrest force is evaluated under normal use conditions is too vague, and recommended that this statement be clarified if an employer is going to be potentially subject to enforcement for lack of awareness. OSHA does not agree with Verallia's comment. Not only does paragraph (n) indicate that employers need to understand that testing personal fall

[84] Available on OSHA's website at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=22784.*

protection systems is to be performed under normal conditions, but appendix C also reminds employers of this testing requirement. OSHA believes the multiple references to testing personal fall protection systems under normal use conditions are clear and understandable. OSHA also notes that the appendices to § 1910.140 are not mandatory.

Appendix D to Subpart I—Test Methods and Procedures for Personal Fall Protection Systems Non-Mandatory Guidelines

OSHA asked for comment on test methods in appendix D, and whether the Agency should include any test methods in the regulatory text of § 1910.140 or test methods and procedures in Appendix D, and whether any of the test methods need updating.

Ameren recommended that OSHA delete the test methods in appendix D because product testing rests with the manufacturer instead of the end user. Ameren also said that that if OSHA believes it is necessary for employers to test their personal fall arrest systems, appendix D should add an option allowing employers to test systems ''per manufacturer's instructions'' (Ex. 189). Ameren explained:

> Testing of fall protection lies more with the manufacturer of the equipment and less with the end user, whereas the inspection and checking of the equipment lies with the user. As long as a manufacturer is required to meet certain standards prior to selling their products, there should be no need for post purchase testing, hence no requirement for detailed, outlined testing instructions for the employer (Ex. 189).

OSHA does not agree with Ameren's recommendation for several reasons. First, although the final rule does not require that employers personally test the personal fall protection systems they use, some employers conduct their own tests to ensure that systems and equipment meet the requirements of OSHA standards. Appendix D gives those employers the information and flexibility they need to conduct tests on personal fall protection systems.

Second, the final rule and appendices do not require employers to test personal fall protection systems. Employers are free to select personal fall protection systems that manufacturers have tested rather than testing them themselves. However, employers are ultimately responsible for ensuring that the systems they provide to their workers meet the requirements of § 1910.140. Manufacturer instructions and specifications often will explain that equipment or systems have been tested and meet the requirements of an OSHA or national consensus standard. However, when the manufacturer has not tested the system according to appendix D or other recognized test methods, or does not affirm that the system meets the requirements of § 1910.140, then employers cannot use the system without verifying independently that it meets the requirements of § 1910.140. Using such a system without verifying its safety puts workers at risk of harm.

Finally, OSHA stresses that appendix D and the test methods in it are not mandatory. Employers are free to use personal fall protection systems that have been tested using other methods, provided those test methods ensure the systems meet the requirements in § 1910.140.

Penta Engineering Group, Inc. recommended that OSHA add several test methods in appendix D:

> ANSI/IWCA 1–14.1–2001 requires testing anchors by applying a minimum static load of twice the design load in each (primary) direction that the load might be applied and that this outlines a good generic method adequate for load testing tie-back safety anchors at most buildings. Also included in the ANSI/IWCA I–14.1–2001 is that any testing procedure should be developed and performed under the direction of a registered professional engineer. This language should also be part of the proposed rule (Ex. 193.)

OSHA does not believe it is necessary to add test methods in I–14.1 to appendix D. The test methods in appendix D are not mandatory, and personal fall protection systems can be tested using other recognized tests, such as those tests specified in national consensus standards such as I–14.1, provided those test procedures ensure that the systems meet the requirements in § 1910.140. OSHA also does not believe it is necessary to include in the final rule or in Appendix D Penta's recommendation that tests methods be developed and performed under the direction of a registered professional engineer. The test methods in appendix D were developed by experts, including engineers. OSHA believes that testing organizations and manufacturers also test systems under the supervision of experts and qualified persons, which likely include engineers.

SPRAT offered another suggestion regarding test methods. They recommended that OSHA accept markings on equipment as meeting the ANSI Z359 family of standards. They said this would help to ensure test methods and equipment are consistent with and meet current national consensus standards.

OSHA does not agree. The Agency does not have the resources to ensure all manufacturers accurately mark their products. As noted in the final rule and appendices, employers and manufacturers are not required to use the test methods in appendix D. They are free to test personal fall protection systems using other recognized test methods and procedures, including those specified by ANSI and other national consensus standards, provided those test methods ensure that the systems meet the requirements in § 1910.140.

Verallia recommended adding a requirement to paragraph (b)(2) of appendix D requiring that each employee visually inspect anchorage points prior to use (Ex. 171). OSHA does not believe that Verallia's recommendation is appropriate for appendix D. Appendix D addresses methods employers and manufacturers may use for testing personal fall protection systems to ensure they meet the requirements in § 1910.140 prior to the purchase and use of the systems. Verallia's recommendation applies to use of personal fall protection systems after the systems are in use in the workplace. However, OSHA notes that paragraph (c)(18) of the final rule addresses Verallia's recommendation by requiring that the employer ensure the entire personal fall protection system, which the final rule defines to include the anchorage, be inspected before initial use in each workshift. In addition, OSHA added language to Appendix C mentioning this requirement, and included anchorages as one of the examples.

C. Other Revisions to 29 CFR Part 1910

The final rule also includes changes to provisions in subparts F, N, and R of 29 CFR part 1910. Primarily, the changes are technical in nature and are necessary so all sections in part 1910 conform to final subparts D and I.

Most of the changes in subparts F, N, and R update references to final subparts D and I. For example, existing § 1910.265(f)(6)—Sawmills, requires that ladders comply with existing § 1910.27 (Fixed ladders). However, the final rule reorganizes subpart D and the ladder requirements are no longer in § 1910.27. Instead, requirements applicable to ladders are contained in other sections of final subpart D (*i.e.,* §§ 1910.22, 1910.23, 1910.28, 1910.29). To ensure that employers comply with all of the applicable general industry ladder requirements, the final rule revises § 1910.265(f)(6) to specify that ladders must comply with 29 CFR part 1910, subpart D.

Some changes in subparts F, N, and R replace existing references with references to final subparts D and I. For instance, existing § 1910.66—Powered platforms for building maintenance, specifies that employers provide personal fall arrest systems that comply with Appendix C of that section (existing paragraph (f)(5)(ii)(L)). Appendix C established provisions for the use of personal fall arrest systems because, at the time OSHA promulgated § 1910.66, the general industry fall protection requirements did not allow employers to use personal fall arrest systems, as defined in final §§ 1910.21(b) and 1910.140(b). Final subpart D adds provisions allowing employers to use personal fall arrest systems, and final subpart I establishes performance, use, and care criteria for those systems. In conjunction with those revisions to subparts D and I, OSHA revises § 1910.66 to specify that employers comply with the requirements in final subpart I instead of those in appendix C. With the addition of the personal fall arrest system provisions to final subpart I, § 1910.66 Appendix C is no longer necessary; accordingly, the final rule deletes it.

Similarly, in final § 1910.269(c)(2)(i) OSHA replaces references to personal fall arrest system provisions in 29 CFR part 1926, subpart M—Fall Protection, with citations to the personal fall protection requirements in final subpart I.

Finally, the final rule revises subpart F (§ 1910.67(c)(2)(v)) to require that employees wear either a personal fall arrest system or travel restraint system that complies with final subpart I when they are working from an aerial lift. Existing § 1910.67(c)(2)(v) allows employees to wear a body belt and lanyard for fall protection in aerial lifts while the proposed rule would have required that aerial lift operators use a ''positioning system'' or personal fall arrest system. Neither the existing nor proposed rules are consistent with OSHA general industry (§§ 1910.140 and 1910.269) and construction standards (§§ 1926.453, 1926.502, and 1926.954). To resolve this discrepancy, in final § 1910.67(c)(2)(v) OSHA revises the existing and proposed rules in two ways.

First, final § 1910.67(c)(2)(v) eliminates the existing requirement, which specifies that employees use body belts and lanyards for fall protection when working from aerial lifts, because it is not consistent with final subpart I (final § 1910.140(d)(3)). Final subpart I, like the construction fall protection standard (§ 1926.502(d)), prohibits the use of body belts as part of a personal fall arrest system. OSHA has determined, as the Agency did in the construction fall protection rulemaking (59 FR 40672 (8/9/1994)), that body belts must be prohibited because they do not afford a level of protection equivalent to body harnesses and present unacceptable risks in fall arrest situations. Specifically, as OSHA discussed in the explanation of § 1910.140, fall arrest forces are more concentrated for a body belt than a body harness, therefore, the risk of injury in a fall is much greater when workers use a body belt. In addition, in a fall, workers are more likely to slip out of a body belt than a body harness and be killed or seriously injured. Moreover, if a fall occurs, the hazards associated with prolonged suspension in a body belt are substantially more severe than suspension trauma associated with body harnesses. (Also see discussion of the prohibition of body belts in the preamble revising the general industry and construction Electric Power Generation, Transmission, and Distribution and Electric Protective Equipment standards (hereafter referred to as ''subpart V'') (79 FR 20316, 20383–88 (4/11/2014)).

To make final § 1910.67(c)(2)(v) consistent with final subpart I, OSHA replaces the existing provision with the requirement that workers use a personal fall arrest system or travel restraint system that meets the requirements of final subpart I when working from an aerial lift. This revision also makes final § 1910.67 consistent with the construction aerial lift (§ 1926.453(b)(2)(v) note 1) and fall protection standards (§ 1926.502(d)) as well as subpart V (§§ 1910.269(g)(2)(iv)(C)(*1*) and 1926.954(b)(3)(iii)(A) (79 FR 20640, 20700)).[85]

OSHA notes that final subpart I (final § 1910.140(b) and (d)(3)), like the construction aerial lift and fall protection standards, allows the use of body belts with a travel restraint system when employees work from an aerial lift (*See also* letter to Mr. Jessie L. Simmons (5/11/2001) [86]). OSHA allows the use of a body belt with a travel restraint system because the system ''prevents a worker from being exposed to any fall'' (Letter to Mr. Charles E. Hill (8/14/2000)). To ensure that employees using travel restraint systems in aerial lifts are protected, the employer must ensure the lanyard and anchor are arranged so workers are not potentially exposed to falling any distance.

Second, final § 1910.67(c)(2)(v) revises the proposed rule to require that employees must use a personal fall arrest system or travel restraint system when working in an aerial lift. The proposed rule specified, mistakenly so, that employees use a personal fall arrest system or ''positioning system'' for fall protection when they work from an aerial lifts. In actuality, OSHA does not permit employees to use positioning systems when working from an aerial lift (Letters to Mr. Jessie L. Simmons (5/11/2001) and Mr. Charles E. Hill (8/14/2000)). A positioning system is defined in the proposed and final rules as a system that support employees on an elevated ''vertical'' surface, such as a wall or window sill (final §§ 1910.21(b) and 1910.140(b)). However, employees working from aerial lifts are on horizontal surfaces. Positioning systems are ''designed specifically to stop a worker from falling from a static, head-up position'' (Letter to Mr. Jessie L. Simmons (5/11/2001)); however, falls from a horizontal surface, such as an aerial lift, can begin with the worker in other than a static, head-up position (Letter to Mr. Jessie L. Simmons (5/11/2001); also see, 79 FR 20384). The final rule corrects the proposed rule and, in so doing, makes final § 1910.67(c)(2)(v) consistent with subpart V (§§ 1910.269(g)(2)(iv)(C)(*1*) and 1926.954(b)(3)(iii)(A) (79 FR 20640, 20700)).[87]

OSHA received several comments on the proposed revision of § 1910.67(c)(2)(v) (Exs. 59; 174; 183; 207). Darren Maddox, with Central Alabama Electric Coop (CAEC), supported requiring the use of personal fall arrest systems when employees work from aerial lifts (Ex. 59). He pointed out positioning straps do not provide fall protection, and that CAEC's employees now use personal fall arrest systems when working in aerial lifts (Ex. 59). Edison Electric Institute, on the other hand, said OSHA should not require fall protection for employees working in bucket trucks (Ex. 207).

The Utility Line Clearance Coalition (ULCC) and Tree Care Industry Association (TCIA) both recommended

[85] Since final § 1910.67(c)(2)(v) and § 1910.269(g)(2)(iv)(C)(*1*) are consistent, OSHA is eliminating the sentence in § 1910.269(g)(2)(iv)(C)(*1*) stating that final § 1910.67(c)(2)(v) does not apply. OSHA believes the sentence is not necessary and deleting it eliminates any potential for confusion.

[86] Letter available on OSHA's Web site at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24360.*

[87] Stakeholders commenting to the proposed rule appeared to recognize that OSHA's reference to positioning systems might be an error (Exs. 174; 183). For example, ULCC pointed out that the proposed definition of positioning systems does not appear to be applicable to line clearance work from aerial lifts because employees are not working on an elevated vertical surface (Ex. 83).

that OSHA allow employers to use body belts and short lanyards (3-foot maximum length) when their employees work from aerial lifts (Exs. 174; 183). TCIA contended that arborists and line-clearance tree trimmers (collectively referred to as ''line-clearance arborists'') often work in aerial lifts above high voltage wires and using body belts and lanyards provides the ''greatest protection'' against falling into energized power lines (Ex. 174). In addition, they said using a body belt with a short lanyard (*i.e.,* 3 feet) [88] ''provides for the shortest overall fall distance,'' which reduces free fall distances, and thus, fall arrest forces, as well as minimizing the risk of falling into power lines (Ex. 174). TCIA also said that body belts attached at the waist allow for ''the possibility of self-rescue,'' but did not provide further explanation (Ex. 174).

ULCC raised similar arguments supporting the use of body belts and lanyards when line-clearance arborists work from aerial lifts, particularly above power lines. They contended that using belts and lanyards in those situations has not resulted in undue risk to employees and requiring that employees use body harnesses, which typically have longer lanyards, would increase the risk of contact with power lines (Ex. 183). ULCC also argued that using body harnesses puts line-clearance arborists at greater risk of injury from falling into tree limbs and stubs from ''reduction cuts'' (Ex. 183). In addition, they contended line-clearance arborists feeding limbs and brush into chippers are a greater risk of serious injury or death because longer lanyards typically used with body harness could get dragged into the chipper.

ULCC also argued that the proposed rule does not provide an explanation for eliminating the use of body belts and lanyards when working from aerial lifts and fails to provide fall protection options for line-clearance work performed from aerial lifts.

TCIA and ULCC raised these same issues and arguments in the subpart V rulemaking and OSHA addressed them in great detail in the preamble to that final rule (79 FR 20383–88). OSHA did not find TCIA's and ULCC's arguments in the subpart V rulemaking to be convincing and nothing in their comments in this rulemaking changes OSHA's conclusion. Since TCIA's and ULCC's comments in this rulemaking are the same as those they made in the subpart V rulemaking, OSHA incorporates by reference the explanation OSHA provided in final subpart V and need not repeat that full discussion here. For the following reasons, consistent with final subpart V, OSHA has not adopted TCIA's and ULCC's recommendation that employers be permitted to use body belts and lanyards when their employees work from aerial lifts.

First, OSHA does not find persuasive TCIA's and ULCC's argument that body harnesses (*e.g.,* personal fall arrest systems) pose a greater hazard (*e.g.,* falling into an energized power line) than body belts and lanyards when employees, including line-clearance arborists, work from aerial lifts. As mentioned in the explanation of § 1910.140(d)(3) and closely examined in the construction fall protection rulemaking (59 FR 40702–03), body belts do not provide the level of protection that full body harnesses do. Body belts, unlike harnesses, expose workers to greater fall arrest forces and suspension trauma and significant hazards of slipping out of the body belt. In addition, TCIA's recommendation that OSHA allow employers to use body belts with 3-foot lanyards, instead of the required 2-foot lanyard, would expose workers to even greater fall arrest forces. In addition, ULCC's admission that some member employers ''mandate full body harnesses and lanyards'' undercuts their argument that using body harnesses, instead of body belts, exposes workers to ''significantly increased risk, especially when working above energized power lines'' from an aerial lift (Ex. 183).

Second, TCIA's and ULCC's unsupported claim that body belts allow workers to self-rescue is not correct. To the contrary, body belts significantly reduce the possibility of self-rescue after a fall because of the increased probability of serious internal injuries sustained from the initial impact forces, from body belt suspension trauma (especially unconscious suspension), or both.

Third, as discussed in detail in the preamble to final subpart V, OSHA does not consider the risk of falling into power lines to be as serious as TCIA and ULCC portray. Line-clearance arborists do not always work directly over power lines; they may work at the same height, below or to the side of power lines. In any event, stakeholders in the subpart V rulemaking said employers can reduce the risk of falling into power lines, without exposing workers to greater arrest forces and suspension trauma, by using personal fall arrest systems that have shorter lanyards (79 FR 20385).

Fourth, ULCC's argument that using body harnesses with longer harnesses puts line-clearance arborists at risk of getting caught in a chipper is unpersuasive. The final rule does not require that line-clearance arborists wear harness when they are not working on an elevated surface (*i.e.,* when working on the ground). Therefore, employers can eliminate that risk by requiring that line-clearance arborists remove their harnesses when using the chipper.

Employers also can reduce the risk by providing line-clearance arborists with harnesses that have a shorter lanyard.

Fifth, final § 1910.67(c)(2)(v), like subpart V (§ 1910.269(g)(2)(iv)(C)(*1*) and § 1926.954(b)(3)(iii)(A) (79 FR 20640, 20700)) provides employers with two options for protecting employees working in aerial lifts. They may use either a personal fall arrest system or travel restraint system. As mentioned, employers can use personal fall arrest systems that have a short lanyard. Also, since travel restraint systems must prevent a fall of any distance, the final rule allows employers to use either a body belt or body harness with travel restraint systems. OSHA notes, however, that a travel restraint system rigged to allow free fall even a small distance (*e.g.,* 2 feet) would not be an acceptable system under the final rule. For further discussion of the requirement that employers ensure employees use a personal fall arrest system or travel restraint system when working from an aerial lift, see preamble to final subpart V (79 FR 20383–88).

V. Final Economic and Final Regulatory Flexibility Screening Analysis

A. Introduction

This collection of final standards governing occupational exposure to slip, trip, falling-object and fall hazards on walking and working surfaces is a ''significant regulatory action'' under Executive Order 12866. Accordingly, the Office of Regulatory Analysis within OSHA prepared this Final Economic and Final Regulatory Flexibility Screening Analysis (FEA) for the final standard. In developing the FEA, OSHA, to the extent possible given the available resources, endeavored to meet the requirements of OMB's Circular A–4 (OMB, 2003), a guidance document for regulatory agencies preparing economic analyses under Executive Order 12866. In addition to adherence to Executive

[88] OSHA notes that final § 1910.140(e)(1)(i)(B) requires that positioning systems must be rigged to prevent the worker from free falling more than 2 feet. Therefore, TCIA's recommendation that line-clearance arborists be allowed to use 3-foot lanyards is not permitted under the final rule. OSHA also notes that as of April 1, 2015, § 1926.954(b)(3)(iv) requires that work-positioning systems be rigged so workers cannot free fall more than 2 feet.

Order 12866, OSHA developed this final rule with attention to the approaches to rulemaking outlined in Executive Order 13563.

This FEA addresses issues related to the costs, benefits, technological and economic feasibility, and economic impacts (including small business impacts) of the Agency's final revisions to subpart D, Walking-Working Surfaces, and subpart I, Personal Protective Equipment. OSHA's final feasibility and impact analysis builds upon the preliminary economic analysis that OSHA developed in support of the proposed standard and the record developed in this rulemaking. The analysis also evaluates regulatory alternatives to the final rule. The Office of Information and Regulatory Affairs in the Office of Management and Budget reviewed this rule as required by Executive Order 12866. Terminology, analytic methods, and standards appearing in a particular section of this FEA correspond to the source(s) of that section's requirements; for example, the legal concept of ''economic feasibility,'' which is a key subject of section V.G, is not recognized in E.O.s 12866 or 13563 or their associated guidance document, OMB Circular A–4. OSHA uses legal concepts, appropriate under the OSH Act and associated case law but distinct from any concepts in Circular A–4, in discussing economic feasibility (see Section III—Pertinent Legal Authority). Furthermore, OSHA discusses how benefit and cost estimates may differ given the differing analytic approaches set forth by the OSH Act, as interpreted in case law, and Circular A–4.

The purpose of the FEA is to:

- Identify the establishments and industries potentially affected by the final rule;
- Estimate current exposures to slip, trip, and fall hazards in general industry, and assess the technologically feasible methods of controlling these exposures;
- Estimate the benefits of the rule in terms of the number of worker deaths and injuries that employers will prevent by coming into compliance with the standard;
- Evaluate the costs that establishments in the regulated community will incur to achieve compliance with the rule;
- Assess the economic impacts and the economic feasibility of the rule for affected industries; and
- Evaluate the principal regulatory alternatives to the final rule that OSHA considered.

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires that a final regulatory flexibility analysis (FRFA) be prepared if an agency determines that a rule will impose a significant economic impact on a substantial number of small entities. To determine the need for a FRFA, OSHA voluntarily prepared a final regulatory flexibility screening analysis that identifies and estimates the impacts of the final standard on small businesses. Based on the screening analysis, presented in the last section of this FEA, the Assistant Secretary certifies that the final rule will not have a significant economic impact on a substantial number of small entities.

This FEA contains the following sections in addition to this Introduction:

- Assessing the Need for Regulation
- Industry Profile
- Benefits, Net Benefits, Cost Effectiveness, and Sensitivity Analysis
- Technological Feasibility
- Costs of Compliance
- Economic Impacts
- Final Regulatory Flexibility Screening Analysis

To develop the FEA, OSHA relied considerably on (1) the record created throughout the history of this rulemaking, (2) an analysis by OSHA's contractor, Eastern Research Group (ERG) (ERG, 2007), and (3) OSHA's Preliminary Economic Analysis (PEA) supporting the Walking-Working Surfaces NPRM and published in the **Federal Register** notice announcing the proposed standard (OSHA, 2010).

1. Reasons for Agency Action

Earlier in this preamble OSHA discussed the major revisions to the existing standards for walking-working surfaces and personal protective equipment (subparts D and I of part 1910) finalized by this rulemaking. OSHA designed the final standards to prevent a significant number of slips, trips, and falls that result in injuries and fatalities in general industry, including falls from ladders, roofs, scaffolds, and stairs.

The final standard also addresses hazards associated with falling objects. However, as noted below in Section D. Benefits, Net Benefits, Cost Effectiveness, and Sensitivity Analysis, and Section F. Costs of Compliance, because the final standard introduces no additional burden on employers beyond existing requirements, and because there were no comments in the record suggesting that additional economic impacts would result, OSHA expects that the final falling-object provisions will involve no new costs or benefits.

Some examples from OSHA's inspection database (OSHA, 2012a and 2007), provided in the following paragraphs, best illustrate the kinds of accidents the standards will prevent, and how the revised standards will prevent them.

A repairperson for a specialty metals producer in Pennsylvania was replacing a water cooling panel (approximately 8-ft. high by 12-ft. long) on a basic oxygen furnace vessel. To access the panel, he placed a ladder on an 8-in. diameter pipe. When the employee attempted either to gain access to the panel or to secure the ladder, he fell 22 feet to the ground. He sustained a blunt-force trauma injury to his head and died. OSHA cited and fined the employer for a violation of § 1910.23(c)(1), Protection of open-sided floors, platforms, and runways, and § 1910.25(d)(2)(i), Use of ladders, along with other standards. OSHA believes that the clarifications of the requirements for the safe use of ladders and the duty to have fall protection will prevent accidents such as the one described above (OSHA, 2007, Inspection No. 123317679).

In a window cleaning operation, two employees were working from boatswain's chairs suspended from a roof by two transportable roof rollers; they lowered their chairs down the side of the building using controlled-descent devices. A third employee was on the roof pushing the rollers back and forth to move his coworkers from window to window. The third employee was moving the roller on one end of the building when one of its wheels slipped off the edge of the parapet wall, causing the rollers, which were tied together, to fall between six and seven stories to the ground. The first two employees, with their lifelines attached only to the suspension point on the rollers, also fell to the ground and sustained serious injuries. When one of the rollers went over the edge, it catapulted the third employee off the roof; that employee fell approximately 84 feet to the ground and died from the fall. In the investigation, OSHA determined that the employer did not anchor the rollers to the roof, and cited the employer for violating the general duty clause (Section 5(a)(1)) of the OSH Act. OSHA believes that compliance with the requirements for rope descent systems in the final standard (§ 1910.27(b)) will help to prevent this type of accident (OSHA, 2007, Inspection No. 303207633).

A 49-year-old service technician fractured five vertebrae and eventually died from the injuries received when he fell 11 feet from a fixed ladder to a concrete landing while performing air-conditioning service work on the roof of a shopping mall. OSHA's investigation of the August 24, 2004, accident identified the likely cause as the absence of uniform spacing between the ladder rungs throughout the climb (the space between the top two rungs/steps was 28 inches, whereas the space between lower rungs was much narrower). Section 1910.23(b)(2) in the final standard requires that, with a few exceptions, the spacing for rungs, cleats, and steps of ladders be not less than 10 inches (25 cm) apart nor more than 14 inches (36 cm) apart, as measured between the center lines of the rungs, cleats, and steps. OSHA believes that compliance with this provision will prevent accidents such as the one described here (OSHA, 2007, Inspection No. 308003953).

As a final example, an employee in a South Dakota feed mill was atop a soybean storage bin gauging the level of the contents when he fell approximately 24 feet onto a concrete surface. The employee suffered head and upper body injuries that resulted in his death. The subsequent OSHA investigation resulted in citations for violations of the general duty clause and provisions in existing subpart D regulating floors, platforms, and railings. OSHA believes that the final revisions to subpart D will remove any ambiguity in the scope or purpose of the rule, which will prevent falls from storage bins and related surfaces (OSHA, 2007, Inspection No. 102761012).

The accidents described above represent a small sample of the many slip-, trip-, and fall-related fatality and injury cases that OSHA's final standards are designed to prevent. Appendix A presents a larger set of preventable fatal workplace accidents taken from the OSHA Integrated Management Information System (IMIS) database for 2006–2010 that involve slips, trips, or falls.[89] To compile the accident dataset, OSHA searched the IMIS database for fatal work place injuries in general industry resulting from falls. The search excluded SIC codes for Construction, Agriculture, and Water Transportation/ Maritime and produced 974 records. Of those 974 records, the dataset in Appendix A focuses on the following types of falls: (1) Falls from ladders (ladders type unspecified, fixed ladders, extension ladders, step ladders, rolling ladders, other ladders); (2) Falls from scaffolds (scaffolds, scaffold ladders); (3) Falls from roofs (roofs, falls through skylights); (4) Falls from walking surfaces (slips, trips); (5) Falls from stairways; (6) Falls involving window washing; (7) Falls involving chimney work; (8) Falls involving manholes; and (9) Other types of falls. These categories alone represented 290 of the possible 974 fatal fall incidents that would be covered by the D&I standard.

When establishing the need for an occupational safety and health standard, OSHA must evaluate available data to determine whether workers will suffer a material impairment of their health or functional capacity resulting from exposure to the safety or health hazard at issue. Prior to promulgating a standard, the Agency also must determine that ''a significant risk of harm exists and can be eliminated or lessened by a change in practices.'' See *Industrial Union Dep't* v. *American Petroleum Institute,* 448 U.S. 607 (1980). *See also* 58 FR 16612, 16614, (March 30, 1993) (OSHA must conclude that the standard it is promulgating will substantially reduce a significant risk of material harm).

OSHA determined that the best available data for quantitatively estimating the risks associated with slips, trips, and falls in general industry come from the Bureau of Labor Statistics (BLS) injury and illness survey and census. OSHA relies on federal survey and census data from recent years to determine the risk to similarly exposed employees across industry in analyzing other safety standards (*e.g.,* Confined Spaces in Construction at 80 FR 25366 (May 4, 2015)).

Other regulatory and non-regulatory entities for research and policymaking widely accept and use these data sets.[90]

As previously discussed in section II of this preamble (Analysis of Risk), OSHA determined that hazards associated with walking and working on elevated, slippery, or other surfaces pose significant risks to employees, and that the revisions to subparts D and I are reasonable and necessary to protect affected employees from those risks. Based on the BLS data showing the number of injuries and fatalities currently occurring and OSHA's judgments about the percentage of these injuries and fatalities that would be averted as a result of the standards, the Agency estimates that full compliance with the revised walking-working surfaces standards will prevent 29 fatalities and 5,842 lost-workday injuries annually. These benefits constitute a substantial reduction of significant risk of material harm for the exposed population of approximately 5.2 million employees in general industry.

2. Feasibility

The Agency must show that the standards it promulgates are technologically and economically feasible. (See 58 FR 16612.) A standard is *technologically feasible* if the protective measures required already exist, available technology can bring the measures into existence, or reasonable designs and developments in technology can create the measures.[91] Protective measures employers take to comply with safety standards generally involve the use of engineering and work-practice controls. Engineering controls include, for example, ladder safety systems, guardrails, toeboards, or other devices or barriers that protect employees from exposures to slip, trip, and fall hazards. Work-practice controls are techniques that employees use to perform their jobs (for example, safe climbing techniques on ladders). Employers also can use administrative controls (such as job rotation) and personal protective equipment (PPE) (such as harnesses and lanyards) to comply with safety standards.

A standard is *economically feasible* if the cost of meeting it does not threaten the existence or competitive structure of an industry. An OSHA standard may be economically feasible even if it imposes costs that will put some marginal firms out of business.[92] As discussed in more detail below, OSHA concludes that the final revisions to subparts D and I are both economically and technologically feasible.

3. Methodological Considerations in Development of the FEA

OSHA prepared an economic analysis to estimate the benefits and costs of the revisions to subparts D and I as required by E.O. 12866. Since 2002, under the direction of the Office and Management and Budget, the Agency ''monetized'' the value of the injuries, illnesses, and fatalities that new standards will prevent, *i.e.,* it monetized the value of expected benefits. Monetized values provide a common metric for both benefits and costs. When preparing an economic analysis in support of a proposed or final rule that is economically significant under E.O. 12866, OSHA presents annual estimates of benefits and costs. The Agency

[89] The IMIS database contains information on over 2.5 million inspections conducted since 1972. The information is continually being updated with new data originating from OSHA federal and state enforcement offices.

[90] See, for example, NIOSH, 2004, and FMCSA, 2010.

[91] See *Society of the Plastics Industry* v. *OSHA,* 509 F.2d, 1301, 1309 (1975); *USWA* v. *Marshall,* 647 F.2d, 1189 (1980); *American Textile Manufacturers* v. *Donovan,* 452 U.S. 490 (1981); and *Building and Construction Trades Dept., AFL–CIO* v. *Brock,* 838 F.2d 1258 (1988)).

[92] See *Industrial Union Dept.* v. *Hodgson,* 499 F.2d 467 (1974); *USWA* v. *Marshall,* 647 F.2d, 1189 (1980); and *American Textile Manufacturers* v. *Donovan,* 452 U.S. 490 (1981)).

believes that this approach offers the simplest and clearest way to assess the economic effects of its standards. Computing annual estimates focuses the Agency's analysis on information from current conditions and recent years, which the Agency deems the best, *i.e.,* most accurate and reliable, information. OSHA typically assumes a ten year annualization period for one-time costs associated with a rule.[93] In the case of this final rule for subparts D and I, adding additional years to the period of the analysis would not change any major policy conclusions.

To characterize the effects of a new standard, the Agency estimates the costs and benefits expected to accrue as regulated entities move from the current state of affairs to full compliance with the rule. Accordingly, OSHA does not include injuries or fatalities already preventable through compliance with existing regulations in its assessment of the benefits expected from compliance with the new standard. Similarly, the Agency does not include the cost of complying with existing standards in its assessment of what it will cost employers to comply with the new standard. The Agency assumes that all employers will fully comply with the standard. OSHA's analysis also assumes that employers incur all costs in the first year following promulgation of the final standard (with ongoing costs incurred annually beginning in Year 1), and that benefits result immediately.

The Agency employs a ''willingness-to-pay'' (WTP) methodology to estimate benefits. Data from the BLS provide the number of expected injuries and fatalities occurring currently and assumed to continue into the future in the absence of this regulatory standard, OSHA makes expert judgments about the percentage of these injuries and fatalities averted as a result of the standard, and the Agency uses WTP estimates from the extant literature to assign monetary values to these injuries and fatalities. OSHA bases its estimates of willingness to pay on empirical studies that statistically analyze the effects of fatality and injury rates on wage rates to arrive at individuals' trade-off between higher wages and an incremental increase in occupational risk. That trade-off allows economists to calculate the implicit value of a statistical life (VSL).[94] Many government regulatory authorities, such as the National Highway Traffic Safety Administration and the Environmental Protection Agency, use the VSL as a metric, but it is particularly appropriate for occupational regulations since it is derived from occupational risks and wages.

The primary alternative to a WTP approach is a ''cost-of-injury'' (COI) approach. The COI approach accounts for the various costs to all parties associated with an injury or fatality, including medical costs, the costs of work disruption from accidents and accident investigations, indirect costs to employers (*e.g.,* absenteeism, hiring costs), lost wages or job opportunities, and rehabilitation expenses. The COI approach results in ascribing costs and benefits to many involved entities: The employer, the employee, workers' compensation programs, health insurance providers, federal disability programs, governmental bodies, and taxpayers, among others. A COI approach does not capture the values of pain and suffering, impacts on families, or similar parameters, and for that reason, the Agency believes that WTP is superior.

The Agency's calculation of benefits and costs adopts the perspective of society as a whole. Compliance costs are borne directly by affected employers but these costs may ultimately be borne by a wide variety of parties including employers, consumers, government, and employees. Benefits accrue to employees, families, insurers, and government, as well as to employers.

4. OSHA's Estimates of Benefits, Costs, and Net Benefits

a. Introduction

Employees throughout general industry are exposed to slip, trip, and fall hazards that cause serious injury and death. OSHA estimates that, on average, approximately 202,066 serious (lost-workday) injuries and 345 fatalities occur annually among workers directly affected by the final standard. Although better compliance with existing safety standards may prevent some of these incidents, research and analyses conducted by OSHA found that many preventable injuries and fatalities would continue to occur even if employers were complying fully with the existing standards. Even if there were full compliance with the existing standards, OSHA estimates that full compliance with the final standard will prevent an additional 5,842 lost-workday injuries and 29 fatalities each year.

An additional benefit of this rulemaking is that it will provide updated, clear, and consistent safety standards for walking and working surfaces and personal fall protection equipment. Most of the existing OSHA standards for walking-working surfaces are over 30 years old and inconsistent with both national consensus standards and more recently promulgated OSHA standards addressing fall protection.

Presently, OSHA's standards for fall protection on walking-working surfaces in general industry differ from the comparable standards for construction work. In most instances, employees use similar work practices to perform similar tasks, irrespective of whether they are performing construction or general industry work. Whether OSHA's construction or general industry standards apply to a particular job depends on whether the employer is altering the system (construction work) or maintaining the system (general industry work). For example, replacing an elevated ventilation system at an industrial site would be construction work if it involves upgrading the system, but general industry work if it involves an in-kind replacement. Since the work practices used by the employees would most likely be identical in both situations, it would ease compliance if OSHA's general industry and construction standards were as consistent as possible. Under OSHA's existing requirements, however, different requirements might apply to similar work practices, *e.g.,* an employer overhauling two or more ventilation systems may have to comply with two different sets of OSHA requirements if one project is considered construction and another general industry. The existing inconsistencies between the construction and general industry standards make it difficult for employers to develop appropriate work practices for their employees. Consequently, employers and

[93] As discussed later in this FEA, fixed ladders, cages, and wells may have a functional life longer than ten years. However, the fall protection equipment and other safety controls applied in this FEA are assumed to have a life of ten years, and the cost analysis for these controls reflects that lifespan. The Agency estimated that fixed ladders have an average life of 30 years. Replacement of the fixed ladders would occur evenly across the 30-year period, and, with a phase-in date 20 years after publication, some ladders still would require replacement anywhere from 1 to 10 years after the 20-year phase-in date. OSHA calculated first-year costs (at Year 0) of installing ladder safety systems for the annual percentage (3.3 percent each year) of the total stock of fixed ladders (24′ to 30′ in height) that from Year 21 to Year 30 will no longer meet the requirements of the standard. Then OSHA used a seven percent discount rate to annualize over 10 years. First-year costs total $8.5 million and annualized costs total $1.2 million. For further details, see Ex. [OSHA Excel Workbook], tabs retrofit_28_calc and retrofit_28.

[94] For example, if workers are willing to pay $50 each for a 1/100,000 reduction in the probability of dying on the job, then the imputed value of an avoided fatality is $50 divided by 1/100,000, or $5,000,000. Another way to consider this result is to assume that 100,000 workers made this trade-off. On average, $5,000,000 would save one life.

For discussion on WTP methodologies, see Viscusi and Aldy (2003).

employees told OSHA that they would like the two standards to match more closely. This final rule achieves that result.

OSHA neither quantified nor monetized several other benefits of the final standard. First, OSHA did not estimate the number of fall injuries prevented that do not result in lost workdays. Second, OSHA did not estimate the improvements in efficiency of compliance associated with clarifying the existing rule and making it consistent with current national consensus standards.

OSHA's benefit estimates are most sensitive when it comes to estimating the percentage of current injuries and fatalities that full compliance with the final standard will avoid. The true benefits of the final standard depend on how well the cases reviewed represent actual fall-related fatalities in general industry.

The Agency believes that its estimate of about 345 annual fatalities in general industry involving slips, trips, and falls is more certain than the estimate of the percentage of fatalities avoided because the estimate of the annual number of baseline fatalities comes from seven years of recent incident data that corroborate eleven prior years of incident data. OSHA's estimate of fatalities avoided is more sensitive because it is based on professional judgment after reviewing incident reports in the record. Moreover, OSHA believes that its benefit estimates have a tendency toward underestimation, as training and work practices adopted in an effort to comply with the final rule will likely increase the use of safety equipment and safer work techniques, thereby further reducing fatalities and injuries.[95]

[95] OSHA notes that the literature on the effectiveness of training indicates positive benefits, but the extent of benefits varies depending on intervention methodology and other factors. See research by the National Institute for Occupational Safety and Health: Cohen and Colligan, 1998, and NIOSH, 2010 (*http://www.cdc.gov/niosh/docs/2010-127/pdfs/2010-127.pdf*).

The impacts exhibit below presents a summary of the annualized costs and benefits for each section of the final standard, assuming a discount rate of seven percent. In addition to estimating annualized costs using a discount rate of seven percent, OSHA, for sensitivity purposes, also used OIRA's recommended alternative discount rate of three percent. Under the alternative scenario of a three-percent discount rate, OSHA estimates that annualized costs would decline from $305.0 million to $297.0 million. For both this scenario and for the primary (seven-percent rate) scenario, OSHA assumed that employers will incur all costs (first-year and recurring) on implementation of the final standard. OSHA also is assuming that the benefits outlined in this section will accrue once the rule takes effect. Section D of this FEA (Benefits, Net Benefits, Cost Effectiveness, and Sensitivity Analysis) describes in detail the other cost-related uncertainties.

BILLING CODE 4510–29–P

Impacts Exhibit V-1: Estimated Annualized Costs and Benefits of the Final Rule

Requirement	Benefits			Costs ($millions)
	Type of Accident Prevented	Fatalities Prevented	Injuries Prevented	
§1910.22 General Requirements	Fall on same level	0.7	1,371	$33.2
	Fall from floor, dock, or ground level	1.4	399	
	Fall from building girders or other structural steel	Fraction of 0.4	Fraction of 13	
§1910.23 Ladders	Fall from ladder	Large fraction of 11.4	Large fraction of 2,161	$11.3
	Fall from ship, boat, n.e.c.[a]	Fraction of 0.2	Large fraction of 415	
§1910.24 Step Bolts and Manhole Steps	Fall from ladder	Small fraction of 11.4	Small fraction of 2,161	$18.0
	Fall down stairs or steps	1.0	736	
	Fall to lower level, n.e.c.	3.4	362	
§1910.27 Scaffolds	Fall from scaffold, staging	Large fraction of 5.4	Large fraction of 239	$71.6
§1910.28 Duty to Have Fall Protection	Fall from ladder	Small fraction of 11.4	Small fraction of 2,161	$55.9
	Fall from roof	Large fraction of 5.1	Large fraction of 86	
§1910.29 Fall Protection Systems Criteria and Practices	Fall from building girders or other structural steel	Fraction of 0.4	Fraction of 13	$13.1
	Fall from ship, boat, n.e.c.	Fraction of 0.2	Fraction of 415	
	Fall from scaffold, staging	Small fraction of 5.4	Small fraction of 239	

Impacts Exhibit V-1: Estimated Annualized Costs and Benefits of the Final Rule (continued)

Requirement	Benefits			Costs ($millions)
	Type of Accident Prevented	Fatalities Prevented	Injuries Prevented	
§1910.30 Training Requirements	Multiple fall categories	Fraction of benefits for many fall categories	Fraction of benefits for many fall categories	$74.2
§1910.132 General Requirements	Multiple fall categories affected by assessment of hazards associated with personal fall protection equipment	Fraction of benefits for many fall categories	Fraction of benefits for many fall categories	$12.7
§1910.140 Fall Protection	Multiple fall categories affected by equipment design specifications	Fraction of benefits for many fall categories	Fraction of benefits for many fall categories	$11.0
Rule Familiarization	Multiple fall categories	Fraction of benefits for many fall categories	Fraction of benefits for many fall categories	$4.1
Total – Preferred Option		29	5,842	$305.0
Less Stringent Alternative – Narrower Scope for Training Requirements		Lower Benefits than under Preferred Option		Lower Costs than under Preferred Option
More Stringent Alternative – Mandated Combination of Cages, Wells, Landing Platforms, and Ladder Safety Systems		Modestly Higher Benefits than under Preferred Option		Significantly Higher Costs (Possibly over $1 Billion) than under Preferred Option

[a]n.e.c.: Not elsewhere classified; term used throughout this FEA.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

BILLING CODE 4510–29–C

b. Changes From OSHA's Preliminary Economic Analysis to This Final Analysis

As shown below in the summary table for Section B of this FEA (Assessing the Need for Regulation), OSHA projects that the final rule will produce annual benefits of 29 fatalities and 5,842 lost-workday injuries prevented, while annualized costs will total $305.0 million. OSHA's preliminary estimate of benefits (in the Preliminary Economic Analysis (PEA) for the proposed rule) was 20 fatalities and 3,706 lost-workday injuries prevented, and the Agency's preliminary estimate of costs in the PEA totaled $173.2 million. The later sections of this FEA explain the reasons for these changes in detail. To summarize, OSHA notes that the primary factors contributing to larger benefits and costs (in relation to the PEA) are: (1) Explicit requirements for ladder safety systems for fixed ladders and structures with step bolts, guardrails for slaughtering platforms, and roof anchor systems for rooftop operations; (2) additional time allotted for inspection of walking-working surfaces for dust and other hazardous substances, consistent with a clarification in the regulatory text; and (3) an increase in the number of workers in outdoor advertising and other activities who will need training in using fall protection equipment.

c. Alternative Regulatory Approaches

To determine the appropriate approach for addressing the occupational risks associated with slips, trips, and falls in general industry, OSHA considered many different factors and potential alternatives. The Agency examined the incidence of injuries and fatalities, and their direct and underlying causes, to ascertain revisions to the existing standards. OSHA reviewed these standards, assessed current practices in the industry, collected information and comments from experts, and scrutinized the available data and research.

OSHA faces several constraints in determining appropriate regulatory requirements. Under Section 3(8) of the OSH Act, OSHA standards must be ''reasonably necessary or appropriate to provide safe or healthful employment and places of employment.'' Also, under Section 6(b)(8) of the OSH Act, to the extent an OSHA standard differs substantially from existing national consensus standards, the Agency must explain why the OSHA standard will better accomplish the purposes of the OSH Act. As noted elsewhere, OSHA standards also must be technologically and economically feasible and cost effective, in the sense of the term as used in the OSH Act as interpreted by the courts.[96] Section IV, Summary and Explanation of the Final Rule, earlier in this preamble, provides a full discussion of the basis for the regulatory requirements in the final rule. The Final Regulatory Flexibility Screening Analysis later in this section of the preamble discusses the regulatory alternatives considered by OSHA. In that section, Table V–34 presents impacts associated with regulatory alternatives for selected provisions of the final standard. OMB's Circular A–4, *Regulatory Analysis,* recommends that agencies ''should analyze at least three options: The preferred option; a more stringent option that achieves additional benefits (and presumably costs more) beyond those realized by the preferred option; and a less stringent option that costs less (and presumably generates fewer benefits) than the preferred option'' (p. 16). This final rule presents the preferred option. The less stringent alternative, rejected by OSHA, would reduce the number of fall-hazard categories requiring training; however, the cost of this alternative would remain significant (but below the cost of $74.2 million for the preferred alternative training requirements), with a reduction in benefits relative to the preferred alternative. OSHA did not explicitly quantify this alternative.

The more stringent alternative would require that employers provide cages, wells, landing platforms, and ladder safety devices for all fixed ladders; the cost of this alternative would be highly significant, while the incremental benefits would be modest relative to the preferred alternative. OSHA notes that the 1990 NPRM estimated the annualized cost for cages, wells, and other safety devices for fixed ladders to be $1.6 billion in 1990 dollars. Evidence in the record suggests that cages and wells are an outdated technology that do not provide adequate fall protection for workers climbing ladders, and that ladder safety devices are a recent development that provide a feasible alternative, or complement, to cages and wells (Exs. 113; 198). Therefore, if employers could not use such devices, the more stringent alternative requiring cages, wells, and landing platforms would be far more expensive than to the final rule.

B. Assessing the Need for Regulation

OSHA previously considered non-regulatory alternatives and established the need for regulation of walking-working surfaces when it promulgated the standard for fall protection in construction (59 FR 40672). The Agency asserts that the same need for regulation applies when employees in general industry are engaged in tasks on walking-working surfaces. Employees in general industry performing work on floors, other ground-level surfaces, or at heights are exposed to a variety of significant hazards—particularly slips, trips, and falls—that can and do cause serious injury and death. Although some of these incidents might have been prevented by better compliance with existing safety standards, research and analyses conducted by OSHA have found that many preventable injuries and fatalities could continue to occur even if employers fully complied with the existing standards. Relative to full compliance with the existing standards, OSHA estimates, in Section D of this FEA, that full compliance with the final standard would prevent an estimated additional 5,842 injuries and 29 fatalities annually.

Executive Order 12866 provides that ''[e]ach agency shall identify the problem that it intends to address [via regulation] . . . including, where applicable, the failures of private markets.'' Executive Order 13563 reiterates that requirement. In the absence of regulations, market failures can prevent free markets from providing the levels of occupational safety—and particularly the levels of safety for workers affected by this standard—that would maximize net benefits to society.

In the absence of regulation, many employees would simply be unaware of the hazards that walking-working surfaces present or the procedures to follow to protect against such hazards. Even those employees with years of experience working at elevated or other surfaces may lack training on fall protection, information about specific fall hazards, or needed equipment for preventing or limiting the impact of falls.

The final standard for walking-working surfaces in general industry addresses these problems. The benefits analysis presented in Section D of this FEA shows that many accidents are

[96] The OSHA Act as interpreted by the courts requires that regulations be cost effective in the sense that no other alternative in the record addressing the same hazards has an equivalent reduction in the risk associated with those hazards; that is, reduces those risks to the same extent at lower cost (*Am. Textile Mfrs. Inst.* v. *Donovan,* 453 U.S. 490, 514 n. 2 (1981); *UAW* v. *OSHA,* 37 F.3d 665, 668 (D.C. Cir. 1994)). This is not a wide ranging invitation to compare cost effectiveness across many risks but a narrow assurance that the exact same effects could not be achieved at less cost. An analysis of regulatory alternatives is provided in Section V.H.8.

potentially preventable with better information on worksite conditions and the provision of the proper procedures and equipment for fall protection. In cases where employers do provide training on fall prevention, that training may be incomplete or ineffective in the absence of a specific set of requirements to train to. OSHA's analysis of benefits and costs, conducted with an orientation toward the OSH Act and associated case law, shows that the benefits of the final standard significantly exceed its costs.

To better understand the market failures that create the need for this rule, it is necessary to examine the economic incentives that underlie employer decisions with respect to workplace safety and health. An employee typically accepts the risks associated with a particular job in return for two forms of compensation—(1) a wage premium for assuming that risk, and (2) expected compensation for damages in the event of occupational injury or illness. The rational profit-maximizing employer will make investments in workplace safety to reduce the level of risk to employees only if such expenditures result in at least an offsetting reduction in the employer's payouts of wage premiums for risk and compensation for damages. To the extent that the sum of the costs of wage premiums and compensation for damages accurately represents the total damages associated with workplace accidents, the rational employer will accordingly arrive at the socially optimal level of accident prevention from an economic efficiency viewpoint.

Consequently, the major possible sources of market failure, resulting in an ''under-provision'' of health and safety, would be either: (1) The existence of occupational accident costs that are borne neither by the employee nor by the employer or (2) the wage premiums or compensation for damages are not fully responsive to changes in employer-specific workplace risk. Both cases apply here.

In the first case, there are some occupational injury and illness costs that are incurred by neither the employer nor the employee. For instance, neither of those two parties has a vested interest in Federal and State taxes that go unpaid as a result of an employee injury. Such taxes typically represent 15 percent (for Social Security alone) to 26 percent of the total value of the income loss to the employee (IRS, 2013; Urban Institute/Brookings, 2012).[97] Tax losses are likely to be significant because (1) workers' compensation payments are not subject to Federal income or Social Security taxes (IRS, 2012), and (2) many studies have found that income losses not compensated by workers' compensation are significant (NASI, 2012). (There are some other possible incentive effects with respect to tax policy that might either encourage or discourage safety, but they represent a small percentage of the total value of a statistical life or injury by comparison.)

In the second case, as discussed below, the costs employers pay in compensation for damages or wage premiums are not fully responsive to changes in employer-specific workplace risk.

Most employers cover—and are required to cover—compensation for injured employees through workers' compensation insurance. (Some very large employers may self-insure in some states.) States highly regulate premiums for workers' compensation insurance and generally employ a combination of a class rating and an experience rating in deriving premiums (NCCI, 2013; Ashford, 2006). The class rating is based on the average risk for employees in the same occupations as those working for the employer. The basis of the experience rating is the employer's actual workers' compensation claims over the past several years. Very small firms are almost entirely class-rated; even medium-sized firms are partly class-rated; and it will take even firms that are fully experience-rated several years before their insurance premium levels fully reflect any change in their workplace safety performance.[98] As a result, most employers will not realize fully or promptly the gains from their expenditures to avoid workplace injury, illness, and fatality risks in the form of reduced workers' compensation premiums. The result is an insufficient level of worker protection from a societal perspective.

Furthermore, workers' compensation covers only a small fraction of most estimates of the willingness to pay to prevent a fatality.[99] Additionally, workers' compensation payments do not fully compensate injuries in that workers' compensation provides no payments for pain and suffering or losses other than lost wages or medical expenses associated with injuries. There is extensive evidence that workers' compensation does not even fully restore wages lost as a result of long-term disability (Ashford, 2006).

Having to pay wage premiums for risk is another economic incentive for employers to mitigate occupational risk. However, wage premiums do not respond to changes in risk level very strongly, due to information asymmetries. For an employer to have an adequate incentive to implement measures that will prevent workplace accidents, it is not sufficient that employees simply know that their work is dangerous, or even know quantitatively that their occupation has a given risk. Employees must know the exact nature and likely quantitative effects of their employer's safety measures and systems; have a reasonable expectation that their employer will continue to provide existing safety measures in the future; and be able to act on their knowledge of risk by readily changing workplaces or changing wage demands in response to differences in levels of risk.[100] OSHA believes that even skilled workers exposed to the risks of slips, trips, and falls (including some persons injured in accidents preventable by the final rule who fall in that category) lack such detailed employer-specific knowledge or the ability to act on it. Further, employees who typically work at a variety of different sites, including sites controlled by multiple employers, will find it particularly challenging to determine future risk levels, as these levels will vary from site to site.

In summary, OSHA believes that: (1) The provisions of the final rule are necessary to assure that employees have the information, procedures, and equipment they need to protect themselves; (2) neither employers nor

[97] The average federal tax rate for 2009 for the middle quintile of household income was 11.1 percent (Urban Institute/Brookings, 2012).

[98] This outcome, of course, reflects an accounting point. Premiums due to class rating, by definition, do not change with an individual employer's injury experience. There is some empirical evidence, using a difference in differences methodology, that (small) firms that move from class to experience rating decrease their total claims by 8 to 12 percent (Neuhauser et al., 2013).

[99] While workers' compensation varies by state, Leigh and Marcin (2012) estimate that the average indemnity benefits for a fatality are $225,919, far less than willingness-to-pay estimates. For example, as explained in Section D of this FEA, OSHA uses a willingness-to-pay measure of $8.4 million per life saved in 2010 dollars. Other agencies use different estimates, but all the values are in the millions of dollars.

[100] Furthermore, bargaining power differences or external constraints must not interfere in the wage setting process—as they do in circumstances of monopsony or multiemployer collective bargaining agreements, for example. Bargaining power differences may occur, for example, in small communities where a single manufacturer may be the employer for certain kinds of skills, or the more general issue that an employee's firm specific skills (such as understanding of unique processes or equipment) are in demand by only a single employer.

employees absorb the full costs of occupational injuries and fatalities; and (3) wage premiums and workers' compensation insurance are not sufficiently responsive to changes in risk to assure that employers will reduce risk to the socially optimal level. The rule is, therefore, necessary to address market failures that result from externalities and information asymmetries that lead to the provision of insufficient levels of worker safety.

C. Profile of Affected Industries, Firms, Workers, and Other Factors of Production

1. Introduction

This section presents OSHA's profile of the firms, establishments, and employees within the industries affected by OSHA's revision to 29 CFR part 1910, subparts D and I. The Agency based this profile on data assembled and organized by its contractor, Eastern Research Group (ERG, 2007), and updated using more recent data from the same data series used previously.

2. Affected Industries and Employees

Revised subparts D and I apply to employers and industries covered by OSHA's standards for general industry in 29 CFR part 1910. Similarly, all other subparts in part 1910 affected by these revisions to OSHA's walking-working surfaces standards would impose requirements on employers in general industry under OSHA's jurisdiction.[101] The general industry category excludes establishments in the agriculture, construction, maritime (longshoring, marine terminal, and shipyards), and mining industries (except for oil and gas extraction). Also excluded from the final standard are employee tasks on surfaces that fall outside of OSHA's jurisdiction due to location or operational status, or those tasks that are subject to unique industry-specific fall protection requirements addressed elsewhere in part 1910, including § 1910.268, Telecommunications, and § 1910.269, Electric power generation, transmission, and distribution. An example of a jurisdictional category excluded from the scope of the final rule based on location or operational status is employee exposure to fall hazards when railroad rolling stock is traveling on rails or trucks are traveling on highways; the Department of Transportation regulates these operations.

The walking-working surfaces covered by the final standards are present in nearly every establishment. Therefore, OSHA assumes that the number of establishments and employees potentially affected by subpart D includes all establishments and employees in general industry. Table V–1 shows the total number of establishments and employees potentially affected by revisions to subpart D, with the data listed in order by the North American Industry Classification System (NAICS) 4-digit industry code (OMB, 2007). Relying on the U.S. Census' Statistics of U.S. Businesses for 2007, OSHA estimates that the final standard will affect 6.9 million establishments employing 112 million employees; the comparable figures in the PEA were 6.7 million establishments and 112 million employees, based on 2006 data. Table V–1 also provides economic profile statistics for the industries covered by the final standard.

For purposes of estimating training requirements with respect to ladders, OSHA estimated that these provisions would apply to the 5.2 million employees engaged in construction, installation, maintenance, repair, and moving operations in general industry. These employees represent the main group of workers affected by the final standards; however, the final standards may affect employees doing other types of operations and some general industry employees engaged in installation, maintenance, and repair operations will not be affected. Therefore, to estimate the population affected, OSHA identified general industry employees in occupational codes involving construction, installation, maintenance and repair. There certainly are ladder users in other occupations, but the occupations OSHA has included also include many persons whose work typically would not involve the use of ladders (*e.g.,* computer repair, electronics repair, or construction work such a plumbing or carpet repair). As a result, while the OSHA list of occupations examined for purposes of costing ladder training may not include all possible persons receiving such training, it is balanced by the inclusion of some occupations that will not need training. This approach assumes that employees in construction occupations, but employed by general industry employers rather than construction employers, routinely engage in what OSHA labels as maintenance (*i.e.,* a general industry activity) rather than construction activities.

In the PEA, OSHA used Census[102] data on payroll and receipts to estimate average revenue per establishment in 2006 for each 4-digit NAICS industry. For this FEA, revenue data for 2007 were available from Census's *Statistics of U.S. Businesses;* Table V–1 reports these revenue data as average receipts per establishment by 4-digit NAICS industry in Table V–1.[103]

BILLING CODE 4510–29–P

[101] For example, subpart F—Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms, would be affected by the revisions to subparts D and I. For a compilation of all standards affected by these revisions, see the Final Regulatory Text at the end of this document.

[102] "Census" refers to the U.S. Census Bureau.

[103] At the time the Agency was developing this FEA, the most recent year for detailed industry-specific revenue was 2007 Statistics of US Businesses. In the years since that date the US economy has experienced a recession and a recovery. Because new hires were greater in 2007, this had the effect of increasing costs.

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
1131	Timber Tract Operations	450	$1,669	2,632	NA[d]	NA	NA
1132	Forest Nurseries and Gathering of Forest Products	231	$1,522	2,216	NA	NA	NA
1133	Logging	9,810	$1,086	59,597	16,250	2,580	15.9%
1141	Fishing	2,062	$1,161	5,302	NA	NA	NA
1142	Hunting and Trapping	327	$688	1,845	NA	NA	NA
1153	Support Activities for Forestry	1,755	$819	13,740	NA	NA	NA
2111	Oil and Gas Extraction	7,542	$31,038	141,809	51,040	24,910	48.8%
2211	Electric Power Generation, Transmission and Distribution	9,611	$45,816	503,134	192,210	130,970	68.1%
2212	Natural Gas Distribution	2,283	$54,187	79,354	47,610	32,520	68.3%
2213	Water, Sewage and Other Systems	4,780	$2,033	40,269	27,410	10,760	39.3%
3111	Animal Food Manufacturing	1,817	$21,156	46,983	36,000	3,580	9.9%
3112	Grain and Oilseed Milling	830	$87,089	58,049	42,600	5,380	12.6%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
3113	Sugar and Confectionery Product Manufacturing	1,788	$15,751	73,457	55,980	6,510	11.6%
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	1,668	$38,180	162,253	138,180	15,690	11.4%
3115	Dairy Product Manufacturing	1,612	$55,897	129,692	98,900	9,660	9.8%
3116	Animal Slaughtering and Processing	3,817	$40,958	487,813	464,910	25,900	5.6%
3117	Seafood Product Preparation and Packaging	685	$16,865	33,169	28,540	1,500	5.3%
3118	Bakeries and Tortilla Manufacturing	10,269	$5,472	284,998	204,000	11,840	5.8%
3119	Other Food Manufacturing	3,310	$22,381	162,852	111,360	9,490	8.5%
3121	Beverage Manufacturing	3,960	$22,088	135,979	107,700	15,210	14.1%
3122	Tobacco Manufacturing	109	$384,255	20,135	17,780	3,710	20.9%
3131	Fiber, Yarn, and Thread Mills	424	$21,211	42,041	40,060	5,950	14.9%
3132	Fabric Mills	1,318	$14,424	80,514	64,710	7,390	11.4%
3133	Textile and Fabric Finishing and Fabric Coating Mills	1,350	$6,381	41,527	38,820	2,550	6.6%
3141	Textile Furnishings Mills	2,583	$7,733	80,278	68,110	4,850	7.1%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
3149	Other Textile Product Mills	4,149	$2,612	72,700	54,280	3,170	5.8%
3151	Apparel Knitting Mills	487	$7,915	26,584	25,130	2,250	9.0%
3152	Cut and Sew Apparel Manufacturing	8,965	$2,603	155,742	135,500	1,463	1.1%
3159	Apparel Accessories and Other Apparel Manufacturing	916	$1,890	15,128	13,830	340	2.5%
3161	Leather and Hide Tanning and Finishing	244	$5,655	4,856	4,440	264	5.9%
3162	Footwear Manufacturing	306	$6,905	15,017	13,070	360	2.8%
3169	Other Leather and Allied Product Manufacturing	842	$3,188	16,798	9,960	100	1.0%
3211	Sawmills and Wood Preservation	4,168	$6,928	112,425	91,820	9,160	10.0%
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	1,924	$11,371	109,002	94,280	12,260	13.0%
3219	Other Wood Product Manufacturing	10,530	$4,759	306,138	249,800	39,970	16.0%
3221	Pulp, Paper, and Paperboard Mills	551	$149,010	130,068	105,270	22,220	21.1%
3222	Converted Paper Product Manufacturing	4,486	$21,433	295,028	257,680	20,140	7.8%
3231	Printing and Related Support Activities	33,281	$3,054	631,771	397,300	10,140	2.6%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees: Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]: Number	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]: Share of Production Employees
3241	Petroleum and Coal Products Manufacturing	2,408	$247,193	103,577	74,770	17,330	23.2%
3251	Basic Chemical Manufacturing	2,540	$88,423	165,025	93,150	19,100	20.5%
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	1,076	$97,133	88,601	72,460	13,690	18.9%
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	906	$31,547	28,618	24,350	4,520	18.6%
3254	Pharmaceutical and Medicine Manufacturing	1,926	$94,046	241,339	111,800	14,170	12.7%
3255	Paint, Coating, and Adhesive Manufacturing	1,906	$17,179	62,493	37,360	2,710	7.3%
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	2,241	$41,957	104,422	69,760	7,580	10.9%
3259	Other Chemical Product and Preparation Manufacturing	2,800	$16,028	103,219	64,520	6,770	10.5%
3261	Plastics Product Manufacturing	12,054	$14,344	707,972	484,610	34,130	7.0%
3262	Rubber Product Manufacturing	2,179	$17,848	147,511	120,650	9,440	7.8%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
3271	Clay Product and Refractory Manufacturing	1,560	$5,818	52,544	44,040	4,350	9.9%
3272	Glass and Glass Product Manufacturing	2,102	$11,056	97,876	81,800	8,960	11.0%
3273	Cement and Concrete Product Manufacturing	9,963	$6,645	221,488	203,410	35,960	17.7%
3274	Lime and Gypsum Product Manufacturing	362	$21,293	17,332	15,330	3,160	20.6%
3279	Other Nonmetallic Mineral Product Manufacturing	3,485	$5,983	82,888	65,810	11,150	16.9%
3311	Iron and Steel Mills and Ferroalloy Manufacturing	901	$116,393	109,998	81,680	19,330	23.7%
3312	Steel Product Manufacturing from Purchased Steel	699	$30,504	44,492	47,060	5,290	11.2%
3313	Alumina and Aluminum Production and Processing	612	$67,170	63,988	59,590	10,870	18.2%
3314	Nonferrous Metal (except Aluminum) Production and Processing	938	$58,260	60,466	51,800	6,990	13.5%
3315	Foundries	2,117	$16,145	159,977	133,200	13,590	10.2%
3321	Forging and Stamping	2,664	$12,189	124,406	86,660	6,800	7.8%
3322	Cutlery and Handtool Manufacturing	1,485	$7,449	50,529	37,250	2,170	5.8%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
3323	Architectural and Structural Metals Manufacturing	13,705	$6,500	398,786	312,940	38,720	12.4%
3324	Boiler, Tank, and Shipping Container Manufacturing	1,570	$20,031	93,356	68,060	6,200	9.1%
3325	Hardware Manufacturing	795	$12,314	41,763	23,970	1,180	4.9%
3326	Spring and Wire Product Manufacturing	1,614	$6,349	53,413	43,030	2,470	5.7%
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	25,267	$2,424	395,207	280,200	10,560	3.8%
3328	Coating, Engraving, Heat Treating, and Allied Activities	6,162	$4,308	137,183	117,980	6,310	5.3%
3329	Other Fabricated Metal Product Manufacturing	6,375	$10,709	271,223	192,570	11,580	6.0%
3331	Agriculture, Construction, and Mining Machinery Manufacturing	3,064	$28,804	205,545	160,220	11,870	7.4%
3332	Industrial Machinery Manufacturing	3,845	$10,320	130,022	63,620	5,910	9.3%
3333	Commercial and Service Industry Machinery Manufacturing	2,296	$10,796	95,729	54,370	4,980	9.2%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	1,822	$22,423	151,175	115,510	13,270	11.5%
3335	Metalworking Machinery Manufacturing	8,010	$3,631	167,558	139,940	5,180	3.7%
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	930	$45,616	102,482	69,130	6,330	9.2%
3339	Other General Purpose Machinery Manufacturing	6,231	$13,746	285,029	172,550	16,160	9.4%
3341	Computer and Peripheral Equipment Manufacturing	1,298	$50,267	99,137	30,390	3,720	12.2%
3342	Communications Equipment Manufacturing	1,828	$35,437	151,847	42,640	5,650	13.3%
3343	Audio and Video Equipment Manufacturing	530	$14,503	17,191	13,180	990	7.5%
3344	Semiconductor and Other Electronic Component Manufacturing	4,753	$25,667	362,859	214,750	13,070	6.1%
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	5,265	$25,181	384,966	142,990	13,920	9.7%
3346	Manufacturing and Reproducing Magnetic and Optical Media	804	$7,705	27,288	19,090	1,520	8.0%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
3351	Electric Lighting Equipment Manufacturing	1,223	$11,500	57,515	40,520	2,520	6.2%
3352	Household Appliance Manufacturing	350	$68,995	65,666	55,620	3,050	5.5%
3353	Electrical Equipment Manufacturing	2,407	$17,529	138,332	91,165	6,374	7.0%
3359	Other Electrical Equipment and Component Manufacturing	2,164	$23,393	144,746	95,620	6,800	7.1%
3361	Motor Vehicle Manufacturing	378	$683,671	196,493	174,525	21,551	12.3%
3362	Motor Vehicle Body and Trailer Manufacturing	2,187	$16,182	151,588	142,240	11,080	7.8%
3363	Motor Vehicle Parts Manufacturing	5,526	$36,411	593,630	490,500	50,450	10.3%
3364	Aerospace Product and Parts Manufacturing	1,725	$99,787	408,139	204,890	50,350	24.6%
3365	Railroad Rolling Stock Manufacturing	221	$58,054	28,712	20,000	3,490	17.5%
3366	Ship and Boat Building	1,771	$16,101	148,864	115,720	31,360	27.1%
3369	Other Transportation Equipment Manufacturing	1,049	$20,370	46,721	30,350	2,690	8.9%
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	16,566	$2,875	333,974	291,910	23,650	8.1%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
3372	Office Furniture (including Fixtures) Manufacturing	4,115	$6,637	141,000	99,860	6,980	7.0%
3379	Other Furniture Related Product Manufacturing	1,036	$9,739	42,427	35,850	1,650	4.6%
3391	Medical Equipment and Supplies Manufacturing	12,194	$6,578	316,789	191,430	7,210	3.8%
3399	Other Miscellaneous Manufacturing	18,966	$3,825	364,059	221,800	15,530	7.0%
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	24,535	$23,333	355,828	154,330	50,180	32.5%
4232	Furniture and Home Furnishing Merchant Wholesalers	12,670	$6,231	153,866	38,080	3,320	8.7%
4233	Lumber and Other Construction Materials Merchant Wholesalers	19,633	$8,055	264,252	130,910	14,470	11.1%
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	36,115	$12,095	705,551	138,430	71,910	51.9%
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	10,660	$19,824	160,366	65,070	3,670	5.6%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
						Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
					Total No. of Production Employees[b]	Number	Share of Production Employees
4236	Electrical and Electronic Goods Merchant Wholesalers	29,379	$14,085	449,905	73,200	25,160	34.4%
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	20,104	$6,009	232,006	71,570	17,670	24.7%
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	59,745	$7,120	723,802	244,480	135,590	55.5%
4239	Miscellaneous Durable Goods Merchant Wholesalers	34,498	$6,872	349,701	123,540	13,550	11.0%
4241	Paper and Paper Product Merchant Wholesalers	11,448	$11,244	172,308	43,570	1,920	4.4%
4242	Drugs and Druggists' Sundries Merchant Wholesalers	7,649	$67,598	248,057	30,770	1,600	5.2%
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	16,218	$8,223	196,601	39,930	490	1.2%
4244	Grocery and Related Product Wholesalers	33,620	$19,115	768,342	371,100	17,420	4.7%
4245	Farm Product Raw Material Merchant Wholesalers	6,566	$20,313	61,349	31,270	1,720	5.5%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
4246	Chemical and Allied Products Merchant Wholesalers	12,541	$13,083	139,481	50,910	6,020	11.8%
4247	Petroleum and Petroleum Products Merchant Wholesalers	7,024	$90,012	94,845	48,370	6,050	12.5%
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	4,160	$26,590	178,694	61,690	1,870	3.0%
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	31,414	$8,472	368,372	127,530	5,970	4.7%
4251	Wholesale Electronic Markets and Agents and Brokers	56,485	$10,679	341,524	147,960	30,340	20.5%
4411	Automobile Dealers	51,236	$14,689	1,273,660	496,270	317,590	64.0%
4412	Other Motor Vehicle Dealers	17,030	$3,746	168,973	66,040	51,820	78.5%
4413	Automotive Parts, Accessories, and Tire Stores	59,065	$1,353	495,633	222,240	157,250	70.8%
4421	Furniture Stores	29,239	$2,038	271,675	76,570	4,160	5.4%
4422	Home Furnishings Stores	36,246	$1,452	324,863	54,250	26,010	47.9%
4431	Electronics and Appliance Stores	52,470	$2,212	500,780	96,500	68,970	71.5%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
4441	Building Material and Supplies Dealers	67,949	$4,282	1,202,392	244,830	46,280	18.9%
4442	Lawn and Garden Equipment and Supplies Stores	20,355	$2,060	171,569	49,020	16,250	33.1%
4451	Grocery Stores	92,315	$5,368	2,564,533	444,380	3,590	0.8%
4452	Specialty Food Stores	28,281	$738	174,558	59,220	1,510	2.5%
4453	Beer, Wine, and Liquor Stores	30,435	$1,181	142,692	6,700	160	2.4%
4461	Health and Personal Care Stores	89,406	$2,898	1,069,187	53,350	3,760	7.0%
4471	Gasoline Stations	115,533	$3,812	888,705	92,920	33,040	35.6%
4481	Clothing Stores	99,325	$1,615	1,278,939	35,380	820	2.3%
4482	Shoe Stores	27,213	$976	206,338	1,760	0	0.0%
4483	Jewelry, Luggage, and Leather Goods Stores	28,833	$1,103	162,880	15,920	1,690	10.6%
4511	Sporting Goods, Hobby, and Musical Instrument Stores	43,522	$1,453	455,576	38,720	17,950	46.4%
4512	Book, Periodical, and Music Stores	16,623	$1,663	184,118	3,370	200	5.9%
4521	Department Stores	10,116	$28,241	1,619,833	127,280	14,480	11.4%
4529	Other General Merchandise Stores	37,340	$8,240	1,277,639	188,410	24,990	13.3%
4531	Florists	19,759	$327	93,779	19,120	190	1.0%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
4532	Office Supplies, Stationery, and Gift Stores	40,674	$1,102	315,159	28,970	12,810	44.2%
4533	Used Merchandise Stores	17,733	$549	133,918	16,150	1,090	6.7%
4539	Other Miscellaneous Store Retailers	45,208	$1,153	270,971	41,930	16,920	40.4%
4541	Electronic Shopping and Mail-Order Houses	16,670	$10,146	268,328	33,930	2,460	7.3%
4542	Vending Machine Operators	5,158	$1,445	49,446	29,110	15,870	54.5%
4543	Direct Selling Establishments	25,895	$2,470	193,784	76,550	22,820	29.8%
4811	Scheduled Air Transportation	3,084	$41,157	435,853	142,390	38,230	26.8%
4812	Nonscheduled Air Transportation	2,646	$5,640	44,795	27,270	7,930	29.1%
4831	Deep Sea, Coastal, and Great Lakes Water Transportation	1,255	$22,924	48,180	22,190	450	2.0%
4832	Inland Water Transportation	673	$8,950	20,767	19,130	540	2.8%
4841	General Freight Trucking	68,494	$2,165	998,697	839,850	48,700	5.8%
4842	Specialized Freight Trucking	52,925	$1,396	477,700	347,130	24,240	7.0%
4851	Urban Transit Systems	932	$3,403	52,912	34,260	4,150	12.1%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees: Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]: Number	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]: Share of Production Employees
4852	Interurban and Rural Bus Transportation	508	$3,261	17,432	12,770	1,640	12.8%
4853	Taxi and Limousine Service	7,493	$788	72,504	51,760	1,610	3.1%
4854	School and Employee Bus Transportation	4,673	$2,191	206,787	164,010	6,700	4.1%
4855	Charter Bus Industry	1,247	$1,762	28,384	25,690	1,830	7.1%
4859	Other Transit and Ground Passenger Transportation	3,469	$1,104	62,604	53,240	1,530	2.9%
4861	Pipeline Transportation of Crude Oil	374	$15,628	8,347	4,330	1,510	34.9%
4862	Pipeline Transportation of Natural Gas	1,479	$14,061	24,683	13,690	5,220	38.1%
4869	Other Pipeline Transportation	922	$8,320	9,415	4,170	1,000	24.0%
4871	Scenic and Sightseeing Transportation, Land	698	$1,295	9,690	5,050	360	7.1%
4872	Scenic and Sightseeing Transportation, Water	1,880	$756	15,612	6,460	250	3.9%
4879	Scenic and Sightseeing Transportation, Other	203	$1,935	2,162	1,160	280	24.1%
4881	Support Activities for Air Transportation	5,430	$3,678	3,676	98,340	47,000	47.8%
4882	Support Activities for Rail Transportation	1,018	$3,282	308	20,480	7,660	37.4%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
						Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
					Total No. of Production Employees[b]	Number	Share of Production Employees
4883	Support Activities for Water Transportation	2,330	$7,072	1,442	79,680	5,950	7.5%
4884	Support Activities for Road Transportation	10,178	$699	9,719	59,440	4,620	7.8%
4885	Freight Transportation Arrangement	17,903	$2,304	212,165	40,240	1,820	4.5%
4889	Other Support Activities for Transportation	1,707	$3,902	34,654	20,380	930	4.6%
4921	Couriers	9,116	$8,233.28	528,177	398,690	13,900	3.5%
4922	Local Messengers and Local Delivery	4,729	$877.68	41,013	18,050	220	1.2%
4931	Warehousing and Storage	14,440	$2,766.70	679,077	434,980	21,630	5.0%
5111	Newspaper, Periodical, Book, and Directory Publishers	23,082	$6,341.52	688,034	133,230	5,780	4.3%
5112	Software Publishers	8,426	$14,921.54	346,675	3,730	1,780	47.7%
5121	Motion Picture and Video Industries	21,118	$3,770.90	298,598	13,830	2,900	21.0%
5122	Sound Recording Industries	3,765	$3,436.51	22,049	810	150	18.5%
5151	Radio and Television Broadcasting	9,757	$5,673.89	252,294	4,420	2,860	64.7%
5152	Cable and Other Subscription Programming	658	$63,287.42	41,674	22,490	21,960	97.6%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
5161	Internet Publishing and Broadcasting	2,746	$4,317.76	46,627	280	80	28.6%
5171	Wired Telecommunications Carriers	27,445	$6,677.53	621,712	167,800	165,500	98.6%
5172	Wireless Telecommunications Carriers (except Satellite)	11,817	$14,132.48	277,622	11,720	11,410	97.4%
5173	Telecommunications Resellers	3,417	$4,228.61	34,973	30,000	29,620	98.7%
5174	Satellite Telecommunications	708	$8,810.15	13,149	2,660	2,660	100.0%
5175	Cable and Other Program Distribution	5,326	$19,054.52	240,038	50,700	48,890	96.4%
5179	Other Telecommunications	1,365	$3,116.63	14,428	1,510	1,510	100.0%
5181	Internet Service Providers and Web Search Portals	4,260	$7,432.83	71,307	2,100	2,050	97.6%
5182	Data Processing, Hosting, and Related Services	15,662	$4,566.21	375,474	9,020	3,520	39.0%
5191	Other Information Services	4,227	$1,719.25	54,659	2,830	460	16.3%
5211	Monetary Authorities - Central Bank	104	$447,246.12	20,223	680	500	73.5%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

					Production Employees		
						Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Total No. of Production Employees[b]	Number	Share of Production Employees
5221	Depository Credit Intermediation	127,180	$6,151.85	2,137,764	10,890	3,500	32.1%
5222	Nondepository Credit Intermediation	58,786	$8,390.54	747,414	3,470	1,320	38.0%
5223	Activities Related to Credit Intermediation	46,750	$1,436.05	341,041	1,660	880	53.0%
5231	Securities and Commodity Contracts Intermediation and Brokerage	39,749	$10,955.04	528,722	1,280	640	50.0%
5232	Securities and Commodity Exchanges	392	$11,418	8,600	250	40	16.0%
5239	Other Financial Investment Activities	49,924	$4,369.98	404,402	3,200	1,370	42.8%
5241	Insurance Carriers	33,598	$43,422.74	1,423,578	7,950	3,700	46.5%
5242	Agencies, Brokerages, and Other Insurance Related Activities	147,930	$1,152.22	903,366	3,770	1,270	33.7%
5259	Other Investment Pools and Funds	3,678	$7,005	33,396	1,920	770	40.1%
5311	Lessors of Real Estate	115,270	$1,233	539,169	248,410	155,760	62.7%
5312	Offices of Real Estate Agents and Brokers	111,028	$825	367,125	41,580	23,850	57.4%
5313	Activities Related to Real Estate	86,226	$940	647,869	161,840	98,000	60.6%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
5321	Automotive Equipment Rental and Leasing	13,475	$3,354	199,872	93,580	25,910	27.7%
5322	Consumer Goods Rental	31,338	$752	237,074	40,220	7,370	18.3%
5323	General Rental Centers	5,435	$987	35,493	25,220	8,920	35.4%
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	14,798	$3,384	165,838	57,990	32,270	55.6%
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	2,568	$8,804	31,735	1,700	250	14.7%
5411	Legal Services	191,351	$1,263	1,206,577	5,070	580	11.4%
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	123,415	$962	1,357,368	18,010	5,310	29.5%
5413	Architectural, Engineering, and Related Services	117,115	$2,186	1,434,803	120,660	60,330	50.0%
5414	Specialized Design Services	34,783	$693	134,739	20,340	2,390	11.8%
5415	Computer Systems Design and Related Services	116,769	$2,347	1,297,710	30,580	22,640	74.0%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
5416	Management, Scientific, and Technical Consulting Services	151,766	$1,277	1,015,109	57,950	24,420	42.1%
5417	Scientific Research and Development Services	17,787	$6,372	688,052	30,300	11,360	37.5%
5418	Advertising and Related Services	40,275	$2,066	445,590	43,730	8,000	18.3%
5419	Other Professional, Scientific, and Technical Services	74,295	$873	599,993	23,470	3,830	16.3%
5511	Management of Companies and Enterprises	50,643	$10,031	3,121,402	171,840	55,500	32.3%
5611	Office Administrative Services	29,996	$2,184	472,690	31,760	10,840	34.1%
5612	Facilities Support Services	4,593	$4,664	189,275	42,480	16,330	38.4%
5613	Employment Services	44,476	$4,382	5,131,446	1,781,420	261,030	14.7%
5614	Business Support Services	35,543	$1,739	766,237	30,920	3,890	12.6%
5615	Travel Arrangement and Reservation Services	22,312	$1,876	243,943	8,790	1,270	14.4%
5616	Investigation and Security Services	25,223	$1,677	777,680	67,570	56,050	83.0%
5617	Services to Buildings and Dwellings	179,825	$598	1,722,595	1,664,320	59,570	3.6%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
5619	Other Support Services	21,075	$1,881	324,602	108,800	19,230	17.7%
5621	Waste Collection	9,857	$3,975	185,047	110,500	12,720	11.5%
5622	Waste Treatment and Disposal	2,729	$5,199	56,755	69,650	18,240	26.2%
5629	Remediation and Other Waste Management Services	8,872	$1,989	113,391	83,210	58,560	70.4%
6111	Elementary and Secondary Schools	21,066	$2,943	827,165	766,170	100,280	13.1%
6112	Junior Colleges	862	$8,099	80,568	40,630	12,020	29.6%
6113	Colleges, Universities, and Professional Schools	4,022	$41,214	1,572,333	202,660	69,670	34.4%
6114	Business Schools and Computer and Management Training	7,640	$1,243	65,818	1,770	510	28.8%
6115	Technical and Trade Schools	8,019	$1,598	119,020	11,200	3,780	33.8%
6116	Other Schools and Instruction	38,506	$430	302,908	4,920	1,570	31.9%
6117	Educational Support Services	6,781	$1,574	71,573	1,900	470	24.7%
6211	Offices of Physicians	219,986	$1,579	2,169,682	22,650	3,150	13.9%
6212	Offices of Dentists	126,392	$742	824,770	12,940	520	4.0%
6213	Offices of Other Health Practitioners	124,498	$419	614,171	8,790	600	6.8%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
6214	Outpatient Care Centers	29,644	$2,685	695,863	11,810	3,680	31.2%
6215	Medical and Diagnostic Laboratories	12,798	$2,953	221,709	2,270	490	21.6%
6216	Home Health Care Services	24,443	$2,096	1,021,573	5,970	1,190	19.9%
6219	Other Ambulatory Health Care Services	9,422	$2,926	269,271	18,900	2,670	14.1%
6221	General Medical and Surgical Hospitals	5,404	$120,585	5,041,848	285,300	65,370	22.9%
6222	Psychiatric and Substance Abuse Hospitals	718	$24,937	216,343	17,010	5,560	32.7%
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals	1,230	$21,388	219,627	11,000	2,520	22.9%
6231	Nursing Care Facilities	17,132	$5,569	1,646,321	163,850	21,780	13.3%
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	31,571	$786	557,907	19,920	5,110	25.7%
6233	Community Care Facilities for the Elderly	20,351	$1,872	685,024	75,920	14,370	18.9%
6239	Other Residential Care Facilities	6,552	$1,262	153,881	6,560	2,290	34.9%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
6241	Individual and Family Services	57,712	$1,089	1,108,173	44,900	5,560	12.4%
6242	Community Food and Housing, and Emergency and Other Relief Services	13,710	$1,630	167,691	13,300	3,550	26.7%
6243	Vocational Rehabilitation Services	7,905	$1,590	330,145	71,170	3,480	4.9%
6244	Child Day Care Services	74,763	$396	853,648	18,050	1,760	9.8%
7111	Performing Arts Companies	9,453	$1,502	134,434	7,930	3,150	39.7%
7112	Spectator Sports	4,631	$6,550	126,092	19,190	7,020	36.6%
7113	Promoters of Performing Arts, Sports, and Similar Events	6,367	$2,485	112,354	14,710	3,530	24.0%
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	3,722	$1,290	17,420	220	90	40.9%
7115	Independent Artists, Writers, and Performers	20,087	$664	45,772	3,360	710	21.1%
7121	Museums, Historical Sites, and Similar Institutions	7,312	$1,780	128,539	14,880	4,420	29.7%
7131	Amusement Parks and Arcades	3,097	$4,407	128,369	21,320	9,590	45.0%
7132	Gambling Industries	2,729	$11,700	205,307	18,360	5,240	28.5%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees: Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]: Number	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]: Share of Production Employees
7139	Other Amusement and Recreation Industries	67,824	$869	1,110,280	211,410	44,390	21.0%
7211	Traveler Accommodation	54,268	$3,117	1,856,110	663,680	80,540	12.1%
7212	RV (Recreational Vehicle) Parks and Recreational Camps	7,434	$594	39,717	10,580	5,830	55.1%
7213	Rooming and Boarding Houses	2,201	$426	11,727	3,580	490	13.7%
7221	Full-Service Restaurants	219,472	$876	4,579,941	57,180	3,580	6.3%
7222	Limited-Service Eating Places	266,844	$700	4,136,741	197,820	4,080	2.1%
7223	Special Food Services	35,322	$1,087	575,579	50,990	6,610	13.0%
7224	Drinking Places (Alcoholic Beverages)	46,948	$394	365,049	6,420	690	10.7%
8111	Automotive Repair and Maintenance	166,369	$538	893,198	710,480	457,970	64.5%
8112	Electronic and Precision Equipment Repair and Maintenance	12,917	$1,966	135,243	64,330	56,920	88.5%
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	23,897	$1,333	199,239	136,820	90,410	66.1%

Table V-1
Profile of General Industry Establishments Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Establishments	Average Receipts per Establishment ($1,000)[a]	Total Employees	Production Employees		
					Total No. of Production Employees[b]	Production Employees in At-Risk Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]	
						Number	Share of Production Employees
8114	Personal and Household Goods Repair and Maintenance	22,948	$406	95,272	58,360	29,940	51.3%
8121	Personal Care Services	113,125	$239	616,538	7,010	420	6.0%
8122	Death Care Services	21,434	$713	136,928	29,670	1,790	6.0%
8123	Dry-cleaning and Laundry Services	41,331	$601	374,356	241,120	6,800	2.8%
8129	Other Personal Services	36,640	$511	252,462	106,250	3,680	3.5%
8131	Religious Organizations	180,304	$698	1,691,182	25,010	4,940	19.8%
8132	Grantmaking and Giving Services	16,356	$5,742	146,709	3,650	700	19.2%
8133	Social Advocacy Organizations	15,431	$1,228	128,522	8,780	2,340	26.7%
8134	Civic and Social Organizations	29,817	$623	330,219	27,510	4,540	16.5%
8139	Business, Professional, Labor, Political, and Similar Organizations	63,683	$1,222	519,905	42,440	18,030	42.5%
	Totals	**6,855,903**		**112,328,837**	**27,787,879**	**5,226,602**	**18.8%**

[a] Estimated based on 2007 receipts and establishment data from U.S. Census Bureau, Statistics of U.S. Businesses, 2007.

[b] These employment estimates are based on applying the share of workers employed in building and grounds; construction; installation, maintenance, and repair; production; and material-moving occupations as reported by BLS, Occupational Employment Statistics, 2007 to total employment levels as reported by U.S. Census Bureau, Statistics of U.S. Businesses, 2007.

[c] Bureau of Labor Statistics, Occupational Employment Statistics, 2007.

[d] NA: Data not available; term used throughout this FEA.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

BILLING CODE 4510–29–P

The parts of the final standard that cover ladders, scaffolds, manhole steps, and other working surfaces are most likely to directly affect employees engaged in maintenance and related activities. To estimate the numbers of such employees, OSHA relied on data from the Bureau of Labor Statistics' (BLS) *Occupational Employment Statistics* (OES) survey documenting employment by detailed occupation using 4-digit NAICS industry codes. The BLS data represent the only source of industry-specific statistics on detailed occupational employment totals. OSHA used these data to estimate the numbers of employees in construction and in maintenance, installation, and repair occupations in each industry, as well as the overall number of production employees.[104] As shown in Table V–1, an estimated 27.8 million employees are in production occupations, while an estimated 5.2 million are in construction, installation, and maintenance and repair occupations.

3. Profile of Potentially Affected Small Entities

To assemble the data necessary for a screening analysis to determine potential impacts on small entities as prescribed by the Regulatory Flexibility Act, OSHA developed profiles of small entities in the industries covered by the final OSHA standards for subparts D and I. OSHA used the Small Business Administration's (SBA) small business criterion for each industry and Census data (taken from the *Statistics of U.S. Businesses*) on employment, payroll, and receipts by entity size to estimate the numbers of entities and associated employment meeting the SBA definitions. When the SBA specified the small business criterion as a revenue threshold, OSHA used the Census data to associate that revenue with a given employment size. The first column of Table V–2 provides OSHA's estimates of SBA-based employment-size criteria. This table shows, for each NAICS industry code, the number of entities and employees, and average receipts per entity, for business units that meet the employment-size criterion. OSHA estimated the numbers of at-risk employees by applying the percentage of at-risk small-entity employees estimated in the PEA to total estimated small-entity employment, after deriving the latter estimate from updated (2007) Census data on the number of affected small entities.

OSHA also used the Census data to develop a profile of entities that employ fewer than 20 employees. Table V–3 provides these estimates.

BILLING CODE 4510–19–P

[104] Production workers include those in building and grounds; construction; installation, maintenance, and repair; production; and material moving occupations. It is possible that employees in construction and related occupations, even though not employed by establishments in construction industries, might perform work regulated by OSHA under its construction standards in 29 CFR part 1926. Therefore, the employers of these workers, depending on the type of work performed, also may have to meet the requirements for fall protection and walking-working surfaces specified in the construction standards. To the extent that these workers may be subject to both the general industry fall protection standard and the construction fall protection standard, the final rule increases harmonization with the construction fall protection standards, rather than generating new costs or worker-safety benefits.

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
1131	Timber Tract Operations	500	389	$1,203,946	1,853	NA
1132	Forest Nurseries and Gathering of Forest Products	500	169	$978,953	1,521	NA
1133	Logging	500	9,714	$985,859	57,067	2,464
1141	Fishing	20	2,039	$1,071,290	2,601	NA
1142	Hunting and Trapping	20	323	$696,350	812	NA
1153	Support Activities for Forestry	100	1,641	$612,625	9,180	NA
2111	Oil and Gas Extraction	500	6,453	$10,209,466	45,332	9,245
2211	Electric Power Generation, Transmission and Distribution	20	1,551	$46,138,696	8,806	2,944
2212	Natural Gas Distribution	20	441	$60,450,299	2,127	639
2213	Water, Sewage and Other Systems	100	3,918	$1,197,612	19,257	4,235
3111	Animal Food Manufacturing	500	1,173	$11,493,951	24,430	1,746
3112	Grain and Oilseed Milling	500	461	$26,376,108	16,640	1,450
3113	Sugar and Confectionery Product Manufacturing	500	1,587	$4,747,662	68,183	6,182
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	500	1,221	$18,280,614	45,938	3,318
3115	Dairy Product Manufacturing	500	1,031	$22,265,319	28,609	1,522
3116	Animal Slaughtering and Processing	500	3,109	$11,500,053	114,645	5,791

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
3117	Seafood Product Preparation and Packaging	500	574	$10,176,408	8,943	378
3118	Bakeries and Tortilla Manufacturing	500	9,408	$1,712,822	288,414	17,004
3119	Other Food Manufacturing	500	2,761	$9,860,693	45,756	3,854
3121	Beverage Manufacturing	500	3,338	$5,864,184	101,892	14,812
3122	Tobacco Manufacturing	500	72	$20,077,861	2,215	289
3131	Fiber, Yarn, and Thread Mills	500	281	$7,063,009	9,472	288
3132	Fabric Mills	500	1,107	$7,614,212	24,459	3,082
3133	Textile and Fabric Finishing and Fabric Coating Mills	500	1,259	$4,778,704	16,917	705
3141	Textile Furnishings Mills	500	2,418	$1,906,425	48,147	4,121
3149	Other Textile Product Mills	500	3,994	$1,883,709	60,009	1,723
3151	Apparel Knitting Mills	500	433	$3,537,748	14,417	2,384
3152	Cut and Sew Apparel Manufacturing	500	8,772	$2,157,055	130,265	1,124
3159	Apparel Accessories and Other Apparel Manufacturing	500	884	$1,466,456	13,021	1,169
3161	Leather and Hide Tanning and Finishing	500	230	$4,184,696	4,203	236
3162	Footwear Manufacturing	500	274	$2,586,898	5,656	201
3169	Other Leather and Allied Product Manufacturing	500	821	$2,272,834	12,685	127
3211	Sawmills and Wood Preservation	500	3,662	$5,030,554	82,529	114

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	500	1,444	$6,305,821	62,374	6,544
3219	Other Wood Product Manufacturing	500	9,405	$3,235,790	196,354	6,380
3221	Pulp, Paper, and Paperboard Mills	750	217	$35,652,696	81,068	19,581
3222	Converted Paper Product Manufacturing	750	2,941	$12,426,409	244,731	18,291
3231	Printing and Related Support Activities	500	31,414	$1,868,047	438,816	15,574
3241	Petroleum and Coal Products Manufacturing	500	1,096	$43,923,678	25,848	7,384
3251	Basic Chemical Manufacturing	500	1,290	$38,377,584	39,224	4,007
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	500	685	$29,953,311	64,863	4,048
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	500	633	$10,129,959	11,603	8,778
3254	Pharmaceutical and Medicine Manufacturing	500	1,385	$15,311,811	52,038	1,465
3255	Paint, Coating, and Adhesive Manufacturing	500	1,446	$7,227,237	30,360	2,309
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	500	1,938	$10,379,385	46,183	1,208
3259	Other Chemical Product and Preparation Manufacturing	500	2,068	$7,196,531	46,088	2,965
3261	Plastics Product Manufacturing	500	9,146	$8,186,170	342,785	19,005
3262	Rubber Product Manufacturing	500	1,628	$8,522,571	52,434	3,355
3271	Clay Product and Refractory Manufacturing	500	1,304	$3,357,373	25,229	1,994

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
3272	Glass and Glass Product Manufacturing	500	1,726	$3,067,226	30,210	2,842
3273	Cement and Concrete Product Manufacturing	500	5,020	$6,750,795	129,383	19,243
3274	Lime and Gypsum Product Manufacturing	500	202	$6,856,391	3,423	623
3279	Other Nonmetallic Mineral Product Manufacturing	500	2,937	$3,124,333	52,410	6,847
3311	Iron and Steel Mills and Ferroalloy Manufacturing	750	730	$25,589,719	87,419	17,941
3312	Steel Product Manufacturing from Purchased Steel	1,000	497	$23,334,183	40,337	3,591
3313	Alumina and Aluminum Production and Processing	750	421	$22,520,990	49,735	7,454
3314	Nonferrous Metal (except Aluminum) Production and Processing	750	676	$24,254,840	44,394	4,551
3315	Foundries	500	1,796	$9,587,227	76,306	6,324
3321	Forging and Stamping	500	2,301	$9,378,614	82,843	4,872
3322	Cutlery and Handtool Manufacturing	500	1,333	$4,684,161	28,710	1,114
3323	Architectural and Structural Metals Manufacturing	500	12,517	$4,646,354	276,206	26,024
3324	Boiler, Tank, and Shipping Container Manufacturing	500	1,214	$8,914,855	43,393	NA
3325	Hardware Manufacturing	500	673	$6,541,624	18,729	660
3326	Spring and Wire Product Manufacturing	500	1,395	$4,646,072	38,974	1,351

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	500	24,638	$2,055,754	350,609	8,633
3328	Coating, Engraving, Heat Treating, and Allied Activities	500	5,526	$3,605,034	114,874	4,720
3329	Other Fabricated Metal Product Manufacturing	500	5,625	$5,096,298	129,261	7,382
3331	Agriculture, Construction, and Mining Machinery Manufacturing	500	2,640	$9,370,238	76,342	4,175
3332	Industrial Machinery Manufacturing	500	3,510	$5,062,247	84,087	4,092
3333	Commercial and Service Industry Machinery Manufacturing	500	2,013	$5,155,096	49,422	2,527
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	500	1,397	$7,687,392	47,346	4,071
3335	Metalworking Machinery Manufacturing	500	7,595	$2,688,982	136,043	3,530
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	500	704	$10,107,295	23,050	1,835
3339	Other General Purpose Machinery Manufacturing	500	5,361	$6,204,507	136,111	7,822
3341	Computer and Peripheral Equipment Manufacturing	1000	1,184	$8,999,667	90,336	1,919
3342	Communications Equipment Manufacturing	750	1,517	$10,202,121	113,536	4,448
3343	Audio and Video Equipment Manufacturing	750	496	$6,870,034	16,243	484

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
3344	Semiconductor and Other Electronic Component Manufacturing	500	4,039	$7,260,568	137,336	4,003
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	500	4,395	$7,395,335	102,427	3,141
3346	Manufacturing and Reproducing Magnetic and Optical Media	500	750	$2,906,879	13,084	560
3351	Electric Lighting Equipment Manufacturing	500	1,102	$6,643,417	30,592	1,519
3352	Household Appliance Manufacturing	500	279	$6,797,928	8,485	369
3353	Electrical Equipment Manufacturing	500	1,971	$6,751,929	109,035	5,017
3359	Other Electrical Equipment and Component Manufacturing	500	1,743	$12,491,840	61,363	2,801
3361	Motor Vehicle Manufacturing	1,000	276	$17,156,736	180,996	18,472
3362	Motor Vehicle Body and Trailer Manufacturing	500	1,851	$8,209,713	65,570	4,562
3363	Motor Vehicle Parts Manufacturing	500	4,227	$13,098,070	167,903	12,979
3364	Aerospace Product and Parts Manufacturing	1,000	1,275	$10,267,905	364,351	37,310
3365	Railroad Rolling Stock Manufacturing	1000	141	$10,698,766	24,859	3,892
3366	Ship and Boat Building	500	1,612	$7,121,573	44,862	8,624
3369	Other Transportation Equipment Manufacturing	500	986	$5,566,299	19,177	1,144
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	500	16,089	$1,588,275	213,696	13,410

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
3372	Office Furniture (including Fixtures) Manufacturing	500	3,866	$4,005,842	95,911	4,836
3379	Other Furniture Related Product Manufacturing	500	888	$5,630,860	24,364	792
3391	Medical Equipment and Supplies Manufacturing	500	11,227	$2,581,520	146,894	3,307
3399	Other Miscellaneous Manufacturing	500	18,259	$2,391,579	267,657	12,600
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	100	16,942	$5,214,828	158,506	22,863
4232	Furniture and Home Furnishing Merchant Wholesalers	100	10,468	$5,505,483	92,798	2,424
4233	Lumber and Other Construction Materials Merchant Wholesalers	100	12,190	$5,017,184	126,964	6,694
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	100	25,371	$3,924,436	216,960	22,318
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	100	6,957	$11,382,651	75,895	2,060
4236	Electrical and Electronic Goods Merchant Wholesalers	100	19,024	$6,108,282	174,753	12,815
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	100	10,751	$4,408,710	112,753	8,440
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	100	41,809	$4,727,813	397,348	79,924

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
4239	Miscellaneous Durable Goods Merchant Wholesalers	100	30,313	$5,269,697	206,395	10,859
4241	Paper and Paper Product Merchant Wholesalers	100	8,752	$4,176,774	74,791	977
4242	Drugs and Druggists' Sundries Merchant Wholesalers	100	5,838	$5,856,288	47,228	338
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	100	14,426	$5,680,399	107,539	382
4244	Grocery and Related Product Wholesalers	100	26,532	$7,708,002	251,866	5,824
4245	Farm Product Raw Material Merchant Wholesalers	100	3,844	$14,484,724	38,877	823
4246	Chemical and Allied Products Merchant Wholesalers	100	7,934	$6,324,060	65,806	2,690
4247	Petroleum and Petroleum Products Merchant Wholesalers	100	4,478	$45,709,900	49,559	3,093
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	100	2,999	$10,952,519	53,042	662
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	100	24,660	$3,695,365	175,492	2,869
4251	Wholesale Electronic Markets and Agents and Brokers	100	53,561	$7,231,541	205,641	8,062
4411	Automobile Dealers	20	44,316	$10,000,839	187,350	47,515
4412	Other Motor Vehicle Dealers	100	15,120	$3,771,504	135,969	40,929

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
4413	Automotive Parts, Accessories, and Tire Stores	100	32,330	$1,326,586	216,682	69,213
4421	Furniture Stores	100	19,802	$1,791,250	152,175	2,020
4422	Home Furnishings Stores	100	26,202	$1,147,520	143,330	12,668
4431	Electronics and Appliance Stores	20	30,335	$1,280,230	119,295	14,960
4441	Building Material and Supplies Dealers	100	45,176	$2,578,176	429,244	16,981
4442	Lawn and Garden Equipment and Supplies Stores	100	16,635	$2,033,779	128,453	13,246
4451	Grocery Stores	100	65,430	$1,691,208	513,196	794
4452	Specialty Food Stores	100	23,426	$756,131	131,540	587
4453	Beer, Wine, and Liquor Stores	100	26,833	$1,134,826	122,074	106
4461	Health and Personal Care Stores	100	43,539	$1,855,531	309,116	1,177
4471	Gasoline Stations	100	65,359	$3,601,756	447,962	16,468
4481	Clothing Stores	100	40,794	$816,092	212,226	131
4482	Shoe Stores	100	6,641	$1,032,767	42,316	7
4483	Jewelry, Luggage, and Leather Goods Stores	100	19,038	$990,006	84,653	867
4511	Sporting Goods, Hobby, and Musical Instrument Stores	100	31,702	$823,248	180,867	6,808
4512	Book, Periodical, and Music Stores	100	9,053	$736,118	51,358	47
4521	Department Stores	100	394	$1,609,330	2,431	18
4529	Other General Merchandise Stores	100	10,002	$844,811	53,983	886

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
4531	Florists	100	18,941	$331,146	91,421	169
4532	Office Supplies, Stationery, and Gift Stores	500	28,693	$592,924	169,928	5,329
4533	Used Merchandise Stores	100	13,005	$563,158	62,101	591
4539	Other Miscellaneous Store Retailers	100	36,844	$1,081,911	179,402	9,414
4541	Electronic Shopping and Mail-Order Houses	100	14,940	$2,969,058	97,777	786
4542	Vending Machine Operators	100	4,518	$1,136,446	25,972	8,371
4543	Direct Selling Establishments	20	19,679	$1,138,456	80,204	12,583
4811	Scheduled Air Transportation	1,500	538	$18,310,617	421,990	35,095
4812	Nonscheduled Air Transportation	1,500	2,304	$3,858,824	41,061	6,708
4831	Deep Sea, Coastal, and Great Lakes Water Transportation	20	838	$10,116,311	20,390	590
4832	Inland Water Transportation	500	580	$3,594,686	11,410	343
4841	General Freight Trucking	500	58,091	$1,289,155	468,958	22,261
4842	Specialized Freight Trucking	500	47,947	$1,150,500	370,325	20,262
4851	Urban Transit Systems	100	566	$1,456,261	7,629	822
4852	Interurban and Rural Bus Transportation	100	224	$2,476,679	2,825	175
4853	Taxi and Limousine Service	500	7,290	$682,884	58,923	1,486
4854	School and Employee Bus Transportation	100	3,045	$1,090,597	44,910	1,544
4855	Charter Bus Industry	500	1,118	$1,593,885	22,171	1,259

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
4859	Other Transit and Ground Passenger Transportation	500	3,196	$1,197,890	51,469	1,532
4861	Pipeline Transportation of Crude Oil	1,500	42	$20,494,772	5,608	1,110
4862	Pipeline Transportation of Natural Gas	500	84	$27,363,548	1,771	362
4869	Other Pipeline Transportation	500	56	$20,316,946	972	183
4871	Scenic and Sightseeing Transportation, Land	500	635	$880,647	6,041	246
4872	Scenic and Sightseeing Transportation, Water	500	1,821	$619,058	9,616	242
4879	Scenic and Sightseeing Transportation, Other	100	188	$2,089,665	1,246	192
4881	Support Activities for Air Transportation	100	3,947	$1,815,260	33,439	9,409
4882	Support Activities for Rail Transportation	100	480	$2,650,352	6,481	2,191
4883	Support Activities for Water Transportation	100	1,765	$3,068,905	16,036	988
4884	Support Activities for Road Transportation	100	9,249	$628,543	55,941	3,056
4885	Freight Transportation Arrangement	100	12,667	$2,172,906	88,629	867
4889	Other Support Activities for Transportation	100	1,551	$1,204,640	10,187	310
4921	Couriers	1,500	3,747	$1,115,230	536,711	13,251
4922	Local Messengers and Local Delivery	500	4,330	$958,560	33,363	109
4931	Warehousing and Storage	100	7,410	$5,391,522	84,202	2,648
5111	Newspaper, Periodical, Book, and Directory Publishers	500	16,643	$2,637,887	240,210	1,946
5112	Software Publishers	500	5,601	$4,259,862	106,847	715

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
5121	Motion Picture and Video Industries	500	17,429	$1,438,874	120,398	1,027
5122	Sound Recording Industries	100	3,425	$482,983	12,256	127
5151	Radio and Television Broadcasting	20	4,606	$2,229,432	28,943	317
5152	Cable and Other Subscription Programming	500	341	$10,561,328	6,809	1,824
5161	Internet Publishing and Broadcasting	500	2,333	$2,351,160	19,451	NA
5171	Wired Telecommunications Carriers	1,500	2,004	$8,334,605	493,023	166,379
5172	Wireless Telecommunications Carriers (except Satellite)	1,500	1,711	$5,075,123	160,166	8,958
5173	Telecommunications Resellers	1,500	3,107	$4,290,738	43,851	N/A
5174	Satellite Telecommunications	1,000	530	$5,662,560	13,492	2,093
5175	Cable and Other Program Distribution	1,000	947	$2,953,364	175,981	NA
5179	Other Telecommunications	1,000	1,260	$1,767,175	27,622	NA
5181	Internet Service Providers and Web Search Portals	1,000	3,747	$2,120,052	58,322	1,620
5182	Data Processing, Hosting, and Related Services	1,000	7,112	$3,189,773	339,914	NA
5191	Other Information Services	1,000	3,349	$917,716	53,714	4,858
5211	Monetary Authorities - Central Bank	1,000	53	$5,712,321	14,044	164
5221	Depository Credit Intermediation	20	15,010	$12,178,211	107,239	738
5222	Nondepository Credit Intermediation	100	23,197	$4,708,135	136,331	106
5223	Activities Related to Credit Intermediation	20	27,577	$940,918	92,463	243

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
5231	Securities and Commodity Contracts Intermediation and Brokerage	100	12,731	$3,449,331	61,945	260
5232	Securities and Commodity Exchanges	100	117	$7,093,103	699	57
5239	Other Financial Investment Activities	100	43,788	$2,678,726	173,174	14
5241	Insurance Carriers	100	6,849	$13,103,280	51,770	419
5242	Agencies, Brokerages, and Other Insurance Related Activities	20	130,229	$737,898	415,001	150
5259	Other Investment Pools and Funds	20	1,965	$2,111,505	4,448	488
5311	Lessors of Real Estate	100	95,427	$1,040,229	361,764	84,509
5312	Offices of Real Estate Agents and Brokers	100	100,495	$700,288	257,710	17,563
5313	Activities Related to Real Estate	100	73,945	$751,556	363,692	65,945
5321	Automotive Equipment Rental and Leasing	500	4,629	$1,924,714	38,958	5,747
5322	Consumer Goods Rental	100	12,034	$676,881	82,488	4,970
5323	General Rental Centers	100	3,167	$1,108,941	21,849	2,506
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	100	8,368	$2,391,534	64,230	3,603
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	100	2,335	$3,451,840	16,632	336
5411	Legal Services	100	180,282	$936,065	831,572	157
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	500	107,843	$549,498	681,543	3,754

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
5413	Architectural, Engineering, and Related Services	100	98,918	$1,456,915	682,282	28,540
5414	Specialized Design Services	100	34,304	$675,008	117,793	1,918
5415	Computer Systems Design and Related Services	500	102,538	$1,270,944	686,853	11,446
5416	Management, Scientific, and Technical Consulting Services	100	141,356	$844,068	502,134	12,600
5417	Scientific Research and Development Services	100	13,440	$3,555,301	121,091	2,307
5418	Advertising and Related Services	500	36,283	$1,506,332	271,265	4,460
5419	Other Professional, Scientific, and Technical Services	500	64,099	$780,896	460,168	3,166
5511	Management of Companies and Enterprises	100	20,794	$3,630,215	154,193	4,331
5611	Office Administrative Services	100	25,338	$1,691,252	186,112	4,422
5612	Facilities Support Services	500	1,500	$3,068,841	41,933	5,492
5613	Employment Services	100	23,151	$1,925,441	377,202	26,725
5614	Business Support Services	100	29,302	$968,918	210,992	1,232
5615	Travel Arrangement and Reservation Services	100	16,703	$995,690	88,955	607
5616	Investigation and Security Services	100	19,479	$876,855	177,631	12,671
5617	Services to Buildings and Dwellings	100	172,700	$480,087	953,744	29,835
5619	Other Support Services	100	18,223	$1,435,410	125,853	7,503
5621	Waste Collection	500	7,666	$1,877,005	87,779	7,912

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
5622	Waste Treatment and Disposal	100	1,534	$3,298,771	14,175	2,492
5629	Remediation and Other Waste Management Services	100	7,883	$1,690,585	69,976	36,457
6111	Elementary and Secondary Schools	100	16,490	$3,380,040	432,755	5,047
6112	Junior Colleges	500	288	$8,113,083	22,232	379
6113	Colleges, Universities, and Professional Schools	100	1,718	$7,571,236	31,773	824
6114	Business Schools and Computer and Management Training	100	6,832	$1,089,675	39,887	282
6115	Technical and Trade Schools	500	6,442	$1,090,769	71,095	1,478
6116	Other Schools and Instruction	100	35,635	$389,292	238,750	1,245
6117	Educational Support Services	100	5,917	$1,201,135	33,541	83
6211	Offices of Physicians	100	189,252	$1,400,668	1,382,978	2,478
6212	Offices of Dentists	100	120,488	$755,088	785,251	395
6213	Offices of Other Health Practitioners	100	112,089	$410,243	481,487	513
6214	Outpatient Care Centers	500	12,233	$2,778,276	325,291	2,191
6215	Medical and Diagnostic Laboratories	500	7,464	$2,696,196	111,982	245
6216	Home Health Care Services	20	15,764	$1,542,557	73,107	89
6219	Other Ambulatory Health Care Services	100	5,449	$2,238,978	80,159	948
6221	General Medical and Surgical Hospitals	20	1,674	$17,794,953	4,592	60
6222	Psychiatric and Substance Abuse Hospitals	20	326	$12,990,991	1,259	28

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals	20	401	$7,388,554	1,236	15
6231	Nursing Care Facilities	500	7,832	$5,346,830	732,737	9,728
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	100	8,036	$1,815,049	149,756	1,416
6233	Community Care Facilities for the Elderly	100	14,491	$1,361,752	213,645	4,616
6239	Other Residential Care Facilities	100	3,523	$1,714,968	58,973	837
6241	Individual and Family Services	100	40,591	$1,237,965	462,899	2,300
6242	Community Food and Housing, and Emergency and Other Relief Services	100	9,325	$2,074,994	110,080	2,807
6243	Vocational Rehabilitation Services	100	4,249	$1,945,328	73,914	820
6244	Child Day Care Services	100	59,716	$397,468	600,199	1,226
7111	Performing Arts Companies	500	9,255	$1,257,784	114,240	3,150
7112	Spectator Sports	100	4,194	$4,107,867	28,305	1,641
7113	Promoters of Performing Arts, Sports, and Similar Events	20	5,982	$1,371,807	19,449	773
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	500	3,620	$1,113,019	15,388	72
7115	Independent Artists, Writers, and Performers	500	20,044	$629,580	45,037	942
7121	Museums, Historical Sites, and Similar Institutions	100	6,778	$1,471,038	72,964	2,685
7131	Amusement Parks and Arcades	100	2,555	$954,517	24,165	1,439

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
7132	Gambling Industries	500	1,988	$4,195,691	68,138	2,078
7139	Other Amusement and Recreation Industries	100	61,465	$733,766	613,317	24,522
7211	Traveler Accommodation	100	43,818	$1,224,034	512,443	23,378
7212	RV (Recreational Vehicle) Parks and Recreational Camps	100	6,809	$573,403	30,846	4,017
7213	Rooming and Boarding Houses	100	2,117	$390,860	9,699	481
7221	Full-Service Restaurants	500	188,281	$674,755	3,026,084	2,251
7222	Limited-Service Eating Places	100	173,832	$656,624	1,847,022	1,978
7223	Special Food Services	100	15,095	$713,151	130,617	1,316
7224	Drinking Places (Alcoholic Beverages)	100	46,253	$383,764	329,754	646
8111	Automotive Repair and Maintenance	100	152,030	$541,795	751,162	389,884
8112	Electronic and Precision Equipment Repair and Maintenance	20	11,232	$893,997	39,042	20,321
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	100	21,850	$1,029,875	125,774	61,417
8114	Personal and Household Goods Repair and Maintenance	500	21,868	$344,533	74,913	28,262
8121	Personal Care Services	100	96,852	$232,216	480,685	286
8122	Death Care Services	20	15,760	$775,267	75,571	875
8123	Dry-cleaning and Laundry Services	20	33,896	$400,368	140,742	2,799

Table V-2
Profile of General Industry Small Business Entities Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	SBA Employment Size or Annual Receipts Criterion[a]	Entities[b]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations) [c]
8129	Other Personal Services	20	25,713	$458,703	83,124	1,109
8131	Religious Organizations	20	178,395	$632,935	833,997	23,020
8132	Grantmaking and Giving Services	20	14,131	$6,009,398	51,941	240
8133	Social Advocacy Organizations	20	13,019	$1,211,695	57,049	719
8134	Civic and Social Organizations	20	26,900	$621,150	123,552	1,279
8139	Business, Professional, Labor, Political, and Similar Organizations	20	60,844	$1,119,240	253,206	10,996
	Totals		**5,233,667**		**44,446,321**	**2,354,813**

[a] 2016 SBA criteria specified in dollar terms converted to size-class definition based on average revenues for establishment size categories. OSHA applied the most restrictive criteria for 6-digit NAICS to the 4-digit NAICS level.

[b] U.S. Census Bureau, Statistics of U.S. Businesses, 2007.

[c] Based on Bureau of Labor Statistics, Occupational Employment Statistics, 2007. Assumes same share of at-risk production workers in construction, installation, maintenance, and repair occupations as derived for the PEA. For example, for NAICS 8139, OSHA estimated in the PEA that of the 242,744 total number of employees in small firms, 10,542 workers, or 4.3 percent, are in the at-risk production occupations (Table V-2, PEA). For this FEA, applied the at-risk percentage (4.3 percent) to the 2007 figure for employment, 253,206, to derive the number of workers (10,996) in at-risk occupations in NAICS 8139 in 2007.

NA: Data not available.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
1131	Timber Tract Operations	371	$904,288	1,853	NA
1132	Forest Nurseries and Gathering of Forest Products	154	$662,500	549	NA
1133	Logging	9,231	$719,994	39,961	1,726
1141	Fishing	2,039	$502,802	2,601	NA
1142	Hunting and Trapping	312	$293,641	721	NA
1153	Support Activities for Forestry	1,528	$391,575	4,354	NA
2111	Oil and Gas Extraction	5,836	$2,175,862	19,887	4,056
2211	Electric Power Generation, Transmission and Distribution	630	$13,277,417	3,577	1,196
2212	Natural Gas Distribution	351	$19,580,715	1,693	509
2213	Water, Sewage and Other Systems	3,766	$539,579	19,257	4,235
3111	Animal Food Manufacturing	819	$2,522,281	5,211	372
3112	Grain and Oilseed Milling	277	$3,868,422	1,782	156
3113	Sugar and Confectionery Product Manufacturing	1,587	$585,509	9,210	788
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	684	$1,719,652	4,101	372
3115	Dairy Product Manufacturing	620	$2,180,692	3,632	262
3116	Animal Slaughtering and Processing	2,262	$1,396,308	12,186	648
3117	Seafood Product Preparation and Packaging	351	$2,035,162	2,058	104

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
3118	Bakeries and Tortilla Manufacturing	7,651	$425,396	43,654	1,843
3119	Other Food Manufacturing	1,786	$1,609,700	10,306	608
3121	Beverage Manufacturing	2,722	$1,051,299	12,874	1,084
3122	Tobacco Manufacturing	40	$5,255,550	158	23
3131	Fiber, Yarn, and Thread Mills	172	$941,680	872	114
3132	Fabric Mills	704	$1,069,004	4,007	382
3133	Textile and Fabric Finishing and Fabric Coating Mills	942	$1,028,120	5,000	236
3141	Textile Furnishings Mills	2,053	$587,568	9,147	491
3149	Other Textile Product Mills	3,302	$544,186	16,477	708
3151	Apparel Knitting Mills	283	$845,307	1,645	126
3152	Cut and Sew Apparel Manufacturing	7,163	$650,130	35,018	304
3159	Apparel Accessories and Other Apparel Manufacturing	730	$473,908	3,148	57
3161	Leather and Hide Tanning and Finishing	186	$638,801	885	41
3162	Footwear Manufacturing	206	$714,306	977	22
3169	Other Leather and Allied Product Manufacturing	682	$533,997	3,201	29
3211	Sawmills and Wood Preservation	2,626	$1,078,822	16,671	1,317
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	735	$1,125,005	5,685	579
3219	Other Wood Product Manufacturing	6,913	$795,184	40,335	5,009
3221	Pulp, Paper, and Paperboard Mills	85	$2,015,788	445	82

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
3222	Converted Paper Product Manufacturing	1,434	$1,708,330	10,430	655
3231	Printing and Related Support Activities	26,396	$574,129	134,736	2,159
3241	Petroleum and Coal Products Manufacturing	696	$3,779,618	3,699	538
3251	Basic Chemical Manufacturing	753	$3,960,376	3,914	471
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	356	$3,619,904	2,238	284
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	445	$2,637,229	2,609	323
3254	Pharmaceutical and Medicine Manufacturing	852	$2,051,926	4,712	213
3255	Paint, Coating, and Adhesive Manufacturing	1,009	$1,699,239	6,437	262
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	1,419	$3,140,786	8,242	556
3259	Other Chemical Product and Preparation Manufacturing	1,476	$1,538,043	8,546	550
3261	Plastics Product Manufacturing	5,175	$1,232,932	35,604	1,974
3262	Rubber Product Manufacturing	961	$1,057,482	6,139	393
3271	Clay Product and Refractory Manufacturing	991	$567,411	4,380	346
3272	Glass and Glass Product Manufacturing	1,403	$723,139	6,383	601
3273	Cement and Concrete Product Manufacturing	3,200	$1,464,123	22,308	3,317
3274	Lime and Gypsum Product Manufacturing	150	$1,663,193	837	153

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
3279	Other Nonmetallic Mineral Product Manufacturing	2,199	$948,698	13,566	1,773
3311	Iron and Steel Mills and Ferroalloy Manufacturing	532	$3,865,032	2,441	501
3312	Steel Product Manufacturing from Purchased Steel	278	$2,364,662	1,462	130
3313	Alumina and Aluminum Production and Processing	220	$3,096,368	1,227	184
3314	Nonferrous Metal (except Aluminum) Production and Processing	420	$3,356,624	2,483	254
3315	Foundries	945	$1,085,725	6,505	539
3321	Forging and Stamping	1,237	$1,276,886	9,085	534
3322	Cutlery and Handtool Manufacturing	982	$850,886	5,725	222
3323	Architectural and Structural Metals Manufacturing	8,801	$1,055,227	55,465	5,226
3324	Boiler, Tank, and Shipping Container Manufacturing	650	$1,431,457	4,364	N/A
3325	Hardware Manufacturing	425	$1,232,386	2,633	93
3326	Spring and Wire Product Manufacturing	918	$971,629	6,106	212
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	19,866	$678,530	113,258	2,788
3328	Coating, Engraving, Heat Treating, and Allied Activities	3,891	$922,584	26,405	1,085
3329	Other Fabricated Metal Product Manufacturing	3,914	$978,226	23,158	1,323
3331	Agriculture, Construction, and Mining Machinery Manufacturing	1,698	$1,422,711	10,869	594
3332	Industrial Machinery Manufacturing	2,406	$1,079,228	15,172	739
3333	Commercial and Service Industry Machinery Manufacturing	1,427	$1,193,423	8,128	416

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	852	$1,747,004	5,334	459
3335	Metalworking Machinery Manufacturing	5,710	$790,926	36,628	950
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	412	$1,638,010	2,727	218
3339	Other General Purpose Machinery Manufacturing	3,478	$1,289,752	22,932	1,318
3341	Computer and Peripheral Equipment Manufacturing	861	$1,376,239	4,513	96
3342	Communications Equipment Manufacturing	970	$1,252,311	5,710	223
3343	Audio and Video Equipment Manufacturing	386	$2,940,404	2,011	60
3344	Semiconductor and Other Electronic Component Manufacturing	2,340	$1,138,233	15,030	438
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	3,011	$1,148,847	16,910	518
3346	Manufacturing and Reproducing Magnetic and Optical Media	604	$782,482	2,801	120
3351	Electric Lighting Equipment Manufacturing	739	$1,024,417	4,387	218
3352	Household Appliance Manufacturing	182	$1,184,984	825	36
3353	Electrical Equipment Manufacturing	1,349	$1,193,299	8,138	374
3359	Other Electrical Equipment and Component Manufacturing	1,053	$1,326,520	6,651	303
3361	Motor Vehicle Manufacturing	199	$3,386,462	905	92
3362	Motor Vehicle Body and Trailer Manufacturing	1,099	$1,198,110	7,250	504

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
3363	Motor Vehicle Parts Manufacturing	2,604	$1,207,262	14,351	1,109
3364	Aerospace Product and Parts Manufacturing	778	$1,223,792	4,623	473
3365	Railroad Rolling Stock Manufacturing	78	$2,292,641	526	82
3366	Ship and Boat Building	1,132	$805,729	5,713	1,099
3369	Other Transportation Equipment Manufacturing	787	$1,106,198	3,625	216
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	13,942	$507,009	68,572	4,303
3372	Office Furniture (including Fixtures) Manufacturing	2,542	$860,408	16,306	823
3379	Other Furniture Related Product Manufacturing	599	$831,331	3,500	113
3391	Medical Equipment and Supplies Manufacturing	9,679	$514,433	41,402	932
3399	Other Miscellaneous Manufacturing	15,011	$680,473	75,533	3,556
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	14,357	$2,329,990	67,329	9,711
4232	Furniture and Home Furnishing Merchant Wholesalers	9,080	$2,011,243	41,180	1,076
4233	Lumber and Other Construction Materials Merchant Wholesalers	10,114	$2,564,331	50,993	2,688
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	22,167	$1,751,265	100,895	10,378
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	5,660	$5,805,661	29,892	811

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
4236	Electrical and Electronic Goods Merchant Wholesalers	16,343	$2,845,987	79,520	5,831
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	8,995	$2,125,415	48,855	3,657
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	35,458	$2,269,440	183,385	36,887
4239	Miscellaneous Durable Goods Merchant Wholesalers	27,588	$2,304,796	108,172	5,692
4241	Paper and Paper Product Merchant Wholesalers	7,623	$1,826,344	35,480	463
4242	Drugs and Druggists' Sundries Merchant Wholesalers	5,110	$2,278,428	21,652	155
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	13,010	$2,094,234	51,757	184
4244	Grocery and Related Product Wholesalers	22,501	$3,596,083	102,085	2,361
4245	Farm Product Raw Material Merchant Wholesalers	3,154	$7,970,817	17,059	362
4246	Chemical and Allied Products Merchant Wholesalers	6,866	$3,246,561	31,459	1,286
4247	Petroleum and Petroleum Products Merchant Wholesalers	3,322	$13,682,888	18,347	1,145
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	2,034	$2,522,152	10,430	131
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	22,114	$1,932,719	89,342	1,460
4251	Wholesale Electronic Markets and Agents and Brokers	51,680	$4,621,845	143,593	5,629
4411	Automobile Dealers	31,917	$2,410,982	134,933	34,221
4412	Other Motor Vehicle Dealers	13,141	$1,868,530	66,358	19,975
4413	Automotive Parts, Accessories, and Tire Stores	30,240	$790,790	148,766	47,519

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
4421	Furniture Stores	18,005	$894,645	89,068	1,182
4422	Home Furnishings Stores	24,937	$769,730	102,613	9,069
4431	Electronics and Appliance Stores	28,687	$738,955	112,814	14,148
4441	Building Material and Supplies Dealers	38,531	$1,159,610	215,620	8,530
4442	Lawn and Garden Equipment and Supplies Stores	14,726	$1,074,554	73,504	7,580
4451	Grocery Stores	57,220	$747,750	226,088	350
4452	Specialty Food Stores	21,967	$517,551	86,699	387
4453	Beer, Wine, and Liquor Stores	26,079	$893,894	99,028	86
4461	Health and Personal Care Stores	39,978	$1,281,999	198,780	757
4471	Gasoline Stations	60,944	$2,233,789	301,733	11,093
4481	Clothing Stores	38,954	$491,851	149,900	93
4482	Shoe Stores	6,177	$596,845	27,210	4
4483	Jewelry, Luggage, and Leather Goods Stores	18,537	$718,611	67,338	690
4511	Sporting Goods, Hobby, and Musical Instrument Stores	30,028	$549,951	123,641	4,654
4512	Book, Periodical, and Music Stores	8,449	$398,946	33,123	30
4521	Department Stores	340	$451,179	1,238	10
4529	Other General Merchandise Stores	9,408	$467,304	35,299	580
4531	Florists	18,405	$277,861	74,866	139
4532	Office Supplies, Stationery, and Gift Stores	27,053	$381,300	102,946	3,228

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
4533	Used Merchandise Stores	12,084	$386,847	40,741	387
4539	Other Miscellaneous Store Retailers	35,066	$784,145	129,654	6,803
4541	Electronic Shopping and Mail-Order Houses	13,757	$1,091,352	52,575	422
4542	Vending Machine Operators	4,200	$511,563	14,237	4,588
4543	Direct Selling Establishments	18,151	$1,138,456	73,976	11,606
4811	Scheduled Air Transportation	375	$1,432,816	1,508	125
4812	Nonscheduled Air Transportation	1,966	$1,144,357	6,850	1,119
4831	Deep Sea, Coastal, and Great Lakes Water Transportation	629	$1,863,897	2,938	85
4832	Inland Water Transportation	465	$1,045,996	1,981	60
4841	General Freight Trucking	53,000	$540,630	160,861	7,636
4842	Specialized Freight Trucking	43,755	$559,392	157,509	8,618
4851	Urban Transit Systems	408	$417,904	1,958	211
4852	Interurban and Rural Bus Transportation	156	$459,436	663	41
4853	Taxi and Limousine Service	6,692	$317,354	23,874	603
4854	School and Employee Bus Transportation	2,107	$244,992	11,254	387
4855	Charter Bus Industry	776	$535,240	4,470	254
4859	Other Transit and Ground Passenger Transportation	2,464	$330,092	11,861	354
4861	Pipeline Transportation of Crude Oil	28	$1,551,464	0	N/A
4862	Pipeline Transportation of Natural Gas	63	$916,556	231	47

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
4869	Other Pipeline Transportation	35	$2,214,257	0	N/A
4871	Scenic and Sightseeing Transportation, Land	536	$449,235	0	N/A
4872	Scenic and Sightseeing Transportation, Water	1,717	$369,853	4,229	107
4879	Scenic and Sightseeing Transportation, Other	171	$565,269	0	N/A
4881	Support Activities for Air Transportation	3,385	$670,672	15,022	4,227
4882	Support Activities for Rail Transportation	335	$1,056,352	2,008	679
4883	Support Activities for Water Transportation	1,404	$842,933	5,293	327
4884	Support Activities for Road Transportation	8,660	$412,065	36,483	1,993
4885	Freight Transportation Arrangement	11,567	$1,169,068	49,202	481
4889	Other Support Activities for Transportation	1,381	$483,409	4,962	151
4921	Couriers	3,321	$470,152	11,293	279
4922	Local Messengers and Local Delivery	3,918	$420,901	13,561	44
4931	Warehousing and Storage	3,827	$978,953	19,343	608
5111	Newspaper, Periodical, Book, and Directory Publishers	14,080	$636,747	63,758	516
5112	Software Publishers	4,524	$944,289	22,363	149
5121	Motion Picture and Video Industries	16,359	$685,625	45,008	384
5122	Sound Recording Industries	3,425	$482,983	8,858	92
5151	Radio and Television Broadcasting	3,621	$540,364	22,753	249
5152	Cable and Other Subscription Programming	293	$1,520,055	1,298	348

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
5161	Internet Publishing and Broadcasting	2,074	$646,030	6,667	N/A
5171	Wired Telecommunications Carriers	1,393	$1,389,149	6,875	2,320
5172	Wireless Telecommunications Carriers (except Satellite)	1,452	$842,178	5,268	294
5173	Telecommunications Resellers	2,789	$1,186,366	10,731	N/A
5174	Satellite Telecommunications	478	$1,141,295	1,823	284
5175	Cable and Other Program Distribution	802	$952,906	3,476	N/A
5179	Other Telecommunications	1,176	$779,734	4,168	919
5181	Internet Service Providers and Web Search Portals	3,350	$648,603	11,712	N/A
5182	Data Processing, Hosting, and Related Services	6,048	$756,550	25,507	337
5191	Other Information Services	2,988	$380,189	12,905	52
5211	Monetary Authorities - Central Bank	39	$1,627,718	229	5
5221	Depository Credit Intermediation	7,589	$1,357,749	54,220	102
5222	Nondepository Credit Intermediation	20,967	$719,656	71,025	121
5223	Activities Related to Credit Intermediation	26,119	$434,504	87,574	259
5231	Securities and Commodity Contracts Intermediation and Brokerage	12,049	$1,066,412	35,583	34
5232	Securities and Commodity Exchanges	107	$2,388,383	235	4
5239	Other Financial Investment Activities	42,067	$925,317	113,019	292
5241	Insurance Carriers	6,199	$1,205,802	23,179	66

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
5242	Agencies, Brokerages, and Other Insurance Related Activities	126,015	$405,901	401,572	487
5259	Other Investment Pools and Funds	1,965	$2,111,505	4,448	55
5311	Lessors of Real Estate	91,585	$686,318	259,246	69,053
5312	Offices of Real Estate Agents and Brokers	100,495	$490,242	202,863	13,555
5313	Activities Related to Real Estate	68,879	$387,554	204,255	40,327
5321	Automotive Equipment Rental and Leasing	4,140	$751,836	14,057	1,855
5322	Consumer Goods Rental	10,893	$348,975	47,138	1,429
5323	General Rental Centers	2,867	$642,647	14,229	2,240
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	7,207	$990,733	29,875	7,714
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	2,051	$1,559,166	7,407	80
5411	Legal Services	173,334	$498,006	561,904	269
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	101,937	$304,149	345,607	1,903
5413	Architectural, Engineering, and Related Services	90,424	$550,511	353,781	14,799
5414	Specialized Design Services	33,480	$503,875	89,625	1,460
5415	Computer Systems Design and Related Services	96,593	$491,452	258,264	4,304
5416	Management, Scientific, and Technical Consulting Services	136,280	$460,433	312,615	7,845

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
5417	Scientific Research and Development Services	10,974	$788,491	43,789	834
5418	Advertising and Related Services	33,795	$757,078	118,339	1,945
5419	Other Professional, Scientific, and Technical Services	59,528	$481,878	251,956	1,734
5511	Management of Companies and Enterprises	5,719	$1,743,093	14,633	411
5611	Office Administrative Services	22,481	$639,205	78,740	1,871
5612	Facilities Support Services	978	$1,047,835	4,292	562
5613	Employment Services	14,288	$449,522	60,685	4,300
5614	Business Support Services	25,890	$433,515	100,431	586
5615	Travel Arrangement and Reservation Services	15,806	$433,715	54,230	369
5616	Investigation and Security Services	16,410	$386,926	68,170	4,863
5617	Services to Buildings and Dwellings	160,667	$289,741	546,830	17,106
5619	Other Support Services	16,611	$692,660	63,972	3,814
5621	Waste Collection	6,550	$763,380	33,154	2,989
5622	Waste Treatment and Disposal	1,277	$1,043,285	6,779	1,191
5629	Remediation and Other Waste Management Services	6,739	$654,417	31,315	16,314
6111	Elementary and Secondary Schools	8,116	$482,773	62,969	734
6112	Junior Colleges	176	$706,528	898	16
6113	Colleges, Universities, and Professional Schools	868	$696,187	4,333	112
6114	Business Schools and Computer and Management Training	6,367	$498,411	20,232	142

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
6115	Technical and Trade Schools	5,671	$465,825	27,936	581
6116	Other Schools and Instruction	32,864	$232,852	137,932	720
6117	Educational Support Services	5,525	$414,953	17,452	43
6211	Offices of Physicians	173,483	$748,931	807,231	1,447
6212	Offices of Dentists	116,943	$663,526	680,995	342
6213	Offices of Other Health Practitioners	108,837	$315,908	371,257	395
6214	Outpatient Care Centers	9,406	$662,078	49,633	334
6215	Medical and Diagnostic Laboratories	6,099	$956,341	27,484	60
6216	Home Health Care Services	9,898	$358,422	45,903	56
6219	Other Ambulatory Health Care Services	4,056	$533,988	22,677	268
6221	General Medical and Surgical Hospitals	170	$2,036,565	466	6
6222	Psychiatric and Substance Abuse Hospitals	95	$799,389	367	8
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals	236	$699,254	727	9
6231	Nursing Care Facilities	1,768	$722,773	8,046	107
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	4,311	$309,512	26,557	251
6233	Community Care Facilities for the Elderly	10,036	$280,604	53,169	1,149
6239	Other Residential Care Facilities	2,018	$317,314	13,130	186
6241	Individual and Family Services	30,530	$361,179	144,429	718

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
6242	Community Food and Housing, and Emergency and Other Relief Services	6,950	$708,070	39,765	1,014
6243	Vocational Rehabilitation Services	2,096	$449,376	10,606	118
6244	Child Day Care Services	49,092	$178,863	281,036	574
7111	Performing Arts Companies	8,161	$586,767	28,265	780
7112	Spectator Sports	3,798	$581,632	12,652	733
7113	Promoters of Performing Arts, Sports, and Similar Events	5,395	$762,802	17,541	697
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	3,511	$737,312	8,864	41
7115	Independent Artists, Writers, and Performers	19,734	$571,636	31,196	652
7121	Museums, Historical Sites, and Similar Institutions	5,711	$380,010	23,753	874
7131	Amusement Parks and Arcades	2,108	$418,728	9,002	537
7132	Gambling Industries	1,466	$811,623	8,535	260
7139	Other Amusement and Recreation Industries	50,769	$331,215	226,514	9,056
7211	Traveler Accommodation	33,973	$494,261	189,353	8,638
7212	RV (Recreational Vehicle) Parks and Recreational Camps	6,233	$434,492	18,918	2,464
7213	Rooming and Boarding Houses	2,034	$296,352	7,687	382
7221	Full-Service Restaurants	141,430	$325,251	867,052	645
7222	Limited-Service Eating Places	141,803	$289,576	772,741	827

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]
7223	Special Food Services	12,836	$338,699	53,511	539
7224	Drinking Places (Alcoholic Beverages)	42,226	$261,017	191,304	375
8111	Automotive Repair and Maintenance	146,321	$419,387	565,789	293,668
8112	Electronic and Precision Equipment Repair and Maintenance	10,607	$453,389	36,870	19,190
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	20,429	$561,565	81,682	39,887
8114	Personal and Household Goods Repair and Maintenance	21,460	$274,609	60,015	22,642
8121	Personal Care Services	92,503	$163,221	339,470	203
8122	Death Care Services	14,826	$572,485	71,093	823
8123	Dry-cleaning and Laundry Services	31,666	$233,543	131,482	2,615
8129	Other Personal Services	24,514	$262,944	79,248	1,058
8131	Religious Organizations	162,152	$304,854	758,061	20,924
8132	Grantmaking and Giving Services	14,131	$2,657,994	51,941	240
8133	Social Advocacy Organizations	11,696	$528,285	51,251	646
8134	Civic and Social Organizations	24,642	$336,464	113,181	1,172
8139	Business, Professional, Labor, Political, and Similar Organizations	56,541	$514,115	235,299	10,219
	Totals	**4,651,919**		**18,951,336**	**1,064,423**

[a] U.S. Census Bureau, Statistics of U.S. Businesses, 2007.

Table V-3
Profile of General Industry Very Small Business Entities (Fewer Than 20 Employees) Covered by the Final Standard for Subparts D and I (continued)

NAICS	NAICS Description	Entities[a]	Average Receipts per Entity[b]	Total Employees	Estimated Employment in At-Risk Production Occupations (Construction, Installation, Maintenance, and Repair Occupations)[c]

[b] Estimated based on U.S. Census Bureau, Statistics of U.S. Businesses, 2007.

[c] Based on Bureau of Labor Statistics, Occupational Employment Statistics, 2007. Assumes the same share of at-risk production workers in construction, installation, maintenance, and repair occupations as derived for the PEA.

NA: Data not available.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

4. Number of Employees Using Fall Protection

Based on analysis by ERG (2007), OSHA estimated the numbers of employees using fall protection equipment by extrapolating results obtained from OSHA's 1999 PPE Cost Survey.[105] This establishment-based survey provided industry-specific estimates of the numbers of workers who used various types of personal fall protection equipment, including body harnesses and body belts. The survey reported the percentage of employees in each industry (by SIC codes) who used these types of personal fall protection equipment. ERG applied the survey findings by first associating the SIC industries covered by the survey with the 4-digit NAICS industry codes, and then multiplying total employment (presented above in Table V–1) by the percentage of employees who used personal fall protection equipment.

Because different employees might use both body harnesses and body belts, OSHA used the combined value of the two percentages in deriving these estimates. For example, if six percent of employees in a given industry used body harnesses while four percent of employees used body belts, OSHA applied the combined percentage (ten percent) as its estimate of the maximum number of employees using either form of fall protection.[106] The survey's design did not permit industry-specific estimates for all industries.

For example, only aggregated estimates are available for several groups of service, wholesale, and retail trade industries. To make the fall protection estimates consistent with the numbers of at-risk employees, OSHA constrained the estimated number of employees using personal fall protection equipment in any industry to be less than or equal to the numbers of employees in construction, installation, maintenance, and repair occupations shown in Table V–1. Table V–4 presents, by the 4-digit NAICS industry code, OSHA's estimate of the number of employees using fall protection equipment.[107] Overall, OSHA estimated that approximately 2.1 million employees in general industry currently use and will continue to use fall protection.

5. Wage Rates

As discussed in detail later in this FEA, OSHA believes that much of the cost impact of the final standard results from the time requirements for additional training and inspections. The Agency based the estimates for these costs on the opportunity cost of the labor time devoted to training, inspections, and installation or deployment of fall protection equipment. OSHA valued these opportunity costs in terms of employees' hourly wages, including benefit and fringe costs. Relying on average hourly earnings as reported by the BLS *Occupational Employment Statistics Survey, 2010,* OSHA constructed a weighted average hourly wage for the specific occupations comprising production employment for each industry. Similarly, OSHA constructed an average hourly production-supervisor wage for each industry.[108] The Agency then multiplied these wages by a mark-up factor to account for fringe benefits. According to the 2010 BLS Employer Costs for Employee Compensation[109] survey (BLS, 2011), this mark-up factor averages 41.5 percent across industries in 2010. The loaded wage rates applied by OSHA in this FEA are in Table V–5.

[105] For a description of the survey, see ERG (1999) in the reference section of this FEA. ERG excluded back-support belts and similar ergonomic devices from the types of personal protective equipment investigated by the survey.

[106] For the PEA, OSHA applied the upper value in the range—six percent in the example given—and not the combined percentage.

[107] The source of the data in Table V–4 is the OSHA PPE Cost Survey. Estimates shown are based on the combined percentage of employees using body harnesses and body belts. See Eastern Research Group, 1999. An ''NA'' indicates that the industry was not within the scope of the survey or that the subset of production employees judged to be subject to this standard was zero (NA) (see Table V–1). In ERG, 1999 (OSHA PPE Survey), see Table A2, PPE Category: Fall Protection; PPE Type: Body Harness; PPE Type: Body Belt, where, by two-, three-, and four-digit SIC codes, the number and percentage of employees using the PPE type is reported. For this FEA, ERG converted SIC codes to NAICS codes; see Ex. [OSHA Excel Workbook], tab Fall_protection.

[108] For example, for NAICS 4871—Scenic and Sightseeing Transportation, Land, NAICS 4872—Scenic and Sightseeing Transportation, Water, and NAICS 4879—Scenic and Sightseeing Transportation, Other, BLS OES did not report production wage and supervisory wage for 2010. Therefore, OSHA's applied as the base wage for production worker ($19.80), the reported value for the next largest available industry sector, NAICS 48–49, Transportation and Warehousing. For the supervisory wage ($27.45) for NAICS 4871, 4872, and 4879, OSHA applied a wage rate taken from a related transportation industry, NAICS 4851, Urban Transit Systems. Applying the fringe-benefit markup factor of 41.5 percent raised the production worker wage to $28.01 and the supervisory wage to $38.83.

[109] BLS (2010) reported a value of 41.5 percent for all private industry for June 2010.

Table V-4
Estimated Number of Employees Using Fall Protection Equipment

NAICS	NAICS Description	Total Employment	Employees Using Fall Protection[a]		
			Percent	Number [c]	
1131	Timber Tract Operations	2,632	10.7%	NA	
1132	Forest Nurseries and Gathering of Forest Products	2,216	18.4%	NA	
1133	Logging	59,597	3.3%	1,954	
1141	Fishing	5,302	N/A	NA	
1142	Hunting and Trapping	1,845	N/A	NA	
1153	Support Activities for Forestry	13,740	18.4%	NA	
2111	Oil and Gas Extraction	141,809	25.0%	24,910	[b]
2211	Electric Power Generation, Transmission and Distribution	503,134	16.2%	81,340	
2212	Natural Gas Distribution	79,354	16.2%	12,829	
2213	Water, Sewage and Other Systems	40,269	16.2%	6,510	
3111	Animal Food Manufacturing	46,983	3.0%	1,411	
3112	Grain and Oilseed Milling	58,049	3.0%	1,743	
3113	Sugar and Confectionery Product Manufacturing	73,457	3.0%	2,206	
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	162,253	3.0%	4,873	
3115	Dairy Product Manufacturing	129,692	3.0%	3,895	
3116	Animal Slaughtering and Processing	487,813	3.0%	14,650	
3117	Seafood Product Preparation and Packaging	33,169	3.0%	996	
3118	Bakeries and Tortilla Manufacturing	284,998	3.0%	8,559	
3119	Other Food Manufacturing	162,852	3.0%	4,891	
3121	Beverage Manufacturing	135,979	3.0%	4,084	
3122	Tobacco Manufacturing	20,135	3.4%	688	
3131	Fiber, Yarn, and Thread Mills	42,041	2.9%	1,213	
3132	Fabric Mills	80,514	2.9%	2,324	
3133	Textile and Fabric Finishing and Fabric Coating Mills	41,527	2.9%	1,199	
3141	Textile Furnishings Mills	80,278	2.9%	2,317	
3149	Other Textile Product Mills	72,700	2.9%	2,098	
3151	Apparel Knitting Mills	26,584	2.9%	779	
3152	Cut and Sew Apparel Manufacturing	155,742	2.9%	1,463	[b]
3159	Apparel Accessories and Other Apparel Manufacturing	15,128	2.9%	340	
3161	Leather and Hide Tanning and Finishing	4,856	2.9%	140	
3162	Footwear Manufacturing	15,017	2.9%	360	

Table V-4
Estimated Number of Employees Using Fall Protection Equipment (continued)

NAICS	NAICS Description	Total Employment	Employees Using Fall Protection[a]		
			Percent	Number[c]	
3169	Other Leather and Allied Product Manufacturing	16,798	2.9%	100	[b]
3211	Sawmills and Wood Preservation	112,425	3.3%	3,687	
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	109,002	3.3%	3,574	
3219	Other Wood Product Manufacturing	306,138	3.3%	10,039	
3221	Pulp, Paper, and Paperboard Mills	130,068	7.4%	9,625	
3222	Converted Paper Product Manufacturing	295,028	7.4%	20,140	
3231	Printing and Related Support Activities	631,771	3.4%	10,140	[b]
3241	Petroleum and Coal Products Manufacturing	103,577	17.5%	17,330	[b]
3251	Basic Chemical Manufacturing	165,025	17.9%	19,100	[b]
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	88,601	17.9%	13,690	[b]
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	28,618	17.9%	4,520	[b]
3254	Pharmaceutical and Medicine Manufacturing	241,339	17.9%	14,170	[b]
3255	Paint, Coating, and Adhesive Manufacturing	62,493	17.9%	2,710	[b]
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	104,422	17.9%	7,580	[b]
3259	Other Chemical Product and Preparation Manufacturing	103,219	17.9%	6,770	[b]
3261	Plastics Product Manufacturing	707,972	2.7%	19,284	
3262	Rubber Product Manufacturing	147,511	2.7%	4,018	
3271	Clay Product and Refractory Manufacturing	52,544	8.0%	4,192	
3272	Glass and Glass Product Manufacturing	97,876	8.0%	7,810	
3273	Cement and Concrete Product Manufacturing	221,488	8.0%	17,673	
3274	Lime and Gypsum Product Manufacturing	17,332	8.0%	1,383	
3279	Other Nonmetallic Mineral Product Manufacturing	82,888	8.0%	6,614	
3311	Iron and Steel Mills and Ferroalloy Manufacturing	109,998	8.3%	9,150	
3312	Steel Product Manufacturing from Purchased Steel	44,492	8.3%	3,701	
3313	Alumina and Aluminum Production and Processing	63,988	8.3%	5,323	
3314	Nonferrous Metal (except Aluminum) Production and Processing	60,466	8.3%	5,030	
3315	Foundries	159,977	8.3%	13,308	
3321	Forging and Stamping	124,406	2.6%	3,246	
3322	Cutlery and Handtool Manufacturing	50,529	2.6%	1,318	

Table V-4
Estimated Number of Employees Using Fall Protection Equipment (continued)

NAICS	NAICS Description	Total Employment	Employees Using Fall Protection[a]		
			Percent	Number[c]	
3323	Architectural and Structural Metals Manufacturing	398,786	2.6%	10,404	
3324	Boiler, Tank, and Shipping Container Manufacturing	93,356	2.6%	2,436	
3325	Hardware Manufacturing	41,763	2.6%	1,090	
3326	Spring and Wire Product Manufacturing	53,413	2.6%	1,394	
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	395,207	2.6%	10,311	
3328	Coating, Engraving, Heat Treating, and Allied Activities	137,183	2.6%	3,579	
3329	Other Fabricated Metal Product Manufacturing	271,223	2.6%	7,076	
3331	Agriculture, Construction, and Mining Machinery Manufacturing	205,545	2.8%	5,841	
3332	Industrial Machinery Manufacturing	130,022	2.8%	3,695	
3333	Commercial and Service Industry Machinery Manufacturing	95,729	2.8%	2,720	
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	151,175	2.8%	4,296	
3335	Metalworking Machinery Manufacturing	167,558	2.8%	4,761	[b]
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	102,482	2.8%	2,912	
3339	Other General Purpose Machinery Manufacturing	285,029	2.8%	8,100	
3341	Computer and Peripheral Equipment Manufacturing	99,137	2.6%	2,540	[b]
3342	Communications Equipment Manufacturing	151,847	2.6%	3,891	
3343	Audio and Video Equipment Manufacturing	17,191	2.6%	441	
3344	Semiconductor and Other Electronic Component Manufacturing	362,859	2.6%	9,298	
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	384,966	2.6%	9,865	
3346	Manufacturing and Reproducing Magnetic and Optical Media	27,288	2.6%	699	
3351	Electric Lighting Equipment Manufacturing	57,515	2.6%	1,474	
3352	Household Appliance Manufacturing	65,666	2.6%	1,683	
3353	Electrical Equipment Manufacturing	138,332	2.6%	3,545	
3359	Other Electrical Equipment and Component Manufacturing	144,746	2.6%	3,709	
3361	Motor Vehicle Manufacturing	196,493	2.7%	5,217	
3362	Motor Vehicle Body and Trailer Manufacturing	151,588	2.7%	4,025	
3363	Motor Vehicle Parts Manufacturing	593,630	2.7%	15,762	

Table V-4
Estimated Number of Employees Using Fall Protection Equipment (continued)

NAICS	NAICS Description	Total Employment	Employees Using Fall Protection[a]		
			Percent	Number[c]	
3364	Aerospace Product and Parts Manufacturing	408,139	2.7%	10,837	
3365	Railroad Rolling Stock Manufacturing	28,712	2.7%	762	
3366	Ship and Boat Building	148,864	39.5%	31,360	[b]
3369	Other Transportation Equipment Manufacturing	46,721	2.7%	1,241	
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	333,974	3.0%	10,002	
3372	Office Furniture (including Fixtures) Manufacturing	141,000	3.0%	4,223	
3379	Other Furniture Related Product Manufacturing	42,427	3.0%	1,271	
3391	Medical Equipment and Supplies Manufacturing	316,789	2.6%	7,210	[b]
3399	Other Miscellaneous Manufacturing	364,059	3.0%	10,907	
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	355,828	8.2%	29,089	
4232	Furniture and Home Furnishing Merchant Wholesalers	153,866	8.2%	3,320	[b]
4233	Lumber and Other Construction Materials Merchant Wholesalers	264,252	8.2%	14,470	
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	705,551	8.2%	57,678	
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	160,366	8.2%	3,670	[b]
4236	Electrical and Electronic Goods Merchant Wholesalers	449,905	8.2%	25,160	
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	232,006	8.2%	17,670	
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	723,802	8.2%	59,170	
4239	Miscellaneous Durable Goods Merchant Wholesalers	349,701	8.2%	13,550	
4241	Paper and Paper Product Merchant Wholesalers	172,308	7.2%	1,920	[b]
4242	Drugs and Druggists' Sundries Merchant Wholesalers	248,057	7.2%	1,600	[b]
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	196,601	7.2%	490	[b]
4244	Grocery and Related Product Wholesalers	768,342	7.2%	17,420	[b]
4245	Farm Product Raw Material Merchant Wholesalers	61,349	7.2%	1,720	[b]
4246	Chemical and Allied Products Merchant Wholesalers	139,481	7.2%	6,020	[b]
4247	Petroleum and Petroleum Products Merchant Wholesalers	94,845	7.2%	6,050	
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	178,694	7.2%	1,870	[b]
4249	Miscellaneous Nondurable Goods Merchant	368,372	7.2%	5,970	[b]

Table V-4
Estimated Number of Employees Using Fall Protection Equipment (continued)

NAICS	NAICS Description	Total Employment	Employees Using Fall Protection[a]		
			Percent	Number[c]	
	Wholesalers				
4251	Wholesale Electronic Markets and Agents and Brokers	341,524	7.2%	24,451	[b]
4411	Automobile Dealers	1,273,660	3.0%	38,408	
4412	Other Motor Vehicle Dealers	168,973	3.0%	5,096	
4413	Automotive Parts, Accessories, and Tire Stores	495,633	3.0%	14,946	
4421	Furniture Stores	271,675	4.2%	4,160	[b]
4422	Home Furnishings Stores	324,863	4.2%	13,722	
4431	Electronics and Appliance Stores	500,780	4.2%	21,152	
4441	Building Material and Supplies Dealers	1,202,392	3.8%	45,188	
4442	Lawn and Garden Equipment and Supplies Stores	171,569	3.8%	6,448	
4451	Grocery Stores	2,564,533	3.2%	3,590	[b]
4452	Specialty Food Stores	174,558	3.2%	1,510	[b]
4453	Beer, Wine, and Liquor Stores	142,692	3.2%	160	[b]
4461	Health and Personal Care Stores	1,069,187	3.2%	3,760	[b]
4471	Gasoline Stations	888,705	3.2%	28,183	
4481	Clothing Stores	1,278,939	4.3%	820	[b]
4482	Shoe Stores	206,338	4.3%	0	[b]
4483	Jewelry, Luggage, and Leather Goods Stores	162,880	4.3%	1,690	[b]
4511	Sporting Goods, Hobby, and Musical Instrument Stores	455,576	4.3%	17,950	
4512	Book, Periodical, and Music Stores	184,118	4.3%	200	[b]
4521	Department Stores	1,619,833	2.7%	14,480	[b]
4529	Other General Merchandise Stores	1,277,639	2.7%	24,990	[b]
4531	Florists	93,779	2.7%	190	[b]
4532	Office Supplies, Stationery, and Gift Stores	315,159	2.7%	8,418	
4533	Used Merchandise Stores	133,918	4.2%	1,090	[b]
4539	Other Miscellaneous Store Retailers	270,971	4.2%	11,258	
4541	Electronic Shopping and Mail-Order Houses	268,328	4.2%	2,460	[b]
4542	Vending Machine Operators	49,446	4.2%	2,054	
4543	Direct Selling Establishments	193,784	4.2%	8,051	
4811	Scheduled Air Transportation	435,853	10.1%	38,230	
4812	Nonscheduled Air Transportation	44,795	10.1%	4,508	
4831	Deep Sea, Coastal, and Great Lakes Water Transportation	48,180	10.1%	450	[b]

Table V-4
Estimated Number of Employees Using Fall Protection Equipment (continued)

NAICS	NAICS Description	Total Employment	Employees Using Fall Protection[a]		
			Percent	Number[c]	
4832	Inland Water Transportation	20,767	6.3%	540	[b]
4841	General Freight Trucking	998,697	6.7%	48,700	
4842	Specialized Freight Trucking	477,700	6.7%	24,240	
4851	Urban Transit Systems	52,912	4.4%	2,329	
4852	Interurban and Rural Bus Transportation	17,432	4.4%	767	
4853	Taxi and Limousine Service	72,504	4.4%	1,610	[b]
4854	School and Employee Bus Transportation	206,787	4.4%	6,700	
4855	Charter Bus Industry	28,384	4.4%	1,249	
4859	Other Transit and Ground Passenger Transportation	62,604	4.4%	1,530	
4861	Pipeline Transportation of Crude Oil	8,347	14.5%	1,214	
4862	Pipeline Transportation of Natural Gas	24,683	14.5%	3,589	
4869	Other Pipeline Transportation	9,415	14.5%	1,000	
4871	Scenic and Sightseeing Transportation, Land	9,690	NA	NA	
4872	Scenic and Sightseeing Transportation, Water	15,612	NA	NA	
4879	Scenic and Sightseeing Transportation, Other	2,162	NA	NA	
4881	Support Activities for Air Transportation	3,676	6.0%	220	
4882	Support Activities for Rail Transportation	308	6.0%	18	
4883	Support Activities for Water Transportation	1,442	15.2%	219	[b]
4884	Support Activities for Road Transportation	9,719	6.0%	580	
4885	Freight Transportation Arrangement	212,165	6.0%	1,820	[b]
4889	Other Support Activities for Transportation	34,654	6.0%	930	[b]
4921	Couriers	528,177	6.0%	13,900	[b]
4922	Local Messengers and Local Delivery	41,013	6.0%	220	[b]
4931	Warehousing and Storage	679,077	6.7%	21,630	[b]
5111	Newspaper, Periodical, Book, and Directory Publishers	688,034	3.4%	5,780	[b]
5112	Software Publishers	346,675	1.3%	1,780	[b]
5121	Motion Picture and Video Industries	298,598	N/A	N/A	
5122	Sound Recording Industries	22,049	15.5%	150	[b]
5151	Radio and Television Broadcasting	252,294	15.5%	2,860	[b]
5152	Cable and Other Subscription Programming	41,674	15.5%	6,471	
5161	Internet Publishing and Broadcasting	46,627	NA	NA	
5171	Wired Telecommunications Carriers	621,712	15.5%	96,533	
5172	Wireless Telecommunications Carriers (except	277,622	15.5%	11,410	[b]

Table V-4
Estimated Number of Employees Using Fall Protection Equipment (continued)

NAICS	NAICS Description	Total Employment	Employees Using Fall Protection[a]		
			Percent	Number[c]	
	Satellite)				
5173	Telecommunications Resellers	34,973	15.5%	5,430	
5174	Satellite Telecommunications	13,149	15.5%	2,042	
5175	Cable and Other Program Distribution	240,038	NA	NA	
5179	Other Telecommunications	14,428	NA	NA	
5181	Internet Service Providers and Web Search Portals	71,307	NA	NA	
5182	Data Processing, Hosting, and Related Services	375,474	NA	NA	
5191	Other Information Services	54,659	NA	NA	
5211	Monetary Authorities - Central Bank	20,223	NA	NA	
5221	Depository Credit Intermediation	2,137,764	NA	NA	
5222	Nondepository Credit Intermediation	747,414	NA	NA	
5223	Activities Related to Credit Intermediation	341,041	NA	NA	
5231	Securities and Commodity Contracts Intermediation and Brokerage	528,722	NA	NA	
5232	Securities and Commodity Exchanges	8,600	NA	NA	
5239	Other Financial Investment Activities	404,402	NA	NA	
5241	Insurance Carriers	1,423,578	1.6%	3,700	[b]
5242	Agencies, Brokerages, and Other Insurance Related Activities	903,366	1.6%	1,270	[b]
5259	Other Investment Pools and Funds	33,396	1.6%	520	
5311	Lessors of Real Estate	539,169	1.6%	8,393	
5312	Offices of Real Estate Agents and Brokers	367,125	1.6%	5,715	
5313	Activities Related to Real Estate	647,869	1.6%	10,086	
5321	Automotive Equipment Rental and Leasing	199,872	1.6%	3,111	
5322	Consumer Goods Rental	237,074	1.6%	3,691	
5323	General Rental Centers	35,493	1.6%	553	
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	165,838	1.6%	2,582	
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	31,735	1.6%	250	
5411	Legal Services	1,206,577	1.6%	580	[b]
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	1,357,368	1.6%	5,310	[b]
5413	Architectural, Engineering, and Related Services	1,434,803	1.9%	26,805	
5414	Specialized Design Services	134,739	1.9%	2,390	

Table V-4
Estimated Number of Employees Using Fall Protection Equipment (continued)

NAICS	NAICS Description	Total Employment	Employees Using Fall Protection[a] Percent	Number[c]	
5415	Computer Systems Design and Related Services	1,297,710	1.9%	22,640	
5416	Management, Scientific, and Technical Consulting Services	1,015,109	1.9%	18,965	
5417	Scientific Research and Development Services	688,052	1.9%	11,360	
5418	Advertising and Related Services	445,590	1.9%	8,000	
5419	Other Professional, Scientific, and Technical Services	599,993	1.9%	3,830	[b]
5511	Management of Companies and Enterprises	3,121,402	1.6%	48,592	
5611	Office Administrative Services	472,690	1.6%	7,359	
5612	Facilities Support Services	189,275	1.6%	2,947	
5613	Employment Services	5,131,446	1.6%	79,883	
5614	Business Support Services	766,237	1.6%	3,890	[b]
5615	Travel Arrangement and Reservation Services	243,943	1.6%	1,270	[b]
5616	Investigation and Security Services	777,680	1.6%	12,106	
5617	Services to Buildings and Dwellings	1,722,595	1.6%	26,816	
5619	Other Support Services	324,602	1.6%	5,053	
5621	Waste Collection	185,047	1.6%	2,881	
5622	Waste Treatment and Disposal	56,755	1.6%	884	
5629	Remediation and Other Waste Management Services	113,391	1.6%	1,765	
6111	Elementary and Secondary Schools	827,165	NA	NA	
6112	Junior Colleges	80,568	NA	NA	
6113	Colleges, Universities, and Professional Schools	1,572,333	NA	NA	
6114	Business Schools and Computer and Management Training	65,818	NA	NA	
6115	Technical and Trade Schools	119,020	NA	NA	
6116	Other Schools and Instruction	302,908	NA	NA	
6117	Educational Support Services	71,573	NA	NA	
6211	Offices of Physicians	2,169,682	1.5%	3,150	[b]
6212	Offices of Dentists	824,770	1.5%	520	[b]
6213	Offices of Other Health Practitioners	614,171	1.5%	600	[b]
6214	Outpatient Care Centers	695,863	1.5%	3,680	[b]
6215	Medical and Diagnostic Laboratories	221,709	1.5%	490	[b]
6216	Home Health Care Services	1,021,573	1.5%	1,190	[b]
6219	Other Ambulatory Health Care Services	269,271	1.5%	2,670	[b]

Table V-4
Estimated Number of Employees Using Fall Protection Equipment (continued)

NAICS	NAICS Description	Total Employment	Employees Using Fall Protection[a]		
			Percent	Number[c]	
6221	General Medical and Surgical Hospitals	5,041,848	1.5%	65,370	
6222	Psychiatric and Substance Abuse Hospitals	216,343	1.5%	3,242	
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals	219,627	1.5%	2,520	[b]
6231	Nursing Care Facilities	1,646,321	1.5%	21,780	
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	557,907	1.5%	5,110	[b]
6233	Community Care Facilities for the Elderly	685,024	1.5%	10,266	
6239	Other Residential Care Facilities	153,881	1.5%	2,290	
6241	Individual and Family Services	1,108,173	1.5%	5,560	[b]
6242	Community Food and Housing, and Emergency and Other Relief Services	167,691	1.5%	2,513	
6243	Vocational Rehabilitation Services	330,145	1.5%	3,480	[b]
6244	Child Day Care Services	853,648	1.5%	1,760	[b]
7111	Performing Arts Companies	134,434	NA	NA	
7112	Spectator Sports	126,092	NA	NA	
7113	Promoters of Performing Arts, Sports, and Similar Events	112,354	N/A	N/A	
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	17,420	NA	NA	
7115	Independent Artists, Writers, and Performers	45,772	NA	NA	
7121	Museums, Historical Sites, and Similar Institutions	128,539	NA	NA	
7131	Amusement Parks and Arcades	128,369	NA	NA	
7132	Gambling Industries	205,307	NA	NA	
7139	Other Amusement and Recreation Industries	1,110,280	NA	NA	
7211	Traveler Accommodation	1,856,110	1.3%	23,602	
7212	RV (Recreational Vehicle) Parks and Recreational Camps	39,717	1.3%	505	
7213	Rooming and Boarding Houses	11,727	1.3%	149	
7221	Full-Service Restaurants	4,579,941	3.3%	3,580	[b]
7222	Limited-Service Eating Places	4,136,741	3.3%	4,080	[b]
7223	Special Food Services	575,579	3.3%	6,610	[b]
7224	Drinking Places (Alcoholic Beverages)	365,049	3.3%	690	[b]
8111	Automotive Repair and Maintenance	893,198	4.0%	35,820	
8112	Electronic and Precision Equipment Repair and	135,243	3.4%	4,659	

Table V-4
Estimated Number of Employees Using Fall Protection Equipment (continued)

NAICS	NAICS Description	Total Employment	Employees Using Fall Protection[a]		
			Percent	Number[c]	
	Maintenance				
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	199,239	3.4%	6,863	
8114	Personal and Household Goods Repair and Maintenance	95,272	3.4%	3,282	
8121	Personal Care Services	616,538	2.4%	420	[b]
8122	Death Care Services	136,928	2.4%	1,790	[b]
8123	Dry-cleaning and Laundry Services	374,356	2.4%	6,800	
8129	Other Personal Services	252,462	2.4%	3,680	
8131	Religious Organizations	1,691,182	1.6%	4,940	
8132	Grantmaking and Giving Services	146,709	1.6%	700	[b]
8133	Social Advocacy Organizations	128,522	1.6%	2,001	
8134	Civic and Social Organizations	330,219	1.6%	4,540	
8139	Business, Professional, Labor, Political, and Similar Organizations	519,905	1.6%	8,094	
	Totals	**112,328,837**	**1.9%**	**2,113,676**	

[a] Source: OSHA PPE Cost Survey. Estimate based on the combined percentage of employees using body harnesses and body belts. See Eastern Research Group, 1999. An "NA" indicates that the industry was not within the scope of the survey or that the subset of production employees judged to be subject to this standard was zero (NA) (see Table V-1). In ERG, 1999 (OSHA PPE Survey), see Table A2, PPE Category: Fall Protection; PPE Type: Body Harness; PPE Type: Body Belt, where by two-, three-, and four-digit SIC code, the number and percentage of employees using PPE type is reported. For this FEA, ERG converted SIC codes to NAICS codes; see Ex. [OSHA Excel Workbook], tab Fall_protection.

[b] Number using fall protection constrained to be less than or equal to the number of at-risk employees in construction, installation, maintenance, and repair occupations as shown in Table V-1.

[c] Due to rounding, the number shown may differ from the product of total employment multiplied by the percentage of employees using fall protection.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis, based on U.S. Census Bureau, Statistics of U.S. Businesses for 2002 and 2006; ERG, 2007; and ERG, 1999.

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces

NAICS	Industry	Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
		Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
1131	Timber Tract Operations	$14.13	$19.99	$18.45	$26.10
1132	Forest Nurseries and Gathering of Forest Products	$14.13	$19.99	$18.45	$26.10
1133	Logging	$14.13	$19.99	$18.45	$26.10
1141	Fishing	$11.46	$16.21	$20.95	$29.63
1142	Hunting and Trapping	$11.46	$16.21	$20.95	$29.63
1153	Support Activities for Forestry	$11.30	$15.98	$21.14	$29.90
2111	Oil and Gas Extraction	$28.93	$40.92	$36.11	$51.07
2211	Electric Power Generation, Transmission and Distribution	$31.89	$45.11	$38.35	$54.24
2212	Natural Gas Distribution	$30.68	$43.39	$39.50	$55.87
2213	Water, Sewage and Other Systems	$21.54	$30.47	$29.45	$41.65
3111	Animal Food Manufacturing	$15.06	$21.30	$24.63	$34.84
3112	Grain and Oilseed Milling	$17.83	$25.22	$27.36	$38.70
3113	Sugar and Confectionery Product Manufacturing	$14.87	$21.03	$25.21	$35.66
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	$14.01	$19.82	$24.52	$34.68
3115	Dairy Product Manufacturing	$16.00	$22.63	$25.89	$36.62
3116	Animal Slaughtering and Processing	$12.15	$17.19	$23.18	$32.79
3117	Seafood Product Preparation and Packaging	$11.69	$16.53	$23.09	$32.66
3118	Bakeries and Tortilla Manufacturing	$13.48	$19.07	$23.36	$33.04
3119	Other Food Manufacturing	$14.47	$20.47	$25.51	$36.08
3121	Beverage Manufacturing	$17.60	$24.89	$27.31	$38.63
3122	Tobacco Manufacturing	$19.30	$27.30	$27.01	$38.20
3131	Fiber, Yarn, and Thread Mills	$12.88	$18.22	$22.87	$32.35
3132	Fabric Mills	$14.08	$19.92	$23.08	$32.64
3133	Textile and Fabric Finishing and Fabric Coating Mills	$12.95	$18.32	$23.27	$32.91
3141	Textile Furnishings Mills	$12.96	$18.33	$22.64	$32.02
3149	Other Textile Product Mills	$12.54	$17.74	$21.57	$30.51
3151	Apparel Knitting Mills	$11.58	$16.38	$20.69	$29.26

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces
(continued)

NAICS	Industry	Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
		Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
3152	Cut and Sew Apparel Manufacturing	$11.56	$16.35	$20.29	$28.70
3159	Apparel Accessories and Other Apparel Manufacturing	$11.24	$15.90	$20.35	$28.78
3161	Leather and Hide Tanning and Finishing	$12.93	$18.29	$22.67	$32.07
3162	Footwear Manufacturing	$12.56	$17.77	$22.36	$31.63
3169	Other Leather and Allied Product Manufacturing	$12.28	$17.37	$21.61	$30.57
3211	Sawmills and Wood Preservation	$14.75	$20.86	$25.00	$35.36
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	$14.58	$20.62	$24.58	$34.77
3219	Other Wood Product Manufacturing	$13.75	$19.45	$23.04	$32.59
3221	Pulp, Paper, and Paperboard Mills	$21.42	$30.30	$33.79	$47.79
3222	Converted Paper Product Manufacturing	$16.87	$23.86	$27.57	$39.00
3231	Printing and Related Support Activities	$16.92	$23.93	$27.05	$38.26
3241	Petroleum and Coal Products Manufacturing	$26.69	$37.75	$35.71	$50.51
3251	Basic Chemical Manufacturing	$23.90	$33.80	$33.57	$47.48
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	$21.52	$30.44	$31.99	$45.25
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	$20.76	$29.36	$31.06	$43.93
3254	Pharmaceutical and Medicine Manufacturing	$17.91	$25.33	$30.09	$42.56
3255	Paint, Coating, and Adhesive Manufacturing	$17.95	$25.39	$29.41	$41.60
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	$16.01	$22.64	$27.40	$38.76
3259	Other Chemical Product and Preparation Manufacturing	$17.55	$24.82	$28.56	$40.40
3261	Plastics Product Manufacturing	$14.90	$21.07	$24.99	$35.35
3262	Rubber Product Manufacturing	$16.65	$23.55	$24.47	$34.61
3271	Clay Product and Refractory Manufacturing	$15.67	$22.16	$25.55	$36.14
3272	Glass and Glass Product Manufacturing	$16.49	$23.32	$27.37	$38.71
3273	Cement and Concrete Product Manufacturing	$16.44	$23.25	$26.92	$38.08
3274	Lime and Gypsum Product Manufacturing	$18.49	$26.15	$26.70	$37.77

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces (continued)

NAICS	Industry	Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
		Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
3279	Other Nonmetallic Mineral Product Manufacturing	$16.16	$22.86	$26.32	$37.23
3311	Iron and Steel Mills and Ferroalloy Manufacturing	$21.33	$30.17	$30.13	$42.62
3312	Steel Product Manufacturing from Purchased Steel	$17.13	$24.23	$26.84	$37.96
3313	Alumina and Aluminum Production and Processing	$18.31	$25.90	$27.72	$39.21
3314	Nonferrous Metal (except Aluminum) Production and Processing	$18.01	$25.47	$27.23	$38.51
3315	Foundries	$16.25	$22.98	$25.90	$36.63
3321	Forging and Stamping	$17.27	$24.43	$26.81	$37.92
3322	Cutlery and Handtool Manufacturing	$16.81	$23.78	$28.77	$40.69
3323	Architectural and Structural Metals Manufacturing	$16.38	$23.17	$26.14	$36.97
3324	Boiler, Tank, and Shipping Container Manufacturing	$17.71	$25.05	$27.93	$39.50
3325	Hardware Manufacturing	$15.73	$22.25	$25.85	$36.56
3326	Spring and Wire Product Manufacturing	$15.82	$22.38	$25.77	$36.45
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	$18.17	$25.70	$28.68	$40.57
3328	Coating, Engraving, Heat Treating, and Allied Activities	$15.36	$21.73	$25.63	$36.25
3329	Other Fabricated Metal Product Manufacturing	$16.96	$23.99	$28.02	$39.63
3331	Agriculture, Construction, and Mining Machinery Manufacturing	$17.68	$25.01	$28.26	$39.97
3332	Industrial Machinery Manufacturing	$18.30	$25.88	$28.29	$40.01
3333	Commercial and Service Industry Machinery Manufacturing	$17.10	$24.19	$29.05	$41.09
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	$15.63	$22.11	$26.25	$37.13
3335	Metalworking Machinery Manufacturing	$19.25	$27.23	$30.14	$42.63
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	$18.33	$25.93	$29.42	$41.61
3339	Other General Purpose Machinery Manufacturing	$17.69	$25.02	$28.21	$39.90
3341	Computer and Peripheral Equipment Manufacturing	$16.42	$23.22	$27.12	$38.36

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces (continued)

NAICS	Industry	Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
		Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
3342	Communications Equipment Manufacturing	$16.85	$23.83	$30.32	$42.89
3343	Audio and Video Equipment Manufacturing	$15.60	$22.07	$27.66	$39.12
3344	Semiconductor and Other Electronic Component Manufacturing	$15.61	$22.08	$27.84	$39.38
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	$17.11	$24.20	$29.61	$41.88
3346	Manufacturing and Reproducing Magnetic and Optical Media	$16.52	$23.37	$26.80	$37.91
3351	Electric Lighting Equipment Manufacturing	$15.57	$22.02	$25.52	$36.10
3352	Household Appliance Manufacturing	$15.91	$22.50	$25.15	$35.57
3353	Electrical Equipment Manufacturing	$16.30	$23.06	$26.99	$38.18
3359	Other Electrical Equipment and Component Manufacturing	$15.73	$22.25	$26.83	$37.95
3361	Motor Vehicle Manufacturing	$24.64	$34.85	$32.75	$46.32
3362	Motor Vehicle Body and Trailer Manufacturing	$15.94	$22.55	$24.74	$34.99
3363	Motor Vehicle Parts Manufacturing	$17.17	$24.29	$26.35	$37.27
3364	Aerospace Product and Parts Manufacturing	$21.12	$29.87	$32.33	$45.73
3365	Railroad Rolling Stock Manufacturing	$16.97	$24.00	$26.53	$37.52
3366	Ship and Boat Building	$18.81	$26.61	$29.77	$42.11
3369	Other Transportation Equipment Manufacturing	$19.00	$26.87	$28.05	$39.67
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	$14.58	$20.62	$23.26	$32.90
3372	Office Furniture (including Fixtures) Manufacturing	$15.42	$21.81	$25.09	$35.49
3379	Other Furniture Related Product Manufacturing	$13.35	$18.88	$23.86	$33.75
3391	Medical Equipment and Supplies Manufacturing	$16.70	$23.62	$28.74	$40.65
3399	Other Miscellaneous Manufacturing	$15.01	$21.23	$24.86	$35.16
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	$15.91	$22.50	$25.17	$35.60
4232	Furniture and Home Furnishing Merchant Wholesalers	$14.16	$20.03	$24.16	$34.17

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces
(continued)

NAICS	Industry	Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
		Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
4233	Lumber and Other Construction Materials Merchant Wholesalers	$15.18	$21.47	$24.70	$34.94
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	$15.73	$22.25	$26.73	$37.81
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	$17.06	$24.13	$28.26	$39.97
4236	Electrical and Electronic Goods Merchant Wholesalers	$15.70	$22.21	$27.53	$38.94
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	$15.84	$22.40	$25.93	$36.68
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	$17.05	$24.12	$28.87	$40.83
4239	Miscellaneous Durable Goods Merchant Wholesalers	$14.94	$21.13	$24.84	$35.13
4241	Paper and Paper Product Merchant Wholesalers	$15.35	$21.71	$25.73	$36.39
4242	Drugs and Druggists' Sundries Merchant Wholesalers	$14.50	$20.51	$27.00	$38.19
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	$14.30	$20.23	$26.48	$37.45
4244	Grocery and Related Product Wholesalers	$14.02	$19.83	$25.44	$35.98
4245	Farm Product Raw Material Merchant Wholesalers	$14.51	$20.52	$21.81	$30.85
4246	Chemical and Allied Products Merchant Wholesalers	$17.39	$24.60	$27.30	$38.61
4247	Petroleum and Petroleum Products Merchant Wholesalers	$22.20	$31.40	$33.09	$46.80
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	$16.72	$23.65	$26.45	$37.41
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	$14.00	$19.80	$23.81	$33.68
4251	Wholesale Electronic Markets and Agents and Brokers	$15.78	$22.32	$27.00	$38.19
4411	Automobile Dealers	$21.44	$30.33	$34.21	$48.39
4412	Other Motor Vehicle Dealers	$15.07	$21.32	$28.56	$40.40
4413	Automotive Parts, Accessories, and Tire Stores	$14.09	$19.93	$24.77	$35.04
4421	Furniture Stores	$15.25	$21.57	$24.64	$34.85

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces
(continued)

		Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
NAICS	Industry	Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
4422	Home Furnishings Stores	$13.50	$19.09	$20.89	$29.55
4431	Electronics and Appliance Stores	$13.79	$19.50	$22.56	$31.91
4441	Building Material and Supplies Dealers	$14.82	$20.96	$23.97	$33.90
4442	Lawn and Garden Equipment and Supplies Stores	$13.96	$19.75	$21.32	$30.16
4451	Grocery Stores	$13.97	$19.76	$21.40	$30.27
4452	Specialty Food Stores	$13.12	$18.56	$23.39	$33.08
4453	Beer, Wine, and Liquor Stores	$15.02	$21.24	$21.60	$30.55
4461	Health and Personal Care Stores	$12.83	$18.15	$23.70	$33.52
4471	Gasoline Stations	$16.94	$23.96	$22.41	$31.70
4481	Clothing Stores	$14.09	$19.93	$27.32	$38.64
4482	Shoe Stores	$12.02	$17.00	$26.92	$38.08
4483	Jewelry, Luggage, and Leather Goods Stores	$19.61	$27.74	$26.04	$36.83
4511	Sporting Goods, Hobby, and Musical Instrument Stores	$11.67	$16.51	$20.75	$29.35
4512	Book, Periodical, and Music Stores	$16.17	$22.87	$20.74	$29.34
4521	Department Stores	$11.11	$15.71	$24.10	$34.09
4529	Other General Merchandise Stores	$11.56	$16.35	$21.90	$30.98
4531	Florists	$9.80	$13.86	$22.22	$31.43
4532	Office Supplies, Stationery, and Gift Stores	$12.79	$18.09	$18.16	$25.69
4533	Used Merchandise Stores	$12.75	$18.03	$22.38	$31.65
4539	Other Miscellaneous Store Retailers	$13.95	$19.73	$23.89	$33.79
4541	Electronic Shopping and Mail-Order Houses	$14.37	$20.33	$23.91	$33.82
4542	Vending Machine Operators	$13.92	$19.69	$24.00	$33.95
4543	Direct Selling Establishments	$16.03	$22.67	$24.35	$34.44
4811	Scheduled Air Transportation	$26.36	$37.28	$27.45	$38.83
4812	Nonscheduled Air Transportation	$22.28	$31.51	$27.45	$38.83
4831	Deep Sea, Coastal, and Great Lakes Water Transportation	$20.02	$28.32	$34.23	$48.42
4832	Inland Water Transportation	$19.14	$27.07	$27.74	$39.24
4841	General Freight Trucking	$17.33	$24.51	$27.08	$38.30

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces
(continued)

NAICS	Industry	Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
		Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
4842	Specialized Freight Trucking	$17.68	$25.01	$28.64	$40.51
4851	Urban Transit Systems	$18.50	$26.17	$27.45	$38.83
4852	Interurban and Rural Bus Transportation	$18.50	$26.17	$27.45	$38.83
4853	Taxi and Limousine Service	$18.50	$26.17	$27.45	$38.83
4854	School and Employee Bus Transportation	$18.50	$26.17	$27.45	$38.83
4855	Charter Bus Industry	$18.50	$26.17	$27.45	$38.83
4859	Other Transit and Ground Passenger Transportation	$18.50	$26.17	$27.45	$38.83
4861	Pipeline Transportation of Crude Oil	$27.73	$39.22	$29.97	$42.39
4862	Pipeline Transportation of Natural Gas	$27.33	$38.66	$32.94	$46.59
4869	Other Pipeline Transportation	$28.20	$39.89	$33.56	$47.47
4871	Scenic and Sightseeing Transportation, Land	$19.80	$28.01	$27.45	$38.83
4872	Scenic and Sightseeing Transportation, Water	$19.80	$28.01	$27.45	$38.83
4879	Scenic and Sightseeing Transportation, Other	$19.80	$28.01	$27.45	$38.83
4881	Support Activities for Air Transportation	$19.56	$27.67	$28.19	$39.87
4882	Support Activities for Rail Transportation	$18.60	$26.31	$21.29	$30.11
4883	Support Activities for Water Transportation	$18.67	$26.41	$26.74	$37.82
4884	Support Activities for Road Transportation	$18.56	$26.25	$25.80	$36.49
4885	Freight Transportation Arrangement	$21.88	$30.95	$25.80	$36.49
4889	Other Support Activities for Transportation	$14.79	$20.92	$22.34	$31.60
4921	Couriers	$21.46	$30.35	$27.45	$38.83
4922	Local Messengers and Local Delivery	$16.69	$23.61	$27.45	$38.83
4931	Warehousing and Storage	$15.49	$21.91	$25.15	$35.57
5111	Newspaper, Periodical, Book, and Directory Publishers	$17.27	$24.43	$27.58	$39.01
5112	Software Publishers	$17.39	$24.60	$27.65	$39.11
5121	Motion Picture and Video Industries	$18.36	$25.97	$28.22	$39.92
5122	Sound Recording Industries	$17.31	$24.48	$27.86	$39.41
5151	Radio and Television Broadcasting	$17.31	$24.48	$27.58	$39.01
5152	Cable and Other Subscription Programming	$17.31	$24.48	$27.58	$39.01

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces
(continued)

NAICS	Industry	Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
		Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
5161	Internet Publishing and Broadcasting	$17.31	$24.48	$27.58	$39.01
5171	Wired Telecommunications Carriers	$23.05	$32.60	$27.58	$39.01
5172	Wireless Telecommunications Carriers (except Satellite)	$15.49	$21.91	$27.58	$39.01
5173	Telecommunications Resellers	$21.65	$30.62	$27.58	$39.01
5174	Satellite Telecommunications	$21.65	$30.62	$27.58	$39.01
5175	Cable and Other Program Distribution	$21.65	$30.62	$27.58	$39.01
5179	Other Telecommunications	$22.15	$31.33	$27.58	$39.01
5181	Internet Service Providers and Web Search Portals	$15.30	$21.64	$26.93	$38.09
5182	Data Processing, Hosting, and Related Services	$15.30	$21.64	$26.93	$38.09
5191	Other Information Services	$19.44	$27.50	$29.95	$42.36
5211	Monetary Authorities - Central Bank	$21.50	$30.41	$35.11	$49.66
5221	Depository Credit Intermediation	$21.34	$30.18	$35.11	$49.66
5222	Nondepository Credit Intermediation	$14.96	$21.16	$35.11	$49.66
5223	Activities Related to Credit Intermediation	$20.00	$28.29	$35.11	$49.66
5231	Securities and Commodity Contracts Intermediation and Brokerage	$19.34	$27.36	$35.11	$49.66
5232	Securities and Commodity Exchanges	$21.49	$30.40	$35.11	$49.66
5239	Other Financial Investment Activities	$21.49	$30.40	$35.11	$49.66
5241	Insurance Carriers	$19.20	$27.16	$34.47	$48.76
5242	Agencies, Brokerages, and Other Insurance Related Activities	$13.93	$19.70	$34.72	$49.11
5259	Other Investment Pools and Funds	$17.91	$25.33	$34.72	$49.11
5311	Lessors of Real Estate	$23.81	$33.68	$32.11	$45.42
5312	Offices of Real Estate Agents and Brokers	$17.08	$24.16	$31.63	$44.74
5313	Activities Related to Real Estate	$21.03	$29.75	$31.44	$44.47
5321	Automotive Equipment Rental and Leasing	$14.91	$21.09	$24.11	$34.10
5322	Consumer Goods Rental	$12.53	$17.72	$22.92	$32.42
5323	General Rental Centers	$14.78	$20.91	$24.42	$34.54

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces
(continued)

NAICS	Industry	Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
		Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	$18.26	$25.83	$26.15	$36.99
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	$11.86	$16.78	$25.37	$35.88
5411	Legal Services	$18.60	$26.31	$30.54	$43.20
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	$18.47	$26.12	$30.97	$43.80
5413	Architectural, Engineering, and Related Services	$19.32	$27.33	$31.52	$44.58
5414	Specialized Design Services	$16.74	$23.68	$28.99	$41.00
5415	Computer Systems Design and Related Services	$18.01	$25.47	$30.79	$43.55
5416	Management, Scientific, and Technical Consulting Services	$18.88	$26.70	$29.25	$41.37
5417	Scientific Research and Development Services	$23.34	$33.01	$37.14	$52.53
5418	Advertising and Related Services	$16.09	$22.76	$25.50	$36.07
5419	Other Professional, Scientific, and Technical Services	$16.42	$23.22	$27.21	$38.49
5511	Management of Companies and Enterprises	$19.63	$27.77	$28.87	$40.83
5611	Office Administrative Services	$17.15	$24.26	$28.03	$39.65
5612	Facilities Support Services	$17.16	$24.27	$30.11	$42.59
5613	Employment Services	$12.05	$17.04	$24.36	$34.46
5614	Business Support Services	$15.91	$22.50	$26.03	$36.82
5615	Travel Arrangement and Reservation Services	$12.47	$17.64	$24.41	$34.53
5616	Investigation and Security Services	$16.83	$23.80	$22.39	$31.67
5617	Services to Buildings and Dwellings	$13.71	$19.39	$20.40	$28.85
5619	Other Support Services	$13.59	$19.22	$23.65	$33.45
5621	Waste Collection	$15.41	$21.80	$23.78	$33.64
5622	Waste Treatment and Disposal	$23.60	$33.38	$31.92	$45.15
5629	Remediation and Other Waste Management Services	$15.99	$22.62	$25.04	$35.42
6111	Elementary and Secondary Schools	$20.02	$28.32	$28.61	$40.47
6112	Junior Colleges	$21.90	$30.98	$26.93	$38.09

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces
(continued)

NAICS	Industry	Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
		Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
6113	Colleges, Universities, and Professional Schools	$21.66	$30.64	$27.10	$38.33
6114	Business Schools and Computer and Management Training	$17.52	$24.78	$29.40	$41.58
6115	Technical and Trade Schools	$19.18	$27.13	$34.63	$48.98
6116	Other Schools and Instruction	$16.55	$23.41	$27.72	$39.21
6117	Educational Support Services	$20.63	$29.18	$29.01	$41.03
6211	Offices of Physicians	$16.81	$23.78	$23.35	$33.03
6212	Offices of Dentists	$17.78	$25.15	$22.72	$32.14
6213	Offices of Other Health Practitioners	$14.18	$20.06	$22.16	$31.34
6214	Outpatient Care Centers	$17.17	$24.29	$31.37	$44.37
6215	Medical and Diagnostic Laboratories	$16.56	$23.42	$26.36	$37.28
6216	Home Health Care Services	$12.19	$17.24	$24.67	$34.89
6219	Other Ambulatory Health Care Services	$16.91	$23.92	$26.48	$37.45
6221	General Medical and Surgical Hospitals	$16.91	$23.92	$27.39	$38.74
6222	Psychiatric and Substance Abuse Hospitals	$19.93	$28.19	$24.24	$34.29
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals	$21.38	$30.24	$32.63	$46.15
6231	Nursing Care Facilities	$10.14	$14.34	$19.04	$26.93
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	$10.40	$14.71	$18.94	$26.79
6233	Community Care Facilities for the Elderly	$10.39	$14.70	$20.68	$29.25
6239	Other Residential Care Facilities	$12.06	$17.06	$19.59	$27.71
6241	Individual and Family Services	$16.22	$22.94	$20.93	$29.60
6242	Community Food and Housing, and Emergency and Other Relief Services	$15.06	$21.30	$17.06	$24.13
6243	Vocational Rehabilitation Services	$10.53	$14.89	$16.96	$23.99
6244	Child Day Care Services	$10.92	$15.45	$17.06	$24.13
7111	Performing Arts Companies	$15.66	$22.15	$28.17	$39.84
7112	Spectator Sports	$26.38	$37.31	$28.17	$39.84

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces
(continued)

		Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
NAICS	Industry	Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
7113	Promoters of Performing Arts, Sports, and Similar Events	$13.49	$19.08	$28.17	$39.84
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	$20.15	$28.50	$28.17	$39.84
7115	Independent Artists, Writers, and Performers	$15.92	$22.52	$28.17	$39.84
7121	Museums, Historical Sites, and Similar Institutions	$15.17	$21.46	$27.45	$38.83
7131	Amusement Parks and Arcades	$16.19	$22.90	$33.54	$47.44
7132	Gambling Industries	$13.29	$18.80	$27.33	$38.66
7139	Other Amusement and Recreation Industries	$14.74	$20.85	$24.29	$34.36
7211	Traveler Accommodation	$11.06	$15.64	$19.39	$27.43
7212	RV (Recreational Vehicle) Parks and Recreational Camps	$11.05	$15.63	$19.39	$27.43
7213	Rooming and Boarding Houses	$8.83	$12.49	$19.39	$27.43
7221	Full-Service Restaurants	$12.09	$17.10	$23.27	$32.91
7222	Limited-Service Eating Places	$10.73	$15.18	$21.62	$30.58
7223	Special Food Services	$12.29	$17.38	$22.38	$31.65
7224	Drinking Places (Alcoholic Beverages)	$14.30	$20.23	$22.21	$31.41
8111	Automotive Repair and Maintenance	$18.11	$25.62	$26.87	$38.01
8112	Electronic and Precision Equipment Repair and Maintenance	$16.32	$23.08	$27.26	$38.56
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	$17.81	$25.19	$27.46	$38.84
8114	Personal and Household Goods Repair and Maintenance	$14.36	$20.31	$23.38	$33.07
8121	Personal Care Services	$10.30	$14.57	$20.51	$29.01
8122	Death Care Services	$10.92	$15.45	$20.51	$29.01
8123	Dry-cleaning and Laundry Services	$10.71	$15.15	$20.22	$28.60
8129	Other Personal Services	$14.69	$20.78	$24.69	$34.92

Table V-5
Wage Rates in Industries Affected by OSHA's Final Standard for Walking-Working Surfaces (continued)

NAICS	Industry	Production Worker Mean Hourly Wage		Production Worker Supervisor Mean Hourly Wage	
		Base Rate	With Fringe Markup	Base Rate	With Fringe Markup
8131	Religious Organizations	$15.18	$21.47	$21.13	$29.89
8132	Grantmaking and Giving Services	$15.34	$21.70	$21.13	$29.89
8133	Social Advocacy Organizations	$12.19	$17.24	$15.79	$22.33
8134	Civic and Social Organizations	$14.33	$20.27	$21.13	$29.89
8139	Business, Professional, Labor, Political, and Similar Organizations	$17.15	$24.26	$28.06	$39.69

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis, based on BLS, Occupational Employment Statistics Survey, 2010, and BLS, Employer Costs for Employee Compensation – June 2011.

6. Other Factors of Production Profiled for This FEA

Factors of production relevant to the final cost analysis included not only establishments, employers, and employees in general industry, but also the following walking and working surfaces:

- Manhole Steps and Rungs
- Stepbolts on Utility and Communication Poles and Towers
- Commercial and Residential Buildings (Window Cleaning) and
- Fixed Ladders

Details on the sources, count, dimensions, and other factors are provided in the cost discussions below in Section E.

D. Benefits, Net Benefits, Cost Effectiveness, and Sensitivity Analysis

1. Introduction

This section reviews the populations in general industry that are at risk of occupational injury or death due to hazards associated with slips, trips, or falls to lower levels, and assesses the potential benefits associated with the changes to subparts D and I resulting from the final rule. OSHA believes that compliance with the final rule will yield substantial benefits in terms of lives saved, injuries avoided, and reduced accident-related costs. Applying updated accident data and incorporating information from the record, OSHA revised its preliminary estimate of (1) the baseline level of risk and (2) prevented deaths and injuries due to the final rule.

As described in Section C of this FEA (Industry Profile) above, the employees affected by the final standard work largely in construction, installation, maintenance, and repair. According to the Bureau of Labor Statistics' 2007 Occupational Employment Statistics survey, there are approximately 112.3 million employees in industries within the scope of this final rule: 5.2 million employees engaged in construction, installation, maintenance, and repair operations in general industry that OSHA judges will need ladder training because these occupations are the most likely to use ladders in their work; [110] and 2.1 million employees in general industry using personal fall protection equipment. The rule also affects workers in a variety of specific kinds of work who may enter manholes using step bolts, use scaffolds or rope descent systems, etc. The inclusion of construction occupations assumes that employees in construction occupations, but employed by general industry rather than construction employers, routinely engage in what OSHA labels as maintenance (*i.e.,* a general industry activity) rather than construction activities.

This section first examines the available data on the number of baseline injuries and fatalities among affected employees; then assesses the extent to which the standard can prevent those injuries and fatalities; and finally estimates some of the economic benefits associated with the prevented injuries and fatalities. This final standard would produce benefits to the extent that compliance prevents injuries and fatalities that would otherwise occur.

2. Profile of Fall Accidents

a. Fall Fatalities

OSHA examined fall fatalities using two databases. As a baseline for determining the average number of fall fatalities per year, OSHA examined data from the BLS *Census of Fatal Occupational Injuries* (CFOI) for 2006 through 2012. To provide a more detailed breakdown of the kinds of falls

[110] Ladder use is not limited to these occupations, and there are many persons in these occupations that do not use ladders. OSHA examined ladder fatalities recorded by BLS from 2011 through 2014 and found that 68 percent of ladder fatalities were in the occupations OSHA included as needing ladder training. However, of the 5.2 million included, many such as computer and electronics repair technicians and auto mechanics have low rates of ladder fatalities indicating that ladders are likely rarely used in th*ese occupations.* Over two million of those included as always needing ladder training are thus unlikely to need ladder training. This potential overestimate of ladder training costs is probably countered by the number of other workers who potentially use ladders but are excluded from the 5.2 million, such as 950,000 grounds maintenance workers who provide over 5 percent of ladder fatalities. The remaining 27 percent of ladder fatalities are very widely dispersed; ladder fatalities are found in every major occupational group.

included in this total, OSHA in the PEA examined CFOI data for a longer period: 1992 to 2002. For this FEA, OSHA has updated the detailed breakdown using data from 2006–2010 and applies this updated breakdown of the kinds of affected falls to the 2006–2012 fatality data.[111]

Distinguished from the larger category of all falls—*i.e.,* a set of accidents that includes falls on the same level, falls to a lower level, and jumps to a lower level—the narrower category of falls to a lower level consists of the types of falls directly addressed by most of the changes to OSHA's requirements by this final standard. As shown in Table V–6, the CFOI reported 283 and 279 fatal falls to lower levels for 2006 and 2007, respectively, in industries covered by the final standard; for the five most recent years for which the data were available, fatal falls to a lower level declined to an average of 252 fatalities. For purposes of estimating the overall rate of fall fatalities for this benefits analysis, OSHA took the average of these seven years—*i.e.,* 261 fall fatalities to a lower level per year. Over the seven-year period, the Professional, Scientific, and Technical Services industry and the Administrative and Support Services industry (NAICS codes 541 and 561, respectively) accounted for 27 percent of the fatal falls, while the Manufacturing (NAICS codes 31–33) and Transportation (NAICS code 48) industries accounted for 9.6 and 7.1 percent of the fall fatalities, respectively. Among all three-digit NAICS codes affected by the standard, BLS reported the highest number of fatal falls in NAICS code 561, Administrative and Support Services. Although not shown in the table, a large majority of the fatalities for Administrative and Support Services—86 percent for the seven-year period 2006–2012—occurred in the industry concerned with services to buildings and dwellings (NAICS code 5617).

[111] Beginning in 2011, BLS revised the system for reporting types of fatal fall events. The detailed fatality events shown below in Tables V–11 were no longer available after 2010.

Table V-6
Fatalities from Falls to a Lower Level - General Industry, 2006-2012

NAICS	NAICS Description	Number of Fatalities						
		2006	2007	2008	2009	2010	2011[a]	2012
113	Forestry and Logging	3	4	0	0	0	0	3
114	Fishing, Hunting and Trapping	0	0	0	0	0	2	2
115	Support Activities for Agriculture and Forestry	0	0	0	0	0	3	0
211	Oil and Gas Extraction	0	0	0	0	0	0	4
213111	Oil and Gas Well Drilling	5	4	4	0	6	4	8
221	Utilities	6	4	0	4	0	6	0
311	Food Manufacturing	5	4	6	5	10	4	6
312	Beverage and Tobacco Product Manufacturing	0	0	0	0	0	0	0
313	Textile Mills	0	0	0	0	0	0	0
314	Textile Product Mills	0	0	0	0	0	0	0
315	Apparel Manufacturing	0	0	0	0	0	0	0
316	Leather and Allied Product Manufacturing	0	0	0	0	0	0	0
321	Wood Product Manufacturing	7	0	0	0	4	0	0
322	Paper Manufacturing	0	0	0	0	0	3	0
323	Printing and Related Support Activities	0	0	0	0	0	0	0
324	Petroleum and Coal Products Manufacturing	0	0	0	0	0	0	0
325	Chemical Manufacturing	3	3	0	3	0	1	0
326	Plastics and Rubber Products Manufacturing	3	0	0	0	0	1	0
327	Nonmetallic Mineral Product Manufacturing	3	0	3	0	0	3	0
331	Primary Metal Manufacturing	0	0	9	0	0	1	4
332	Fabricated Metal Product Manufacturing	10	7	4	3	6	6	0

Table V-6
Fatalities from Falls to a Lower Level - General Industry, 2006-2012 (continued)

NAICS	NAICS DESCRIPTION	Number of Fatalities						
		2006	2007	2008	2009	2010	2011[a]	2012
333	Machinery Manufacturing	0	0	0	0	0	3	0
334	Computer and Electronic Product Manufacturing	0	0	0	0	0	2	0
335	Electrical Equipment, Appliance, and Component Manufacturing	0	0	0	0	0	0	0
336	Transportation Equipment Manufacturing	7	4	6	4	4	3	6
337	Furniture and Related Product Manufacturing	0	0	0	0	0	0	0
339	Miscellaneous Manufacturing	0	4	0	0	0	4	2
423	Merchant Wholesalers, Durable Goods	4	7	5	10	0	8	7
424	Merchant Wholesalers, Nondurable Goods	12	6	5	5	8	3	15
425	Wholesale Electronic Markets and Agents and Brokers	0	0	0	0	0	0	0
441	Motor Vehicle and Parts Dealers	4	0	4	0	3	0	0
442	Furniture and Home Furnishings Stores	0	0	0	0	0	0	0
443	Electronics and Appliance Stores	0	0	0	0	0	0	0
444	Building Material and Garden Equipment and Supplies Dealers	6	4	0	4	9	0	4
445	Food and Beverage Stores	5	0	0	0	0	1	3
446	Health and Personal Care Stores	0	0	0	0	0	0	0
447	Gasoline Stations	0	0	0	0	0	1	0
448	Clothing and Clothing Accessories Stores	0	0	0	0	0	0	0
451	Sporting Goods, Hobby, Book, and Music Stores	0	0	0	0	0	0	0
452	General Merchandise Stores	0	0	3	4	0	0	3
453	Miscellaneous Store Retailers	0	0	0	4	0	0	3
454	Nonstore Retailers	0	0	3	0	0	1	0

Table V-6
Fatalities from Falls to a Lower Level - General Industry, 2006-2012 (continued)

NAICS	NAICS DESCRIPTION	Number of Fatalities						
		2006	2007	2008	2009	2010	2011[a]	2012
481	Air Transportation	0	0	0	0	0	1	0
482	Railroads	0	0	0	0	0	0	0
483	Water Transportation	0	0	0	0	0	0	0
484	Truck Transportation	11	18	24	12	20	9	14
485	Transit and Ground Passenger Transportation	0	0	0	0	0	0	0
486	Pipeline Transportation	0	0	0	0	0	0	0
487	Scenic and Sightseeing Transportation	0	0	0	0	0	0	0
488	Support Activities for Transportation	0	4	4	3	4	0	5
492	Couriers and Messengers	0	0	0	0	0	0	0
493	Warehousing and Storage	4	5	0	3	0	6	3
511	Publishing Industries (except Internet)	0	0	0	0	0	0	0
512	Motion Picture and Sound Recording Industries	0	0	0	0	0	4	0
515	Broadcasting (except Internet)	0	0	0	0	0	3	0
516	Internet Publishing and Broadcasting	0	0	0	0	0	0	0
517	Telecommunications	6	3	0	4	0	3	0
518	Internet Service Providers, Web Search Portals, and Data Processing Services	0	0	0	0	0	0	0
519	Other Information Services	0	0	0	0	0	0	0
521	Monetary Authorities - Central Bank	0	0	0	0	0	0	0
522	Credit Intermediation and Related Activities	0	0	0	0	3	0	0
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	0	0	0	0	0	0	0

Table V-6
Fatalities from Falls to a Lower Level - General Industry, 2006-2012 (continued)

NAICS	NAICS DESCRIPTION	Number of Fatalities 2006	2007	2008	2009	2010	2011[a]	2012
524	Insurance Carriers and Related Activities	3	0	0	0	0	0	0
525	Funds, Trusts, and Other Financial Vehicles	0	0	0	0	0	0	0
531	Real Estate	10	9	14	8	12	4	12
532	Rental and Leasing Services	0	0	0	0	0	0	0
533	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	0	0	0	0	0	0	0
541	Professional, Scientific, and Technical Services	7	10	9	5	5	4	7
551	Management of Companies and Enterprises	0	0	0	0	0	0	0
561	Administrative and Support Services	66	80	45	68	47	84	60
562	Waste Management and Remediation Services	5	0	0	3	0	4	6
611	Educational Services	4	0	0	0	3	0	0
621	Ambulatory Health Care Services	0	0	0	6	3	0	0
622	Hospitals	0	0	0	0	0	0	0
623	Nursing and Residential Care Facilities	4	0	0	0	4	0	3
624	Social Assistance	0	3	0	0	4	0	3
711	Performing Arts, Spectator Sports, and Related Industries	6	3	0	4	3	3	0
712	Museums, Historical Sites, and Similar Institutions	0	0	0	0	0	0	0
713	Amusement, Gambling, and Recreation Industries	0	7	3	0	4	5	5
721	Accommodation	8	5	0	0	0	5	0
722	Food Services and Drinking Places	4	7	4	5	5	0	0
811	Repair and Maintenance	6	4	7	6	7	7	4
812	Personal and Laundry Services	0	0	0	0	0	0	0

Table V-6
Fatalities from Falls to a Lower Level - General Industry, 2006-2012 (continued)

NAICS	NAICS DESCRIPTION	Number of Fatalities						
		2006	2007	2008	2009	2010	2011[a]	2012
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	11	7	7	0	9	3	4
	Industries not specified[b]	45	63	65	64	60	73	74
Total		**283**	**279**	**234**	**237**	**243**	**278**	**270**

[a] Reference year 2011 is the first year in which the IIF program used the Occupational Injury and Illness Classification System (OIICS), version 2.01, when classifying Event or Exposure, Primary Source, Secondary Source, Nature, and Part of Body. Due to substantial differences between OIICS 2.01 and the original OIICS structure, which was used from 1992 to 2010, data for these case characteristics from 2011 forward should not be compared to prior years. The data shown in this table are presented for convenience of illustration; a comparison across the two time spans mentioned above is not intended.

[b] Includes falls from ship, boat, not elsewhere classified.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis, based on BLS, Census of Fatal Occupational Injuries, 2006-2012.

To assess the benefits of this rule, it is necessary to determine not only the total annual number of fall fatalities, but also the number of various types of fall fatalities. Quantifying the various types of fatal falls is necessary because the final standard will prevent fall fatalities to different degrees for different types of falls. Table V–7 shows, for the 5-year period 2006 to 2010, the breakdown of fall fatalities by type of fall based on CFOI data. As shown, falls to a lower level (distinguished from falls on the same level) accounted for about 77 percent of total fall fatalities.[112] On a sector-by-sector basis, falls to a lower level as a percentage of all fatal falls ranged from 50 percent for the Educational Services (1.4 of 2.8, unrounded) and Health Care and Social Assistance sectors (6.4 of 12.8, unrounded) to 91 percent for the Administration and Support and Waste Management and Remediation Services sector (64 of 74.6, unrounded). As Table V–7 also shows, fatal falls from ladders averaged 56 per year over the 5-year period, while fatal falls from scaffolds averaged 13 per year.

[112] The average for 2006–2010 shown in Table V–7 (333 fatalities) differs from the baseline estimate applied in OSHA's benefits analysis (345 fatalities; see Table V–11) due to the addition of two years (2011 and 2012) in OSHA's estimate of the baseline average. See Ex. [OSHA Excel Workbook], tab Prevented Fatalities '06–'12.

Table V-7
Fatal Falls by Type of Fall and Industry Sector, 2006-2010

NAICS - Industry Sector	All Falls	Falls to a Lower Level			
		Total[a]	From a Ladder	From a Roof	From a Scaffold
Total Fatal Falls, 2006-2010					
11 - Agriculture, forestry, fishing, and hunting	151	126	22	10	N/A
22 - Utilities	17	14	N/A	N/A	N/A
31-33 - Manufacturing	246	192	45	22	17
42 - Wholesale trade	97	70	13	N/A	N/A
44-45 - Retail trade	157	94	38	4	N/A
48-79 - Transportation and warehousing	174	131	4	N/A	N/A
51 - Information	40	26	4	N/A	N/A
52 - Finance and insurance	15	9	N/A	N/A	N/A
53 - Real estate and rental and leasing	66	57	16	8	N/A
54 - Professional, scientific, and technical services	45	36	5	3	N/A
56 - Administration and support and waste management and remediation services	353	320	59	34	10
61 - Educational services	14	7	N/A	N/A	N/A
62 - Health care and social assistance	64	32	N/A	N/A	N/A
71 - Arts, entertainment, and recreation	49	37	N/A	N/A	N/A
72 - Accommodation and food services	75	40	9	N/A	N/A
81 - Other services	92	72	25	3	3
Total [b]	**1,664**	**1,276**	**280**	**125**	**66**
Average Fatal Falls per Year, 2006-2010					
11 - Agriculture, forestry, fishing, and hunting	30	25	4	2	N/A
22 - Utilities	3	3	N/A	N/A	N/A

31-33 - Manufacturing	49	38	9	4	3
42 - Wholesale trade	19	14	3	N/A	N/A
44-45 - Retail trade	31	19	8	1	N/A
48-79 - Transportation and warehousing	35	26	1	N/A	N/A
51 - Information	8	5	1	N/A	N/A

Table V-7
Fatal Falls by Type of Fall and Industry Sector, 2006-2010 (continued)

NAICS - Industry Sector	All Falls	Falls to a Lower Level			
		Total[a]	From a Ladder	From a Roof	From a Scaffold
52 - Finance and insurance	3	2	N/A	N/A	N/A
53 - Real estate and rental and leasing	13	11	3	2	N/A
54 - Professional, scientific, and technical services	9	7	1	1	N/A
56 - Administration and support and waste management and remediation services	71	64	12	7	2
61 - Educational services	3	1	N/A	N/A	N/A
62 - Health care and social assistance	13	6	N/A	N/A	N/A
71 - Arts, entertainment, and recreation	10	7	N/A	N/A	N/A
72 - Accommodation and food services	15	8	2	N/A	N/A
81 - Other services	18	14	5	1	1
Total [b]	**333**	**255**	**56**	**25**	**13**

Notes: Titles for industry sectors use BLS' classifications and correspond to 2-digit NAICS. Data in the table are rounded.

N/A – Indicates no data reported or data that did not meet BLS publication criteria.

[a] Totals for falls to a lower level include other types of falls to lower levels not shown separately. Therefore, the number of falls from a ladder, roof, and scaffold may not sum to the total number of falls to a lower level.

[b] Totals include falls in industries not shown separately in the table. Therefore totals may not equal the sum of the data for the industry sectors shown in the table.

Source: U.S. Dept. of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety, based on BLS, Census of Fatal Occupational Injuries, 2006–2010.

b. Fall Injuries

Table V–8, based on BLS's *Survey of Occupational Injuries and Illnesses,* shows the average number of lost-workday injuries due to falls in general industry, by type of fall, for 2006–2012. The number of falls to lower level (48,379) and the number of falls on same level (137,079) were calculated as the average of injury data reported by BLS for 2006–2012. OSHA allocated the average number of falls to a lower level (48,379) among the different fall to a lower level categories based on the average distribution of falls to a lower level for 2006–2010.[113] The estimate of other falls is derived as the difference between total falls and the sum of falls to lower level and falls on same level. As Table V–8 shows, unlike fall fatalities, falls to a lower level represent a relatively small share of injurious, non-fatal, falls. This table forms the basis for OSHA's estimate of the number of lost-workday injuries prevented by the final standard.

Table V–9, also based on BLS's *2010 Survey of Occupational Injuries and Illnesses,* provides additional details about the lost-workday injury rates for the two major categories of falls: Falls to a lower level and falls to the same level. Excluding industry groups for which the data are incomplete, the combined fall injury rate ranges from a low of 3.2 cases per 10,000 workers in NAICS 518 (Internet Service Providers, Web Search Portals, and Data Processing Services) to a high of 72.0 per 10,000 employees in NAICS 481 (Air Transportation). Of the 81 affected industries with reported fall injury data, 17 had fall injury rates in excess of 30 cases per 10,000 employees, while 28 had fall injury rates between 20 and 30 cases per 10,000 employees.

Table V–10, also based on BLS's *2010 Survey of Occupational Injuries and Illnesses,* shows lost-workday fall-related injury rates by specific type of fall, disaggregated by the major industry sectors covered by the final standard. The majority of accidents in the fall-to-same-levelcategory are falls to a floor, walkway, or other surface.

[113] Data on injuries associated with types of fall to lower level were reported only up until 2010.

Table V-8

Estimated Annual Number of Lost-Workday Falls in Workplaces Affected by the Final Standard

Type of Fall		Annual Average Number of Falls, 2006-2012
Fall to lower level		48,379
	Fall down stairs or steps	14,726
	Fall from floor, dock, or ground level	3,987
	Fall from ladder	10,805
	Fall from piled or stacked material	370
	Fall from roof	429
	Fall from scaffold, staging	597
	Fall from building girders or other structural steel	134
	Fall from nonmoving vehicle	9,188
	Fall to lower level, n.e.c.	7,230
	Fall to lower level, unspecified	921
Fall on same level		137,079
Other falls (incl. ship, boat)		16,609
Total		**202,066**

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis, based on BLS, Survey of Occupational Injuries and Illnesses, 2006-2012.

Table V-9
Injuries From Falls - General Industry, 2010

NAICS	NAICS Description	Lost-Workday Cases per 10,000 Workers			Industry Rank	Estimated Number of Falls
		Falls to Lower Level	Falls on Same Level	All Falls		
113	Forestry and Logging	11	17.3	28.3	18	140
114	Fishing, Hunting and Trapping	0	0	0	81	0
115	Support Activities for Agriculture and Forestry	11.2	20.7	31.9	13	790
211	Oil and Gas Extraction	2	7.4	9.4	70	140
213111	Oil and Gas Well Drilling	4.5	10.2	14.7	58	100
221	Utilities	6.5	14.1	20.6	40	1,130
311	Food Manufacturing	7.1	18.3	25.4	26	3,660
312	Beverage and Tobacco Product Manufacturing	5.9	20.3	26.2	23	470
313	Textile Mills	3.2	10.6	13.8	60	160
314	Textile Product Mills	0	10	10	68	110
315	Apparel Manufacturing	1.9	9.9	11.8	67	170
316	Leather and Allied Product Manufacturing	0	15.2	15.2	55	40
321	Wood Product Manufacturing	7.8	14.5	22.3	33	740
322	Paper Manufacturing	4.9	13.9	18.8	45	760
323	Printing and Related Support Activities	2.1	16.5	18.6	46	870
324	Petroleum and Coal Products Manufacturing	4.8	4.5	9.3	71	110
325	Chemical Manufacturing	6.2	8.6	14.8	57	1,180
326	Plastics and Rubber Products Manufacturing	4.4	15.2	19.6	42	1,210
327	Nonmetallic Mineral Product Manufacturing	9.9	11.2	21.1	38	770
331	Primary Metal Manufacturing	5.3	12.3	17.6	52	640
332	Fabricated Metal Product Manufacturing	5.4	8.5	13.9	59	1,750
333	Machinery Manufacturing	2.7	11.1	13.8	61	1,360
334	Computer and Electronic Product Manufacturing	2.1	5	7.1	77	770

Table V-9
Injuries From Falls - General Industry, 2010 (continued)

NAICS	NAICS Description	Lost-Workday Cases per 10,000 Workers			Industry Rank	Estimated Number of Falls
		Falls to Lower Level	Falls on Same Level	All Falls		
335	Electrical Equipment, Appliance, and Component Manufacturing	1.5	5.9	7.4	76	260
336	Transportation Equipment Manufacturing	6.3	11.9	18.2	47	2,380
337	Furniture and Related Product Manufacturing	6.2	11.6	17.8	50	620
339	Miscellaneous Manufacturing	5.8	9.3	15.1	56	830
423	Merchant Wholesalers, Durable Goods	5.2	11.1	16.3	54	4,310
424	Merchant Wholesalers, Nondurable Goods	9	18.2	27.2	22	5,040
425	Wholesale Electronic Markets and Agents and Brokers	1.6	10.8	12.4	65	970
441	Motor Vehicle and Parts Dealers	5.8	13.6	19.4	43	2,990
442	Furniture and Home Furnishings Stores	15.1	19.6	34.7	9	1,210
443	Electronics and Appliance Stores	3.2	5.3	8.5	74	350
444	Building Material and Garden Equipment and Supplies Dealers	9.9	12.7	22.6	30	2,320
445	Food and Beverage Stores	3.9	22.2	26.1	24	5,490
446	Health and Personal Care Stores	4.4	13.3	17.7	51	1,320
447	Gasoline Stations	3.8	18.3	22.1	35	1,420
448	Clothing and Clothing Accessories Stores	4.7	8.9	13.6	63	1,110
451	Sporting Goods, Hobby, Book, and Music Stores	4.2	8	12.2	66	470
452	General Merchandise Stores	5.1	22.6	27.7	21	6,060
453	Miscellaneous Store Retailers	10.3	12.4	22.7	29	1,240
454	Nonstore Retailers	14.3	22.8	37.1	8	1,340
481	Air Transportation	20.8	51.2	72	1	2,630
482	Railroads	19.6	2.2	21.8	36	580
483	Water Transportation	9.3	11.5	20.8	39	160
484	Truck Transportation	27.6	33.1	60.7	2	7,960
485	Transit and Ground Passenger Transportation	9.9	38.8	48.7	4	1,480
486	Pipeline Transportation	9.7	0	9.7	69	40
487	Scenic and Sightseeing Transportation	9.3	19.2	28.5	17	50
488	Support Activities for Transportation	8.7	16	24.7	27	1,270
492	Couriers and Messengers	12.3	36	48.3	5	1,840
493	Warehousing and Storage	6.7	21.2	27.9	20	1,630
511	Publishing Industries (except Internet)	4.2	8.7	12.9	64	920
512	Motion Picture and Sound Recording Industries	2.3	19.5	21.8	37	580

Table V-9
Injuries From Falls - General Industry, 2010 (continued)

NAICS	NAICS Description	Lost-Workday Cases per 10,000 Workers			Industry Rank	Estimated Number of Falls
		Falls to Lower Level	Falls on Same Level	All Falls		
515	Broadcasting (except Internet)	11.3	18.3	29.6	15	810
516	Internet Publishing and Broadcasting	N/R	N/R	N/R		N/R
517	Telecommunications	10.1	18.9	29	16	2,610
518[a]	Internet Service Providers, Web Search Portals, and Data Processing Services	NR	NR	NR		NR
519[b]	Other Information Services	0	4.6	4.6	80	60
521	Monetary Authorities - Central Bank	NR	NR	NR		NR
522	Credit Intermediation and Related Activities	1.5	6.5	8	75	1,900
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	6.6	2.4	9	73	680
524	Insurance Carriers and Related Activities	2.8	6.5	9.3	72	1,800
525	Funds, Trusts, and Other Financial Vehicles	11.3	6.9	18.2	48	140
531	Real Estate	11.8	12.3	24.1	28	2,880
532	Rental and Leasing Services	6.5	12.7	19.2	44	890
533	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	0	6.4	6.4	79	20
541	Professional, Scientific, and Technical Services	2.3	4.8	7.1	78	4,850
551 [c]	Management of Companies and Enterprises	4.1	9.7	13.8	62	2,420
561	Administrative and Support Services	8.3	17.4	25.7	25	10,660
562	Waste Management and Remediation Services	15.7	14.8	30.5	14	1,100
611	Educational Services	4.5	15.3	19.8	41	3,360
621	Ambulatory Health Care Services	3.7	12.8	16.5	53	7,710
622	Hospitals	4.8	28	32.8	12	12,030
623	Nursing and Residential Care Facilities	4.8	50.5	55.3	3	13,510
624	Social Assistance	11.4	26.4	37.8	7	6,830
711	Performing Arts, Spectator Sports, and Related Industries	9.2	13.2	22.4	32	510
712	Museums, Historical Sites, and Similar Institutions	11.7	22.4	34.1	10	290
713	Amusement, Gambling, and Recreation Industries	11.7	21.7	33.4	11	2,870
721	Accommodation	9.5	29.4	38.9	6	5,170
722	Food Services and Drinking	2.7	19.5	22.2	34	12,910

Table V-9
Injuries From Falls - General Industry, 2010 (continued)

NAICS	NAICS Description	Lost-Workday Cases per 10,000 Workers			Industry Rank	Estimated Number of Falls
		Falls to Lower Level	Falls on Same Level	All Falls		
	Places					
811	Repair and Maintenance	15.9	12.3	28.2	19	2,980
812	Personal and Laundry Services	2.8	15.3	18.1	49	1,690
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	6.3	16.2	22.5	31	2,050

[a] Discontinued in 2009. NR: Not reported for 2010.

[b] Scope changed in 2009.

[c] Data for code SP2MCE—Management of Companies and Enterprises.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety, based on BLS, Survey of Occupational Injuries and Illnesses: Case and Demographic Information, 2010.

Table V-10
Fall Incidents by Type of Fall and Sector, 2010
(Lost-Workday Cases per 10,000 Workers)

Event Code	Type of Fall	Private Industry	Manu-facturing	Trade, Transport-ation, and Utilities	Inform-ation	Financial Activities	Profes-sional and Building Services	Education and Health Services	Leisure and Hospitality	Other Services
10	Fall, unspecified	0.7	0.5	1.2	0.3	0.2	0.4	0.9	0.6	0.5
11	Fall to lower level	6.9	5	8.1	6.4	4.7	4.8	5.2	5	8.7
110	Fall to lower level, Unspecified	0.1	0.1	0.2	[b]	[a]	0.1	0.2	0.1	0.1
111	Fall down stairs or Steps	1.9	1.1	1.7	2.1	1.6	1.7	2.8	2.6	3
112[c]	Fall from floor, dock, or Ground	0.8	0.9	0.8	0.6	1	0.6	0.6	0.5	0.4
1120	Fall from floor, dock, or ground level, unspecified	0.1	0.2	0.3	[b]	0.1	0.1	[a]	[a]	[b]
1121	Fall through existing floor opening	0.4	0.5	0.2	0.1	0.7	0.4	0.3	0.3	0.2
1122	Fall through floor Surface	0.1	[b]	0.1	0.1	0.1	[a]	0.1	[a]	1
1123	Fall from loading Dock	0.1	[a]	0.1	[b]	[b]	[a]	[a]	[a]	[b]
1124	Fall from ground level to lower level	0.1	0.1	0.1	0.2	0.1	[a]	0.1	[a]	[b]
1129	Fall from floor, dock, or ground level, n.e.c.	0.1	[a]	0.1	0.1	[b]	[b]	0.1	0.1	[b]

Table V-10
Fall Incidents by Type of Fall and Sector, 2010 (continued)
(Lost-Workday Cases per 10,000 Workers)

Event Code	Type of Fall	Private Industry	Manu-facturing	Trade, Transportation, and Utilities	Inform-ation	Financial Activities	Profes-sional and Building Services	Education and Health Services	Leisure and Hospitality	Other Services
113	Fall from ladder	1.7	1.3	2	1.8	1.3	0.9	0.4	0.7	2
114	Fall from piled or stacked material	[a]	0.1	0.1	[b]	[b]	[b]	[b]	[b]	[b]
115	Fall from roof	0.2	0.1	[b]	[b]	0.1	[a]	[b]	0.1	0.3
1150	Fall from roof, unspecified	[a]	[b]	[b]	[b]	[a]	[b]	[b]	[b]	0.3
1151	Fall through existing roof opening	[a]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
1152	Fall through roof surface	[a]	[b]	[a]	[b]	[b]	[b]	[b]	[b]	[b]
1153	Fall through skylight	[a]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
1154	Fall from roof edge	0.1	0.1	[b]	[b]	[b]	[a]	[b]	[b]	[b]
1159	Fall from roof, n.e.c.	[a]	[b]	[b]	[b]	[b]	[b]	[b]	[b]	[b]
116	Fall from scaffolding, staging	0.2	0.2	[a]	0.1	[b]	0.1	0.1	[b]	0.2
117	Fall from building girders or other structural steel	[a]	[a]	[a]	[b]	[b]	[b]	[b]	[b]	[b]
118	Fall from nonmoving vehicle	1.1	0.7	2.3	1.2	0.3	0.6	0.2	0.2	2.2
119	Fall to lower level, n.e.c.	0.8	0.6	0.9	0.5	0.4	0.9	1	0.8	0.5
12	Jump to lower level	0.3	0.2	0.4	0.5	0.1	0.2	0.1	0.2	0.7
120	Jump to lower level, Unspecified	[a]	0.1	[a]	[b]	[b]	[a]	[b]	[b]	[b]

Table V-10
Fall Incidents by Type of Fall and Sector, 2010 (continued)
(Lost-Workday Cases per 10,000 Workers)

Event Code	Type of Fall	Private Industry	Manu-facturing	Trade, Transportation, and Utilities	Inform-ation	Financial Activities	Profes-sional and Building Services	Education and Health Services	Leisure and Hospitality	Other Services
121	Jump from scaffold, platform, loading dock	[a]	[a]	[a]	[b]	[b]	[b]	[a]	[b]	[b]
122	Jump from structure, structural steel, n.e.c.	[a]	[b]	[a]	0.2	[b]	[b]	[b]	[a]	0.1
123	Jump from nonmoving vehicle	0.1	0.1	0.2	[b]	0.1	0.1	[a]	[a]	0.4
129	Jump to lower level, n.e.c.	0.1	0.1	0.1	0.3	[b]	0.1	[a]	0.1	0.2
13	Fall on same level	16.1	11.5	18.1	14.6	7.5	9.7	25.1	21.2	14.5
130	Fall on same level, unspecified	0.1	[a]	0.1	[b]	[b]	0.1	0.1	0.1	[b]
131	Fall to floor, walkway, or other surface	14.2	15.1	15.3	13.5	6.8	8.6	23	19.2	13.5
132	Fall onto or against objects	1.8	1.7	2.6	1.1	0.6	1.1	1.9	1.9	0.9
139	Fall on same level, n.e.c.	0.1	0.1	0.1	[b]	[b]	[b]	0.1	[a]	[b]
19	Fall, n.e.c.	0.1	0.1	0.2	[b]	[b]	[a]	0.1	0.1	[b]
	All falls	**24.1**	**17.3**	**27.9**	**21.8**	**12.4**	**15.2**	**31.4**	**27**	**24.5**

[a]Less than 0.1 cases per 10,000 workers.
[b]Data not available.
[c]Here and elsewhere in this table, data may not sum to totals due to rounding.
Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety, based on Bureau of Labor Statistics, Survey of Occupational Injuries and Illnesses: Case and Demographic Information, 2010.

BILLING CODE 4510–29–C

Among falls addressed by the final standard, the annual number of falls to a lower level resulting in a lost-workday injury ranges from 4.7 per 10,000 employees for the Financial Activities sector to 8.1 per 10,000 employees for the Trade, Transportation, and Utility sector. Among specific types of falls to a lower level, falls from ladders represent 7.5 percent of all falls in the Manufacturing sector as reflected in an injury rate of 1.3 cases per 10,000 employees. Among other sectors, the injury rate from falls from ladders ranges from 0.4 per 10,000 employees in the Education and Health Services sector to 2.0 per 10,000 employees in the Trade, Transportation, and Utility sector and in the Other Services sector.

In several sectors, falls down stairs or steps represent a major share of injuries from falls to a lower level. The provisions in the final standard requiring guardrails, handrails, and training would protect employees from these types of falls. The final rule addresses directly falls from floor holes, loading docks, roofs, and scaffolding, but these falls constitute much smaller shares of nonfatal fall accidents.

3. Fatalities and Injuries Prevented by the Final Subpart D and I Standard

a. Fatalities Prevented

OSHA's final standard for subparts D and I contains safety requirements designed to prevent falls involving ladders, rope descent systems, unguarded floor holes, and unprotected platform edges, among other conditions. In this FEA, OSHA classifies these types of falls as ''falls to [a] lower level.'' ''Falls on the same level'' include slips and trips from floor obstructions or wet or slippery working surfaces. The final rule has relatively few new provisions addressing falls on the same level and therefore OSHA has assigned a preventability rate of 1 percent (*i.e.,* the percentage of fatal incidents that the Agency estimates will be prevented by the final rule) to these types of falls.

Combining the data in Tables V–6 and V–7 with other fatality data from BLS, Table V–11 shows the estimated number of annual fatalities from falls in general industry. Based on 2006–2012 data, OSHA calculated an average of 345 fatal falls per year, 261 fatal falls to a lower level per year, and 75 fatal falls to the same level. OSHA allocated the average number of falls to a lower level (261) among the different fall categories based on overall fatal fall accident experience from 2006 to 2010 derived from the BLS *Census of Fatal Occupational Injuries* summarized in table V–7.[114] On this basis, an estimated 261 fatalities per year resulted from falls to a lower level, while the remaining 84 fatalities resulted from falls on the same level or other types of falls.

In examining the costs of the proposed standard, ERG found, after reviewing inspection results, that most employers are generally in compliance with the existing subpart D standards that have been in place for over 30 years (see Table V–15 in the PEA). However, this general compliance does not necessarily mean that many of the observed fall fatalities and injuries are not the result of failure to comply with existing standards. For example, even if employers are complying with a standard 99.9 percent of the time, it is still possible that many current fall fatalities could still be the result of the 0.1 percent level of employer noncompliance.

BILLING CODE 4510–29–P

[114] See ERG, 2007 (Ex. OSHA–2007–0072–0046), p. 4–10, for further explanation of OSHA's methodology for applying historic percentages to types of falls. *See also* Ex. [OSHA Excel Workbook], tab Prevented Fatalities '06–'12 for details on the application of the distribution of falls from 2006–2010 to the baseline average number of fatal falls for 2006–2012 in the final benefits analysis.

Table V-11
Estimated Fatalities Prevented per Year by Compliance with the Final Standard

Type of Fall		2006-2010 Distribution of Fall to Lower Level by Type of Fall	Estimated Annual Number of Fatal Falls by Type	Incremental Prevention Resulting from Compliance with the Final Standard		Estimated Annual Fatalities Prevented by Final Standard[a]
Fall to lower level			261			
	Fall down stairs or steps	7.7%[b]	20	Low	5.0%	1.0
	Fall from floor, dock, or ground level	5.5%	14	High	10.0%	1.4
	Fall from ladder	22.0%	57	High	20.0%	11.4
	Fall from piled or stacked material	0.2%	1	High	10.0%	0.1
	Fall from roof	9.8%	25	High	20.0%	5.1
	Fall from scaffold, staging	5.2%	13	Very High	40.0%	5.4
	Fall from building girders or other structural steel	1.7%	4	High	10.0%	0.4
	Fall from nonmoving vehicle	22.3%	58	None	0.0%	0.0
	Fall to lower level, n.e.c.	25.7%	67	Low	5.0%	3.4
	Fall to lower level, unspecified	1.8%	3	Uncertain	2.5%	0.1
Fall on same level			75	Low	1.0%	0.7
Other falls (incl. ship, boat			10	Low	2.5%	0.2
Totals		**All Falls**	**345**			**29.0**

Note: Due to rounding, figures may not sum to totals shown.

[a] Prevented fatalities calculated as the product of annual fatal falls and the incremental prevention rate, by type.

[b] Distribution percentages for this category and the nine categories below it are calculated as percentage of fall to a lower level.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety, based on Bureau of Labor Statistics, Census of Fatal Occupational Injuries, 2006-2012.

BILLING CODE 4510–29–C

For the purposes of the analysis summarized in Table V–11, OSHA did not perform a quantitative analysis of how many fatal falls full and complete compliance with the existing standard could prevent. However, a qualitative examination of the fatal falls to a lower level shows that full and complete compliance with the existing standard could prevent a majority, and perhaps a large majority, of these falls. For the PEA, and for this FEA, OSHA and its contractor used expert judgment to estimate preventability factors associated with the new rule taking account of considerations that most falls might be prevented by existing rules. The preventability factors are then the percentage of existing falls, many of which are preventable by existing rules, that would be prevented by this new final rule. On the other hand, these preventability factors assume, as do the cost estimates, full compliance with the new rule. On the benefits side, the estimated number of preventable falls is based on estimates of the number of actual current falls that are preventable by full compliance with the new standard. On the cost side, costs are estimated as the cost of going from baseline compliance to full compliance with the new rule. In order to achieve consistency between costs and benefits estimates, both must reflect the same assumptions regarding existing compliance with the new rule.

OSHA also considered, and in some cases adopted, the approach of using consensus standards as a baseline. As will be discussed in detail in the cost chapter, in some cases OSHA assumed full compliance with consensus standards for purposes of both benefits and costs. In such cases, OSHA estimated neither costs nor benefits where the OSHA rule did not go beyond consensus standards. However, where consensus standards involve training or work practices required of even the smallest firms who may not even be aware of consensus standards, OSHA estimated both costs and benefits from the existing baseline. This baseline might yield overestimates of true impacts because many follow the consensus standard, but there is some reasonable chance that employers are more likely to meet an OSHA requirement than a consensus standard.

A comparison of the existing and new standards shows that the new provisions largely concern training and inspections, with requirements for additional or more stringent engineering or work-practice controls being less prominent (see Section F (Costs of Compliance) below in this FEA). Nonetheless, OSHA's final cost analysis assigns engineering controls and personal protective equipment to operations and activities that were not assigned such controls in the PEA, including costs for repairs or replacements of equipment as a result of equipment failing inspections. In addition, the new standard simplifies and clarifies certain provisions, and, compared to the existing standard, better aligns them with various national consensus standards. OSHA finds that the benefits in terms of reductions in fatal falls result from increased training, inspections, and certifications (*i.e.,* roof anchor certification) in preventing falls.

In the PEA, OSHA based its analysis of accident prevention on ERG's professional judgment and two published studies.[115] The studies show that well-designed training programs are an effective means of improving workplace safety. A review of the literature by the National Institute for Occupational Safety and Health concerning the benefits of training reported that the studies showed consistently that improved and expanded training increased hazard recognition and promoted adoption of safe work practices. However, the magnitude of the effect of increased training on accident rates remains uncertain (Cohen and Colligan, 1988). Further, analysis of past OSHA experience shows that requiring training programs does not ultimately prevent the majority of accidents addressed by the training. One study of OSHA benefits estimates for 6 standards promulgated between 1990 and 1999 found that OSHA had routinely estimated greater numbers of accidents potentially prevented than had actually occurred (Seong and Mendeloff, 2004). OSHA's accident prevention estimates ranged from 40 to 85 percent of relevant classes of accidents. The article shows that such levels of prevention did not in fact occur. The article goes on to discuss the issue of why effects were overestimated and states:

> Why has OSHA usually overestimated the effects? One point that OSHA staff emphasized in response to these findings was that the figures they produce should not be viewed as ''predictions;'' rather, they are estimates of what the impact would be if there were full compliance with the standard.
>
> OSHA staff is well aware that there is not full compliance with OSHA standards. However, despite its lack of realism, the assumption of full compliance seems generally reasonable given the task that the regulatory analysts face. OSHA is required by statute to demonstrate that its standards are technologically and economically feasible, and this demonstration must be made under the assumption that there is full compliance. And if costs are estimated under this assumption, then calculations of the benefits these costs would generate should arguably use it as well.
>
> However, there is a point at which the full compliance assumption does go beyond reasonableness. OSHA appears to assume that if a standard requires workers to avoid working in a hazardous manner or provides them training to change their behaviors, then all such unsafe behavior will be eliminated. This assumption creates the potential for estimating unrealistically large reductions in injuries. When training and work practices are major components of a standard, OSHA should be required to analyze their impacts in a more deliberative and realistic fashion. (Seong and Mendeloff, 2004)

OSHA continues to feel it is important to present full compliance estimates, but agrees with the article that such an assumption should not imply that the training can be expected to prevent accidents as if all lessons provided in training are automatically applied by all workers.

In addition to less than full compliance, there are some methodological limitations to the time trend approach used by Seong and Mendeloff. First they assume that compliance begins on the effective date of the regulation. In reality, some employers begin compliance with new regulations before they are finalized, while others do not start to comply until long after a regulation goes into effect. Many employers start applying many of the provisions of a proposed standard at the time of proposal, in part to get ahead of the curve; to the extent their change in practices is anticipatory of OSHA setting or revising standards, it should be attributed to the OSHA policy. Other employers do not respond to a regulation as soon as it is promulgated. OSHA itself frequently lets employers off with a warning rather than citation in the first year of enforcement of a standard. Finally there is a surprising amount of year-to-year variation in fatality data which create a great deal of noise that makes the effects of rules difficult to interpret. Seong and Mendeloff analyze the results of OSHA analyses from 17 to 27 years ago. OSHA personnel are acknowledged in the articles credits, and OSHA has continued to believe that OSHA should take account of this article in its benefits analysis. In order to assure that this was done, OSHA has shared this concern with its contractors where appropriate. As a result of consideration of this article, OSHA has made clear that reviewers of safety benefits analysis would apply certain principles in their review. First, expert analysts were informed on past overestimates, with the hope that experts would gain in accuracy from feedback on their past inaccuracies and biases. Secondly,

[115] The term ''prevention rate'' as used in this FEA, refers to prevention of both injuries and fatalities.

benefits analyses should not assume that changes in training requirements can be expected to have large changes in incident prevented unless there are also changes in engineering controls or strong prohibitions on practices. Third, the higher the estimate, the greater would be the justification required beyond stating this was the best judgment of the experts. One possible effect of applying these principles is that the highest preventability factor that was applied in the PEA was lower than the lowest preventability factors in the studies the Seong and Mendeloff (2004) article reviewed.

A second major issue is that the failure of OSHA regulations to achieve the anticipated benefits maybe partly due to failure of employers to comply with the regulations. As noted by Seong and Mendeloff, OSHA routinely assume full compliance with regulations for legal reasons. In some cases, if compliance is lower than 100 percent, benefits and costs will be proportionally reduced, with no effect on whether benefits exceed costs. For example, if twenty percent of establishments in an industry are out of compliance with a provision in the baseline, and these twenty percent cause ten percent of all fall fatalities, then if only ten percent come into compliance, rather than twenty percent, accidents would still be reduced by five percent. Under this scenario, a finding that benefits exceed costs under full compliance would be maintained at a lower compliance level, as long as those out of compliance are a homogeneous group.

There is, however, the possibility that those out of compliance are not a homogeneous group but consist of the two subgroups, one of which has found other ways of preventing the same kind of falls, and one of which are ''bad actors'' who make no efforts of any kind to prevent falls. In this case, if compliance is only by those in the safer group, the effects of noncompliance would not simply be proportional. Such a situation might be particularly likely if there is noncompliance with an existing rule and OSHA adds provisions designed to assure greater compliance. For example, almost all trenching fatalities are the result of complete failure to comply with existing shoring requirements. An attempt to improve compliance by increasing recordkeeping, training, and certification might have little effect on the bad actors who simply fail to use shoring at all while imposing additional costs on those already following existing shoring requirements. If only those in compliance with the existing rule also follow these new provisions, then there would be costs without benefits. OSHA has reviewed this rule and does not believe that this is the case for the provisions of this rule.

Because of the importance of this issue, OSHA examines the effects of possible overestimation of benefits and of noncompliance on both costs and benefits in the sensitivity analysis.

For the PEA, OSHA estimated the number of fatal falls potentially prevented by compliance with the proposed standard, categorized by type of fall. Since proposed subpart D focused heavily on ladder safety, OSHA judged the highest impact—15 percent—would be in preventing fatal falls from ladders. For other types of fatal falls directly addressed in the proposal (*e.g.,* falls from floor or dock), OSHA judged a more moderate impact of 10 percent. For other types of fatal falls (*e.g.,* falls down stairs or steps), OSHA judged a relatively low prevention impact (5 percent). For the several types of fatal falls not specifically defined by the BLS injury survey (fall to lower level, n.e.c., and fall to lower level, unspecified), OSHA judged a level of preventability (2.5 percent). (See the PEA (Ex. 1) and ERG, 2007 (Ex. 46), pp. 4–10 to 4–14.)

For falls from roofs, OSHA judged in the PEA that compliance with the provisions in proposed subpart D addressing safety systems, work practices, and training associated with the fall hazards encountered on roof surfaces—including the requirements referenced in national consensus standards such as ANSI/ASSE A1264.1–2007, Safety Requirements for Workplace Walking/Working Surfaces and Their Access; Workplace, Floor, Wall and Roof Openings; Stairs and Guardrail Systems—would result in a prevention rate of 15 percent. Therefore, in the preliminary analysis of benefits, OSHA applied a prevention rate of 15 percent to roof accidents.

For this final analysis of benefits, OSHA increased the prevention rate for roofs to 20 percent because the final standard: (1) Significantly strengthened fall protection for chimney sweeps (see Section F Costs of Compliance below in this FEA for a discussion of the control measures that OSHA used for the chimney-cleaning services industry), and (2) in greater detail, through association with an analogous standard for construction, extended fall protection in the form of designated areas and work rules intended to limit the movement of workers to within 15 feet of the roof edge when fall protection is not installed and available for use (see Section F below for a discussion of fall protection on rooftops across industries covered by § 1910.28, Duty to have fall protection). OSHA's final analysis of compliance costs for rooftop inspections addressed by final § 1910.28(b)(13), Work on low-slope roofs, includes costs for the installation of fall-arrest anchorages for the small percentage of inspections that identify hazardous conditions at or near roof edges (see discussion in the section ''Cost Estimates'', below). These additional rooftop inspections and fall-system enhancements are expected to contribute to the benefits of reduced fatalities and injuries.

Two chimney-sweep accidents reported in OSHA's IMIS database (OSHA, 2012a) illustrate the benefits achievable under the final standard. In the first accident (Inspection No. 311734842), an employee of a Maryland chimney-sweep business died from impact injuries to the head and neck after apparently falling 15 feet. Although no one witnessed the accident, it appears, based on evidence at the scene and an interview with the homeowner, that the employee was using a 12-foot section of a ladder to gain access to three roof levels: the primary roof, the porch roof, and the roof peak. Inspectors found no roof perimeter guardrail or anchorage-based personal fall protection equipment at the site. OSHA believes the final standard at § 1910.28 would prevent such a fall because the employer would have to provide fall protection for an employee exposed to a height of four feet or greater.

In a second chimney-cleaning accident identified by OSHA (Inspection No. 307309054), employees of an air-duct and chimney-service company were installing a protective cap on a chimney. One of the employees was using a 2-foot stepladder leaning against the chimney chase to access the top of the chimney when he fell 24 feet. OSHA's investigation of the fatality showed that the employee was not using personal fall protection equipment, a safety measure required by the final standard.

For this final analysis of benefits, OSHA increased the prevention rate for ladders to 20 percent (from 15 percent in the PEA) because the requirement in the final rule for safety systems on all fixed ladders, including outdoor advertising, will substantially reduce the number of ladder-related accidents.

In addition, OSHA believes that the increased level of worker training on ladder safety systems required by the final rule, and the heightened recognition of the fall hazards associated with ladder safety systems resulting from this training, will yield a higher percentage of accident avoidance than preliminarily estimated by the Agency in the PEA.

OSHA also increased the prevention rate for falls to lower level, not elsewhere classified, to 5 percent (from 2.5 percent in the PEA) based on the requirements for step bolts in the final rule. OSHA revised its preliminary estimate of the prevention rate based on its determination that employers will increase use of ladder safety systems combined with personal fall protection on structures covered by the final rule that currently use only step bolts or ladders without ladder safety systems, such as pole-mounted lights at sports and performance arenas and other tall structures.

For falls from scaffolds or staging, OSHA judged a prevention rate of 40 percent in the PEA. No commenters raised objections to this estimate, so OSHA retained it for this FEA. OSHA believes that this estimate is reasonable because, according to OSHA and BLS accident data, approximately 40 percent of lost-workday scaffold accidents involve rope-descent systems. Therefore, in view of the final standard's comprehensive coverage of these systems, OSHA believes that it is reasonable to expect that the final standard will prevent at least 40 percent of deaths and injuries associated with scaffolds.

In addition, Table V–11 shows that falls from scaffolds or staging is a leading category of falls in general industry. According to the Bureau of Labor Statistics, such falls caused an average of 18 deaths and 1,474 lost-workday injuries yearly over a recent eleven-year period (1992–2002). For the PEA, OSHA reviewed a subset of scaffold accidents recorded in the Agency's Integrated Management Information System (IMIS) database to expand ERG's analysis of the extent to which the proposed standard would prevent accidents involving commercial window cleaning to gain additional information on prevention of fatal falls (OSHA, 2009). Accordingly, OSHA reviewed 36 incidents (some involving multiple casualties) that occurred during the period January 1995 to October 2001 in which a fall from an elevated scaffold or a similar surface during commercial window cleaning operations either killed or injured workers in general industry. OSHA then applied expert judgment to make determinations about which of these incidents would be preventable by full compliance with each of the following standards:

1. The existing standard for walking-working surfaces;

2. A 1991 memorandum to regional administrators that describes the safe use of descent-control devices (*i.e.,* rope-descent systems or RDSs) by employees performing building exterior cleaning, inspection, and maintenance (OSHA, 1991a), which were incorporated into ANSI/IWCA I–14.1, Window Cleaning Safety Standard; or

3. The final standard.

Table V–12 below summarizes OSHA's analysis of the IMIS window cleaning incidents. Table V–12 shows that the existing standard did not account for incidents in three of the four cause-of-incident categories. The existing standard could not account for these incidents because it has no provisions that directly regulate RDSs. Accordingly, OSHA believes that full compliance with the existing standard would not prevent these incidents.

Table V-12

Fall Incidents Associated with the Use of Scaffolds during Window Cleaning

Cause of Incident	Incidents Prevented by:[a] Existing Standard	OSHA 1991 Memo	Final Standard
Malfunction/Mishandling of Rope Descent System or Lifelines	NA[b]	19	21
Anchorage Failure	NA	7	8
Inadequate Training	NA	12	14
Other Factors (suspension scaffold hardware, manlift, powered platform, roof top equipment, safety belt)	5	NA	6
Number of incidents believed to be preventable	5	20	36

[a]OSHA assigned some incidents to more than one standard because provisions in the standards provided similar fall protection.

[b]NA: No provision in the document addressing this cause.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance.

The 21 RDS incidents in the category titled ''Malfunction/Mishandling of Rope Descent System or Lifelines'' typically involved a malfunction in, or unsafe use of, an RDS rope descent systems (including lifelines). OSHA determined that safety conditions specified in its 1991 memorandum could prevent 19 of these incidents. The final rule could prevent these 19 RDS incidents, as well as the remaining two RDS incidents. As noted earlier, OSHA's existing subpart D would not prevent any of the RDS incidents in this category.

One of the primary causes of accidents in commercial window cleaning is the failure of the rooftop anchorage to support the suspended scaffold, the second cause-of-incident category in Table V–12. The final standard requires that employers use proper rigging, including sound anchorages and tiebacks, with RDS. OSHA identified eight incidents in the IMIS database for which anchorage failure contributed to the incident. In OSHA's judgment, all eight anchorage-related incidents involved factors addressed by the final standard and, therefore, would be preventable under that standard. All but one of these eight incidents involved factors addressed by the 1991 OSHA memo.

The third cause-of-incident category in Table V–12 addresses accidents that are less likely to occur when employers train workers adequately—for example, in the proper use of harnesses and lifelines. OSHA identified 14 incidents in the IMIS database in which death or injury to a worker would be preventable had the worker applied the training required by the final standard. Of these 14 cases, 12 involved factors addressed by the 1991 OSHA memo.

Other factors that led to a fall from elevation, such as equipment failure involving suspension scaffolds and powered platforms, contributed to the death or injury of workers during window cleaning operations. The fourth cause-of-incident category in Table V–12 addresses these incidents. OSHA determined that provisions in the existing standard would prevent four of these incidents, while the provisions of the final standard would prevent six of them. The 1991 OSHA memo had no provisions that would prevent these incidents.

OSHA believes that this analysis illustrates some of the complexities in assigning benefits to the final standard. Chief among these complexities is the assumption that full compliance with the final standard will prevent fatalities not preventable by the existing standard due to the addition in the final standard of major requirements addressing window cleaning operations.

Second, there is the question of the proper baseline for such an analysis. Prior to publication of the final standard, while OSHA did not have a rule addressing RDSs or anchorages for these systems and suspended scaffolds, OSHA could use national consensus standards and enforcement policies, in concert with the general duty clause, to prompt employers to prevent falls to lower levels. Therefore, reductions in fall-related incidents likely occurred as a result of this enforcement practice, even if OSHA applied this practice irregularly. However, OSHA has not treated the 1991 memo as the baseline for either benefits or costs, but has instead estimated costs for most activities required by the 1991 memo and benefits from the current levels of compliance.

Third, there is the issue, already discussed, of how to treat the benefits of training requirements. OSHA normally assumes full compliance with a rule for the purposes of both benefit and cost analysis. For some provisions in a rule, the Agency can readily determine whether full compliance with the rule would prevent an incident. However, for training provisions, it is difficult to determine whether full compliance with the training requirements would prevent the incidents the training is addressing (Seong and Mendeloff, 2004). OSHA's resulting estimate of the effects of the training requirements is specified by Table V–11. According to OSHA's determinations summarized in Table V–12, adequate training, if the instructions in training were followed, could have prevented up to 14 of the 36 window cleaning fall-related incidents reported in IMIS.

Based on the PEA and the rulemaking record, and applying the fatality-prevention rate for scaffolds explained above, OSHA concludes that the final standards will prevent 29 fall fatalities a year, *i.e.,* the final standards would prevent approximately 8 percent of the fatal falls in general industry.

b. Injuries Prevented

For the purposes of estimating the number of lost-workday injuries prevented by the final standards, OSHA applied the same prevention factors to lost-workday injuries that it assigned to the defined categories of fatal falls. Table V–13 shows, by type of fall, the distribution of lost-workday injuries for general industry; these injury categories duplicate the categories in Table V–8. The BLS data show that, for non-fatal falls to a lower level, 30.4 percent of injuries are due to falls down stairs or steps, while 22.3 percent are the result of falls from ladders. Averaging total lost-workday fall injuries for 2006–2012, OSHA estimates that 202,066 lost-workday fall injuries occur each year for work operations directly affected by the final revisions to subparts D and I (see Ex. [OSHA Excel Workbook], tabs Injury Fall % 2006–2012 and Prevented Injuries '06–'12).

For this FEA, OSHA notes a significant addition to its preliminary analysis of benefits. In the PEA, OSHA primarily focused on the benefits of preventing falls to a lower level because of the relatively greater certainty of accident avoidance associated with the required control strategies that OSHA anticipates employers will apply to ladders, scaffolds, rope descent systems, roofs, and other elevated surfaces after the Agency issues the final rule. However, based on testimony in the record (Exs. 329 (1/20/2011, pp. 42, 60–61); 329 (1/21/2011, pp. 200–203); 330), OSHA expanded its analysis to include the benefits of preventing slips, trips, and falls on the same level. As shown in Table V–8, 2006–2012 BLS data indicate that falls on the same level resulted in 137,079 lost-workday injuries in work activities in general industry affected by the final rule. OSHA estimates that the provisions of final subpart D addressing general conditions (§ 1910.22) will prevent 1 percent of these accidents, or 1,371 injuries. The 1% prevention rate assumes that the time employers will expend to inspect (two hours per year) and correct hazards (20 minutes for the 10 percent of establishments with unsafe conditions) in compliance with 1910.22(d) will lead to this reduction. This estimate is uncertain, and we examined other prevention rates in our sensitivity analysis.[116]

Using the prevention estimates described above for falls on the same level and the prevention estimates applied to fatal incidents involving falls to a lower level, OSHA estimates that compliance with final subparts D and I will prevent 5,842 lost-workday fall injuries annually. OSHA recognizes that this prevented-injuries estimate is a 58 percent increase over the preliminary estimate (*i.e.,* 3,706 prevented injuries); however, OSHA believes that this estimate accurately captures the full range of accidents that the final rule addresses.

BILLING CODE 4510–29–P

[116] Other sections of the standard may indirectly prevent falls on the same level.

Table V-13
Estimated Lost-Workday Injuries per Year Prevented by Compliance with Final Subparts D and I

Type of Fall	Distribution of Falls Resulting in Lost Workdays by Type	Estimated Annual Number of Nonfatal Falls by Type	Incremental Prevention Resulting from Compliance with the Final Standards		Estimated Annual Injuries Prevented by the Final Standards[a]
Fall to lower level	24.0%	48,379			
Fall down stairs or steps	30.4%[b]	14,726	Low	5.0%	736
Fall from floor, dock, or ground level	8.2%	3,987	High	10.0%	399
Fall from ladder	22.3%	10,805	High	20.0%	2,161
Fall from piled or stacked material	0.8%	370	High	10.0%	37
Fall from roof	0.9%	429	High	20.0%	86
Fall from scaffold, staging	1.2%	597	Very High	40.0%	239
Fall from building girders or other structural steel	0.3%	134	High	10.0%	13
Fall from nonmoving vehicle	19.0%	9,188	None	0.0%	0
Fall to lower level, n.e.c.	14.9%	7,230	Low	5.0%	362
Fall to lower level, unspecified	1.9%	921	Uncertain	2.5%	23
Fall on same Level	67.8%	137,079	Very Low	1.0%	1,371
Other falls (incl. ship, boat)	8.2%	16,609	Uncertain	2.5%	415
Totals	**100.0%**	**202,066**			**5,842**

Note: Due to rounding, figures may not sum to totals shown.

[a]Prevented injuries calculated as the product of annual nonfatal falls and the incremental prevention rate, by type.

[b] Distribution percentages for this category and the nine categories below it are calculated as percentage of fall to a lower level. Distribution percentage for fall on same level and other falls are calculated as percentage of total falls in general industry.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety, based on Bureau of Labor Statistics, Survey of Occupational Injuries and Illnesses: Case and Demographic Information, 2006-12.

</PHOTO>

4. Nonquantifiable Benefits

As noted earlier in this FEA, OSHA did not estimate the improvements in the efficiency of compliance associated with clarifying the existing rule and making it consistent with current national consensus standards. In addition to the benefits associated with those factors, OSHA anticipates that improvements to its walking-working surfaces standard in general industry will yield further benefits. In the following exhibit and in the discussion that follows, OSHA highlights the key substantive differences introduced by the final rule.

4. Nonquantifiable Benefits

Exhibit V-2: Revised Subparts D&I and Existing Standards for Fall Protection in General Industry – Key Substantive Differences

Existing Standard (Subpart D, unless otherwise indicated)	Revised Standard	Comment
§1910.22 General requirements, paragraph (a)(3) "Housekeeping." requires that every floor, working place, and passageway shall be kept free from protruding nails, splinters, holes, or loose boards.	**§1910.22 General requirements**, paragraph (a)(3) Surface conditions, requires that the employer ensure that walking-working surfaces are maintained free of hazards such as sharp or protruding objects, loose boards, corrosion, leaks, spills, snow, and ice.	Expanded list will strengthen employer duty to maintain hazard-free surfaces.

Exhibit V-2: Revised Subparts D&I and Existing Standards for Fall Protection in General Industry – Key Substantive Differences (continued)		
Existing Standard (Subpart D, unless otherwise indicated)	Revised Standard	Comment
Consensus standards only.	**§ 1910.24 Step bolts and manhole steps**, paragraph (a)(1) Step bolts, requires that the employer ensure that each step bolt installed on or after January 17, 2017 in an environment where corrosion may occur is constructed of, or coated with material that protects against corrosion. § 1910.24 Step bolts and manhole steps, paragraph (b)(2) Manhole steps, requires the employer must ensure that each manhole step installed on or after January 17, 2017 • has a corrugated, knurled, dimpled, or other surface that minimizes the possibility of an employee slipping; and • is constructed of, or coated with, material that protects against corrosion if the manhole step is located in an environment where corrosion may occur.	New section addresses hazards of unsafe step bolts and manhole steps.
Consensus standards only.	**§1910.27 Scaffolds and rope descent systems**, paragraph (b)(1) Rope descent systems, requires that before any rope descent system is used, the building owner must inform the employer, in writing, that the building owner has identified, tested, certified, and maintained each anchorage so it is capable of supporting at least 5,000 pounds (268 kg) in any direction, for each employee attached. The information must be based on an annual inspection by a qualified person and certification of each anchorage by a qualified person, as necessary, and at least every 10 years. Paragraph (b)(ii) in that section requires that the employer must ensure that no employee uses any anchorage before the employer has obtained written information from the building owner that each anchorage meets the requirements of paragraph (b)(1)(i) of this section. The employer must keep the information for the duration of the job.	New provision specifies requirement for building anchorage certification and inspection for use of suspended scaffolds.

Exhibit V-2: Revised Subparts D&I and Existing Standards for Fall Protection in General Industry – Key Substantive Differences (continued)		
Existing Standard (Subpart D, unless otherwise indicated)	Revised Standard	Comment
Generally consensus standards only, except: §1910.28 **Safety requirements for scaffolding**, paragraph (a)(21) "General requirements for all scaffolds", requires that only treated or protected fiber rope shall be used for or near any work involving the use of corrosive substances or chemicals.	**§1910.27 Scaffolds and rope descent systems**, paragraph (b)(2) Rope descent systems, requires that the employer ensure: • that no rope descent system is used for heights greater than 300 feet (91 m) above grade unless the employer demonstrates that it is not feasible to access such heights by any other means or that those means pose a greater hazard than using a rope descent system; • that the rope descent system is used in accordance with instructions, warnings, and design limitations set by the manufacturer or under the direction of a qualified person; • that each employee who uses the rope descent system is trained in accordance with §1910.30; • that the rope descent system is inspected at the start of each workshift that it is to be used. The employer must ensure damaged or defective equipment is removed from service immediately and replaced; • that the rope descent system has proper rigging, including anchorages and tiebacks, with particular emphasis on providing tiebacks when counterweights, cornice hooks, or similar non-permanent anchorages are used; and • that each employee uses a separate, independent personal fall arrest system that meets the requirements of 29 CFR part 1910, subpart I.	New RDS section codifies consensus standard and best practices.

Exhibit V-2: Revised Subparts D&I and Existing Standards for Fall Protection in General Industry – Key Substantive Differences (continued)		
Existing Standard (Subpart D, unless otherwise indicated)	**Revised Standard**	**Comment**
Generally consensus standards only, except: **§1910.28 Safety requirements for scaffolding**, paragraph (a)(21) "General requirements for all scaffolds" requires that only treated or protected fiber rope shall be used for or near any work involving the use of corrosive substances or chemicals.	**§1910.27 Scaffolds and rope descent systems**, paragraph (b)(2) Rope descent systems, requires that the employer must ensure: • that all components of each rope descent system, except seat boards, are capable of sustaining a minimum rated load of 5,000 pounds (22.2 kN). Seat boards must be capable of supporting a live load of 300 pounds (136 kg); • that prompt rescue of each employee is provided in the event of a fall; • that the ropes of each rope descent system are effectively padded or otherwise protected, where they can contact edges of the building, anchorage, obstructions, or other surfaces, to prevent them from being cut or weakened; • that stabilization is provided at the specific work location when descents are greater than 130 feet (39.6 m); • that no employee uses a rope descent system when hazardous weather conditions, such as storms or gusty or excessive wind, are present; • that equipment, such as tools, squeegees, or buckets, is secured by a tool lanyard or similar method to prevent it from falling; and • that the ropes of each rope descent system are protected from exposure to open flames, hot work, corrosive chemicals, and other destructive conditions.	New RDS section codifies consensus standard and best practices.

Exhibit V-2: Revised Subparts D&I and Existing Standards for Fall Protection in General Industry – Key Substantive Differences (continued)

Existing Standard (Subpart D, unless otherwise indicated)	Revised Standard	Comment
§1910.27 Fixed ladders, paragraph (d)(2) "Special requirements" requires that when ladders are used to ascend to heights exceeding 20 feet (except on chimneys), landing platforms must be provided for each 30 feet of height or fraction thereof, except that, where no cage, well, or ladder safety device is provided, landing platforms must be provided for each 20 feet of height or fraction thereof. In addition, each ladder section shall be offset from adjacent sections. Where installation conditions (even for a short, unbroken length) require that adjacent sections be offset, landing platforms must be provided at each offset.	**§1910.28 Duty to have fall protection**., paragraph (b)(9) Fixed ladders, requires that for fixed ladders that extend more than 24 feet (7.3 m) above a lower level, the employer must ensure: • that each fixed ladder installed before November 19, 2018 is equipped with a personal fall arrest system, ladder safety system, cage, or well; • that each fixed ladder installed on or after November 19, 2018, is equipped with a personal fall arrest system or a ladder safety system; • that when a fixed ladder, cage, or well, or any portion of a section thereof, is replaced, a personal fall arrest system or ladder safety system is installed in at least that section of the fixed ladder, cage, or well where the replacement is located; and • That on and after November 18, 2036, all fixed ladders are equipped with a personal fall arrest system or a ladder safety system.	In outdoor advertising and other industries where fixed ladders are climbed frequently, additional protection provided at heights above 24 ft.

Exhibit V-2: Revised Subparts D&I and Existing Standards for Fall Protection in General Industry – Key Substantive Differences (continued)		
Existing Standard (Subpart D, unless otherwise indicated)	Revised Standard	Comment
	§1910.28 Duty to have fall protection, paragraph (b)(13) Work on low-slope roofs, requires: • that when work is performed less than 6 feet (1.6 m) from the roof edge, the employer must ensure each employee is protected from falling by a guardrail system, safety net system, travel restraint system, or personal fall arrest system; • that when work is performed at least 6 feet (1.6 m) but less than 15 feet (4.6 m) from the roof edge, the employer must ensure each employee is protected from falling by using a guardrail system, safety net system, travel restraint system, or personal fall arrest system, The employer may use a designated area when performing work that is both infrequent and temporary; and • that when work is performed 15 feet (4.6 m) or more from the roof edge, the employer must: (1) protects each employee from falling by a guardrail system, safety net system, travel restraint system, or personal fall arrest system, or a designated area. The employer is not required to provide any fall protection provided the work is both infrequent and temporary; and (2) implements and enforces a work rule prohibiting employees from going within 15 feet (4.6 m) of the roof edge without using fall protection in accordance with paragraphs (b)(13)(i) and (ii) of this section. The employer is not required to provide any fall protection provided the work is both infrequent and temporary.	New provision addresses risks on low-slope roofs.

Exhibit V-2: Revised Subparts D&I and Existing Standards for Fall Protection in General Industry – Key Substantive Differences (continued)

Existing Standard (Subpart D, unless otherwise indicated)	Revised Standard	Comment
	§1910.30 Training requirements, paragraph (a)(1) Fall hazards requires that before any employee is exposed to a fall hazard, the employer must provide training for each employee who uses personal fall protection systems or who is required to be trained as specified elsewhere in this subpart. Moreover, employers must ensure employees are trained in the requirements of this paragraph on or before May 17, 2017. Paragraph (a)(2) of that section requires the employer must ensure that each employee is trained by a qualified person. Paragraph (a)(3) of that section requires the employer to train each employee in at least the following topics: (i) The nature of the fall hazards in the work area and how to recognize them; (ii) The procedures to be followed to minimize those hazards; (iii) The correct procedures for installing, inspecting, operating, maintaining, and disassembling the personal fall protection systems that the employee uses; and (iv) The correct use of personal fall protection systems and equipment specified in paragraph (a)(1) of this section, including, but not limited to, proper hook-up, anchoring, and tie-off techniques, and methods of equipment inspection and storage, as specified by the manufacturer. §1910.30 Training requirements, paragraphs (b)(1), requires that the employer train each employee on or before May 17, 2017 in the proper care, inspection, storage, and use of equipment covered by this subpart before an employee uses the equipment. Paragraph (b)(2) of that section requires the employer train each employee who uses a dockboard to properly place and secure it to prevent unintentional movement. Paragraph (b)(3) of that section requires the employer train each employee who uses a rope descent system in proper rigging and use of the equipment in accordance with §1910.27. Paragraph (b)(4) of that section requires the employer train each employee who uses a designated area in the proper set-up and use of the area.	New requirements for training on fall and equipment hazards ensure communication on, and remediation of hazards.

Exhibit V-2: Revised Subparts D&I and Existing Standards for Fall Protection in General Industry – Key Substantive Differences (continued)		
Existing Standard (Subpart D, unless otherwise indicated)	**Revised Standard**	**Comment**
§1910.132 **General Requirements**, paragraph (d)(1) Hazard assessment and equipment selection, requires that the employer assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the employer must: • select, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment; • communicate selection decisions to each affected employee; and, • select PPE that properly fits each affected employee. Note: Non-mandatory Appendix B contains an example of procedures that would comply with the requirement for a hazard assessment. Paragraph (d)(2) of that section requires that the employer shall verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; and the date(s) of the hazard assessment. The written certification must be identified as the document certifying the hazard assessment.	Hazard Assessment requirements in Subpart I are now applied to fall protection PPE.	

Source: U.S. Department of Labor, OSHA Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

BILLING CODE 4510–29–C

Earlier in this preamble, in the summary and explanation of final § 1910.28 Duty to have fall protection and falling-object protection, OSHA described the means by which the final standard provides greater flexibility in controls than is found in the current walking-working standard for preventing slip, trip, and fall accidents. OSHA believes that expanding control flexibility will produce nonquantifiable benefits, and in the following discussion, the Agency reiterates the factors that will help generate the nonquantified benefits supplementing the quantified benefits shown in Impacts Exhibit V–1 and in Tables V–11 and V–13 in this FEA.

This rule, like the construction fall protection standard, allows general industry employers, similar to construction employers, to protect workers from falls hazards by choosing from a range of acceptable fall protection options. The existing general industry standard, however, mandated the use of guardrail systems as the primary fall protection method (*e.g.,* see existing § 1910.23(c)).

The 1990 proposed revision of subpart D continued to require the use of guardrail systems. However, in the 2003 notice reopening the record, OSHA acknowledged that it may not be feasible to use guardrails in all workplace situations (68 FR 23528, 23533 (5/2/2003)) and requested comment on whether the Agency should allow employers to use other fall protection systems instead of guardrails. Commenters overwhelmingly favored this approach, which the construction fall protection standard adopted in 1994. In response to comments and OSHA's history and experience with the construction fall protection standard, the Agency proposed allowing employers to select from a range of fall protection options instead of requiring employers to comply with the existing mandate to use guardrail systems.

OSHA is adopting the proposed approach for several reasons. First, OSHA believes giving general industry employers flexibility in selecting fall and falling-object protection systems allows them to select the system or method that they determine will work best for the particular work operation and location. Such flexibility allows employers to consider factors such as exposure time, availability of appropriate attachment points, feasibility, cost effectiveness, and cost constraints when selecting the appropriate fall protection system for the work activity.

Second, providing control flexibility allows general industry employers to take advantage of advances in fall protection technology developed since OSHA adopted the existing rule. The existing rule, by contrast, limited choices in fall protection technology.

Third, making the final rule consistent with the construction standard ensures that employers who have workers engaged in both general industry and construction activities are able to use the same fall and falling-object protection while performing both types of activities. It eliminates the need to purchase different fall protection systems when their workers perform general industry operations. Thus, making the general industry and construction rules consistent ensures that final rule is a cost-effective approach for reducing significant risk of harm. As a result, OSHA believes that the additional flexibility and consistency achieved by this final rule in providing fall protection will reduce worker deaths and injuries.

OSHA believes the comprehensive approach to fall protection (that is, duty to provide fall protection, mandatory criteria for controls, regular inspections, and training) that the final rule and the construction fall protection standard incorporate will provide equivalent or greater protection than the existing rule. In addition, the greater flexibility the final rule affords employers will allow them to select the fall protection option that works best in the specific situation and is the most cost-effective protective measure capable of reducing or eliminating significant risk of harm. Moreover, the comprehensive approach in the final rule, like the construction fall protection standard, recognizes that, in some instances, it may not be possible to use guardrail systems or other passive controls to protect workers from falls. For example, employers may not be able to install permanent systems such as guardrails when they do not own the building or structure on which their employees are working. OSHA believes the final rule addresses the concerns of these commenters without limiting employer flexibility or compromising worker safety.

As mentioned, the final rule limits fall protection choices in some situations where the Agency determined that passive/permanent systems provide the requisite level of protection. For example, in final paragraph (b)(5), OSHA specifically requires the use of guardrails on runways and similar walkways. Likewise, guardrail systems or travel restraint systems are the only systems that employers may use to protect workers on slaughter-house platforms (see final paragraph (b)(14)). In these cases, OSHA limited employers' choices to those systems that are possible to use on those walking-working surfaces and that provide an adequate and appropriate level of safety.

The final rule also establishes criteria and work practices addressing personal fall protection systems (§ 1910.140). These criteria include minimum strength and load, locking, and compatibility requirements for components of personal fall protection systems, such as lines (vertical lifelines, self-retracting lines, travel restraint lines), snaphooks, and anchorages. The work practices include requiring employers to ensure inspection of personal fall protection systems before the initial use during each work shift, and to ensure that a competent or qualified person inspects each knot in a lanyard or vertical lifeline. OSHA believes that these criteria and work practices, in conjunction with the training and retraining requirements in the final rule, provide a combination of controls and redundancies that will help to ensure that personal fall protection systems are effective in protecting workers from falls hazards.

c. Public Comment on Benefits

OSHA requested comment on the Agency's preliminary analysis of the scaffold accidents described above, and on the various approaches used to determine the estimated benefits achievable from compliance with the other provisions of the proposed standard. The following discussion presents OSHA's summary of the public comments received on OSHA's preliminary benefits analysis.

The National Chimney Sweep Guild (NCSG) questioned the benefits of a fall protection system that involved the use of an anchorage, travel restraint lines, and harnesses for repair and maintenance activities on a residential roof:

> Given that the average time on the roof for a typical chimney service is between five and twenty minutes, we believe it is clear that the installation of a single roof anchor (taking 45 to 90 minutes) would expose the chimney sweep to greater hazards for a longer period of time. Installation of the anchor requires extra equipment to be taken to the roof, and increases the number of ground to roof trips. We believe one of the highest hazards is the ladder to roof transition, both getting onto and off of the roof. The work required to install the roof anchor(s) would significantly increase the number of ladder to roof to ladder transition cycles. Furthermore, the anchor would not provide any fall protection during the period before the sweep could attach to it or during the period after the sweep detached from it.
>
> In conclusion, the installation of a roof anchor point roughly equals the cost of an

average chimney cleaning or inspection service, requires significantly more ladder to roof to ladder transitions, keeps the technician working on the roof for a substantially longer period of time than would be required to perform the average chimney cleaning or inspection service, and would not provide fall protection for the ladder to roof and roof to ladder transitions. Accordingly, we believe it is clear that it is economically infeasible (in the rare circumstance where it would be acceptable to a homeowner) and would expose the technician to a greater hazard to require the installation of the anchor(s) that would be necessary to use a personal fall arrest system, a travel restraint system or a safety net while performing the great majority of the tasks performed by sweeps (Ex. 150, pp. 30–31).

In this quotation, NCSG argued that, in many cases, the installation of a roof anchor would involve greater hazard, and challenged OSHA's determination that it is feasible to apply these fall protection systems for chimney or other roof work.

With respect to the issue of greater hazard, while some chimney sweep jobs are relatively short (*e.g.,* chimney cleaning and inspection, minor repairs), some are much longer than five to 20 minutes (*e.g.,* substantial and major installations and repairs) (Exhibit 150). A simple chimney cleaning job typically involves no time on the roof except possibly a short inspection of the exterior of the chimney after the cleaning is finished (Ex. 150; 329 (1/18/2011, p. 267, 270, 276–277, 301)). OSHA has modified the rules so roof anchorages are not required for inspections prior to starting work or after completing work (§ 1910.28(a)(2)(ii)). As a result, most short chimney cleaning and inspection jobs will not require use of anchorages and fall protection. In those situations where work actually needs to be done on a roof, and thus more time will be required on the roof, OSHA has modified the rule to except requirements for anchorages in situations where employers can demonstrate that installing anchorages for personal fall arrest systems as well as using any other conventional fall protection is infeasible or creates a greater hazard (§ 1910.28(b)(1)(ii)). Because the length of chimney sweep jobs varies widely as does the time to install anchors, individual determinations on whether installation of personal fall protection anchorages would make the job more dangerous than not using the required fall protection are required. Where anchorages are infeasible or create a greater hazard, employers must develop and implement a fall protection plan, including implementing other control measures, to eliminate or reduce fall hazard hazards for workers.

OSHA also differs with the NCSG's statement above with respect to time requirements and expense for installing fall protections. In response to a question from the OSHA panel on the feasibility and potential benefits of anchorage and lifeline systems on roofs, a representative of the Industrial Safety Equipment Association stated in the public hearing:

In the event of existing construction there are permanent roof anchors that can be installed on residential structures and other types of facilities, buildings and so on that can be installed after the construction. And depending upon the type of construction, those can range in cost anywhere from, you know, $35 to a few hundred dollars. And they have varying degrees of installation, again depending upon the type of structure.

There are also—if it's new construction there are different construction techniques where the anchors can be installed, for instance, on the roof truss before the truss is put up into place so that the anchor's already up there and then you can use first man type systems to anchor your lifeline on the ground before the worker has to climb to do the work at the height.

So there are various types of roof anchor products. And you know, I would—every fall protection equipment manufacturer manufactures a number of different types specifically for the roofing industry (Ex. 329 (1/18/2011), pp. 176–177).

OSHA also notes that where an employer can show that it is not feasible to use guardrails, safety nets, or personal fall protection systems in work on residential roofs (or it creates a greater hazard), the final rule requires the employer to develop and implement a fall protection plan and training meeting the requirements of the construction standard (final rule § 1910.28(b)(1)(ii)).

Charles Lankford of Rios & Lankford Consulting International challenged OSHA's finding in the PEA that fatalities involving falls represent a risk so significant that only a revised standard with a scope covering all of general industry will address the problem:

The relative ranking of falls appears to have more to do with the falling rate of workplace homicides than with an increase in fatal falls, since the rate of fatal falls has remained fairly constant at around 5 and 6 fatal falls per million employees for decades.

While it is true that fatal falls were 14% of all fatalities (2009 BLS data), this was not evenly distributed among the industrial sectors. In the ''goods producing'' sector, falls were the second (or third) leading cause of death, and were ten times more likely than a homicide to be the cause of death. This is the major category that includes mining, agriculture, construction and manufacturing.

In contrast, in the service sector, falls were the third (or fourth) leading cause of death. In the service sector overall, homicides were twice as likely to be the cause of death as a fall. In some NAIC codes, homicides were 4 times more likely to be the cause of death than a fall. The service sectors where fatal falls were relatively more likely were: (1) Durable goods wholesale; (2) utilities; (3) information; and (4) administrative and waste services.

I've focused on fatal falls data rather than non-fatal falls because the non-fatal data are more subject to variations from record-keeping interpretations, data initiatives, etc.

Never-the-less historical incident rates for non-fatal falls also do not display an increasing fall problem. The all-industries non-fatal fall incidence rate has declined every year since 2003 (the oldest year in the BLS Table I consulted), so the decline in rates is not attributable to the current recession. If we exclude 2008 and 2009 data, manufacturing did not show a change. Yet 2006 and 2007 showed lower injury incidence rates than 2003 and 2004 (Ex. 368).

In response to Mr. Lankford's comment, OSHA notes that, combining data taken from Tables V–1 and V–13, the roughly 5.2 million workers directly exposed to fall hazards had approximately 187,000 lost-workday injuries resulting from falls each year, or 36 injuries per 1,000 workers annually. The hazards faced by these employees are similar, even though they work in a broad range of industries. OSHA believes, as indicated by Mr. Lankford's comment, that the risk of fall-related injuries, combined with the risk of fall-related fatalities, remained at a constant rate in recent years and that the final rule will help prevent a substantial number of them. Accordingly, OSHA concludes that falls constitute a safety threat best addressed by the final rule's revisions to existing subparts D and I.

d. Monetized Benefits, Net Benefits, and Cost Effectiveness

The previous section showed that OSHA judges that complete compliance with the revised standard will result in the prevention of 29 deaths and 5,842 lost-workday injuries each year. Consistent with current federal regulatory methodologies recommended by OMB Circular A–4, discussed below, the Agency assigned a dollar value to these safety benefits.

In estimating the value of preventing a fatality, OSHA followed the approach established by the U.S. Environmental Protection Agency (EPA). EPA's *Guidelines for Preparing Economic Analyses* provides a detailed review of methods used to estimate mortality-risk values, and summarizes the values obtained in the literature (EPA, 2000). Synthesizing the results from 26 relevant studies, EPA arrived at a mean value for a statistical life (VSL) of $4.8 million (in 1990 dollars). EPA recommends this central estimate, updated for inflation, for application in regulatory analyses.

Viscusi and Aldy (2003) presented a metaanalysis of studies in the economics literature that used a willingness-to-pay (WTP) methodology to estimate the imputed value of life-saving programs, and arrived at a value of approximately $7.0 for each avoided fatality. Applying the GDP deflator (U.S. BEA, 2010), this $7.0-million base number in 2000 dollars yields an estimate of $8.7 million in 2010 dollars for each fatality avoided.

This VSL estimate is consistent with EPA's estimate, and is also within the range of the substantial majority of such estimates in the literature ($1 million to $10 million per statistical life), as discussed in OMB Circular A–4 (OMB, 2003). Applying a VSL of $8.7 million to the estimated number of prevented fatalities, OSHA estimates that the dollar value of the benefits associated with preventing fatal accidents from compliance with revised subparts D and I will be $252.3 million annually.

OSHA also reviewed the available research literature regarding the dollar value of preventing an injury. In the paper cited immediately above, Viscusi and Aldy conducted a critical review of 39 studies estimating the value of a statistical injury (Viscusi and Aldy, 2003). In their paper, Viscusi and Aldy reviewed the available WTP literature to identify a suitable range of estimates; using WTP to value non-fatal injuries is the approach recommended in OMB Circular A–4.

Viscusi and Aldy found that most studies resulted in estimates in the range of $20,000 to $70,000 per injury (in 2000 dollars), although several studies resulted in higher estimates. That some studies used an overall injury rate, and others used only injuries resulting in lost workdays, partly explains the variation in these estimates. The injuries prevented by final subparts D and I often involve hospitalization and, therefore, are likely to be more severe than the majority of lost-workday injuries. In addition, injuries resulting from falls involve more pain and suffering, more expensive treatments, and generally longer recovery periods than other lost-workday injuries.[117]

Thus, it is reasonable to believe that the value of a statistical injury for this rulemaking will be in the upper part of the reported range of estimates. Nevertheless, in the preliminary benefits analysis discussed in the PEA, OSHA used a mid-range estimate—$50,000—to assess monetized benefits for injuries and, for this FEA, raised that estimate to $62,000 (2010 dollars) to account for a rise in the cost of living since 2000, the base year for the monetized values estimated by Viscusi and Aldy when the authors published their 2003 study. Thus, with an estimated 5,842 injuries a year prevented by the final standards, OSHA determined that the dollar value of prevented injuries through compliance with revised subparts D and I will total $362.2 million annually.

OSHA estimates that the combined dollar value of prevented fatalities and injuries through compliance with the final revisions to subparts D and I will total $615 million per year. Comparing gross monetized benefits with costs of compliance (discussed in more detail in section V.F, below), OSHA estimates that the net monetized benefits of the final standard will be $310 million ($615 million in benefits—$305.0 million in compliance costs; all figures rounded). Table V–14 summarizes the compliance costs, benefits, net benefits, and cost effectiveness of the final standards.

There are other benefits of the final standards that OSHA neither quantified nor monetized. First, OSHA did not estimate the number of fall injuries prevented that do not result in lost workdays. Second, OSHA did not estimate improvements in the efficiency of compliance associated with clarifying the existing rule and bringing it into closer correspondence with current voluntary standards.

BILLING CODE 4510–29–P

[117] In 2009, the median number of days away from work was 14 days for falls to a lower level, whereas the median number of days away from work for all events or exposures leading to injury or illness was 8 days (BLS, 2012). For more discussion of this issue, see Part II of this document.

Table V-14
Net Benefits of the Final Subparts D and I Standards
(millions of 2010 dollars)

Annualized Costs[a]	
§1910.22 General Requirements	$33.2
§1910.23 Ladders	$11.3
§1910.24 Step Bolts and Manhole Steps	$18.0
§1910.27 Scaffolds and Rope Descent Systems	$71.6
§1910.28 Duty to Have Fall Protection	$55.9
§1910.29 Fall Protection Systems Criteria and Practices	$13.1
§1910.30 Training Requirements	$74.2
§1910.132 General Requirements	$12.7
§1910.140 Personal Fall Protection Systems	$11.0
Rule Familiarization	$4.1
Total Annual Costs	**$305.0**
Annual Benefits	
Number of Injuries Prevented	5,842
Number of Fatalities Prevented	29
Monetized Benefits (assuming $62,000 per injury and $8.7 million per fatality prevented)	**$615.0**
Injuries not Resulting in Lost Workdays and Improved Compliance Efficiency	Unquantified
Net Benefits (benefits minus costs)	**$310.0**

[a] Data may not sum to totals due to rounding. The monetized benefit per fatality avoided is $8.7 million (in 2010 dollars, after applying the GDP deflator to $7.0 million in 2000 dollars).

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

BILLING CODE 4510–29–C

E. Technological Feasibility

OSHA reviewed the substantial evidence collected throughout this rulemaking, including the data and comments submitted to the record in response to the earlier proposed standard published on April 10, 1990, the notice reopening the record published on May 2, 2003, and the recent NPRM (May 24, 2010). Accordingly, OSHA determined that compliance with the final revisions to subparts D, I, and other subparts in 29 CFR part 1910 (general industry), as described in this final rule, is technologically feasible. This subsection presents the details of this conclusion with regard to specific requirements.

1. Technological Feasibility for Final Subpart D (Walking-Working Surfaces)

General Requirements (§ 1910.22)

Section 1910.22 of final subpart D revises existing requirements addressing housekeeping, safe aisles and passageways, covers and guardrails, and floor-loading protection, and introduces new requirements associated with broad areas of safety on walking-working surfaces. Final paragraphs (a), (b), (c), and (d) of this section address, respectively, surface conditions, application of loads, access and egress, and inspection, maintenance, and repair. OSHA received no testimony in the record suggesting that there would be feasibility concerns with final § 1910.22.

Final paragraph (a) requires that employers keep all walking-working surfaces in a clean, dry, orderly, and sanitary condition, and free of hazards such as sharp or protruding objects, loose boards, corrosion, leaks, and spills. Data in OSHA's inspection file analyzed by ERG (ERG, 2007) indicate a high level of compliance with similar requirements in existing subpart D, suggesting that there have been few, if any, technical challenges to employers; therefore, this provision is technologically feasible.

Final § 1910.22(b) requires that employers ensure that each walking-working surface can support the maximum intended load for that surface. This language restates and simplifies the existing regulatory text, and should not present any technological feasibility difficulties. The next provision, final § 1910.22(c), requires that employers provide employees with, and ensure that they use, a safe means of access and egress to and from walking-working surfaces. Although new, this requirement, in OSHA's judgment, will not impose any duties on employers beyond the limits of feasibility.

Paragraph (d) of final § 1910.22 requires employers to regularly inspect and maintain, as necessary, all walking and working surfaces in a safe condition. Employers also must correct and repair all hazardous conditions on walking-working surfaces before employees use them, and guard the surfaces until completing repairs to prevent employee use. A qualified employee must perform or supervise any correction or repair that involves the structural integrity of a walking-working surface. Employers can accomplish the inspection, maintenance, repair, and guarding of surfaces with technologically feasible and currently available methods.

Ladders (§ 1910.23)

Final § 1910.23 covers ladders. Accordingly, final § 1910.23(a) specifies that the section applies to all ladders except for ladders used only for firefighting, rescue operations, tactical law enforcement operations, or training for these operations, and ladders designed into, or are an integral part of, a machine or piece of equipment. In addition, final § 1910.23(b) provides general requirements for all ladders; final paragraph (c) addresses portable ladders; final paragraph (d) presents standards for fixed ladders; and final paragraph (e) addresses mobile ladder stands and mobile ladder stand platforms. OSHA based the requirements in this section partly on current American National Standards Institute (ANSI) standards, A14 series. The ANSI standards provide guidelines for industry, and are generally compatible with current industry practices and technology. Since manufacturers make and test virtually all manufactured ladders to meet these ANSI standards, OSHA believes there will be few problems regarding technological feasibility.

Most of the requirements for ladders in final subpart D do not represent any change from existing OSHA requirements. For both existing and new requirements, current and readily available technology is capable of meeting or exceeding the design and strength criteria specified for ladders. The final language is clearer and more concise than the existing regulatory text. Moreover, OSHA introduced greater compliance flexibility into the final standard, such as in the case of the range provided in the spacing requirements for rungs, cleats, and steps (see final § 1910.23(b)).

Comments submitted to the docket in response to the 1990 proposed rule generally confirmed OSHA's preliminary conclusion that compliance with the proposed requirements for ladders would be technologically feasible. Although several commenters addressed the appropriateness or the costs associated with the proposed ladder requirements, they did not question the technological feasibility of the requirements. Similarly, during the reopening of the record following publication of the 2010 NPRM, commenters raised concerns about the potential costs for protecting workers on ladders in particular circumstances (see, for example, Exs. 121; 301; 342) or the rationale for excluding ladders from the duty to provide fall protection for heights above four feet (Ex. 185). However, there was no evidence presented that would suggest that the final standard for ladders is technologically infeasible.

OSHA grouped training in the proper care, use, and inspection of ladders with other training requirements under final § 1910.30. Compliance with these training requirements does not require any additional or new technology.

Step Bolts and Manhole Steps (§ 1910.24)

Final subpart D provisions for step bolts and manhole steps address basic criteria for the safe design, construction, and use of these components. For example, final § 1910.24(a)(3) specifies uniform spacing of step bolts between 12 inches (30 cm) and 18 inches (46 cm) measured center to center, while § 1910.24(b)(2)(iv) requires uniform spacing of manhole steps not more than 16 inches (41 cm) apart. Although these requirements will be new to subpart D, OSHA based the engineering criteria on consensus standards established by the American Society for Testing and Materials (ASTM), which have wide acceptance throughout industry. Therefore, OSHA believes that existing technology is capable of meeting these performance criteria and that this technology is feasible to apply.

Stairways (§ 1910.25)

Section 1910.25 in the final standard describes OSHA safety specifications for stairs, and covers all types of stairs except stairs serving floating roof tanks; stairs on scaffolds; stairs designed into machines or pieces of equipment; and stairs on self-propelled motorized equipment. Requirements in this section address the obligations to install handrails, stair-rail systems, and guardrail systems, as necessary. Other requirements in this section describe design specifications such as the appropriate load capacities that stairs must be able to support, minimum vertical clearances for different types of stairs, the height of risers, the depth of treads, and the proper angle of stairs. These requirements are not substantially different from the requirements of the existing standard; OSHA drew the requirements from NFPA and ANSI consensus codes, indicating that industry already adopted the requirements as a feasible industry practice using existing technology.

Dockboards (§ 1910.26)

Section 1910.26 provides for the safe movement of personnel and equipment on dockboards (defined in the final standard to include bridge plates and dock plates), and relocates, updates, and clarifies requirements for dockboards located in existing § 1910.30, Other working surfaces. The design, construction, and maintenance of these surfaces must be such as to support their maximum intended load and prevent transfer vehicles from running off the edge. According to final § 1910.26(c), employers must secure portable dockboards with anchors or other means, when feasible, to prevent displacement while in use. Other requirements in this section prevent the sudden displacement of vehicles on dockboards that are in use, and require handholds or other means for safe handling. Compliance with the final requirements for dockboards does not necessitate the use of any new technologies, materials, or production methods; thus, this section is technologically feasible.

Scaffolds and Rope Descent Systems (§ 1910.27)

Section 1910.27 introduces to subpart D the existing requirements for scaffolds in the construction standards. Thus, for final subpart D, OSHA directly references subpart L in 29 CFR part 1926. In addition, new requirements for rope descent systems will include inspection prior to each workshift; proper rigging; a separate personal fall arrest system; minimum strength criteria for lines used to handle loads; establishment of rescue procedures; effective padding for ropes; and stabilization for descents greater than 130 feet. In addition, final § 1910.27(b)(2) prohibits the use of rope descent systems for heights greater than 300 feet (91 m) above grade unless the employer can demonstrate that it is not feasible to access such heights by any other means or those other means pose a greater hazard than using RDS. Although new to subpart D, industry adopted these and other specifications for the safe use of scaffolds many years ago owing to the publication of ANSI I–14.1–2001, Window Cleaning Safety (Ex. 14), and a March 12, 1991, OSHA memorandum to Regional Administrators addressing the ANSI standard and the provisions listed above (Ex. OSHA–S029–2006–0662–0019). Therefore, OSHA judges the requirements in this new section on scaffolds to be technologically feasible.

Duty To Have Fall Protection and Falling-Object Protection (§ 1910.28)

Section 1910.28 restates, clarifies, and adds flexibility and consistency to existing OSHA requirements for providing fall protection to employees. In addition to general requirements for the strength and structural integrity of walking-working surfaces (with reference to § 1910.29, Fall and falling-object protection systems criteria and practices), this section of the final rule also includes detailed specifications on the following surfaces for which employers have a duty to provide fall protection:

- Unprotected sides and edges;
- Hoist areas;
- Holes;
- Dockboards;
- Runways and similar walkways;
- Dangerous equipment;
- Wall openings;
- Repair pits, service pits, and assembly pits less than 10 feet in depth;
- Fixed ladders (that extend more than 24 feet (7.3 m) above a lower level);
- Outdoor advertising (billboards);
- Stairways;
- Scaffolds and rope descent systems;
- Work on low-slope roofs;
- Slaughtering facility platforms; and
- Walking-working surfaces not otherwise addressed.

Hazards on walking-working surfaces can include accidental displacement of materials and equipment. To prevent objects from falling to lower levels and to protect employees from the hazards of falling objects, final § 1910.28(c) requires head protection and screens, toeboards, canopy structures, barricades, or other measures.

The final subpart D standards reaffirm the existing Agency interpretation and enforcement practice that fall protection is generally necessary for fall hazards associated with unprotected sides or edges of any surface presenting a fall hazard of four feet or more. In this regard, the obligation of employers to provide fall protection remains substantially unchanged from existing requirements in final subpart D.

Whereas the existing requirements specify that employers must protect employees by installing standard guardrail systems or equivalent systems, the final standard more clearly allows employers to provide fall protection through any of several methods, including guardrails, personal fall arrest systems, and safety nets. OSHA recognizes that some work surfaces may present difficult challenges for applying fall protection. One participant in the 1990 NPRM (Ex. OSHA–S041–2006–0666–0194) pointed out that maintenance work may require that employees be on equipment such as compressors, turbines, or pipe racks at elevations in the range of 4 to 10 feet above lower surfaces, and that guardrails, platforms, ladders, or tying off would not always be possible in such situations. In the current rulemaking for walking-working surfaces, the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) (Ex. 165) appeared to express a similar concern with respect to the duty to provide fall protection in a manufacturing plant. OSHA notes that its enforcement procedures allow special consideration in unique circumstances when compliance with a particular standard may not be feasible or appropriate.[118]

In general, employers should be able to address and eliminate employee exposures to potential slip, trip, and fall hazards by planning and designing adequate facilities and work procedures. Based on widespread industry practice, OSHA concludes that the fall protection requirements specified by this section of the final standards are technologically feasible.

Fall Protection Systems and Falling-Object Protection—Criteria and Practices (§ 1910.29)

In § 1910.29, OSHA specifies or provides references for revised criteria for fall protection systems such as guardrail systems; handrails; stair rail systems; cages, wells, and platforms used with fixed ladders; toeboards; designated areas; travel restraint systems; safety net systems; grab handles; and fall protection for the outdoor advertising industry. Final § 1910.140, discussed at length below, provides criteria for personal fall protection systems that OSHA is adding to existing subpart I through this rulemaking.

With regard to guardrail systems (§ 1910.29(b)), the final subpart D standards do not substantially modify existing requirements involving height, strength, or other criteria. In some circumstances on low slope roofs for

[118] See OSHA's Field Operation Manual: *http://www.osha.gov/OshDoc/Directive_pdf/CPL_02-00-150.pdf.*

which the existing standard requires guardrails (or equivalent protection), the final standard allows employers to use designated areas.

Rather than explicitly requiring midrails in guardrail systems as in the existing subpart D standards, the final subpart D standards use performance-oriented criteria that allow midrails, screens, mesh, intermediate members, solid panels, or equivalent intermediate structural members. Compliance with the existing standards would generally also meet the requirements of the final standards. Furthermore, the final standard allows the employer to choose any of a wide variety of currently used and readily available guardrail system materials and designs to meet the performance-oriented criteria. Based on these considerations, the final subpart D requirements for guardrail systems are technologically feasible.

Final § 1910.29(c) references the construction standards to specify criteria for safety net systems. The criteria for safety nets established through this final rulemaking include requirements for drop tests and inspections for each safety net installation. Other criteria for safety nets established in final subpart D involve design and strength standards. Employers can achieve all of these criteria by using existing and commonly available safety net systems. The final requirements for installing safety net systems reflect basic safety considerations already adopted by manufacturers of equipment and by employers. Readily available and currently used technology is capable of meeting these requirements.

The final standard introduces the option of designated areas (see final § 1910.29(d)) as a means of fall protection available to employers, in addition to other acceptable fall protection measures in certain circumstances on low slope roofs. The technology necessary to implement this option consists of basic materials such as rope, wire, or chain, and supporting stanchions. Employers can achieve the strength, height, and visibility criteria specified in the final standard for designated areas with currently available materials and technology.

Requirements for covers for holes in floors, roofs, and other walking-working surfaces in the final standard (see final § 1910.29(e)) simplify and consolidate the proposed requirements for covers and now consist of two new provisions requiring that the cover: (1) Is capable of supporting without failure, at least twice the maximum intended load that may be imposed on the cover at any one time; and (2) Is secured to prevent accidental displacement. The performance-oriented criteria applicable to covers allow for the application of a wide variety of technological solutions.

Requirements in final subpart D for handrail and stair rail systems (§ 1910.29(f)) specify criteria for height, strength, finger clearance, and type of surface, among others. Employers currently meet these criteria with existing technology, and a wide variety of different materials and designs are available to comply with the requirements.

New requirements in final paragraph (g) of this section specify that landing platforms, as well as all platforms used with fixed ladders and cages and wells, provide a horizontal surface that meets specified dimensions are feasible considering the availability of appropriate materials and engineering expertise. Final § 1910.29(g) also sets criteria for ladder cages and wells, if used on fixed ladders. OSHA notes that the Agency is phasing out the use of cages and wells as a means of fall protection on fixed ladders. See full discussion in summary and explanation of § 1910.28(b)(9).

Final paragraph (h) includes requirements for qualifying employees to climb ladders on outdoor advertising that expire two years after publication of the final standard (see § 1910.28(b)(10)). After this two-year period, employers in outdoor advertising must provide one or more of the fall protection systems specified in § 1910.28 for employees who climb fixed ladders. Although new to subpart D, the training and other administrative controls that characterize the development and protection of those working without fall protection have been around for many years. Furthermore, evidence in the record indicates that some employers in outdoor advertising are now providing conventional fall protection for ladders (Ex. 369). Therefore, OSHA concludes that there will be few, if any, technological hurdles for industry to implement the provisions for qualified climbers before and after the two-year expiration date.

Final paragraph (i) establishes criteria and practice requirements for ladder safety systems permanently attached to fixed ladders or immediately adjacent to such ladders. A ladder safety system is a conventional fall protection system designed to eliminate or reduce the possibility of falling from a fixed ladder (see definition of ''ladder safety system'' in final § 1910.21(b)). According to this definition, it usually consists of the following:

- A carrier, which is a rigid or flexible track attached to or adjacent to the fixed ladder;
- A safety sleeve, which is moving component that travels on the carrier;
- A lanyard;
- Connectors; and
- A body harness.

Although the existing rule at § 1910.21(e)(13) addresses ''ladder safety devices,'' which serve the same purpose as ladder safety systems, the existing rule does not specify criteria or practice requirements for those devices. As a result, OSHA drew many of the proposed ladder safety system criteria and practice requirements from the construction ladder standard at § 1926.1053(a)(22) and (23). The construction standard allows the use of body harnesses or body belts with ladder safety systems. OSHA also drew ladder safety system criteria and practice from ANSI/ASC A14.3–2008. The Agency notes the national consensus standard does not include the use of body belts with ladder safety systems.

As noted above, the ladder safety system criteria and practice requirements in the final standard have been published in an OSHA construction standard and in a national consensus standard, and therefore any technological feasibility concerns for the range of structures encountered in general industry would very likely have been addressed in the proceedings that led to those publications. Therefore, OSHA concludes that the final requirements for ladder safety systems are technologically feasible.

Final paragraph (j), like the proposed rule, requires that body belts, body harnesses, and other components of personal fall arrest systems, work-positioning systems, and travel restraint systems, meet the applicable requirements in final § 1910.140. Employers currently meet these criteria with existing technology, and a wide variety of different materials and designs are available to comply with the requirements.

Final § 1910.29(k) clearly specifies criteria for systems that provide falling-object protection. OSHA redrafted the provisions in the existing standard addressing toeboards using specification language found in the OSHA construction standard (§ 1926.502(j)(3)) and with national consensus standards (ANSI/ASSE A10.18–2012 (Section 5.7), and ANSI/ASSE A1264.1–2007 (Section 4.1.5) while other requirements for guardrail systems and canopies specified in the design criteria are within current engineering norms. Therefore, OSHA concludes that the falling-object protection provisions are technologically feasible.

Lastly, final paragraph (l) contains design and strength criteria for grab handles. For the most part, these requirements are consistent with the requirements for grab handles in existing subpart D and are, therefore, technologically feasible.

Training Requirements (§ 1910.30)

Section 1910.30 introduces requirements specifying that employees receive training from a qualified person, and that the training, which applies to personal fall protection equipment, prepare employees to recognize fall hazards in the work area, in the procedures to follow to minimize these hazards, and in the installation, inspection, operation, maintenance, disassembly, and correct use of personal fall protection equipment. Employers also must train workers in the proper care, inspection, storage, and use of equipment subpart D covers before workers use that equipment, such as dockboards, RDS, and designated areas. Employers must retrain employees when changes occur in the workplace or in the types of fall protection systems or equipment used that renders the previous training obsolete or inadequate, or employees exhibit an absence of understanding or skill needed to use the equipment or perform the job safely; employers also must train employees in a manner the employees understand. Because of extensive evidence in the record that the training required under the final standard has widespread acceptance throughout industry (Exs. 53; 73; 96; 127; 172; 189; 205; 216; 222; 226; 329 (1/18/2011), pgs. 82, 117, 186, 258; 329 (1/19/2011), pgs. 22, 24; 329 (1/20/2011), pgs. 182, 287; 329 (1/21/2011), pgs. 9, 92, 200, 206; 364), such training will not present technological feasibility concerns.

2. Technological Feasibility for Final Subpart I (Personal Protective Equipment)

General Requirements (§ 1910.132)

Revised § 1910.132(g) of subpart I in this final rulemaking requires that employers conduct hazard assessments and training in accordance with the requirements in § 1910.132(d) and (f) in workplaces when employers provide personal fall protection equipment to employees. Survey data indicate that a significant percentage of employers currently assess the occupational fall hazards encountered by their employees, and that a similarly large percentage of employers train their employees in the proper use of personal fall protection equipment (OSHA, 1994). These hazard assessment and training requirements, therefore, will not present technological feasibility concerns.

Personal Fall Protection Systems (§ 1910.140)

The final subpart D standards include provisions for personal fall protection systems, including components such as harnesses, connectors, lifelines, lanyards, anchorages, and travel restraint lines. Section 1910.140 of subpart I specifies the criteria that these components must meet when employees use them.

The revisions to the walking-working surfaces and fall protection systems described in the final rule include revisions to several subparts in 29 CFR part 1910 other than subparts D and I. For purposes of this analysis, the determinations of technological feasibility described in this FEA include the revisions of these other subparts.

The requirements applicable to personal fall protection systems specified by this final rulemaking codify basic safety criteria for these systems. These criteria reflect common industry safety practices, and currently and readily available equipment meets these criteria. The final standards generally do not require changes in current technology or practices for employers who use standard safety equipment and follow standard safety procedures. The current and ready availability of personal fall protection systems, including personal fall arrest systems, positioning systems, and travel restraint systems, and the application of these technologies in diverse industrial activities and circumstances, demonstrate the technological feasibility of these requirements in the final standard.

3. Summary of Technological Feasibility

In conclusion, OSHA determined that compliance with the final revisions to subparts D, I, and other affected subparts of 29 CFR part 1910 is technologically feasible. Thus, there is no technological hindrance to the significant improvement of employee safety on walking and working surfaces resulting from implementation of this final rule.

F. Costs of Compliance

1. Introduction

This subsection presents OSHA's final analysis of the compliance costs associated with the final standard for walking-working surfaces and fall protection in general industry. Following discussion on the public comments addressing OSHA's preliminary estimate of compliance costs and OSHA's response to those comments, the cost analysis proceeds into a discussion of the assumptions used in the analysis. OSHA based its final analysis of compliance costs largely on the cost analysis conducted by OSHA's contractor, Eastern Research Group (ERG, 2007), and the Preliminary Economic Analysis. The presentation below focuses on what constitutes the regulatory baseline (*i.e.,* current conditions) from which OSHA measured the costs, impacts, and benefits of the final rule. The Agency also discusses the effect of consensus standards and the compliance rates for the existing rule on the cost analysis (*i.e.,* when codification of existing consensus standards results in little to no incremental costs for the final rule).

Following the discussion of baseline assumptions, the next subsection reviews the final rule on a paragraph-by-paragraph basis for those paragraphs that potentially could result in costs to industry. The final subsection examines one-time costs to bring employers into compliance with the rule, as well as the annual costs for training new employees and retraining existing employees. OSHA presents the cost estimates by affected industry, and by applicable provision. The final subsection concludes with a discussion and tables that summarize the costs for each section of the standard, and aggregates them to estimate total costs.

2. Public Comments on the Preliminary Cost Analysis

OSHA requested comment on the assumptions, unit costs, and analytical methods applied in the preliminary cost analysis for proposed subparts D and I. The discussion below summarizes the public comments addressing OSHA's preliminary cost analysis and OSHA's response to those comments.

The Sheet Metal and Air Conditioning Contractors National Association (SMACNA) was critical of OSHA's estimate of compliance costs, stating:

> A review of the anticipated costs indicates that OSHA has under-estimated the actual costs to employers to comply with the requirements of these rules. SMACNA encourages OSHA to conduct further outreach to employers to find the true costs associated with the revisions to company operations, purchasing equipment and conducting training that these proposed standards would require. With over 5 million small businesses affected by these requirements (OSHA's data), it is fair and prudent upon OSHA to outreach to these companies by convening a Small Business Regulatory Enforcement Fairness Act panel. (Ex.165, p. 5.)

With respect to the convening of a Small Business Regulatory Enforcement Fairness Act (SBREFA) panel, OSHA in the NPRM certified that the proposed standard would not have a significant impact on a substantial number of small firms, which satisfied the statutory requirements at the time OSHA published the NPRM. Other stakeholders who also requested that OSHA convene a SBREFA panel include the National Federation of Independent Businesses (Ex. 173) and the U.S. Chamber of Commerce (Ex. 202). With respect to SMACNA's assertion that OSHA underestimated compliance costs, SMACNA did not provide any further details to support its statement, and, therefore, OSHA has no basis to evaluate the criticism.

ORC HSE Networks, a division of Mercer LLC, expressed concerns about the proposed requirement, found in § 1910.29(b)(1), that the top edge of guardrail systems be 42 inches (107 cm), plus or minus 3 inches (8 cm), above the walking-working surface. Mercer's comment reads as follows:

> In a footnote on page 28894 of the May 24 notice of proposal, OSHA stated that it decided not to include existing guardrails having top edges as low as 36 inches from the working surface in any of the ''grandfathering'' provisions of this rule despite such a provision having been included in the previous proposals and acknowledged as a ''de minimis'' violation of the existing standard in various OSHA letters of interpretation. While OSHA states that it does not consider 36 inches to be ''equally safe'' to the ''42 inches nominal'' requirement in the existing standard or the 42 inches plus or minus three inches in the proposed rules, OSHA provided no rationale or support for this proposed decision.
>
> OSHA's economic and benefits analyses should estimate the number of injuries that would be prevented if existing guardrails that have heights between 36 and 39 inches must be replaced with those having at least a 39-inch height. In addition, OSHA should determine the costs that will be associated with replacing guardrails with top edge heights between 36 and 39 inches and include them in the regulatory and economic feasibility analyses for these rules. Clearly, if people have been writing to OSHA to ask about guardrails that are less than the ''42 inches nominal'' in the existing rule, there are likely to be significant numbers of workplaces that have these non-standard guardrails in place. OSHA should either quantify the benefits and costs of this rule change or grandfather those guardrail installations that occurred prior to the effective date of the new rules. Only new or remodeled facilities should be required to follow the new requirement for top edge height of guardrails. (Ex. 170, p. 6.)

As noted in the NPRM (75 FR 28894), the proposed provision for the height of guardrail systems was essentially the same as the existing requirement in § 1910.23(e)(1). Despite proposed grandfathering of guardrails with heights as low as 36 inches (above the working surface) under the two previous proposals (1973 and 1990), OSHA believes that in the 40 or so years since it issued the existing standard, a large percentage of the walking-working surfaces protected by guardrails are in compliance with the 39-inch minimum-height standard. In the absence of data in the record on the range of heights of guardrails throughout industry, OSHA believes that the percentage of guardrail systems not meeting the minimum height requirement is low. Therefore, if OSHA's belief is correct, the additional cost burden and economic impacts for employers not in compliance with the final height requirement would be relatively insubstantial and, therefore, would not present economic feasibility concerns.

Corporate Cleaning Services, a leading window washing company in Chicago, urged OSHA to consider the economic ramifications of limiting the permitted distance when using rope descent systems (RDS) to 300 feet (Ex. 126). In written testimony, Corporate Cleaning Services stated that the use of suspended scaffolds could add up to 30 percent to the time required to complete a job compared with RDS. By comparison, in a post-hearing comment, Valcourt Building Services estimated that the cost increase would range from 10 to 20 percent if it had to use a permanent scaffold installation as an alternative to RDS (Ex. 358). In response to these comments, OSHA in this FEA estimated the costs and economic impact of the 300-foot distance limitation for RDS specified in the final rule. OSHA discusses the revised cost estimate below under § 1910.27, Scaffolds and rope descent systems.

Charles Lankford of Rios & Lankford Consulting International argued that OSHA's requirement, under the paragraph for general conditions, that walking-working surfaces be designed, constructed, and maintained free of recognized hazards would impose legal responsibilities, and hence, legal costs, on employers that OSHA neglected in the PEA. Mr. Lankford stated:

> My review of the risk-benefit analysis in the proposed rule did not find that OSHA considered the costs of defending from citations being issued after the collapse of a surface the employer did not have tested or evaluated by an engineer after a plant purchase, that might have resulted in a fatality. It is reasonable to expect that litigation costs arising from new regulations should be included in an estimate of costs, when conducting a risk-benefit analysis.
>
> OSHA does not seem to have considered all the ramifications, or having considered them, opted to leave them in a grey area so as to more broadly enforce these provisions to the detriment of employers. (Ex. 368.)

OSHA agrees with Mr. Lankford that the failure of employers to exercise due diligence in ensuring the safety of workers on surfaces could result in torts and other legal expenses. However, the probability of legal liability will diminish to the extent that employers expend the resources necessary to achieve compliance with more stringent fall protections.

In a comment to the record and testimony at the public hearing, the National Chimney Sweep Guild (NCSG) expressed concerns about the costs and economic feasibility of compliance with the proposed standard for the businesses performing chimney-cleaning services and other related work on residential roofs (Exs. 150; 296; 329 (1/18/2011), p. 342; 365). The following post-hearing comment summarizes the views voiced by NCSG throughout the rulemaking:

> If adopted and enforced as proposed, the provisions of the Proposed Rule that address the structural integrity and condition of walking-working surfaces, the use of ladders, and the selection and use of fall protection would: (1) substantially affect the manner in which chimney sweeps perform their work; (2) expose sweeps (and/or the roofing trade) to greater hazards than current industry practices; (3) threaten the continuing economic viability of the chimney sweeps industry; and (4) threaten the availability of chimney inspection, sweeping and repair services at affordable prices, which would be expected to result in less chimney inspections/sweeping/repairs and a significant increase in residential fires and/or an increase in falls by homeowners or other self-employed individuals who would perform these tasks. (Ex. 365, pp. 2–3.)

Below under the heading ''Cost estimates'' and in section H, Regulatory Flexibility Screening Analysis, OSHA addresses NCSG's concerns.

3. Cost Assumptions

a. Baseline for Estimating Costs

The Office of Management and Budget's guidance on regulatory analysis (OMB, 2003) discusses how to develop a baseline against which to measure the costs and benefits of a rule. The baseline should be the best assessment of conditions absent the proposed standard, and is frequently assumed to resemble the present practice broadly observed among affected employers (although the more technically correct approach from a benefit cost analysis viewpoint, where feasible, is to project the hypothetical future state of the world in the absence of the rule). The baseline for this final cost analysis, then, includes rates of compliance with existing subparts D and I, as well as with applicable national consensus standards. For a discussion on the theoretical underpinnings for the use of consensus standards as a baseline in OSHA's cost analysis, see ERG, 2007.

OSHA analyzed Agency inspections for fiscal year 2005 that resulted in a citation (OSHA, 2006a); see Table V–15. The first column in the table presents cases for which OSHA issued a citation for any reason, and the other columns in the table indicate cases of non-compliance with a section of 29 CFR part 1910, subpart D. Table V–15 may overstate the noncompliance rate because it does not include inspections for which no citations were issued.

BILLING CODE 4510–29–P

Table V-15
Compliance with Existing 29 CFR 1910 Requirements

Sector	Inspections With Citations	Inspections With Subpart D Citations													
		§1910.23		§1910.24		§1910.25		§1910.26		§1910.27		§1910.28		§1910.29	
	Total	Floor Guarding		Fixed Industrial Stairs		Portable Wood Ladders		Portable Metal Ladders		Fixed Ladders		Scaffolding		Manually Propelled Aerial Platforms	
Manufacturing	6,773	732	10.8%	168	2.5%	18	0.3%	23	0.3%	60	0.9%	16	0.2%	19	0.3%
Transportation and Utilities	1,301	115	8.8%	15	1.2%	0	0.0%	7	0.5%	11	0.8%	3	0.2%	5	0.4%
Retail trade	680	58	8.5%	14	2.1%	2	0.3%	6	0.9%	3	0.4%	1	0.1%	2	0.3%
Wholesale trade	670	91	13.6%	18	2.7%	1	0.1%	7	1.0%	8	1.2%	4	0.6%	0	0.0%
Finance, Insurance, and Real Estate	107	3	2.8%	0	0.0%	0	0.0%	2	1.9%	0	0.0%	1	0.9%	0	0.0%
Services	1,938	106	5.5%	19	1.0%	4	0.2%	5	0.3%	10	0.5%	15	0.8%	3	0.2%
All sectors	**11,469**	**1,105**	**9.6%**	**234**	**2.0%**	**25**	**0.2%**	**50**	**0.4%**	**92**	**0.8%**	**40**	**0.3%**	**29**	**0.3%**

Source: ERG, 2007, based on analysis of OSHA's Integrated Management Information System inspection database (OSHA, 2006a).

Based on the analysis presented in Table V–15, OSHA determined that upper-bound non-compliance rates for floor-guarding requirements in current § 1910.23 vary by industry. For example, the Finance, Insurance, and

Real Estate category has the lowest non-compliance rate (2.8 percent), while Wholesale Trade has the highest non-compliance rate (13.6 percent). For the requirements for fixed industrial stairs, the non-compliance rates are quite low, ranging from 0 percent (Finance, Insurance, and Real Estate) to 2.7 percent (Wholesale Trade). For the remaining sections (portable wood ladders, portable metal ladders, fixed ladders, scaffolding, and manually propelled mobile ladder stands and scaffolds), non-compliance rates do not exceed 1.9 percent.

Thus, for §§ 1910.25 through 1910.29, the assumption of 100 percent industry compliance with the existing requirements may be reasonable.[119] That is, employers will incur costs only when the final requirements exceed the existing requirements. OSHA requested comments on rates and levels of non-compliance with respect to existing requirements in subpart D, but received no comments; therefore, OSHA applied the preliminary compliance estimates for existing subpart D in this FEA.

If meeting an existing requirement also would meet the final requirement, OSHA did not assign costs to the provision. For example, the existing language for § 1910.27(b)(1)(iii) states that the clear length of a rung or cleat in a fixed ladder shall be a minimum of 16 inches. Final § 1910.23(b)(4)(iii) states that rungs and steps on rolling ladders used in telecommunication centers must have a minimum clear step or rung width of 8 inches (20 cm). A rolling ladder in telecommunications that meets existing requirements (16 inches) would also meet the new requirements (a minimum of 8 inches); hence, OSHA assigned no costs to the final requirement. Later in this cost analysis, a detailed provision-by-provision examination of potential costs will provide further concrete examples of OSHA's application of estimates of current industry compliance and practices.

[119] OSHA implicitly considered the costs for all industrial sectors to meet the existing standards when it published those standards.

b. Compliance With National Consensus Standards

In some instances, the final rule's provisions reflect existing national consensus standards, and OSHA used information on adherence to those standards to estimate compliance rates with the concerned provisions. Due to general adherence to national consensus standards, for purposes of this analysis, national consensus standards serve as the ''baseline'' against which OSHA measured the incremental costs and benefits of the final standard. If the final standard requires a level of safety equivalent to that in an existing consensus standard, then there is no difference between the final standard and the baseline except that the final standard would be mandatory rather than voluntary. Thus, the costs are those costs associated with the change from a voluntary standard to a mandatory standard. In such cases, OSHA assumes employers in compliance with the voluntary consensus standard incur no additional costs to meet the final rule's requirements. Only that part of the employer population that currently does not comply with the voluntary standards would incur these costs. If, however, the final standard is more stringent than the consensus standard, OSHA assumed that employers who are not already following practices that would constitute compliance with the final standard would incur compliance costs solely attributable to the final OSHA standard.

ERG developed a logic-flow diagram outlining the process for identifying costs associated with new regulatory language (see ERG, 2007, Figure 3–2). The starting point is a side-by-side, provision-by-provision comparison of the existing and final regulatory language. In many cases, the language changed to enhance comprehension of the regulation without changing the scope of activities covered or its requirements. In some cases, the final language gives the employer alternative methods of compliance that provide protection for employees equivalent to the original standard, thereby resulting in *no* costs to the employer.

If there is a change from the existing to the final standard, the second decision point is to determine whether the final standard is equivalent to an existing consensus standard. If it is, then there would be no costs associated with the final standard for those employers already meeting the consensus standard, but there would be costs for those employers currently not meeting the consensus standard.

Table V–16 lists the national consensus standards used in subparts D and I and the associated section of the final rule for subparts D and I that refer to each of these consensus standards.

Table V-16
Final Subpart D Requirements and Associated National Consensus Standards

Subpart D Section	National Consensus Standard
§1910.22 General Requirements	ANSI/ASSE A1264.2-2012, Standard for the Provision of Slip Resistance on Walking/Working Surfaces.
§1910.23 Ladders	ANSI A14.1-2007, American National Standard for Ladders - Wood Safety Requirements. ANSI A14.2-2007, American National Standard for Ladders - Portable Metal - Safety Requirements. ANSI A14.3-2008, American National Standard for Ladders - Fixed - Safety Requirements. ANSI A14.5-2007, American National Standard for Ladders - Portable Reinforced Plastic - Safety Requirements. ANSI A14.7-2011, Safety Requirements for Mobile Ladder Stands and Mobile Ladder Stand Platforms.

Table V-16
Final Subpart D Requirements and National Consensus Standards (continued)

Subpart D Section	National Consensus Standard
§1910.24 Step Bolts and Manhole Steps	ASTM C478-13, Standard Specification for Precast Reinforced Concrete Manhole Sections. ASTM A394-08, American Society for Testing and Materials Specification for Steel Transmission Tower Bolts, Zinc-Coated and Bare. ASTM C497-13, American Society for Testing and Materials Test Methods for Concrete Pipe, Manhole Sections, or Tile. IEEE[120] 1307-2004, IEEE Standard for Fall Protection for Utility Work. TIA[121]-222-G-2009, Structural Standard for Antenna Supporting Structures and Antennas.
§1910.25 Stairways	ANSI/ASSE A1264.1-2007, Safety Requirements for Workplace Walking/Working Surfaces and Their Access; Workplace Floor, Wall and Roof Openings; Stairs and Guardrails Systems. NFPA 101-2012, National Fire Protection Association Life Safety Code. ICC IBC-2012, International Code Council International Building Code.
§1910.26 Dockboards	ITSDF B56.1-2012, Industrial Truck Standards Development Foundation, Trucks, Low and High Lift, Safety Standard. ANSI/MH30.1-2007, Specification for Dock Leveling Devices. ANSI/MH30.2-2005, Portable Dock Loading Devices: Safety, Performance, and Testing. ASME/ANSI MH14.1-1987, Loading Dock Levelers and Dockboards

[120] IEEE: Institute of Electrical and Electronics Engineers.
[121] TIA: Telecommunications Industry Association.

Table V-16
Final Subpart D Requirements and National Consensus Standards (continued)

Subpart D Section	National Consensus Standard
§1910.27 Scaffolds and Rope Descent Systems	ANSI/IWCA I-14.1-2001, Window Cleaning Safety. ANSI/ASCE 7-2010, American National Standard for Minimum Design Loads for Buildings and Other Structures. ANSI/ASSE Z359.4-2012, Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components.
§1910.28 Duty to Have Fall Protection	ANSI A10.11-2010, Safety Requirements for Personnel and Debris Nets.
§1910.29 Fall Protection Systems Criteria and Practices §1910.30 Training Requirements	ANSI A14.3-2008, American National Standard for Ladders - Fixed - Safety Requirements. ANSI A1264.1-2007, Safety Requirements for Workplace Walking/Working Surfaces and Their Access; Workplace, Floor, Wall and Floor Openings; Stairs and Guardrail Systems. ANSI/IWCA I-14.1-2001, Window Cleaning Safety.

Table V-16
Final Subpart D Requirements and National Consensus Standards (continued)

Subpart D Section	National Consensus Standard
§1910.140 Personal fall protection systems	ANSI Z359.0-2012, Definitions and Nomenclature Used for Fall Protection and Fall Arrest. ANSI Z359.1-2007, Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components. ANSI Z359.2-2007, Minimum Requirements for a Comprehensive Managed Fall Protection Program. ANSI Z359.3-2007, Safety Requirements for Positioning and Travel Restraint Systems. ANSI Z359.4-2013, Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

At the next decision point, if the final standard differs from the existing requirements, the presence or absence of a ''grandfather'' provision determines whether employers incur costs to retrofit and upgrade to the new requirements when the standard becomes effective or when employers replace infrastructure or equipment at a time of their choosing. OSHA discusses the cost effects of grandfather provisions in more detail below and in the ERG report (ERG, 2007).

Some equipment addressed by the final standard, such as portable ladders or mobile ladder stands, is commercially available to employers in ready-to-use condition. OSHA believes that manufacturers design and fabricate such equipment, in virtually all cases, to meet current consensus standards because equipment manufacturers seek to avoid: (1) The small market represented by employers that would purchase non-compliant equipment, and (2) the liabilities associated with manufacturing non-compliant equipment.

Typically, employers use architects, engineers, and/or contractors to design, fabricate, and install certain types of site-specific equipment. While it is conceivable that an employer might insist on installing nonconforming equipment, OSHA believes that professional standards for architects and engineers, local building codes, and potential liability concerns dictate that virtually all employers voluntarily use equipment conforming to existing national consensus standards. For these reasons, OSHA concludes that compliant equipment will be available to meet the final requirements of subparts D and I. For example, final § 1910.23(b)(1) specifies that ladder rungs and steps must be parallel, level, and uniformly spaced when the ladder is in a position for use. While existing § 1910.25(c)(2)(i)(b) covers steps, no existing OSHA standard covers rungs. However, current national consensus standards cover both rungs and steps (see Table V–16).

Likewise, the spacing requirements for the steps of step stools and the rungs, steps, and cleats of ladders covered by final paragraphs § 1910.23(b)(3) and (4) are new (*i.e.,* not in the existing standard); however, the current consensus standard for ladders includes these spacing requirements. Similarly, final § 1910.23(d)(7) requires that grab bars on fixed ladders extend 42 inches (1.1 m) above the access level or landing platform served by the ladder. While the existing standard does not have a similar provision, the provision is in the ANSI 14.3–2008 standard for fixed ladders. Therefore, OSHA did not assign costs to final § 1910.23(d)(7).

In conclusion, for establishing a baseline, OSHA assumed that equipment and work practices met the national consensus standard in effect at the time of installation, and did not estimate costs when the provisions in the final standard and the current national consensus standards were equivalent. For additional analysis of the interface between national consensus standards and OSHA standards, see ERG, 2007, pp. 3–6 and 3–14.

c. Compliance Using the Least-Cost Method

Consistent with past practice, OSHA assumed that employers would meet a regulatory requirement by choosing the least expensive means to do so. For example, under final § 1910.28(b)(1), an employer can meet the duty to have fall protection for an employee on a walking-working surface with an unprotected side or edge by using: (A) Guardrail systems, (B) safety net systems, or (C) personal fall protection systems such as personal fall arrest, travel restraint, or work-positioning systems. If (A)–(C) are not feasible or create a greater hazard for residential roofing work, the final standard permits a fourth option, *i.e.,* developing and implementing a specified fall protection plan. The existing standard only specifies options (A)–(C); therefore, OSHA assigned no costs to § 1910.28(b)(1) except when there were ambiguities in the scope of the existing standard, such as its application to loading docks or teeming platforms.

In some cases, when the final rule gives an employer a lower-cost compliance option than is currently available, the employer could realize a cost savings. However, OSHA did not estimate such savings in this analysis.

d. No Costs Due to Grandfathering Provision

Table V–17 lists the paragraphs in the final standard with new requirements, but which also have a ''grandfather'' provision for existing conditions. A grandfather provision exempts equipment that currently is in place from requirements that strengthen or upgrade the safety features of the equipment. Therefore, employers do not incur costs associated with modifying or replacing equipment covered by these paragraphs.

Table V-17
Paragraphs in Final Subpart D with Grandfather or Delayed-Implementation Provisions

Paragraph	Subject
§1910.24(a)(1)	The employer must ensure that step bolts installed on or after January 17, 2017 in an environment where corrosion may occur are constructed of, or coated with, material that protects against corrosion.
§1910.24(a)(7)	The employer must ensure that step bolts installed on or after January 17, 2017 are capable of supporting at least four times their maximum intended load.
§1910.24(b)(1)	The employer must ensure that manhole steps are capable of supporting their maximum intended load.
§1910.24(b)(2)	The employer must ensure that manhole steps installed on or after January 17, 2017: (i) Have a corrugated, knurled, dimpled, or other surface that minimizes the possibility of an employee slipping; (ii) are constructed of, or coated with, material that protects against corrosion in an environment where corrosion may occur; (iii) have a minimum clear step width of 10 inches (25 cm); (iv) are uniformly spaced at a vertical distance not more than 16 inches (41 cm) apart, measured center to center between steps. The spacing from the entry and exit surface to the first manhole step may differ from the spacing between the other steps; (v) have a minimum perpendicular distance between the centerline of the manhole step to the nearest permanent object in back of the step of at least 4.5 inches (11 cm); and (vi) are designed, constructed, and maintained to prevent the employee's foot from slipping or sliding off the end.

Table V-17
Paragraphs in Final Subpart D with Grandfather or Delayed-Implementation Provisions (continued)

Paragraph	Subject
§1910.25(b)(5)	The employer must ensure that, when a door or a gate opens directly on a stairway, a platform is provided, and the swing of the door or gate does not reduce the effective usable depth to: (i) Less than 20 inches (51 cm) for platforms installed before January 17, 2017; and (ii) less than 22 inches (56 cm) for platforms installed on or after January 17, 2017.
§1910.26(b)	The employer must ensure that dockboards put into service on or after January 17, 2017 are designed, constructed, and maintained to prevent transfer vehicles from running off the dockboard edge. Exception: When the employer demonstrates there is no hazard of transfer vehicles running off the dockboard edge, the employer may use dockboards that do not have run-off protection.
§1910.28(b)(9)	The employer must ensure: (A) Existing fixed ladders. Each fixed ladder installed before November 19, 2018 is equipped with a personal fall arrest system, ladder safety system, cage, or well; (B) New fixed ladders. Each fixed ladder installed on or after November 19, 2018, is equipped with a personal fall arrest system or a ladder safety system; (C) Replacement. When a fixed ladder, cage, or well, or any portion of a section thereof, is replaced, a personal fall arrest system or ladder safety system is installed in at least that section of the fixed ladder, cage, or well where the replacement is located; and (D) Final deadline. On and after November 18, 2036, all fixed ladders are equipped with a personal fall arrest system or a ladder safety system.
§1910.29(f)(1)(ii)	The employer must ensure: (A) The height of stair rail systems installed before January 17, 2017 is not be less than 30 inches (76 cm) from the leading edge of the stair tread to the top surface of the top rail; and (B) the height of stair rail systems installed on or after January 17, 2017 is not less than 42 inches (107 cm) from the leading edge of the stair tread to the top surface of the top rail.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

4. Cost Impacts for Final Subparts D (Walking-Working Surfaces)

This subsection provides a brief paragraph-by-paragraph review of the final rule. OSHA took a two-step approach to determining the cost impacts of the final rule. First, the Agency looked at requirements that represent changes from the existing walking working surfaces and personal protective equipment standards to determine whether they might involve additional incremental costs. That analysis is described in this subsection and subsection 5. In subsection 6, ''Cost Estimates,'' OSHA discusses how it reached an estimate of the costs for each provision OSHA identified as involving additional costs.

Table V–18 summarizes the paragraphs in the final subparts D and I that represent changes from the existing standards and might result in costs to employers if current industry practice falls short of the requirements of the rule. In the PEA, these costs primarily involved inspection and training; for this FEA, OSHA also identified significant costs for engineering and administrative controls and personal protective equipment. For the purpose of this analysis, OSHA distinguished between informal and formal training. For example, final § 1910.23(b)(11) states that an employee must face the ladder when ascending or descending. For this provision, OSHA assumed that employers provide such instruction on an in-house basis (*e.g.,* ''on-the-job'' training), using materials such as OSHA training videos. When employers deliver training on an ongoing, less formal basis, OSHA did not assign a tracking or recordkeeping cost to it. However, as indicated in the table, OSHA attributed employer costs (and employee benefits, as discussed later in this FEA) to such provisions, where OSHA judged that additional training would be required beyond baseline practice.[122] When the regulatory text uses the words ''trained'' or ''training,'' OSHA assumed that employers would deliver the instruction on a more formal basis, possibly hiring a contractor to deliver the training. OSHA assumed that an employer would maintain documentation of all formal training and, thus, assigned a cost for this administrative task.

[122] See the discussion later in this section and Ex. [OSHA Excel Workbook], tabs one_time_23 and annual_23, for details on the training costs attributed to the final requirements for ladders under § 1910.23(b) and (c).

Table V-18
Paragraphs of the Final Standards for Subparts D and I Evaluated Further for Cost Impacts

Paragraph	Subject
§1910.22(b)	The employer must ensure that each walking-working surface can support the maximum intended load for that surface.
§1910.22(d)(1)	The employer must inspect walking-working surfaces regularly and as necessary, and maintain them in a safe condition.
§1910.22(d)(2)	The employer must correct and repair any hazardous conditions on walking-working surfaces before employees use the surfaces. If the employer cannot make the correction or repair immediately, then they must guard the hazardous conditions to prevent employees from using the surfaces until the hazard is corrected or repaired.
§1910.22(d)(3)	The employer must ensure that a qualified person performs or supervises any correction or repair that involves the structural integrity of the walking working surface.
§1910.23(b)(11)	The employer must ensure that when ascending or descending a ladder, the employee faces the ladder. [This is a training requirement.]
§1910.23(b)(12)	The employer must ensure that each employee uses at least one hand to grasp the ladder when progressing up and down the ladder. [This is a training requirement.]
§1910.23(b)(13)	The employer must ensure that an employee climbing up or down a ladder must not carry any object or load that could cause the employee to lose balance and fall. [This is a training requirement.]
§1910.23(c)(5)	Employers may not use portable, single-rail ladders. [This is a training requirement.]
§1910.23(c)(6)	The employer must ensure that ladders are not moved, shifted, or extended while occupied by employees. [This is a training requirement.]
§1910.23(c)(9)	The employer must ensure that ladders used on slippery surfaces are secured and stabilized. [This is a training requirement.]
§1910.23(c)(10)	The employer must ensure that both rails support the top of non-self-supporting ladders, unless the ladder is equipped with a single support attachment. [This is a training requirement.]
§1910.23(c)(11)	The employer must ensure that the side rails of a ladder used to access an upper landing extend at least 3 feet above the landing surface. [This is a training requirement.]
§1910.23(e)(1) – (e)(3)	The employer must ensure mobile ladder stands and platforms meet requirements for such design specifications as step width, load capacity, work surface height, and the provision of stair handrails.

Table V-18
Paragraphs of the Final Standards for Subparts D and I Evaluated Further for Cost Impacts (continued)

Paragraph	Subject
§1910.23(e)(1)(viii)	The employer must ensure that mobile ladder stands and platforms are not moved when occupied by an employee. [This is a training requirement.]
§1910.24(a)(8)	The employer must inspect[123] each step bolt at the start of the workshift and maintain the step bolts in accordance with §1910.22.
§1910.24(b)(2)(i)	The employer must provide manhole steps with slip resistant surfaces.
§1910.24(b)(2)(ii)	The employer must provide manhole steps that are protected against corrosion
§1910.24(b)(2)(vi)	The employer must ensure that manhole steps are designed, constructed, and maintained to prevent the employee's foot from slipping or sliding off the end of the manhole step.
§1910.24(b)(3)	The employer must inspect[124] each manhole step before each workshift and maintain the steps in accordance with §1910.22.
§1910.27(b)(2)(iii)	The employer must ensure that employees who use rope descent systems receive training in accordance with §1910.30.
§1910.27(b)(2)(iv) and (b)(2)(v)	The employer must ensure that rope descent systems used by employees are inspected at the start of each workshift and have proper rigging, including anchorages and tiebacks.
1910.28(b)(1)	Employee must be protected while working on a surface with an unprotected side or edge from falling 4 feet (1.2 m) or more to a lower level.
§1910.28(b)(4)(i)	The employer must install guardrails or handrails on dockboards.
§1910.28(b)(9)(i)(A)-(D)	Employers must ensure that existing, new, and replaced ladders and ladder sections are equipped with the specified fall protection systems, cages, or wells (depending on implementation date, cages and wells may not be considered fall protection systems).
§1910.28(b)(10)(ii)(A)	The employer must ensure that each employee who climbs fixed ladders on billboards receives the training and demonstrates the physical capability to perform the necessary climbs in accordance with §1910.29(h).

[123] The requirement in the proposed standard that step bolts be "visually inspected" was revised in the final standard to read that step bolts be "inspected."

[124] The requirement in the proposed standard that manhole step be "visually inspected" was revised in the final standard to read that manhole steps be "inspected."

Table V-18
Paragraphs of the Final Standards for Subparts D and I Evaluated Further for Cost Impacts (continued)

Paragraph	Subject
§1910.28(b)(10)(ii)(C)	The employer must ensure that employees have both hands free of tools or material while ascending or descending fixed ladders on billboards. [This is a training requirement.]
§1910.28(b)(13)	The employer must protect employees from falls on low slope roof by using a guardrail systems, safety net system, travel restraint system, personal fall arrest system, or designated area .
§1910.28(b)(14)(i)	The employer must protect employees on slaughtering facility platforms falling 4 feet or more by using: (A) Guardrail systems; or (B) Travel restraint systems.
§1910.28(b)(15)	The employer must protect employees from fall hazards on surfaces not otherwise addressed through guardrails, safety net systems, or personal protection systems.
§1910.29(b)(15)	The employer must inspect top rails or midrails made of manila or synthetic rope to ensure the rope continues to meet strength requirements
§1910.29(h)(1)	Employers must determine, through observation of actual climbing activities or by physical examination, that each employee who climbs a fixed ladder in outdoor advertising operations is physically capable of performing the assigned duties.
§1910.29(h)(2)	Employers must train, and retrain as necessary, employees to safely climb fixed ladders in outdoor advertising operations.
§1910.30(a)	The employer must provide training for each employee who uses personal fall protection systems or who requires training as specified elsewhere in the standard before exposing the employees to fall hazards.
§1910.30(b)	The employer must train each employee on the proper: care, inspection, storage, and use of equipment covered by the standard before the employee uses the equipment such as dockboards, rope descent systems, and designated areas.
§1910.30(c)	The employer must retrain an employee when the employer has reason to believe that the employee does not have the understanding and skills required by paragraphs (a) and (b) of §1910.30.
§1910.132(d)	The employer must conduct a hazard assessment of the workplace to determine the need for personal fall protection equipment; select, and have affected employees use, the requisite personal fall protection equipment; communicate the selection decisions to each affected employee; select equipment that fits the affected employees properly; and verify in writing that the hazard assessment was performed.

Table V-18
Paragraphs of the Final Standards for Subparts D and I Evaluated Further for Cost Impacts (continued)

Paragraph	Subject
§1910.132(f)	The employer must provide training to each employee who is required to use fall protection equipment.
§1910.140(c)(18)	The employer must inspect personal fall protection systems before their initial use each workshift for mildew, wear, damage, and other deteriorations, and remove defective systems from service.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

Finally, three requirements in the standard specify that employers must provide training in accordance with § 1910.30 or the equivalent:

- § 1910.27(b)(2)(iii): Rope descent systems;
- § 1910.28(b)(1)(ii)(C): Unprotected sides and edges; and
- § 1910.28(b)(4)(ii)(C): Dockboards.

The costs for § 1910.30 include the costs for the three paragraphs listed above.

In the following subsection, organized by regulatory provision, OSHA discusses the potential cost implications of the new requirements. OSHA described earlier in this cost analysis final changes to the existing standard that likely will result in little or no costs; OSHA does not address these changes in the discussion below.

General Requirements (§ 1910.22)

§ 1910.22(b). This provision specifies general requirements, one of which is that employers must ensure that the walking-working surface has the strength to support employees safely. From the standpoint of compliance costs, OSHA believes that employers can meet this requirement by performing a 5- to 10-minute inspection of the surface or reviewing engineering diagrams of the structure. In rare circumstances, an employer might need to spend 15 to 30 minutes determining if the work can proceed. OSHA discusses the costs for this provision later in this subsection in connection with the duty to inspect walking-working surfaces as part of the general requirements specified under § 1910.22(d) (see ''Cost estimates'' below).

§ 1910.22(c). The employer must provide employees with, and ensure that they use, a safe means of access to, and egress from, one walking-working surface to another. The language in existing § 1910.22(b) specifies that employers must keep aisles and passageways clear, in good repair, and with no obstruction across or in the aisles that could create a hazard to employees. For the PEA, OSHA generalized the terms ''aisles'' and ''passageways'' in proposed § 1910.22(c) to cover all means of access and egress. The terminology in the proposed rule was consistent with that in a National Fire Protection Association consensus standard (NFPA 101). Thus, OSHA assigned no costs to proposed § 1910.22(c) in the PEA and, with no comment in the record objecting to that decision, OSHA assigned no costs to § 1910.22(c) in this FEA.

§ 1910.22(d). This new provision sets forth requirements for the employer to inspect regularly and as necessary, and maintain in a safe condition, walking-working surfaces; guard hazardous conditions to prevent employee use until the employer corrects or repairs the hazard; and have a qualified person inspect perform or supervise any correction or repair work that involves the structural integrity of a walking-working surface. OSHA considered the costs for these safe work practices below under ''Cost estimates'' (for the duty to have fall protection; § 1910.28).

Ladders (§ 1910.23)

§ 1910.23(a). This paragraph specifying the application final standard covers all ladders, except when the ladder is used in emergency operations such as firefighting, rescue, and tactical law enforcement operations, or training for these operations or designed into or is an integral part of machines or equipment. Special wood ladders specifically excluded in the existing standard, including fruit picker's ladders, combination step and extension ladders, stockroom step ladders, aisle-way step ladders, shelf ladders, and library ladders are now included under the final standard. In the PEA, OSHA assumed that these ladders met consensus standards for wooden ladders (see Table V–16) and, therefore, OSHA expected that employers would incur no costs with the expanded application. After reviewing the record, OSHA reached the same conclusion for this FEA.

Final § 1910.23(b)(4) specifies a minimum clear rung, step, or cleat width of 11.5 inches for portable ladders and 16 inches for fixed ladders; thus, the distance from the centerline to the inside edge of the ladder ranges from roughly 6 to 8 inches. Adding the existing requirement of 2.5 inches from the nearest edge of the ladder to the nearest edge of the structure or equipment to the 6- to 8-inch centerline width required by the final standard results in a step-across width of 8.5 to 10.5 inches for the purposes of the final standard. Thus, any fixed ladder that meets the existing requirements also meets the final requirements. OSHA assigned no costs to this paragraph in the PEA. Therefore, absent comment by the public or any other evidence in the record that would alter this preliminary assessment, the Agency assigned no costs for this paragraph in this FEA.

§ 1910.23(b)(4)(iii). This paragraph concerns rolling ladders in communications centers, which OSHA moved to this final rule from existing § 1910.268(h)(5), Telecommunications. Thus, as this is not a new requirement, it has no costs.

§ 1910.23(b)(4)(iv). This paragraph is a new requirement that addresses the minimum clear width for stepstools, which OSHA defines as a type of portable ladder (§ 1910.21(b)). The final rule specifies that stepstools must have a minimum clear width of at least 10.5 inches instead of the 11.5-inch minimum clear width that the final rule requires for other portable ladders. Although OSHA did not receive any comments on this issue, the Agency

added this provision to make the rule consistent with ANSI/ALI national consensus standards for wood and metal portable ladders (A14.1–2007 and A14.2–2007). OSHA assigned no costs to this paragraph in the PEA, and absent comment by the public or any other evidence in the record that would alter this preliminary assessment, the Agency assigned no costs for this paragraph in this FEA.

§ 1910.23(b)(9). Both the existing and proposed standards had a requirement to inspect ladders before use. In the PEA, OSHA determined that the inspection frequency would not increase under the proposed standard. Therefore, OSHA concluded that employers would incur no additional costs associated with this requirement and, after reviewing the record following publication of the NPRM, reached the same conclusion for this FEA.

§ 1910.23(b)(11)–(13); § 1910.23(c)(5) and (6) and (9)–(11). These eight paragraphs include instructions to employees on the proper use of ladders. Final § 1910.23(c)(5) prohibits the use of single rail ladders, which OSHA finds is a training requirement. The wide availability of permitted ladders means that there are no equipment costs associated with this prohibition. In the PEA, OSHA also concluded that training would cover the other six provisions, and reached the same conclusion for this FEA. OSHA considered training costs below under ''Cost estimates.''

§ 1910.23(c)(12) and (13). These provisions state that employers are not to tie or fasten ladders and ladder sections together to provide added length unless the design of the ladders permits such use, nor are employers to place ladders on boxes, barrels, or other unstable bases to obtain additional height. These provisions are essentially identical to current paragraphs §§ 1910.25(d)(2)(v) and 1910.26(c)(3)(vi), which specify that neither wood nor metal portable ladders may be spliced, tied, or fastened together or elevated on unstable surfaces to create a longer section or higher reach unless the manufacturer has designed the equipment for such a purpose. These provisions, both in the existing and final standards, might cause employers to incur a cost if it is necessary to purchase longer ladders, or ladders that they can fasten together. During the comment period, OSHA received no data estimating the frequency of such occurrences but, presumably, they are rare. Thus, OSHA did not assign a cost to these paragraphs in this final analysis.

§ 1910.23(d)(1). As proposed, fixed ladders installed 90 days after the effective date of the final standard must be capable of supporting two live loads of at least 250 pounds each, additional concentrated loads of 250 pounds each, plus anticipated loads caused by ice build-up and other conditions. Each rung must be capable of supporting at least a single concentrated load of 250 pounds. The language in this proposed requirement reflected the consensus standard in ANSI A14.3–2002. The language in the existing standard, however, specifies a single concentrated load of 200 pounds.

As discussed earlier in this preamble, OSHA removed paragraph (d)(2) of the proposed rule from the final rule because OSHA believes that the performance criteria specified in final § 1910.23(d)(1) provide an adequate level of safety for employees. Therefore, because paragraph (d)(1) reflects industry practice as documented in ANSI A14.3–2002, there are no costs associated with this provision.

§ 1910.23(d)(12)(i). This final provision requires that employers measure ''step-across distance'' from the centerline of the steps or rungs of a fixed ladder. The existing definition measures step-across distance from the nearest edge of the ladder to the nearest edge of the structure or equipment. The minimum distance under the final standard is 7 inches, and under the existing standard it is 2.5 inches; the maximum distance in the final standard is 12 inches, identical to the current standard. OSHA assigned no costs to this paragraph in the PEA and, although the minimum step-across distance in the proposed standard differed significantly from that in the current standard, no commenters objected to the proposed expansion in minimum step-across distance. Therefore, OSHA assigned no costs to this provision in this FEA.

§ 1910.23(d)(12)(ii). The final standard specifies that the step-across distance from the centerline of the steps or rungs of a fixed ladder to the access point of the platform edge for side-step ladders must be not less than 15 and not more than 20 inches. Based on Figure D–10 in the existing standard, the maximum space from the edge of the ladder to the platform (*i.e.,* access point) is 12 inches. As noted in the previous paragraph, the centerline width for a fixed ladder ranges from roughly 6 to 8 inches. The total step-across distance under the existing standard ranges from 18 to 20 inches. Thus, a fixed ladder that meets the existing requirements also meets the final requirements. Therefore, OSHA assigned no costs to this paragraph in the PEA and OSHA assigned no costs to this provision in this FEA.

§ 1910.23(e). Paragraph (e)(1)(viii) (which impede or prohibit moving occupied mobile ladder stands and platforms) are the only paragraphs in this provision that do not have a corresponding requirement in a national consensus standard. However, these are work practice requirements that employers can meet through ladder safety training and enforcement. See the subsection titled ''Cost estimates'' below.

All other provisions in § 1910.23(e) meet the national consensus standard in the ANSI A14 series. An analysis of fiscal year 2005 OSHA inspection data for violations of existing subpart D indicate that the failure to provide safe ladders is low (*e.g.,* 0.2 percent of the violations were for portable wood ladders, 0.4 percent were for metal ladders, and 0.8 percent were for fixed ladders). Based on these data, OSHA infers that there is nearly 100 percent compliance with the provisions of the current consensus standards. Therefore, OSHA assigned no costs for equipment upgrades required by these paragraphs. However, OSHA assigned costs for the time it would take to ensure new ladders meet the technical specifications found in § 1910.23(e); see ''Cost estimates'' below.

Step Bolts and Manhole Steps (§ 1910.24)

The requirements for step bolts are new to subpart D. In the preliminary regulatory impact analysis for the 1990 proposed rule, OSHA noted, ''Manufactured products, such as ladders, step bolts, manhole steps . . . generally meet or exceed proposed OSHA specifications'' (OSHA, 1990a). A 2003 OSHA interpretation document comments that OSHA believes that the IEEE 1307–1996 consensus standard, in most cases, prevents or eliminates serious hazards (OSHA, 2003a). IEEE 1307–1996 defines ''failure'' in a step bolt as occurring when it is bent more than 15 degrees below the horizontal, and § 1910.24(a)(9) in the final standard for subpart D mirrors that definition. Because IEEE revised the standard in 2004, OSHA, in the most recent PEA for subparts D and I, assumed that industry was using the more up-to-date consensus standard. For this FEA, OSHA continues to assume that industry is complying with the 2004 IEEE standard.

§ 1910.24(a)(1). This provision reads, ''[The employer must ensure:] Each step bolt installed on or after January 17, 2017] in an environment where corrosion may occur is constructed of,

or coated with, material that protects against corrosion.'' The national consensus standard applicable to this requirement is ASTM A394–08, Specification for Steel Transmission Tower Bolts, Zinc-Coated and Bare. The appendix to the consensus standard notes that the purchaser shall specify the dimensions of ladder bolts, step bolts, and equipment-support bolts. The ASTM standard describes three types of bolts covered by the standard:

- Type 0: Hot-dip, zinc-coated bolts made of low or medium carbon steel (ASTM 394–08, Section 1.1.1);
- Type 1: Hot-dip, zinc-coated bolts made of medium carbon steel, quenched and tempered (ASTM 394–08, Section 1.1.2); and
- Type 3: Bare (uncoated), quenched and tempered bolts made of weathering steel (ASTM 394–08, Section 1.1.4).[125]

Appendix A.2 of the consensus standard mentions that bolts should be Type 0 unless agreed upon by the manufacturer and purchaser. That is, the default condition is to use zinc-coated bolts; therefore, such bolts would meet the OSHA requirement for corrosion resistance. Presumably, the use of any other bolt type means that the manufacturer and purchaser agreed that the bolt is appropriate for the intended environment and use. Since manufacturers of step bolts are unlikely to make non-compliant step bolts, OSHA assigned no costs to § 1910.24(a)(1) in the PEA and also assigned no cost to this provision in this FEA.

§ 1910.24(a)(6). This provision reads, ''[The employer must ensure:] Each step bolt installed before January 17, 2017 is capable of supporting its maximum intended load.'' In the final standard, OSHA revised the proposed text by reducing the implementation period after the publication date of the final standard from 90 days to 60 days, a change that OSHA believes will not impose significant costs on employers.

The requirement that a step bolt must be capable of supporting its maximum intended load is consistent with IEEE 1307–2004, Standard for Fall Protection for Utility Work. Section 9.1.1.1(d) in that standard reads:

> Step bolts shall [b]e capable of supporting the intended workload [as defined for the application specified by the appropriate ANSI standard(s)], but in no case shall the minimum design live load be less than a simple concentrated load of 271 kg (598.4 lb) applied 51 mm (2 inches) from the inside face of the step bolt head.

Therefore, OSHA assigned no costs to this provision in the PEA and, after considering all factors associated with this provision, did not alter this estimation for this FEA.

§ 1910.24(a)(7). This paragraph requires that step bolts installed on or after 60 days after publication of the final rule be capable of supporting four times their maximum intended load. As discussed in the preamble to the proposed rule, OSHA considered a ⅝-inch bolt as meeting this requirement, and bolts of that size are readily available. Therefore, in the PEA OSHA determined that there would be no incremental costs associated with this provision.

In prehearing comments, The Southern Company questioned OSHA's proposed load criterion, stating, ''Instead of using the four times the maximum intended load, OSHA should consider using the criteria of the NESC or IEEE 1307'' (Ex. 192, p.3). OSHA noted earlier in the summary and explanation for this paragraph that, under this performance-based final rule, employers may use a range of methodologies, including criteria found in consensus standards, to determine the load capabilities of step bolts. Therefore, since bolt manufacturers are producing bolts that meet these design criteria, OSHA believes that there will be little, if any, additional cost burden on employers who must use step bolts that meet OSHA's load requirement, and, therefore, assigned no compliance costs to this provision in the final rule.

§ 1910.24(a)(8) and § 1910.24(b)(3). Under these paragraphs of the final standard, employers must inspect step bolts and manhole steps at the start of each workshift. OSHA considered inspection costs below under ''Cost estimates.''

§ 1910.24(b). Table V–19 summarizes the language in the final standard for manhole steps, along with the corresponding section of ASTM C478–13. The following three requirements in this provision exceed the requirements specified in a national consensus standard for steps in precast concrete manhole sections:

- Manhole steps must have slip-resistant surfaces such as corrugated, knurled, or dimpled surfaces;
- Manhole steps must be constructed of, or coated with, material that protects against corrosion in an environment where corrosion may occur; and
- The design of manhole steps must prevent the employee's foot from slipping or sliding off the end of the manhole step.

ASTM C478–13 permits the use of uncoated or untreated ferrous steps as long as they are at least 1 inch in cross-section, but is silent with regard to a slip-resistant surface or design. Because the final requirements appear to exceed the requirements in the consensus standard, the PEA determined that there would be incremental costs for slip-resistant and corrosion-resistant surfaces when employers rebuild or replace a manhole section. Moreover, the specifications in the final standard, unlike the consensus standard, define when a step fails while still in the manhole; thus, as noted in the PEA, there would also be step replacement costs associated with this provision. OSHA discusses these costs below under ''Cost estimates.''

[125] ATSM removed type 2 bolts from the standard in 2005.

Table V-19 Manhole Steps

Provision	Language	Related ASTM C478-13
§1910.24(b)(1)	The employer must ensure that manhole steps are capable of supporting their maximum intended load.	16.6.1.3
§1910.24(b)(2)	The employer must ensure that manhole steps installed on or after January 17, 2017.	
§1910.24(b)(2)(i)	Are provided with slip-resistant surfaces such as corrugated, knurled, or dimpled surfaces.	
§1910.24(b)(2)(ii)	Are constructed of, or coated with, material that protects against corrosion in an environment where corrosion may occur.	16.5.1
§1910.24(b)(2)(iii)	Have a minimum clear step width of 10 inches (25 cm).	16.5.2
§1910.24(b)(2)(iv)	Are uniformly spaced at a vertical distance of not more than 16 inches (41 cm) apart, measured center to center between steps. The spacing from the entry and exit surface to the first manhole step may differ from the spacing between the other steps.	16.4.1
§1910.24(b)(2)(v)	Have a minimum perpendicular distance between the centerline of the manhole step to the nearest permanent object in back of the step of at least 4.5 inches (11 cm).	16.5.3[126]
§1910.24(b)(2)(vi)	Are designed, constructed, and maintained to prevent the employee's foot from slipping or sliding off the end.	
§1910.24(b)(3)	The employer must ensure that manhole steps are inspected before initial use during a workshift, and is maintained in accordance with §1910.22.	

(a) Empty cells in this column indicate that no comparable ASTM C478-13 provision exists.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance.

[126] ASTM C478–13, Section 16.5.3, specifies that the rung or cleat shall project a uniform clear distance of four inches minimum ±1/4 in. from the wall to the embedment side of the rung. The OSHA distance in the final standard measures from the centerline of the manhole step. Thus, if a step is at least an inch wide, a step that meets the ASTM 4-inch requirement also would meet the OSHA 4.5-inch requirement.

Stairways (§ 1910.25)

§ 1910.25(b)(5). The existing standard states that employers must provide a platform for doors or gates that open directly onto a stairway, and the swing of the door must not reduce the effective width to less than 20 inches. In the final standard, platforms installed before 60 days after the publication date of the final rule need only comply with the existing requirements; therefore, there are no retrofit costs to employers. For platforms installed on or after 60 days from the publication date of the final rule, the effective width increases to 22 inches.[127] Employers will have an incremental cost when replacing a platform with one that has two inches of additional clearance.

Commenting on the proposed revision to this paragraph, Ameren Corporation expressed concerned about the proposed 90-day grandfathering timeline:

> Lead time for material orders are often quite longer than three months often up to years to order material for large capital projects. Small projects with possibly only a small amount of material being required shouldn't have much of an issue of complying depending on the manufacturer capabilities and their imposed deadlines. Stipulations of ''ordered'' material should be imposed in regard to the date of the final rule because the time between ordering and placing into service is often greater than 90 days. (Ex. 189, p. 6.)

In response, OSHA recognizes that, as Ameren indicates, some large projects may require a lead-time longer than 60 to 90 days. However, OSHA also believes that most, if not all, manufacturers of such platforms should be familiar with the associated consensus standard, ANSI A1264.1–2007, and, therefore, produce platforms now that meet the 22-inch clearance requirement. OSHA believes that most contracts, as a usual and customary practice, already incorporate into the cost of the product the minimal increase in material cost borne by the employer to meet the clearance specification. For the reasons given above under the subsection titled ''Compliance with national consensus standards,'' OSHA estimated no incremental costs for this provision (§ 1910.25(a)(6)) in the PEA and, for these same reasons, did not take incremental costs for the provision (§ 1910.25(b)(5)) in the final standard.

§ 1910.25(d). Existing § 1910.24(b) does not permit spiral stairways except under special conditions. Employers cannot use spiral stairs under final § 1910.25(d) unless the stairs meets specific design specifications. Therefore, employers must modify or replace existing spiral staircases that do not meet these requirements. However, spiral staircases are likely to be relatively rare in commercial or industrial settings given that they are exceptions to the existing rule. Thus, OSHA did not assign costs to § 1910.25(d) in the PEA. Given that no commenters objected to this preliminary cost estimate, OSHA is estimating no costs for this paragraph in this FEA.

§ 1910.25(e). OSHA developed this paragraph in response to a comment made to an OMB-initiated, government-wide effort to reform regulation in the U.S. manufacturing sector. This comment, submitted by the Copper and Brass Fabricators Council, stated that OSHA required the use of fixed stairs when ship stairs or spiral stairways would be safer (OMB, 2005).

Employers typically install ship stairs with slopes of 50 degrees or greater; however, the existing standard for fixed stairs addresses stairs installed at angles between 30 and 50 degrees, but does not specifically address ship stairs. Recently, OSHA issued an interpretation stating that if ship stairs conformed to the 1990 proposed standard for subpart D,[128] the Agency would consider slopes up to 70 degrees to be *de minimis* violation of the existing standard[129] (OSHA, 2006b and 2006c). OSHA believes that most existing ships stairs conform to the 1990 proposed standard, and therefore the Agency assigned no costs to § 1910.25(e) in the PEA, nor did it assign costs to § 1910.25(e) in this FEA.

§ 1910.25(f). The existing standard does not expressly mention alternating tread-type (tread) stairs. A letter of interpretation from OSHA to a manufacturer of alternating tread stairs concluded that these stairs are safe (OSHA, 1981). NFPA 101, Section 7.2.11 (NFPA, 2012) also addresses alternating tread stairs. As discussed in the PEA, any alternating tread stair that meets the requirements of NFPA 101 would also meet the requirements in § 1910.25(f); accordingly, the PEA determined that this provisions does not impose a new cost burden on employers. Thus, in this FEA, OSHA did not assign costs to this provision.

Dockboards (§ 1910.26)

§ 1910.26(b). The text for this provision states that the employer must ensure dockboards put into initial service on or after January 17, 2017 are designed, constructed, and maintained to prevent transfer vehicles from running off the dockboard edge. Exception: When the employer demonstrates there is no hazard of transfer vehicles running off the dockboard edge, the employer may use dockboards that do not have run-off protection.

The definition of a dockboard in ANSI MH30.2–2005, Section 2.2, contains the language ''as well as providing a run-off guard, or curb,'' similar to the requirement in this final provision. OSHA believes, as it stated in the PEA, that nearly all dockboards manufactured currently conform to the ANSI standard; however, should an employer encounter an older, out-of-compliance dockboard, OSHA believes that the costs for them to comply with the final standard will be minimal. Therefore, in the absence of comment on this analysis, OSHA is not assigning costs in this FEA for final § 1910.26(b).

§ 1910.26(e). The text for this provision reads, ''[The employer must ensure:] Portable dockboards are equipped with handholds or other means to permit safe handling of dockboards.'' The requirement in final § 1910.26(e) that portable dockboards have handholds or other means to permit safe handling is essentially the same requirement specified in existing § 1910.30(a)(4), which OSHA based on ANSI/ASME B56.1, American Society of Mechanical Engineers, Safety Standard for Low Lift and High Lift Trucks. Therefore, OSHA believes that commercial dockboards likely come equipped with handholds and that any additional costs associated with this provision will be minimal. Thus, OSHA in this FEA did not assign costs for final § 1910.26(e).

Scaffolds and Rope Descent Systems (§ 1910.27)

§ 1910.27(a). This paragraph extends the construction industry requirements for scaffolds (except rope descent systems) to general industry. OSHA believes that many general industry employers who use scaffolds also perform work covered by the construction industry standards and are already familiar, and in compliance, with the construction industry scaffold standards. Therefore, linking the final standard for scaffolds in general

[127] The 22-inch clearance requirement for new structures matches ANSI A1264, Section 6.11.

[128] The 1990 proposed standard allowed ship stairs that are designed with slopes between 50 degrees and 70 degrees from the horizontal; have open risers; have treads that are four inches (10 cm) in depth, 18 inches (46 cm) in width, and a vertical rise between tread surfaces of six and one-half inches to 12 inches (16 cm to 30 cm); and have handrails that are installed on both sides of the ship stairs and meet § 1910.28 (within the existing standard). (55 FR 13400.)

[129] See OSHA's Field Operation Manual: *https://www.osha.gov/OshDoc/Directive_pdf/CPL_02-00-148.pdf.*

industry to the scaffold requirements in 29 CFR part 1926 resolves any inconsistencies between the scaffold requirements for the construction and general industries. OSHA received no comment on this analysis in the PEA. Thus, as in the PEA, OSHA attributed no costs to this paragraph in this FEA.

§ 1910.27(b)(1). When employers use rope descent systems (RDS; also known as controlled-descent devices) for building maintenance, the final standard requires that the building owner or its representative provide to the building-maintenance contractor (the employer) written documentation of identified, tested, certified, and maintained anchorages capable of supporting at least 5,000 pounds (268 kg), in any direction, for each employee attached. As OSHA noted in the PEA, it would appear from the documentation associated with the industry consensus standard, ANSI/IWCA I–14.1, that the International Window Cleaning Association (IWCA) customarily finds from information its members receive that many buildings lack the required anchorages. A key provision of that consensus standard is a written work plan (Section 1.7), and the IWCA Web site urges window cleaning enterprises to develop written plans and coordinate their operations with building owners. Accordingly, the IWCA Web site states:

> The intent of the [IWCA I–14.1] standard was not to stop window cleaning, it was to improve the level of safety of our industry by having a shared responsibility between the window cleaner and the building owner. If you have outdated equipment or are using equipment that doesn't meet the standard, phase it out. If you have buildings you're working on that are dangerous and are using creative rigging, phase them out and work with the building owners toward compliance. (IWCA, 2014.)

ANSI/IWCA I–14.1, Section 17, lists options for roof support equipment, including:

- Parapets, cornices, and building anchorages (Section 17.1);
- Davits and davit fixtures (a crane-like structure, Section 17.2);
- Sockets (Section 17.3);
- Tiebacks (Section 17.4);
- Counterweighted outriggers (Section 17.5);
- Parapet clamps and cornice hooks (Section 17.6); and
- Overhead monorail tracks and trolleys (Section 17.7);

Several of these options, such as counterweighted outriggers, are transportable and likely supplied by the contractor. Thus, the work plan delineates how the employer is to perform the work using a mix of contractor and property-owner equipment. The consensus standard provides several acceptable options for roof support equipment, and specifies that both the contractor and property owner concur with the work plan, and that the work plan describe how the contractor will perform the job safely. For the PEA, OSHA presumed that voluntary compliance with the consensus standard is likely to be high. However, as described in detail below, comments in the record indicate that industry compliance with the provision for sound anchorages varies considerably. In the PEA, OSHA assigned no costs for equipment; however, the Agency did estimate costs for inspections and certification that anchorages meet requirements. OSHA discusses these costs below in the subsection titled ''Cost estimates.''

§ 1910.27(b)(2)(i). Rope descent systems are an alternative to powered platforms. The final rule states that employers cannot use rope descent systems at heights greater than 300 feet unless they demonstrate that it is not feasible to access such heights by any other means or that those means pose a greater hazard to employees than using a rope descent system. The wording of the final rule is consistent with the industry consensus standard, ANSI/IWCA I–14.1, 2001. Accordingly, both the IWCA consensus standard and the final OSHA standard (1) prohibit the use of rope descent systems for descents exceeding 300 feet, and (2) contain an exclusion clause, which, in the case of the IWCA standard, provides that the requirement apply unless ''access cannot safely and practicably be obtained by other means.'' Because both the IWCA and OSHA standards contain a similar exclusion clause, the OSHA requirement is no more restrictive than the consensus standard.

Since this is a work-practice as opposed to an equipment-specification requirement, incremental costs are attributable to the OSHA standard only to the extent that employers would not voluntarily comply with the IWCA standard and to the extent that employers provide excess-risk documentation to OSHA. Employers, therefore, would incur costs from this provision only when (1) a building is 300 feet tall or higher, and (2) there is an alternative to the rope descent system that is feasible and at least as safe as an RDS. For the PEA, ERG examined a database developed by the Council on Tall Buildings and Urban Habitat (CTBUH) and identified slightly more than 1,900 buildings in the United States that are 300 feet (91.7 m) tall or higher (CTBUH, 2006). Over 25 percent of these buildings are in New York City, where state law does not allow the use of rope descent systems for window cleaning (DiChacho, 2006). Accordingly, ERG derived an estimate of 1,500 potentially affected buildings nationwide (ERG, 2007). For the PEA, OSHA assumed that some of these 1,500 buildings have permanently installed power platforms for access to the exterior of the building, and further assumed that using a platform would be less expensive than setting up an RDS.

For this FEA, OSHA examined the CTBUH database described above and determined that, currently: Approximately 1,960 existing buildings are 300 feet or higher; of that total, roughly 600 buildings with a height of 300 feet or greater are in New York City; and two states—California and Minnesota—have statutes that limit the RDS descent distance to, respectively, 130 feet and 300 feet (CA–DIR, 2012; Minnesota, 2012). After subtracting the number of buildings in those three states from the total, OSHA conservatively estimates that the 300-foot limit specified by this final standard would affect 1,300 buildings with a height of 300 feet or greater.[130]

The final set of buildings for which § 1910.27(b)(2) could result in costs are those buildings for which employers use RDS due to technical factors specific to a building's history, architecture, or style of operation. For example, to wash regularly the windows of a tall building with many sharp angles or tiered levels, management may find it cost-effective to contract for RDS rather than powered platforms. OSHA expects that there will be additional costs to the building owners in these situations because of factors discussed below under ''Cost estimates.''

§ 1910.27(b)(2)(ii)–(xiii). With one exception, these paragraphs in the final standard codify safety provisions presented in the 1991 memorandum to OSHA's Regional Administrators, which are similar to the requirements now specified in the national consensus standard, ANSI/IWCA I–14.1 (OSHA, 1991b). The safety provisions in this ANSI standard that mirror the OSHA memo are:

- Training employees in the use of the equipment;

[130] Valcourt Building Services estimated that 2.6 percent of its window washing operations involve buildings that are 300 feet or greater in height (Ex. 358). If OSHA applies that percentage to the number of all commercial buildings subject to the suspended scaffolds standard and, therefore, potentially affected by the 300-foot limit (DOE, 2006), the resulting estimate is significantly greater than the CTBUH estimate. This finding suggests that Valcourt's operations involve an unusually large proportion of buildings that are taller than 300 feet.

• Inspecting the equipment each day before use and removing of damaged equipment from service;

• Using proper rigging, including sound anchorages and tiebacks, in all cases, with particular emphasis on providing tiebacks when using counterweights, cornice hooks, or similar non-permanent anchorage systems;

• Using a separate personal fall arrest system;

• When installing lines, using knots, swages, or eye splices when rigging RDS that are capable of sustaining a minimum tensile load of 5,000 pounds;

• Providing prompt rescue of employees;

• Effectively padding ropes where they contact edges of a building, anchorage, obstructions, or other surfaces that might cut or weaken the rope; and

• Providing stabilization at the work location when descents are greater than 130 feet.

A provision in the OSHA memo not duplicated in the ANSI standard is the requirement in final § 1910.27(2)(b)(xi), which specifies that no employee may use an RDS under hazardous weather conditions, such as storms or gusty or excessive wind. OSHA estimates that this new provision is not likely to present a significant burden on employers because of the relatively high levels of current compliance with the provision (see, for example, Ex. 329 (1/19/2011), pp. 213, 346, 411–412) and the Agency's expectation, based on comments in the record (Ex. 329 (1/19/2011), pp. 235–236, 361), that employers will respond to wind conditions by adjusting window cleaning operations to minimize lost revenue and added project costs (for example, scheduling window cleaning operations on short buildings when weather conditions would create a hazard for window cleaning operations on tall buildings).

The proposed regulatory text updated the 1991 OSHA memo by using terminology such as ''prompt rescue'' rather than ''rescue'' and ''harness'' rather than ''body belt,'' but, as it stated in the PEA, OSHA did not believe that these revision would increase compliance costs. Other revisions to the 1991 OSHA memo made in the proposal, and now in the final standard, include the addition of three safety provisions to the original list of safety provisions described above. These three provisions include:

• Using equipment in accordance with the instructions, warnings, and design limitations set by manufacturers or qualified persons (final § 1910.27(2)(b)(ii));

• Securing equipment by a tool lanyard or similar method to prevent equipment from falling (final § 1910.27(2)(b)(xii)); and

• Protecting suspension ropes from exposure to open flames, hot work, corrosive chemicals, or other destructive conditions (final § 1910.27(2)(b)(xiii)).

In the PEA, OSHA stated that the eight safety provisions listed in the 1991 OSHA memo, the provision dealing with wind and other weather hazards, and the additional three provisions described in the previous paragraph, would not impose significant costs on employers. None of the comments submitted to the proposal provided any evidence contradicting this analysis.

OSHA determined in the PEA that the training requirements in proposed § 1910.27(b)(2)(ii), now codified as final § 1910.27(b)(2)(iii), imposed costs on employers. Final § 1910.27(b)(2)(iii) specifies that employers provide training in accordance with § 1910.30. Therefore, OSHA assigned the costs for training beyond that noted in its 1991 memorandum to § 1910.30. OSHA discusses these costs under ''Cost estimates'' below.

The Agency identified two additional provisions, final § 1910.27(b)(2)(xii) and (b)(2)(xiii), in the PEA as having potential costs.[131] The requirement specified by final § 1910.27(b)(2)(xii) to secure equipment is consistent with consensus standard IWCA I–14.1–2001, Section 3.10. Thus, OSHA did not assign incremental costs to this requirement in either the PEA or this FEA.

The requirement in final § 1910.27(b)(2)(xiii) that employers protect suspension ropes from exposure to open flames, hot work, corrosive chemicals, or other destructive conditions, is an extension of the requirement to protect the integrity of the ropes specified in OSHA's 1991 OSHA memorandum. OSHA attributed the costs for meeting this requirement under the training costs estimated in § 1910.30, and described below under ''Cost estimates.''

Duty To Have Fall Protection and Falling Object Protection (§ 1910.28)

The revised regulatory text for final § 1910.28 consolidates the fall protection requirements in the existing rule, with two major revisions. First, comments submitted in response to the reopening of the rule in 2003 recommended that the fall protection requirements in subpart D be consistent with the requirements in subpart M of the construction standards. The final text for § 1910.28 makes the general industry fall protection requirements consistent with the construction requirements, which may impose additional costs on employers in general industry. In addition, the existing standard does not address the use of restraint systems, designated areas, or safety net systems, nor does the existing standard clarify when employers can use personal fall protection systems. In contrast, the final standard allows employers to choose from various options in providing fall protection, *i.e.,* it is not as restrictive as the existing standard, which primarily requires use of guardrails.

In the proposal, OSHA requested public comment on the expenses that employers typically would incur to comply with this requirement. Stakeholders raised concerns about the compliance burden of this provision when conducting routine inspections on roofs. These stakeholders included the Property Casualty Insurers Association of America (Ex. 98), the Massachusetts Institute of Technology (MIT; Ex. 156), the National Roofing Contractors Association (NRCA; Ex. 197), and the U.S. Chamber of Commerce (Ex. 202). MIT's comments, presented below, are typical of these responses:

Under Subpart D—Walking-Working Surfaces, Section 1910.21(a) reads as follows: (a) Scope and application. This subpart applies to all general industry workplaces. It covers all walking-working surfaces unless specifically excluded by individual sections of this subpart. Following paragraph (a), MIT recommends adding the following narrow exception: ''Exception: The provisions of this subpart do not apply when employees are making routine inspections, investigations, or assessments of workplace conditions.'' Reason for comment: Periodic routine inspections, investigations, and assessments should be allowed on flat roof tops without installing guard rails, designated areas, or fall restraint/arrest systems. Employees engaged in routine inspections, investigations, and assessments of workplace conditions are exposed to fall hazards for very short durations, if at all, since they most likely would be able to accomplish their work without going near the danger zone. Requiring the installation of fall protection systems under such circumstances would expose the employee who installs those systems to falling hazards for a longer time than the person performing an inspection or similar work. As a result, the Proposed Rule could potentially create a greater hazard, rather than reducing a hazard. As stated above, the fall protection exemption anticipates that inspectors likely would be able to accomplish their work without going near the danger zone; yet installing such protections for a short time period would be

[131] In the proposal, these two provisions are § 1910.27(b)(2)(x) and (xi).

expensive and time-consuming. If the exception is not included, the Proposed Rule would have a significant impact on EHS personnel checking monitors, researchers inspecting research equipment on roofs, facilities operations investigating roof drains, facilities operations assessments prior to beginning project work, and other similarly-situated employees who regularly conduct such inspections. In addition, individuals who conduct these types of inspections are trained to be very focused on their footing, ever alert, and aware of the hazards associated with falling. Therefore, employees who inspect, investigate, or assess workplace conditions will be more aware of their proximity to an unprotected edge. This proposed exception would be in line with the existing OSHA Construction Standard, 29 CFR 1926.500(a)(1). (Ex. 156.)

OSHA notes that final § 1910.28(a)(2)(ii) provides an exemption stating that when employees are making an inspection, investigation, or assessment of workplace conditions prior to the starting work or after completing all work, the employer does not have to provide fall protection unless fall protection systems or equipment meeting the requirements of § 1910.29 have been installed and are available for workers to use for pre-work and post-work inspections, investigations, or assessments.

§ 1910.28(b)(1). Under this final provision, if a walking-working surface (vertical or horizontal) has an unprotected side or edge that is four feet or more above a lower level, an employer must protect employees from falling by using a guardrail system, safety net system, or personal fall protection system. If the work is on residential roofs and the employer demonstrates that it is infeasible or creates a greater hazard to use a guardrail system, safety net system, or personal fall protection system, then the employer must develop a fall protection plan that meets the requirements of 29 CFR 1926.502(k) and training that meets the requirements of 29 CFR 1926.503(a) and (c). In the existing rule, employers must implement fall protection under the following provisions when the fall hazard is four or more feet:

- § 1910.23(b): Wall openings;
- § 1910.23(c)(1): Open-sided floors or platforms; and
- § 1910.23(c)(2): The open sides of any runway.

Thus, there is no change in the height requirement for fall protection between the existing and final rules. OSHA believes that the language and organization for the final rule is less complex than for the existing rule and provides additional flexibility in the methods used for fall protection. The final rule also allows for exceptional conditions. For example, if it is not feasible or creates a greater hazard to install guardrails or other fall protection systems on a residential roof, then the employer does not have to install these systems and must instead develop and implement the requisite fall protection plan, including implementing other control measures to eliminate or reduce fall hazards for workers, and training. As discussed below under ''Cost estimates,'' OSHA anticipates that the costs for fall protection plans will not exceed the costs for guardrails and fall protection systems and, as demonstrated in employer response to the Construction standard (29 CFR 1926.502(k); 29 CFR 1926.503(a) and (c)), those compliance costs are economically feasible.

Comments to the proposal informed OSHA that chimney cleaning exposes workers to fall hazards resulting from work on residential roofs, and that protection from these fall hazards would require additional control measures. OSHA's analysis of the compliance costs for chimney cleaning, one industry among several industries found in NAICS 56179, Other Services to Buildings and Dwellings, appears below under ''Cost estimates.''

§ 1910.28(b)(2). This final provision requires fall protection in hoist areas when the fall hazard is four feet or greater, and also clarifies the requirements for hoist areas found in existing § 1910.23(b)(1) and (c)(1). Therefore, OSHA assigned no costs to this paragraph in either the PEA or in this FEA.

§ 1910.28(b)(3). The existing rule requires guarding every hole and skylight floor opening. This final provision specifies that employers must use fall protection when an employee might fall more than four feet through a hole. Thus, the new language harmonizes the fall protection requirement for holes with the requirements for unprotected sides and edges and hoist areas. The new language also permits employers to meet the requirement using covers, guardrail systems, travel restraint systems, or personal fall arrest systems.

The final revision to § 1910.28(b)(3) also provides protection for stairway floor holes, ladderway floor holes, and hatchways and chute-floor holes, and updates existing § 1910.23(a) by incorporating the best practices found in industry consensus standards (notably ANSI/ASSE A1264.1–2007). This subparagraph also clarifies application of the provision (*e.g.,* provides an exception for stairways used less than once per day). Furthermore, employers must construct guardrail systems to protect holes in accordance with final § 1910.29, Fall protection criteria. OSHA noted in the PEA that these requirements have been part of an OSHA standard or industry consensus standards for at least 15 years and, therefore, the incremental cost burden to employers would likely be minimal. OSHA could identify no data in the record that contradicted its preliminary finding of minimal cost impact and, therefore, carried the minimal impact estimate forward in this FEA.

§ 1910.28(b)(4). This final provision requires guardrails or handrails on dockboards to protect an employee from falls of four feet or more. There is an exception for cases when employers use dockboards exclusively for material handling operations performed with motorized equipment. In these cases, neither guardrails nor handrails are necessary if the fall hazard is 10 feet or less and employees received the training specified by § 1910.30. OSHA discusses the costs for installing handrail or guardrail systems for dockboards later in this subsection, and assigned the training costs to § 1910.30 (see ''Cost estimates'' below).

§ 1910.28(b)(6). The existing rule § 1910.23(c)(3) requires a standard railing and toe board for walking-working surfaces above dangerous equipment. This final provision bases the required controls on the potential fall distance. For potential falls of less than four feet onto or into dangerous equipment, the employer can cover or guard the dangerous equipment to eliminate the hazard. For potential falls of four feet or more, the employer must use guardrail systems, safety net systems, travel restraint systems, or personal fall arrest systems to protect employees from the fall hazard. For both the PEA and this FEA, OSHA assumed that employers already implemented the required controls under the existing standard using the least-cost method; therefore, OSHA assigned no costs to this paragraph in either the PEA or this FEA.

§ 1910.28(b)(7). For openings, the final standard limits the need for fall protection to cases for which the inside bottom edge of the opening is less than 39 inches above a walking-working surface and the bottom edge of the outside of the opening is four feet (1.2 m) or more above a lower level. The employer can use a guardrail system, a safety net system, a travel restraint system, or a personal fall arrest system to meet this requirement. In the PEA, OSHA stated that it believed that current industry practice was to protect employees exposed to openings; therefore, the Agency estimated no costs

for this paragraph in the PEA. OSHA received no comments in the record that contradicted this preliminary assessment and, therefore, assigned no costs to paragraph (b)(7) in this FEA.

§ 1910.28(b)(8). Existing § 1910.21(a)(2) classified pits, in general, as floor openings. In this final provision, pits that are 4 feet and less than 10 feet in depth used for repair, service, or assembly operations need not have a fall protection system provided employers demarcate, with floor markings, warning lines, stanchions, or some combination thereof, a (minimum) 6-foot perimeter around the pit, limit access to that demarcated area to trained and authorized employees, and post readily visible caution signs. In the PEA, OSHA did not assign incremental costs to paragraph (b)(8) because an employer would only incur costs for caution signs and floor markings if they were less expensive than the fall protection system required under the existing standard. In addition, existing § 1910.145 already requires an employer to post caution signs where needed, and existing § 1910.144 specifies the content of the signs. OSHA assumed that most employers have signs and marking materials readily available and, therefore, assigned no incremental costs to this paragraph in the PEA. There was no evidence submitted to the record to justify revising this preliminary assessment; therefore, OSHA in this FEA estimates that any additional compliance costs associated with this paragraph will be minimal.

The final rule provides more than one method to comply with § 1910.28(b)(8). That is, an employer may use a conventional fall protection system or implement specific safe work practices (*i.e.,* marking, stanchions, posting, and limiting access). When the alternative method—the use of safe work practices—is less expensive than the method specified in the existing rule (guardrails), an employer likely would incur lower costs to comply with the paragraph. As stated in the PEA, OSHA concluded that the new provision may reduce costs for some employers; however, OSHA did not quantify the cost savings in the preliminary analysis, nor did it do so in this final analysis.

§ 1910.28(b)(9). The existing regulatory text specifies landing platforms, cages, wells, or ladder safety devices as means of providing fall protection for fixed ladders. The 1990 proposal for subpart D permitted some workers to climb fixed ladders without the use of ladder safety devices, cages, or wells if they were qualified climbers and met other, specified conditions. In particular, employers could use qualified climbers to climb fixed ladders only if they did so no more than twice a year and it would be a greater hazard to the employee to install the fall protection system than to climb the ladder without fall protection (which OSHA believed rarely occurs).

In paragraph (b)(9) and elsewhere in the final standard, OSHA no longer permits employers to use qualified climbers beginning two years after publication of the final rule. In addition, after two years employers must equip new fixed ladders and replacement ladders and ladder sections with ladder safety systems or personal fall arrest systems. However, employers still can meet the fall protection requirement for existing fixed ladders extending more than 24 feet above a lower level by using cages, wells, personal fall arrest systems, and ladder safety systems for 20 years after publication of the final rule; after 20 years, employers must use either personal fall arrest systems or ladder safety systems for fixed ladders. For this FEA, OSHA assigned costs for using ladder safety systems on fixed ladders. OSHA's describes its analysis of costs for fall protection on fixed ladders below in ''Cost estimates.''

§ 1910.28(b)(10). These final paragraphs address fall hazards in outdoor advertising, also known as billboards. Existing subpart D has no requirements specific to billboards. However, for analytical purposes, the existing fixed ladder requirements cover the fixed ladder portion of a billboard. Existing § 1910.27(d)(1) requires cages or wells for ladders more than 20 feet in length. In the PEA, OSHA assumed that under proposed § 1910.28(b)(10)(i), an employee climbing the fixed ladder portion of a billboard up to 50 feet in length would need to use either a body belt or a body harness with an appropriate 18-inch rest lanyard to tie off to the fixed ladder, and that these additional options, when not already deployed, would be less expensive than cages or wells. Further, proposed § 1910.28(b)(10)(iv) required employers to properly maintain and use any ladder safety system installed on fixed ladders; according to ERG, this requirement is consistent with widespread industry practice (ERG, 2007). Thus, in the PEA, OSHA assigned no incremental compliance costs to these paragraphs. However, OSHA received a comment from the outdoor advertising industry in response to the proposal stating that ladder safety systems are not in widespread use for the initial 50-foot climb (or 65 feet from grade) on fixed ladders connected to billboards (see Exs. 329 (1/18/2011), pp. 143–146; 359, pp.7–8). Therefore, OSHA revised its preliminary analysis in this FEA to indicate that a significant percentage of outdoor advertising employers will need to install ladder safety systems on fixed ladders. OSHA presents its estimate of the costs for those systems below in ''Cost estimates.''

Final § 1910.28(b)(10)(ii)(A) requires employees in outdoor advertising who climb a fixed ladder be qualified climbers as specified in § 1910.29(h) when the fixed ladder does not come equipped with a cage, well, personal fall arrest system, or a ladder safety system. Therefore, OSHA assigned the costs for this paragraph to § 1910.29(h). In doing so, the Agency conservatively assumed in both the PEA and in this FEA that all employees in NAICS 5418 (Advertising and Related Services) who climb fixed ladders will receive training as qualified climbers (see the discussion for § 1910.29(h) below). OSHA notes that the provision for qualified climbers in outdoor advertising will expire two years after publication of the final rule, at which time employers must use other means and methods of fall protection. The Agency assigned the costs of fall protection for these workers after the second year as initial and ongoing costs (see the discussion below under ''Cost estimates).''

Final § 1910.28(b)(10)(ii)(B) requires that qualified climbers in outdoor advertising wear a body harness equipped with an 18-inch (46 cm) rest lanyard. Both the proposed rule at paragraph (b)(10)(i) and OSHA's outdoor advertising directive contain a similar requirement. The lanyard allows workers to tie off to the fixed ladder and rest during the climb. Proposed paragraph (b)(10)(i) and outdoor advertising directive both include a requirement permitting employers to provide, and allow workers to use, a body harness or body belt. However, the final rule does not permit the use of body belts as a part of a personal fall arrest system, thus OSHA deleted body belts from final § 1910.28(b)(10)(ii)(B). This also makes the final provision consistent with OSHA's construction industry rule, which does not allow body belts to be used for personal fall arrest (§ 1926.502(d)).

According to comment from the Outdoor Advertising Association of America (OAAA), OAAA's training program emphasizes ''the duty to provide fall protection for employees working above 4–6 feet including equipment such as harnesses, lanyards and any supplemental PPE uses.'' (Ex. 359) Therefore, because the use of harnesses and lanyards is central to the training program of the leading outdoor advertising industry association, OSHA anticipates that there will be no additional costs associated with the requirement in the final standard that qualified climbers be outfitted with full body harnesses. Proposed § 1910.28(b)(10)(vi), now codified as final § 1910.28(b)(10)(ii)(C), specifies that the employee is to have both hands free of tools and material while climbing up or down the ladder. In the PEA, OSHA assigned a cost to this paragraph; in this FEA, the Agency discusses these costs below under ''Cost estimates.''

Under final § 1910.28(b)(10)(ii)(D), climbers must use an appropriate fall protection system after they reach their work positions. OSHA attributed the cost of these systems to the existing standard for fixed ladders. Thus, the Agency estimated no additional costs for equipment required by this provision in either the PEA or in this FEA.

Proposed § 1910.28(b)(10)(iii) required that employers follow inspection procedures for ladder safety systems. Final § 1910.29(i) now delineates the inspection procedures identified in the proposed requirement. OSHA did not specify in the proposed rule the frequency of inspection, but in the PEA assumed that inspections would occur prior to each use. OSHA assigned costs to this paragraph in the PEA, and discusses these costs below under ''Cost estimates'' in this FEA.

Final paragraph (b)(11) requires that employers protect workers from falling off stairway landings and the exposed sides of all stairways. Stairways, as defined in the final rule in § 1910.21(b)), includes standard stairs, ship stairs, spiral stairs, and alternating tread-type stairs. As noted earlier in the summary and explanation of the final standard, final paragraph (b)(11)(i), like the proposal, requires that employers ensure each worker exposed to an unprotected side or edge of a stairway landing that is four feet or more above a lower level is protected by a guardrail or stair rail system. The final requirement is consistent with the requirements for stairway landings specified by the existing general industry standard in § 1910.24(h) and the construction standard in § 1926.1052(c)(12). The final provision is also consistent with A1264.1–2007 (Section 7.1), NFPA101–2012 (Sections 7.1.8 and 7.2.2.4.5), and ICC IBC–2012 (Section 1013.2), except that NFPA and IBC require guards on open-sided walking surfaces that are located more than 30 inches above the floor or grade below.

Final paragraph (b)(11)(ii), consistent with existing § 1910.23(d)(1) and proposed paragraph (b)(11)(ii), requires that employers ensure each flight of stairs having at least three treads and at least four risers is equipped with a stair rail system and handrails as specified in Table D–2.

Final paragraph (b)(11)(iii), like the proposal, requires that employers ensure ship stairs and alternating tread-type stairs are equipped with handrails on both sides. Both of those types of stairs have slopes that are 50 to 70 degrees from the horizontal, and OSHA believes that workers need handrails on both sides to safely climb those stairs. This requirement is consistent with ICC IBC–2012 (Section 1009.15) and NFPA 101–2012 (Section 7.2.11.2).

In the PEA, OSHA recognized that compliance with existing consensus standards for stairways and stairway landings will eliminate much of the employee exposure to fall hazards addressed by proposed § 1910.28(b)(11). Therefore, the Agency estimated no costs for this paragraph in the PEA. OSHA received no comments in the record that contradicted this preliminary assessment. Because as shown above in Table V–16, updated versions of the same consensus standards for stairways apply to the final standard, OSHA assigned no costs to paragraph (b)(11) in this FEA.

§ 1910.28(b)(12). Final § 1910.28(b)(12)(i), which addresses the duty to provide fall protection for employees on scaffolds, refers to the construction standards at 29 CFR part 1926, subpart L (Scaffolds), thereby avoiding any inconsistencies between the general industry and construction standards. Fall protection on scaffolds in the construction standards generally follows consensus standards; thus, in the PEA, based on the estimated high level of current compliance with the construction standards or consensus standards, OSHA assigned no costs to this paragraph, and retained that cost estimate for this FEA.

Final § 1910.28(b)(12)(ii) requires that employers ensure that each employee using a rope descent system more than four feet (1.2 m) above is protected from falling by a lower level using a personal fall arrest system. Such systems must meet the requirements of 29 CFR part 1910, subpart I. OSHA addresses the costs associated with rope descent systems in ''Cost estimation'' below as part of the discussion of § 1910.27, Scaffolds and rope descent systems.

§ 1910.28(b)(13) and (14). These two paragraphs are new to final subpart D and introduce additional compliance costs for employers specializing in, respectively, rooftop services (paragraph (b)(13)) and work on platforms and other elevated surfaces in animal slaughtering and animal processing plants (paragraph (b)(14)). Discussion of these costs appears in the next subsection, ''Cost estimates.''

§ 1910.28(b)(15). OSHA proposed this paragraph covering walking-working surfaces not otherwise addressed by the standard to clarify existing § 1910.23(c)(3), which requires a railing and toeboard for these types of surfaces. In the final rule, the revised language restricts the requirement to working surfaces four feet or more above a lower level, and permits the employer to comply with the paragraph by using a guardrail, safety net system, travel restraint system, or personal fall arrest system. Assuming that employers will choose the least-cost compliance option and that current industry use of conventional fall protection is widespread, OSHA in the PEA assigned costs to one surface, stepbolts, that appeared to be newly affected. OSHA determined that this requirement for protection on stepbolts will primarily affect establishments in NAICS 51, Information, and NAICS 7113, Promoters of performing arts, sports, and similar events, and that the preferred fall protection will be ladder safety systems. In the next subsection, ''Cost estimates'', OSHA discusses its final analysis of costs for this paragraph.

§ 1910.28(c). Final paragraph (c) requires that employers protect workers from being hit by falling objects, such as objects falling through holes or off the sides or edges of walking-working surfaces onto workers below. In addition, final paragraph (c) requires that employers protect workers using one or more of the following measures:

- Erecting toeboards, screens, or guardrail systems to prevent objects from falling to a lower level (final paragraph (c)(1));
- Erecting canopy structures and keeping potential falling objects far enough from an edge or opening to prevent them from falling to a lower level (final paragraph (c)(2)); or
- Barricading the area into which objects could fall, prohibiting workers from entering the barricaded area, and keeping objects far enough from the edge or opening to prevent them from falling to the lower level (final paragraph (c)(3)).

Final paragraph (c) simplifies the final rule by consolidating into a single paragraph all of the provisions that address falling objects found in the existing standard at § 1910.23(b)(5) and (c)(1) and the proposed rule at paragraphs (b)(3)(iii), (b)(5)(i), (b)(14)(ii)). The final rule is consistent with the proposal and patterned on the construction standard (§ 1926.501(c)).

Therefore, because the final standard introduces no additional burden on employers beyond existing requirements, and because there were no comments in the record suggesting that additional economic impacts would result, OSHA expects that final paragraph (c) will impose no new costs.

Fall Protection Systems and Falling Object Protection—Criteria and Practices (§ 1910.29)

Final § 1910.29, like the proposed rule, establishes system criteria and work practice requirements for fall protection systems and falling object protection specified by final § 1910.28, Duty to have fall protection and falling object protection, and § 1910.140, Personal fall protection equipment.

Final § 1910.29 requires that employers ensure the fall protection system and falling object protection they select meets the specified criteria and practice provisions. In general, OSHA patterned the system criteria and work practice requirements in final § 1910.29 to be consistent with its construction standards (§§ 1926.502 and 1926.1053). As mentioned in the preamble to final § 1910.28 and § 1910.29, many commenters supported making the general industry fall and falling object protection requirements consistent with those in the construction industry (*e.g.,* Exs. 124; 155; 194).

Final § 1910.29 reorganizes the existing rule so that the format of the final rule is consistent with the format in the construction fall protection standard at § 1926.502 and also draws provisions from, and is consistent with, national consensus standards addressing personal fall protection systems and falling object protection, including:

- ANSI/ASC A14.3–2008: American National Standards for Ladders–Fixed (A14.3–2008) (Ex. 8);
- ANSI/ASSE A1264.1–2007, Safety Requirements for Workplace Walking/Working Surfaces and Their Access; Workplace, Floor, Wall and Roof Openings; Stairs and Guardrails Systems (ANSI/ASSE A1264.1–2007)(Ex. 13); and
- ANSI/ASSE A10.18–2012, Safety Requirements for Temporary Roof and Floor Holes, Wall Openings, Stairways, and Other Unprotected Edges in Construction and Demolition Operations (ANSI/ASSE A10.18–2012) (Ex. 388).

Final paragraph (b) contains system requirements employers must follow to ensure guardrail systems they use will protect workers from falling to lower levels. In developing final paragraph (b), OSHA carried forward, with some revision, many of the requirements from the existing rule (*e.g.,* existing § 1910.23), and drew the requirements from the construction fall protection standard at § 1926.502(b).

OSHA analyzed the potential economic impacts of final § 1910.29(b) and anticipates that only paragraphs (b)(13) and (15) could potentially impose significant cost impacts, while the existence of the consensus standards listed above and other factors affecting current practice will result in no costs for all other paragraphs in § 1910.29(b). The Agency's review of the impacts associated with paragraphs (b)(13) and (15) is given immediately below.

§ 1910.29(b)(13). This final paragraph revises a related provision in the proposed standard by specifying that guardrail systems used around points of access (*e.g.,* ladderways) must have a self-closing gate that slides or swings away from the hole, with the gate constructed with a top rail, midrail, and latch or, alternatively, are offset to prevent a worker from walking or falling into the hole.

In two separate comments, Intrepid Industries, Inc. (Intrepid), recommended that OSHA clarify the proposed requirement by recognizing recent technological developments in ladderway gates. Intrepid noted in its comments that when OSHA published the 1990 proposal, multiple horizontal rails were "'foreign' to industry,'" that since publication of the 1990 proposal, "a majority of protection devices have both a top rail and a mid rail similar to that of the guardrail . . . ," and that such gates are equivalent in strength and design to guardrail systems and are widely available throughout industry (Exs. 68; 366). Therefore, having adopted Intrepid's recommended clarification in the final rule, OSHA estimates that few affected employers will need to replace current ladderway gates, resulting in a negligible cost burden for employers. Accordingly, as in the PEA, OSHA did not assign any costs to this provision.

§ 1910.29(b)(15). This final paragraph, as did the proposal, requires that employers inspect manila, plastic, or synthetic rope used for top rails or midrails as frequently as necessary to ensure that it meets the specified strength requirements. OSHA addresses the inspection costs for this final paragraph below in "Cost estimates."

§ 1910.29(c). Both the proposed and final paragraphs require that employers ensure safety net systems meet the requirements in the construction standards at 29 CFR part 1926, subpart M, thus avoiding any inconsistencies between general industry and construction standards. Given that the safety net system requirements in the construction standards follow current consensus standards, OSHA in the PEA estimated that this requirement had no incremental costs. OSHA received no comments to the proposal addressing this analysis and, therefore, attributed no costs to final § 1910.29(c) in this FEA.

§ 1910.29(h). This final paragraph outdoor advertising operations, and sets forth the criteria for the use of qualified climbers, which it limits to these operations. In the PEA, OSHA modeled the costs to train and, as necessary, retrain qualified climbers. That is, OSHA assumed that qualified climbers required training beyond that now required for fixed ladders and, furthermore, OSHA believed that employers would incur additional costs associated with the requirement that the employer observe the performance to ensure the qualified climber has the skills necessary to perform the climb safely.

The final standard permits the use of qualified climbers up to two years after publication of the rule, after which outdoor advertising employers must protect employees engaged in outdoor advertising from fall hazards in accordance with provisions of § 1910.28. Therefore, although OSHA's estimate of costs associated with the criteria enumerated in § 1910.29(h) would not apply two years after publication of the final rule, OSHA retained those costs in this final analysis to account for any training costs connected with transitioning to the use of ladder safety systems or other fall protection measures on fixed ladders. OSHA discusses the cost estimates for final § 1910.29(h) below under "Cost estimates."

The other requirements in final § 1910.29, include the requirements found in final paragraphs (d) Designated areas, (e) Covers, and (f) Handrail and stair rail systems, (g) Cages, wells, and platforms used with fixed ladders, (i) Ladder safety systems, (j) Personal fall protection systems, (k) Protection from falling objects, and (l) Grab bars (specified as "Grab handles" in the NPRM). OSHA in the PEA noted that there already is significant, widespread compliance with the proposed requirements among general industry employers, resulting in the proposed requirements imposing minimal incremental cost burden on employers. OSHA requested feedback from the public on this analysis, but received no comments to this request. Therefore, in this FEA, OSHA assigned no costs to paragraphs (d) Designated areas, (e)

Covers, (f) Handrail and stair rail systems, (g) Cages, wells, and platforms used with fixed ladders, (i) Ladder safety systems, (j) Personal fall protection systems, (k) Protection from falling objects, and (l) Grab bars.

Training Requirements (§ 1910.30)

This new section requires that employers in general industry train their employees regarding fall and equipment hazards, and retrain them when necessary. In the PEA, OSHA assumed that an employer that trains employees in compliance with § 1910.30 would choose to maintain records of the training, and the cost estimates in the PEA took account of this time burden on employers. The training costs estimated for proposed § 1910.30 included requirements from other proposed paragraphs that specify that the employer must conduct the training in accordance with proposed § 1910.30 (see Table V–18 for examples). OSHA discusses these costs in more detail below under ''Cost estimates''; in this analysis, incremental training costs apply only to the percentage of establishments that do not already provide regular safety training.

5. Cost Impacts for Final Subpart I (Personal Protective Equipment)

In the NPRM, OSHA proposed to add a new section, § 1910.140, to 29 CFR part 1910, subpart I, to address personal fall protection equipment. The proposed text for § 1910.140 added specific design and performance requirements for personal fall protection systems to existing subpart I. In addition, the proposed standard required that the provisions for hazard assessment found in existing § 1910.132 apply as well to personal fall protection systems.

The text of the final standard is virtually identical to that of the proposed rule, and although a number of commenters raised concerns about the technical specifications and criteria that would apply to personal fall protection systems, OSHA received few, if any, comments directly addressing the PEA. The discussion below describes OSHA's general treatment of costs for subpart I; the next subsection, ''Cost estimates,'' provides additional details on the specific method for estimating costs.

§ 1910.132(g). Existing § 1910.132(g) lists the personal protective equipment standards under 29 CFR part 1910, subpart I, that are subject to the requirements specified in existing § 1910.132(d) and (f). Paragraph (d) of § 1910.132 requires employers to assess the workplace to identify any potential hazards and the need for PPE, while § 1910.132(f) requires employers to train employers, at specified times, on the application limits of the equipment; proper hook-up, anchoring, and tie-off techniques; methods of care, use, and disposal; and proper methods of equipment inspection and storage. Final § 1910.132(g) adds the personal fall protection equipment regulated under § 1910.140 to the list of covered personal protective equipment. In the PEA, OSHA identified significant costs in connection with the proposed requirement; the Agency discusses the costs associated with this final requirement below under ''Cost estimates'' (for §§ 1910.140, Personal fall protection systems, and 1910.30, Training).

§ 1910.140(c)(18). 29 CFR 1910.140 is a new section that OSHA is adding to subpart I Personal Protective Equipment (PPE) (29 CFR part 1910, subpart I) to address personal fall protection systems, which include personal fall arrest, travel restraint, and positioning systems. The new section establishes requirements for the design, performance, use, and inspection of personal fall protection systems and system components (*e.g.,* body harnesses, lifelines, lanyards, anchorages).

Similar to the final rule revising 29 CFR part 1910, subpart D, final § 1910.140, when appropriate, also draws from national consensus standards addressing personal fall protection systems, details of which are provided in Section IV.B. of this document. Therefore, with the exception of one paragraph in § 1910.140, paragraph (c)(18), OSHA in the PEA estimated that current industry practice is widespread, and there were no comments objecting to that preliminary estimate. Final § 1910.140(c)(18) requires that employers inspect personal fall protection systems prior to the initial use during each workshift. In the PEA, OSHA identified significant costs in connection with the proposed requirement; the Agency discusses costs for this final paragraph below under ''Cost estimates.''

6. Cost Estimates

This subsection presents OSHA's detailed estimates of the costs associated with the final rule, provision by provision. These compliance costs represent the incremental burden incurred by employers beyond the current baseline of fall-related safety expenditures. OSHA did not estimate potential cost savings to industry from increased flexibility in meeting specific requirements, such as using personal fall protection systems rather than the currently mandated handrail/guardrail systems, even if some of the new requirements might be safer than the currently mandated requirements.[132]

For a number of cost categories, there were no public comments on the PEA. For those cases, OSHA updated the applied unit wage and the numbers of affected employers and employees to reflect the revised profile, but retained the cost methodology used in the PEA. For provisions in the final standard for which OSHA adjusted the preliminary cost estimate, the Agency describes the form of the cost revision and the public comments that lead to the final cost estimate.

a. Estimated Compliance Costs by Provision in the Final Standard for Subpart D

Labor costs associated with compliance with the final standard generally involve additional employer and supervisor time for training and inspection. OSHA took the number of establishments and employees from *Statistics of U.S. Businesses: 2007.* The Agency based the number of employees covered by subparts D and I on the share of employees working in building and grounds; construction;[133] installation, maintenance, and repair; production; and material-moving occupations reported by the Bureau of Labor Statistics, *Occupational Employment Statistics* (BLS, 2007). See section C above in this FEA for additional industry-profile information.

OSHA based employee and supervisor wages (see Table V–5) on data reported by the Bureau of Labor Statistics through their *Occupational Employment Statistics* program (BLS, 2010). OSHA adjusted wages to include the cost of benefits, and determined estimated benefits from data provided from the Bureau of Labor Statistics, *Employer Costs for Employee Compensation—*

[132] The Agency assumed that the new requirements are at least as effective in employee protection as the requirements provided by the existing requirements.

[133] As noted earlier in this FEA, production workers include workers in building and grounds; construction; installation, maintenance, and repair; production; and material-moving occupations. It is possible that employees in construction and related occupations, even though not employed by establishments in construction industries, might perform work regulated by OSHA under its construction standards in 29 CFR part 1926. Therefore, the employers of these workers, depending on the type of work performed, also may have to meet the requirements for fall protection and walking-working surfaces specified in the construction standards. For the purpose of estimating costs, however, OSHA assumed that the general industry standards cover these employees.

June 2011 (released September 2011).[134] The Agency based current compliance rates on OSHA inspection statistics for fiscal year 2005 (see Table V–15); it determined the fraction of businesses that already provide regular safety training from information in the *National Occupational Exposure Survey* conducted by the National Institute for Occupational Safety and Health (NIOSH, 1988). See Table V–20, below.

Table V-20
Fraction of Businesses Providing Regular Safety Training

Table V-20
Fraction of Businesses Providing Regular Safety Training

NAICS	Industry	Fraction Providing Regular Safety Training
11	Agriculture, Forestry, Fishing, and Hunting	.796
21	Mining (2111 Oil and Gas Extraction)	.751
22	Utilities	.890
31-33	Manufacturing	.855
42	Wholesale Trade	.668
44-45	Retail Trade	.668
48-49	Transportation	.890
51	Information	.664
52	Finance and Insurance	.664
53	Real Estate	.664
54	Professional, Scientific, and Technical Services	.664
55	Management	.664
56	Administrative and Support, Waste Management and Remediation Services	.664
61	Educational Services	.83
62	Health Care	.957
71	Arts, Entertainment, and Recreation	.664
72	Accommodation and Food Services	.664
81	Other Services	.664

Source: ERG, 2007, based on NIOSH, 1988.

General Requirements (§ 1910.22)

Final § 1910.22 contains three paragraphs with new requirements:

- § 1910.22(d)(1): Perform regular and periodic inspection, and maintenance, of walking-working surfaces;
- § 1910.22(d)(2): Correct and repair hazardous conditions on walking-working surfaces, and guard unsafe conditions until corrected or repaired; and
- § 1910.22(d)(3): Have a qualified person perform or supervise any

[134] Throughout the discussion below, wages that include benefits are also referred to as "loaded" wages.

correction or repair that involves the structural integrity of a walking-working surface.

There were no public comments that addressed OSHA's preliminary approach to estimating costs the costs for these paragraphs. For the final standard, OSHA revised all three provisions from the proposed language for clarification.

For the purpose of estimating costs for § 1910.22(d)(1), OSHA in the PEA assumed that a significant percentage of facilities already include regular and periodic inspections of walking-working surfaces. OSHA used the non-compliance rates for floor-guarding in proposed § 1910.23 (which has the highest non-compliance rates, see Table V–15) to estimate the number of establishments that need to perform regular and periodic inspections of walking-working surfaces. OSHA assumed that a supervisor would spend 15 minutes every quarter performing the inspection, for a total of 1 hour per year. Based on these unit costs, OSHA preliminarily estimated that the total annual inspection cost would be $15.3 million.

Relative to the existing and proposed standards, the final standard provides more specificity in the types of hazards for which employers will be inspecting walking-working surfaces (namely, protruding or sharp objects, loose boards, corrosion, leaks and spills). Included among the inspected surfaces will be residential roofs (addressed in § 1910.28(b)(1)), low-slope roofs (§ 1910.28(b)(13)), and slaughtering facility platforms (§ 1910.28(b)(14)), surfaces whose inclusion in the scope of the proposed standard is recognized by OSHA in this final notice. As a result of further analysis of these affected surfaces, OSHA believes that regular and periodic inspections will be more extensive than determined in the PEA. For this final analysis, OSHA raised the quarterly inspection time from 15 minutes to 30 minutes. Therefore, OSHA estimated the final cost for paragraph § 1910.22(d)(1) to be $32.8 million.[135]

For estimating the costs of § 1910.22(d)(2), OSHA in the PEA projected that within a year, 10 percent of affected establishments would identify an unsafe condition, and that it takes an employee 15 minutes to set up a guard mechanism (*e.g.,* cones, barriers). The Agency assumed incremental material costs to be negligible since it is likely that most employers currently stock guard equipment but only occasionally deploy it. Estimated compliance costs for this provision were $0.23 million in the PEA and are $0.25 million in this FEA.[136]

For § 1910.22(d)(3), OSHA in the PEA estimated that it takes five minutes for a supervisor or qualified person to inspect the repair of the unsafe condition. Final § 1910.22(d)(3) was revised to read that when any correction or repair involving the structural integrity of the walking-working surface is conducted, a qualified person must perform or supervise the correction or repair. Applying the five-minute time unit across all affected employers, OSHA preliminarily estimated that the costs for a supervisor or qualified person to inspect repairs would total $0.13 million, and, applying the five-minute unit for this FEA, determined that final costs will be slightly higher, at $0.14 million for performance or supervision of the correction or repair.

Summing costs for the three paragraphs in final § 1910.22(d) with cost impacts, the total estimated cost for compliance with § 1910.22(d) is, after rounding, $33.2 million per year.

Ladders (§ 1910.23)

In the PEA, eight paragraphs in proposed § 1910.23 specify new training requirements for protecting employees from slip, trip, and fall hazards during operations involving ladders. Table V–21 summarizes these eight new training requirements.

[135] For timber tract operations (NAICS 1131), costs are estimated by multiplying together 450 establishments (see Table V–1), 9.6 percent noncompliance rate for existing floor guarding requirements (see Table V–15), two hours per supervisor, and a $26.10 hourly loaded wage (see Table V–5), yielding a result of $2,263. Analogous calculations are performed for each industry and summed to produce the total of $32.8 million.

[136] For example, OSHA estimated the costs to correct unsafe conditions for timber tract operations (NAICS 1131) in the following way. Total guarding cost = no. of affected establishments * (1 − current compliance rate) * percent with an unsafe condition * time to set up guarding * employee hourly loaded wage = 450 establishments (1 − 90.4 percent) * 10 percent * 0.25 hours * $19.99 = $22. Analogous calculations are performed for each industry and summed to produce the total of $0.25 million.

Table V-21
Training Requirements Under §1910.23 – Ladders

Paragraph	Subject
§1910.23(b)(11)	When ascending or descending a ladder, the employee must face the ladder.
§1910.23(b)(12)	Each employee must use at least one hand to grasp the ladder when progressing up and down the ladder.
§1910.23(b)(13)	Employees must not carry any object or load that could cause the employee to lose their balance and fall.
§1910.23(c)(5)	Prohibits use of portable single rail ladders.
§1910.23(c)(6)	Prohibits moving, shifting, or extending a ladder occupied by employees.
§1910.23(c)(9)	Secure and stabilize non-self-supporting ladders used on slippery surfaces.
§1910.23(c)(10)	Place the top of a non-self-supporting ladder with the two rails supported unless it is equipped with a single support attachment. [New for wood ladders.]
§1910.23(c)(11)	When using portable ladders to gain access to an upper landing surface, the ladder siderails must extend at least three feet (0.9 m) above that upper landing surface. [New for metal ladders.]
§1910.28(e)(1)(viii)	The employer must ensure that mobile ladder stands and platforms are not moved when occupied by an employee.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

The PEA determined that employers could address all eight of these new provisions in a single training session. In addition, OSHA determined that employers can comply with these provisions using informal training; therefore, the Agency did not include administrative costs for employers. For this FEA, OSHA added a ninth provision, § 1910.23(c)(9), addressing stabilization of ladders on slippery surfaces, to its analysis of costs, and applied the same cost modeling parameters here as it did in the PEA.

OSHA's Web site includes a resource center with a loan program for training videos (OSHA, 2012b). The index lists 12 training videos for ladders and stairways, with run times ranging from 5 to 19 minutes, for an average of 12 minutes. Accordingly, for the purposes of estimating costs for ladder safety training, OSHA in the PEA and this FEA applied a 15-minute training period per video.

In OSHA's cost model, employers can train 10 employees per session, with one supervisor in attendance. OSHA further assumed that employers incur $1 in materials cost for handouts for each employee trained.

Some establishments already provide regular safety training. For each affected NAICS industry, OSHA applied an estimate for the percentage of employees already providing training. OSHA's derived its industry-by-industry baseline estimate for safety training from the NIOSH *National Occupational Exposure Survey* (NOES) database (NIOSH, 1988). Although these data are over 25 years old, the NIOSH NOES survey is still the primary source for such information, and covers a broad range of industries. No comment in the record suggested that the NIOSH NOES survey data are no longer accurate. Furthermore, OSHA believes that the proportion of employees already offered regular safety training likely increased over the past two decades; hence, the Agency most likely overestimated the training costs.

The cost to train employees at establishments that do not offer regular safety training is a one-time cost annualized over a 10-year period at a discount rate of 7 percent. Summing across all affected employers, the total first-year cost is $11.5 million, with an annualized cost of $1.6 million.[137]

[137] For gambling industries (NAICS 7132), costs are estimated by first multiplying together 5,240 employees (see Table V–1) and the 33.6 percent rate of not yet providing training (=1–0.664 shown in Table V–20), yielding an estimate of 1,761 employees that do not yet receive training. Next, this estimate is multiplied by the sum of worker

Continued

New employees who begin affected jobs also will need training. For the purpose of estimating this cost, OSHA in the PEA assumed that training received from a prior employer was not sufficient to meet the proposed subpart D requirement. ERG's analysis of 2002 hires data collected by the Bureau of Labor Statistics (ERG, 2007) formed the basis in the PEA for OSHA's analysis of the annual costs of training employees new to the workforce; for this FEA, OSHA used 2007 BLS industry hires-rate data to correspond to the employment levels (2007) used in the analysis. Table V–22 below summarizes these data for the NAICS codes affected by this final standard. Under these assumptions, the estimated cost is $5.4 million per year to train new employees in ladder safety.

Table V-22
Industry Hires Rates Applied in OSHA's Cost Analysis

Industry	NAICS	2007 Annual Hires Rates
Mining and Logging	1133 21	45.4
Durable Goods Manufacturing	321, 327, 33	29.8
Nondurable Goods manufacturing	31, 322, 323, 324, 325, 326	36.9
Wholesale trade	42	34.9
Retail trade	44 -45	58.8
Transportation, warehousing, and utilities	22, 48-49	36.3
Information	51	31.2
Finance and Insurance	52	31.7
Real Estate and Rental and Leasing	53	47.6
Professional and Business Services	54-56	63.1
Educational Services	61	30.7
Health Care and Social Assistance	62	35.4
Arts, Entertainment, and Recreation	71	81.8
Accommodation and Food Services	72	82.8
Other services	81	41.9

Source: Bureau of Labor Statistics (BLS, 2007), Job Openings and Labor Turnover Survey (JOLTS).

In the PEA, to estimate the costs of mobile ladder stands and mobile ladder stand platforms that conform to the design requirements specified in § 1910.23(e), OSHA's cost formula included all establishments potentially covered by proposed subpart D. OSHA assumed that the typical lifetime for a ladder is five years; thus, one-fifth of the establishments would purchase a ladder meeting the design requirements each year.[138] Furthermore, OSHA assumed that a supervisor from each establishment would take five minutes to read ladder specifications to ensure that, prior to purchase, the ladder met the requirements for that type ladder. With these assumptions, the estimated annual cost for § 1910.23(e) was $3.8 million in the PEA; in this FEA, allowing for the increase in the number of affected establishments and updated wage rates (generally upward), annual total costs for final § 1910.23(e) are $4.2 million.[139]

Step Bolts and Manhole Steps (§ 1910.24)

Step bolts. In estimating the cost of the step-bolt inspection requirement specified by proposed paragraph (a)(8) in the PEA, OSHA identified three types of structures requiring step bolts and pole steps:

- Utility poles;
- Communication structures; and
- Pole-mounted lights in sports and performance arenas.

Final paragraph (a)(8) requires that employers ensure step bolts are

time costs (0.25 hours times an $18.80 hourly production worker loaded wage (see Table V–5)), materials costs ($1 per employee) and instructor time costs (0.25 hours times a $38.66 hourly supervisor loaded wage (see Table V–5), divided by 10 to reflect a 10-worker class size), yielding a result of $11,736 (= $8,274 labor cost + $1,761 materials cost + $1,701 instructor cost). Analogous calculations are performed for each industry and summed to produce the total of $11.5 million.

[138] Underlying this assumption is the likelihood that some establishments will purchase more than one ladder in a given year, or will purchase more than one ladder over the five-year span.

[139] For grantmaking and giving services (NAICS 8132), costs are estimated by first multiplying together 16,356 establishments (see Table V–1) and the 20 percent rate applied in ladder replacement, yielding an estimate of 3,271 establishments that will be purchasing a ladder. Next, this estimate is multiplied by the sum of worker time costs (5 minutes/60 minutes = 0.083 hours times a $29.89 hourly production supervisor loaded wage (see Table V–5)), yielding a result of $8,147. Analogous calculations are performed for each industry and summed to produce the total of $4.2 million.

inspected at the start of each work shift and maintained in accordance with § 1910.22. OSHA addresses the cost impacts of final paragraph (a)(8) in the following discussion.

Utility poles. According to the *2007 Utility Data Institute Directory of Electric Power Producers and Distributors,* there are 6,297,596 miles of distribution lines in the United States (Platts, 2007).[140] According to ERG, the most recent mileage estimate available for overhead distribution lines was 4.1 million miles in 1996, or about two-thirds of total line miles (NCAMP, 1997). Considering the maturity of the electric-power industry in the United States, OSHA assumed that there has not been a significant increase in overhead line miles since 1996, with most new lines probably built underground. Assuming one utility pole for every 100 feet of line, OSHA estimated that there are 216,480,000 utility poles in the United States. According to a 2004 highway safety study, this estimate is 2.5 times the number of reported utility poles on highways in 1999 (NCHRP, 2004); therefore, OSHA's estimate appears to be reasonable.

OSHA assumed that employees in the affected industry group—NAICS 2211, Electric Power Generation, Transmission and Distribution—climb one percent of the poles once each year and that it takes a production worker (at an hourly wage of $45.11, including benefits) one minute to inspect the step bolts on a pole. Therefore, the estimated annual cost in the PEA for inspecting step bolts was $1.5 million. In the absence of any comment on the record taking exception to this analysis, in this FEA, OSHA estimated the cost for this requirement to be $1.6 million, allowing for an increase in wages since publication of the NPRM.

Communication structures. For the PEA, ERG estimated that there are roughly 190,000 fixed-ladder structures in the communications industry (see ERG, 2007, Appendix A). This estimate encompasses communication structures with fixed ladders and step bolts. Fixed ladders, however, have an existing requirement for inspection, while step bolts do not. To narrow the estimate to fixed ladders with step bolts, ERG searched an FCC database (Antenna Structure Registration (ASR)) and determined that most communication structures meet at least one of the following criteria:

- Height is 200 feet or higher;
- Height <199 feet if within 5 miles of an airport and fails the glide calculation (part 17 requirement); or
- Height of the extension (*e.g.,* beyond the building roof) is 20 feet or more.

ERG assumed that these structures are more likely to have fixed ladders rather than step bolts. As of May 2007, there were approximately 93,000 structures in the ASR database. Communication structures that are not in the ASR database are smaller and, thus, more likely to have step bolts. ERG calculated that the difference between the total number of structures (190,000) and the number in the ASR database (93,000) would represent the number of structures that could potentially have step bolts. Following ERG's methodology, OSHA's cost model projected that employees climb each of the 97,000 structures with step bolts once a year and that spend one minute inspecting the structure before climbing it. These unit estimates resulted in an annual cost of $0.05 million ($50,000) for NAICS 51 (Information) in the PEA; with 2010 loaded hourly wages ranging from $21.64 to $32.60 for production workers across sixteen four-digit industry codes in NAICS 51, the annual cost is approximately $0.04 million ($43,000) in this FEA (average wages for production workers in NAICS 51 fell from 2008 to 2010).

Sports and performance arenas. According to the 2002 census, there were 1,699 establishments in NAICS 7113, Promoters of performing arts, sports, and similar events, with facilities (Census, 2002). For the PEA, ERG was unable to estimate the number of step bolts at each facility, but instead assumed that employers spent one hour per year inspecting all step bolts at each facility (OSHA assumed that a production worker would conduct the inspection). Therefore, in the PEA, OSHA calculated that annual costs would total $0.034 million ($34,000) for NAICS 7113. For this FEA, annual costs for NAICS 7113 total $0.050 million ($50,000) after updating the number of facilities (2,613) per the 2007 Census and applying the 2010 loaded hourly wage of $19.08 for production workers in NAICS 7113.

Summing costs for utility poles, communication structures, and sports and performance arenas, OSHA estimated in the PEA that the total annual inspection costs for step bolts would be $1.54 million; for this FEA, total inspection costs are $1.72 million.

In the proposal, OSHA requested, but did not receive: (1) Comment on the extent to which employers currently conduct visual inspection [141] of step bolts in the telecommunications and electric-utility industries, and in sports and performance arenas; (2) comment on the assumptions underlying its analysis of costs; and (3) information on the potential impacts of the proposed requirements on climbing surfaces with step bolts safely. Therefore, in this FEA, OSHA adjusted the cost estimates in the PEA only to the extent that wages and the number of establishments changed since it published the PEA.

For this final economic analysis, OSHA included, within the total costs for the final standards for step bolts under final § 1910.24, the costs for repairing or replacing defective step bolts identified in inspections required by the final rule. Based on a review of OSHA 2005 inspection data for the Transportation and Utility sectors, OSHA calculated that 0.34% of inspected step bolts will be found to be out of compliance.[142] Applying this step bolt failure rate to the total number of step bolts in affected NAICS industries (*see* above) yields an estimated 7,727 step bolts repaired or replaced yearly. At a unit cost of $4.50 or $14.75 per step bolt depending on the NAICS code [143] and an installation time of fifteen minutes, annual costs for repair or replacement of step bolts are expected to total approximately $0.3 million. (*See* Ex. [OSHA Excel Workbook], Tab annual_24_stepbolts.).

Summing costs for inspection of step bolts and repair or replacement of defective step bolts, OSHA estimates that the costs for the provisions addressing step bolts under final § 1910.24 will total $2.0 million.

Manhole steps. Final paragraph (b) addresses the design, capacity, and use of manhole steps. As discussed earlier,

[140] The final Electric Power Generation, Transmission, and Distribution; Electrical Protective Equipment standard requires that employers follow the fall protection requirements in 29 CFR part 1910, subpart I (79 FR 20315 (4/11/2014); see § 1910.269(g) in this final rule).

[141] The requirement in the proposed standard that step bolts be ''visually inspected'' was revised in the final standard to read that step bolts be ''inspected''.

[142] Of 38,714 OSHA inspections in 2005, 11,469 resulted in citations, of which 1,301 were in Transportation or Utility industries. One hundred and fifty-six citations in Transportation/Utility referenced Subpart D, and of that total, 15 citations referenced 1910.24, Fixed industrial stairs, the existing standard judged by OSHA to be most closely associated with the final provision for step bolts. (See *https://www.osha.gov/dep/enforcement/enforcement_results_05.html*). Therefore, (11,469 citations/38,714 inspections) * (156 Transportation/Utility citations in Subpart D/1,301 total Transportation/Utility citations) * (15 industrial stairs citations/156 Subpart D citations) = 0.34% probability of a scaffolds citation in Transportation/Utility sector.

[143] NAICS 22: $4.50; NAICS 51, 71: $14.75. See Ex. [OSHA Excel Workbook], Tab annual_24_stepbolts).

three requirements in final paragraph (b)(2) exceed the requirements specified in a national consensus standard, ASTM C478–13, for steps in precast concrete manhole sections:

• Manhole steps must have slip-resistant surfaces such as corrugated, knurled, or dimpled surfaces;

• Manhole steps must be constructed of, or coated with, material that protects against corrosion in an environment where corrosion may occur; and

• The design of manhole steps must prevent the employee's foot from slipping or sliding off the end of the manhole step.

OSHA expects that employers will identify any deficiencies in manhole steps through compliance with final paragraph (b)(3); that provision requires that employers ensure manhole steps are inspected at the start of the work shift, and maintained in accordance with § 1910.22. In estimating the cost of the manhole-step inspection requirement specified by proposed paragraph (b)(3) in the PEA, OSHA estimated there are between 6.6 million and 13.2 million manholes, with a mid-point estimate of 9.9 million, nearly all of which are in water, sewage, and related utilities. Of these manholes, approximately 85 percent, or 8.4 million manholes, are 20 feet or less in depth, while the remainder, 15 percent or 1.5 million manholes, are more than 20 feet in depth. In the PEA, OSHA estimated that employees would enter 10 percent of all manholes, on average, and that it would take one minute to inspect the steps prior to entering the manhole. That analysis resulted in an estimated annual cost of $0.4 million for the industry most affected by this requirement, NAICS 2213 (Water, sewage, and other systems). After updating the wage rate for production workers in NAICS 2213, OSHA's final estimate for inspection of manhole equipment, including steps, totals $0.5 million.

Other industries also use manholes for access, such as electric-power generation, transmission, and distribution (NAICS 2211) and natural-gas distribution (NAICS 2212). ERG, however, had no data on the number of manholes for those industry groups, and although OSHA assumed in the PEA that the costs would be proportional to the number of manholes estimated for water and sewage systems, OSHA was not able to estimate costs for NAICS 2211 and 2212. The Agency requested, but did not receive, public comment in the proposal on the impact of the inspection requirement on these and any other affected industries. Therefore, for this FEA, OSHA assumed that, for NAICS 2211 and 2212, employers seldom encounter manholes, and that when they do encounter manholes, they routinely inspect the manhole steps to ensure that the steps meet or exceed the requirements of the final rule. Therefore, OSHA determined that, under the final standard, any incremental costs for manhole fall protection in NAICS 2211 and 2212 will not be significant.

Employers would incur costs for slip-resistant and corrosion-resistant manhole step surfaces required by proposed paragraphs (b)(2)(i) and (ii) in the future because employers would replace manholes with steps at the end of their useful life. As described above, OSHA estimates there are 9.9 million manholes, of which 85 percent are 20 feet or less in depth and 15 percent are more than 20 feet in depth. In the PEA, OSHA assumed that manholes less than or equal to 20 feet in depth used portable ladders, fixed ladders, and steps in equal shares, resulting in 2.9 million manholes with steps, while it assumed that manholes more than 20 feet in depth used fixed ladders and steps in equal shares, resulting in 0.7 million manholes with steps. This analysis, therefore, indicates that the proposed requirement would affect 3.6 million manholes. The manhole step selected from vendor lists in the PEA had a per-unit cost of $8.50, and OSHA assumed that this price included a 10 percent premium for the steps to meet the proposed requirements (ERG, 2007).

Applying the unit values and methodological assumptions described above for this FEA, OSHA estimated annual replacement costs for steps by applying a 10 percent rate for annual entry of manholes and, of that number, applying a 10-percent rung failure rate. At the incremental cost of $0.85 each (10 percent of $8.50 per rung), the estimated annual replacement cost for steps is $0.03 million ($31,000). OSHA estimated annual replacement costs for all manhole-access equipment (including steps, but excluding manhole covers) assuming a baseline of ten percent and further assuming that employers would replace 5 percent of this equipment each year and would install steps every 16 inches. Accordingly, the estimated yearly manhole replacement cost is $1.6 million, and combining this cost with OSHA's final estimate of costs for inspection of manhole equipment, including steps ($0.5 million), OSHA derives a total cost of $2.1 million for manhole fall protection under the final rule (after rounding).

For this FEA, OSHA has included the labor costs for annual replacement of manhole steps or rungs that are judged to be out of compliance with the final standard. OSHA applied a baseline compliance rate of ten percent for affected utilities, estimated that removal of the old rung or step and replacement with a new one will involve 15 minutes of labor per rung or step (hourly loaded wage of $30.47 for a production worker in NAICS 2213 (water, sewage utilities)), and multiplied unit labor cost times the total number of affected steps, or 1.83 million steps after adjusting for baseline.[144] Combining those cost factors, the Agency estimates that labor costs for removal and replacement of defective rungs or steps will total $13.9 million.

Combining costs for inspections and repair of step bolts and manhole steps, OSHA estimates that the final costs associated with § 1910.24, Stepbolts and manhole steps, will total $16.0 million.

Scaffolds and Rope Descent Systems (§ 1910.27)

Training. Paragraph (b)(2)(ii) of proposed § 1910.27 and paragraph (b)(2)(iii) of the final § 1910.27 specify training requirements for rope descent systems. As described earlier in this ''Costs of Compliance'' section, OSHA attributed costs for any training beyond what is done as a result of the 1991 OSHA memorandum on descent-control devices to final § 1910.30 (see below).

Sound anchorages. In the PEA, costs assigned to ensure sound anchorages as required by proposed § 1910.27(b)(iv) involved: (1) A qualified/competent person who would inspect the rigging and anchorages on buildings annually, and (2) a professional engineer who would certify the soundness of the rigging and anchorages every 10 years.

According to an industry expert contacted by ERG, an estimated 3.0 million window cleaning descents take place annually at 750,000 buildings in the U.S. (ERG, 2007). In the absence of comments on the PEA in the proposal, OSHA is retaining these estimates in this FEA for the inspection and certification requirements specified by final § 1910.27(b)(1)(i). Using data collected by the Department of Energy (DOE) for surveys on energy use, ERG compared this estimate with the number of commercial and residential buildings with four or more floors. The *2003*

[144] 1.06 million steps or rungs in manholes less than 20 ft. deep (28,611 in single-rung manholes and 1,144,440 in multi-rung manholes) + 780,000 steps or rungs in manholes more than 20 ft. deep (7,425 in single-rung manholes and 853,875 in multi-rung manholes) = 2.03 million steps or rungs (100% − 10% baseline) = 1.83 million steps or rungs. See Document ID [OSHA Excel Workbook], Tab materials_24_manholes.

Commercial Buildings Energy Consumption Survey identified about 140,000 commercial buildings nationwide (DOE, 2006). The *2001 Residential Energy Consumption Survey* (RECS) identified about 2.4 million apartment buildings with 5 to 10 floors, 0.9 million apartment buildings with 11 to 20 floors, and an unspecified number of buildings with more than 20 floors (DOE, 2004). Summing the three categories of residential buildings, ERG estimated that there are approximately 3.3 million residential buildings in the U.S. with five or more floors.[145]

OSHA assumed that each commercial building has its windows cleaned annually, thereby accounting for 140,000 of the estimated 750,000 window cleanings per year. If the 3.3 million residential buildings account for the remaining 610,000 cleanings, each of these buildings would, on average, have its windows cleaned every five to six years.

ERG's industry expert estimated that a minimum of 20 percent of the building owners complied with the anchorage-inspection requirement, and that the number was increasing. However, comments submitted to the Agency in response to the 2003 reopening were inconsistent regarding the likelihood that building owners inspect their anchorages on a periodic basis. Amodeo (2003) noted that some clients view ANSI I–14.1 as voluntary and resist having inspections. Kreidenweis (2003) commented that engineers seldom inspect anchorages.[146] In contrast, Lebel (2003) noted that many buildings have a roof plan and identified anchorages (*i.e.* anchorages designated for use in window cleaning), certified by a professional engineer. Zeolla (2003) stated that most buildings that invest in anchors are inspecting them. On the basis of these comments, OSHA in the PEA estimated that 25 percent of the approximately 750,000 buildings cleaned every year undergo anchor certification on a consistent basis.

OSHA's final standard provides more detailed requirements for anchorages used with rope descent systems than the proposed standard. Final § 1910.27(b)(1)(i) states that before any rope descent system is used, the building owner must inform the employer, in writing, that the building owner has identified, tested, certified, and maintained each anchorage so it is capable of supporting at least 5,000 pounds (268 kg), in any direction, for each employee attached. The information must be based on an annual inspection by a qualified person and certification of each anchorage by a qualified person, as necessary, and at least every 10 years.

Therefore, for this FEA, OSHA revised upward its estimate of the baseline level for anchor certification. Accordingly, OSHA believes that the current baseline is at least 35 percent nationwide, and may be much higher in some markets. For example, the owner of Chicago's largest window cleaning company testified in OSHA's public hearings on the NPRM that in Chicago, 60 to 70 percent of building owners provide documentation of anchor certification (Ex. 329 (1/19/2011), p. 218). Similarly, the owner of one of Houston's leading window cleaning companies testified that every building owner that he works with provides certification of anchorages (Ex. 329 (1/19/2011), p. 310). Recognizing that in some smaller markets, anchor certification may not be as widespread or frequent as suggested by these commenters, OSHA applied a baseline level of 35 percent for anchor certification and inspection in estimating costs for this requirement in the FEA.

Therefore, if 65 percent of the approximately 750,000 buildings that have windows cleaned each year must now comply with the final inspection and certification requirement, then OSHA estimates that 487,500 buildings will require annual inspections and decennial certifications. In the PEA, OSHA further assumed that a production supervisor would perform the annual inspections, and that it would take this supervisor one hour to perform the inspection. Annual costs in the PEA for the building inspections totaled $16.7 million; after adjusting wage rates to 2010 levels and applying the revised baseline estimate, OSHA in this FEA estimates annual costs of $14.1 million for the inspection of building roof anchorages.

Table V–23 summarizes the range in costs for a professional engineer to certify building anchorages; OSHA drew these cost estimates from comments in the record, and adjusted the estimates to 2003 dollars using as the deflator the *Consumer Price Index—All Urban Consumers* (BLS, 2007). The costs range from a low of $175 to a high of $2,500; this range probably represents the variation in building sizes, complexity of anchorage arrangements, and regional standards. The median value is $1,000, which is the estimate (in 2005 dollars) applied by OSHA in the PEA.

Table V-23. Estimated Cost for the Certification of Building Anchorages

	Estimated Cost			Estimated Cost (2003 Dollars)	
Source	Low	High	Year	Low	High
Bright, 2007	$300	$1,500	2006	$274	$1,369
Kreidenweis, 2003	$1,000	$2,500	2003	$1,000	$2,500
Lebel, 2003	$175	$1,000	2003	$175	$1,000
Wright, 2003	$400		2003	$400	

Source: ERG, 2007.

[145] Since publication of the PEA, DOE released the results from its 2009 Residential Energy Consumption Survey (RECS) (DOE, 2013). According to the 2009 RECS, 1.9 million apartment buildings have 5 to 10 floors, 0.9 million apartment buildings have 11 to 20 floors, and 0.4 million apartment buildings have more than 20 floors. Summing the three categories of residential buildings, OSHA estimates that there are approximately 3.3 million residential buildings with five or more floors, a total that is identical to OSHA's preliminary estimate of 3.3 million residential buildings with at least five floors. Therefore, OSHA applied its preliminary estimate of tall residential buildings for this final analysis.

[146] OSHA notes that in the 2010 Proposed Rule, the Agency requested comment on inspection and maintenance of rooftop anchorages but nowhere stated that a revised OSHA standard would require an engineer to perform those duties.

A cost breakdown of inspections and anchor installations provided by Valcourt Building Services (Valcourt; Ex. 358) confirms OSHA's preliminary estimate of the cost for the certification of building anchorages; Valcourt's quote for initial roof certification was $1,090. For this final cost analysis, OSHA applied the ratio of the 2011 GDP deflator and the 2005 GDP deflator to its preliminary estimate to derive an estimate of $1,122 in 2011 dollars for initial roof anchor certifications.

Assuming, as indicated earlier, that building owners would certify building anchorages every 10 years, OSHA estimates that 48,750 buildings (one-tenth of 487,500 buildings) would need anchorage certification each year. At an average cost of $1,122 for certification, annual costs for anchorage certification would total $54.7 million.

During the course of decennial certifications and annual inspections, engineers will determine that a small percentage of anchorages will need replacement due to failure to meet building codes or other applicable requirements. For this final economic analysis, OSHA has included the cost for the purchase and installation of replacement anchorages. Based on a review of OSHA 2005 inspection data for the Service industry sector (NAICS 54–81), OSHA calculated that 0.23% of inspected anchorages will be found to be out of compliance.[147] Applying this anchorage failure rate to the annual number of affected buildings, 750,000 building, yields an estimated 1,734 anchors replaced yearly. At a unit cost of $1,000 per anchor[148] and an installation time of three hours, annual costs for replacement of roof anchors are expected to total approximately $1.9 million. (See Ex. [OSHA Excel Workbook], Tab annual_27.)

Summing costs for inspecting and certifying building anchorages and replacing faulty anchors, OSHA estimates that annual costs would total $71.1 million for employer compliance with the anchorage inspection and certification requirements specified by final § 1910.27(b)(1).

RDS distance limitation. Final § 1910.27(b)(2)(i) prohibits the use of a rope descent system (RDS) for heights greater than 300 feet (91 m) above grade unless the employer can demonstrate that it is not feasible to access heights above 300 feet by any other means or that these other means result in a greater hazard to employees than an RDS. Based on comments in the record (Exs. 126; 163; 219; 222; 358), and as discussed earlier in this section, OSHA expects that there are 1,300 buildings over 300 feet tall subject to this limitation. In written testimony, Valcourt Building Services estimated that limiting the RDS distance to 300 feet would lead to an increase in window cleaning costs ranging from 10 to 20 percent (Ex. 358, p. 4). In a comment submitted in response to the 2003 Notice, Braco Window Cleaning Service, Inc. estimated that the 300-ft. limit to RDS would lead to an increase in prices of 30 percent for building owners (Kreidenweis, 2003). As noted earlier in this analysis of costs, Corporate Cleaning Services estimated that the RDS distance limit would increase costs for use of suspended scaffolds by up to 30 percent (Ex. 126). Combining the Braco and Corporate Cleaning estimates of percentage cost increase with the Valcourt range of percentage cost increase, OSHA estimates that if a typical window cleaning job on a tall building takes 24 hours for a 4-person crew (production worker loaded wage in NAICS 5617—Services to Buildings and Dwellings is $19.39), then applying the midpoint of the range of 10 percent to 30 percent (*i.e.,* 20 percent) to the number of affected buildings results in an annual increased labor cost of $484,000.

In addition to the labor costs associated with this distance limitation, a small fraction of affected buildings will now need to acquire suspended scaffolds (*i.e.,* swing stages) or powered platforms to service windows at distances over 300 feet from the building roof. OSHA believes that building owners will elect to purchase or contract with window cleaning services to purchase the least expensive system that delivers the appropriate level of safety. According to Valcourt, transportable swing-stage systems are available for $25,000 per unit, and that approximately 10 percent of the affected buildings that they service would need to purchase such units (Ex. 358, p. 4). Therefore, applying the unit cost for suspended scaffolds to 10 percent of affected buildings (10 percent of 1,300 buildings, or 130 buildings), OSHA estimates that employers will incur first-year costs of $3.25 million. Annualized over 10 years, equipment costs associated with the RDS height limitation will total $463,000.

Duty To Have Fall Protection and Falling-Object Protection (§ 1910.28)

Table V–24 lists the requirements in this section that are likely to result in new cost burdens on employers.

[147] Of 38,714OSHA inspection in 2005, 11,469 resulted in citations, of which 1,938 were in Service industry sector (NAICS 54–81). One hundred and sixty-two citations in the Service industry sector referenced Subpart D, and of that total, 15 citations referenced 1910.28, Scaffolds, the existing standard judged by OSHA to be most closely associated with the final provision for anchorages stabilizing suspended scaffolds. (See *https://www.osha.gov/dep/enforcement/enforcement_results_05.html* and Document ID [OSHA Excel Workbook], Tab Compliance.) Therefore, (11,469 citations/38,714 inspections) * (162 Service industry sector citations in Subpart D/1,938 Service industry sector citations) * (15 Scaffolds citations/162 Subpart D citations) = 0.23% probability of a scaffolds citation in Service industry sector.

[148] Google shopping: Grainger roof anchor.

Table V-24
New Requirements in Final §1910.28, Duty to Have Fall Protection

Paragraph	Subject
§1910.28(b)(1)	The employer must protect employees working on a surface from falls of four feet or greater to a lower level by any of the controls detailed in this paragraph.
§1910.28(b)(4)(ii)(C)	Those employee have been trained [on dockboards] in accordance with §1910.30.
§1910.28(b)(9)	Requirements for proper fall protection systems for fixed ladders that extend more than 24 feet above a lower level; prohibits after specified dates the use of cages and wells for the purpose of fall protection in the absence of personal fall protection systems or ladder safety systems.
§1910.28(b)(10)(ii)	Employees who climb fixed ladders on billboards not equipped with fall protection must receive training and demonstrate the physical capability to perform the necessary work in accordance with §1910.29(h), and meet other requirements specified for qualified climbers; prohibits use of qualified climbers two years after publication of the final rule. Costs associated with training assigned to final §1910.29(h).
§1910.28(b)(13)	For work performed on low-sloped roofs that are 4 feet (1.2 m) or more above a lower level, the employer must protect each employee from falling by using a guardrail system, safety-net system, travel restraint system, personal fall arrest systems, or designated areas; requirements for fall protection depends on the distance the employee is from the roof edge and the type of work being performed.
§1910.28(b)(14)	For slaughtering facility platforms, the employer must protect each employee from fall hazards on the unprotected working side of a platform that is 4 feet (1.2 m) or more above a lower level by using a guardrail system or a travel restraint system. When the employer can demonstrate the use of a the use of a guardrail or travel restraint system is not feasible, the work may be done without guardrails or a travel restraint system provided: (A) The work operation for which fall protection is infeasible is in process; (B) Access to the platform is limited to authorized employees; and (C) The authorized employees are trained in accordance with §1910.30.

Table V-24
New Requirements in Final §1910.28, Duty to Have Fall Protection (continued)

Paragraph	Subject
§1910.28(b)(15)	Employers having walking-working surfaces 4 feet (1.2 m) or more above a lower level not otherwise addressed by final subpart D must protect employees from falling by using a guardrail system, safety-net system, travel restraint system, or personal fall arrest system.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

The following discussion presents, by requirement, the details of OSHA's cost analysis for this section.

Chimney-cleaning services. OSHA received comments indicating that the chimney cleaning industry would incur additional costs, when compared to its current practices, and therefore OSHA has included these costs in its analysis. To protect chimney sweeps from falls after they ascend to residential and commercial roofs using ladders or lifting devices, OSHA's cost model determined that, for the roughly 6,000 chimney-sweep companies nationwide, affected employers will use a roof anchor kit that includes a 14-inch steel roof anchor, 50-foot lifeline and hardware assembly, and a 3-foot shock-absorbing lanyard and full-body harness with a unit cost of $368. In addition, employers will need two harnesses, at $118 per unit, to equip the typical two-man or three-man crews involved in each job; the cost model assigned three calls daily for each chimney-sweep crew. Based on comments in the record (Ex. 329 (1/18/2011), pp. 97, 101, 162, 176–178), OSHA estimates that 10 percent of chimney-sweep employers currently protect their workers from falls in accordance with the requirements of this final standard. In addition to the initial equipment costs annualized over 10 years, employers will incur the following labor and equipment costs:

- Pre-installation of anchors requiring one-half hour of a production worker's time, at a loaded wage = $19.39/hour, per anchor;
- Monthly replacement of roof anchors due to deterioration; and
- A production worker's time of five minutes per job to use the lifeline and lanyard system (productivity loss).

Combining annualized initial costs and annual recurring costs for fall protection of chimney sweeps (NAICS 56179), OSHA estimates that the new costs associated with this industry will total $12.7 million, or $2,124 per chimney-sweep company each year.[149]

In post-hearing comments, the National Chimney Sweep Guild stated that compliance with the proposed standard is infeasible and would pose a greater hazard during sweep activities typically performed by their members (Ex. 342, p. 3). However, the sweeps guild did not provide information or data on the extent of the infeasibility that the requirement would impose on NCSG members. Indeed, OSHA notes that NCSG's quoted price for the initial installation of a roof anchor-system ($578) (Ex. 365) is consistent with OSHA's estimate of combined up-front cost for (1) a roof anchor kit ($368), (2) monthly replacement of a worn roof anchor ($67) per company, (3) a full-body harness ($118) for each of the sweeps, and (4) labor for installation of each new or replaced anchor ($18); Section H of this FEA demonstrates that these costs are feasible economically.

In response to NCSG's concerns, OSHA notes that final § 1910.28(b)(1) provides an exception to the duty for fall protection for work on residential roofs when an employer can demonstrate that it is not feasible, or creates a greater hazard, to use guardrail, safety-net, or personal fall arrest systems. In such a case, the employer must develop and implement a fall protection plan that meets the requirements of 29 CFR 1926.502(k) and training that meets the requirements of 29 CFR 1926.503(a) and (c). Based on comment in the record by NCSG (Exs. 342; 365), OSHA determined that, for a small percentage of chimney-sweep jobs, chimney-sweep employers will find it infeasible to install roof anchors or other fall protection systems for technological, contractual, or other reasons. In these cases, the employer must develop a fall protection plan and provide training in accordance with the requirements in subpart M of the construction standards cited above. For this FEA, OSHA did not estimate the costs for fall protection plans and training because it believes that these costs will not exceed the equipment and labor costs described previously. Therefore, OSHA determined that the total cost for employers to protect their employees from fall hazards during chimney-sweep jobs ($12.8 million, or $2,128 per chimney-sweep company) is the maximum or worst-case value.

Dockboards. Final § 1910.28(b)(4) would require installation of guardrails or handrails to protect employees on dockboards from falls of four feet or more to a lower level. Employers with dockboards having maximum heights that are less than four feet would not incur costs under this paragraph. This final provision exempts dockboards presenting a fall hazard of four feet up to 10 feet from this requirement when the employer uses the ramp exclusively for material-handling operations with motorized equipment. To qualify for the exception, employers must train their employees in accordance with § 1910.30. OSHA discusses the training costs for this provision later in this section.

---

[149] Initial equipment (capital) cost = roof anchor kit * no. of chimney sweep companies * (1 − industry baseline) + full body harness unit cost * no. of chimney sweep companies * sweeps needing harness * (1 − industry baseline) = $368 * 6,000 * (100% − 10%) + $118 * 6,000 * 2 * (100% − 10%) = $3,261,600

Initial system installation = no. of chimney sweep companies * time to pre-install anchors * production worker loaded wage * (1 − industrybaseline) = 6,000 * 0.5 hour * $19.39 * (100% − 10%) = $52,581.

Annual costs = roof anchor unit costs * no. of chimney sweep companies * monthly anchors per company * months per year + production worker loaded wage * lifeline productivity loss * sweep calls per day * workdays per year * no. of chimney sweep companies * (1 − industry_baseline) = $66.95 * 6,000 * 1 * 12 + $19.39 * .083 hours * 3 * 250 * 6,000 * (100% − 10%) = $4,820,400 + $6,572,621 = $11,393,021.

Additional, relatively minor training and other costs related to hazard communication and rule familiarization bring the total annualized costs for chimney cleaning services to approximately $12.7 million.

ERG estimated that a substantial proportion of dockboards would either not incur costs due to height or would fall under the exception. Thus, OSHA believes that any costs incurred under this provision are unlikely to be substantial. In the proposal, OSHA requested, but did not receive, comment on the potential impacts associated with the duty to protect employees on dockboards from falls. Therefore, OSHA applied its preliminary estimate of non-substantial costs associated with dockboard fall protection in this final analysis.

Fixed Ladders. To address fall safety on fixed ladders that extend more than 24 feet above a lower level, as specified under final § 1910.28(b)(9), OSHA estimates that, of the approximately 3.1 million fixed ladders over 20 feet in height (ERG, 2007, Table A.1), around 328,000 fixed ladders are between 24 and 30 feet high. Beginning 20 years after publication of the final rule, employers would face additional requirements for fixed ladders beyond those found in voluntary consensus standards (notably ANSI–ASC A14.3–2008[150]) and the existing OSHA standards. Accordingly, employers must provide workers making climbs of 24 to 30 feet on fixed ladders 20 years after publication of the final standard with additional protections not currently provided by existing voluntary and mandatory industry standards. While much of general industry uses the affected ladders, this use occurs mainly in manufacturing and industrial buildings (105,000 ladders), silos (85,000), water tanks and water towers (53,000), ski lift towers (29,000), communications towers (25,000), and six other types of structures with fixed ladders (30,000) (see Ex. [OSHA Excel Workbook], Tab retrofit_28). The total for all affected fixed ladders is approximately 328,000 (after rounding).

OSHA assigned costs for fall protection on fixed ladders as follows:

- The Agency distributed ladders among NAICS codes according to the number of affected establishments in the industry represented by a NAICS code; for example, if the 85,000 silos with fixed ladders were primarily in NAICS 3111, Animal Food Manufacturing, OSHA distributed the costs of ladder safety systems among the 1,817 establishments in NAICS 3111;
- OSHA averaged the cost of two leading ladder safety systems (DBI, Miller; average total upfront cost = $983, including two-hour installation by a production supervisor; the systems are 30 feet in length, and include the cable, cable sleeve, and carabiner);
- The Agency estimated that fixed ladders have an average life of 30 years, that replacement of the fixed ladders would occur evenly across a 30-year period (10,921 ladders replaced each year by new ladders equipped with a safety system), and, with a phase-in date 20 years after publication, some ladders still would require replacement anywhere from one to 10 years after the 20-year phase-in date;
- OSHA calculated first-year costs, then used a seven percent discount rate to annualize over 10 years; first-year costs total $8.5 million, and annualized costs total $1.2 million;
- Billboards with fixed ladders greater than 20 ft. were each assigned a 30-ft. ladder safety system; initial costs of $20.1 million were annualized over ten years, resulting in annualized costs of $2.9 million.

Therefore, the initial costs for fall protection on fixed ladders total $28.6 million, with annualized costs of $4.1 million.

Outdoor advertising (billboards). This provision, § 1910.28(b)(10), covers the use of fixed ladders on billboards serviced by the outdoor-advertising industry. Based on discussions with the Outdoor Advertising Association of America, ERG estimated that the number of billboards with fixed ladders over 20 feet is approximately 20,500 (ERG, 2007). Employees climb billboards from one to more than 12 times a year, whenever they have to change the copy on the billboard. For the purposes of estimating costs, ERG assumed that an employee climbs each billboard an average of six times a year, totaling 123,000 climbs (20,500 billboards × six climbs). Per the requirement in § 1910.140(c)(18) that personal fall protection systems must be inspected before initial use during each workshift, each time an employee climbs a billboard, ERG estimated that the employee takes two minutes to inspect the ladder safety system (246,000 minutes or 4,100 hours).[151] Employees who climb billboards are generally in NAICS 5418 (Advertising and Related Services). In 2010, the average wage, including benefits, for this category was $22.76/hr. Thus, the estimated total cost to inspect ladder safety systems on billboards is approximately $93,000 per year.

As specified in § 1910.28(b)(10)(ii), until the requirement for fall protection on fixed ladders in outdoor advertising becomes effective two years after publication of the final standard, employees who routinely climb fixed ladders on billboards must satisfy the criteria for qualified climbers found in § 1910.29(h), *i.e.,* must undergo training, demonstrate the capacity to perform the necessary climbs safely, use a body harness equipped with an 18-inch rest lanyard, have both hands free of tools or material when ascending or descending a ladder, use a fall protection system upon reaching the work position. For the purpose of estimating costs, OSHA determined that all employees who climb billboards are qualified climbers and that the training for a qualified climber includes instruction on having both hands free while ascending or descending the ladder (see final § 1910.29(h)(2)). After the two-year phase-in period, employers will protect employees from fall hazards using on billboards using ladder safety systems, cages or wells, and personal fall arrest systems, which will require substantively identical training to the training specified by final § 1910.29(h)(2). For the PEA, OSHA assigned the costs to train a qualified climber under proposed § 1910.28(b)(10)(v) through § 1910.29(h); for this FEA, OSHA applied the same cost methodology (*i.e.,* assigned costs to § 1910.29(h)).

Low-slope roofs. Final § 1910.28(b)(13) standard requires employers to protect employees working on low-sloped roofs and exposed to fall hazards that are four feet (1.2 m) or more to lower levels. If the employee is working less than six feet (1.8 m) from the edge of the roof, the employer must use a guardrail system meeting the requirements of § 1910.29 of the subpart, a travel restraint system meeting the requirements of subpart I of the part, or a personal fall arrest system meeting the requirements of subpart I of the part. If the employee is working at a distance more than six feet (1.8 m) but less than 15 feet from the roof's edge, employers must protect the employees using a guardrail system meeting the requirements of § 1910.29 of the subpart, a travel restraint system meeting the requirements of subpart I of this part, a personal fall arrest system

[150] In ANSI–ASC A14.3–2008, American National Standard for Ladders—Fixed—Safety Requirements, the following provisions lead OSHA to infer that the use of ladder safety systems for ladder heights above 24 feet has become accepted industry practice.

4.1.2 A cage or ladder safety system shall be provided where the length of climb is less that [sic] 24 feet but the top of the ladder is at a distance greater than 24 feet above ground level, floor, or roof (See Fig. 3).

4.1.3 A ladder safety system shall be provided where a single length of climb is greater than 24 feet . . . .

[151] The costs for inspecting ladder safety systems prior to use in outdoor advertising are separate from the costs for overall inspection of fall protection systems discussed below under § 1910.140(c)(18).

meeting the requirements of subpart I of this part, or, if the work is infrequent and temporary, work in a designated area meeting the requirements of § 1910.29 of the subpart. Finally, if the work is taking place 15 feet or more from the edge of the roof, the employer is not required to provide fall protection or use a designated area provided the work is both infrequent and temporary and the employer implements and enforces a work rule prohibiting employees from going within 15 feet (4.6 m) of the roof edge without using fall protection in accordance with paragraphs (b)(13)(i) and (ii).

To estimate compliance costs for this provision, OSHA determined that the most significant incremental burden involves inspections or assessments of rooftop conditions prior to performing any work on the roof. The Agency assumed that most work on rooftops is infrequent and temporary, and occurs in areas that are six to 15 feet from the roof edge, thereby eliminating the need for guardrails, travel restraint systems, and personal fall arrest systems, and using designated areas instead.

Similarly, for work performed 15 feet (4.6 m) or more from the roof edge, OSHA anticipates that most employers will adapt, at minimal cost, existing company work rules and training programs to comply with the final rule. As discussed earlier in this Preamble, OSHA's choice of regulatory text for § 1910.28(b)(13)(iii) makes the final rule consistent with OSHA policy specified in a series of Agency interpretations of the construction fall protection standard for work performed 15 feet or more from the edge of a roof (see, *e.g.,* letter to Mr. Anthony O'Dea (12/15/2003);[152] letter to Mr. Keith Harkins (11/15/2002);[153] letter to Mr. Barry Cole (5/12/2000) [154]).

For work six feet or less from the roof edge with extensive fall exposure, and for work that is less than 15 feet from the edge that is not infrequent and temporary, OSHA believes that, where feasible, the majority of employers currently provide conventional fall protection (guardrails, travel restraint systems, or personal fall arrest systems) and therefore compliance costs will be insubstantial. OSHA bases this estimate in part because the final rule is consistent with provisions in the construction standard that require employers to provide conventional fall protection for workers exposed to unprotected sides and edges, and most leading edges (§ 1926.501(b)(1) and (2)). In addition, OSHA recognizes that awareness of existing consensus standards on fall protection—including ANSI A1264.1–2007, Safety Requirements for Workplace Walking/Working Surfaces and Their Access; Workplace, Floor, Wall and Floor Openings; Stairs and Guardrail Systems—have heightened use of conventional fall protection at roof perimeters and will minimize any incremental costs associated with final § 1910.28(b)(13).

Assuming one affected rooftop per affected establishment, OSHA estimated that twice per year, with the exception of establishments in agriculture, forestry, fishing, and hunting, affected employers would direct a production worker to conduct a five-minute assessment of all fall-related conditions on the low-slope roofs of facilities (the inspection time includes any follow-up assessment addressing safety concerns). Summing these labor costs across all affected NAICS codes, OSHA estimates that employer expenditures for inspection of low-slope roofs will total $34.2 million annually in this FEA.

A small percentage of roof-top inspections are expected to reveal to employers the need for conventional fall protection near unprotected sides and edges. Basing calculations on 2005 OSHA inspection data, OSHA estimates that, depending on the NAICS sector, the probability of identifying an unguarded hazard during a rooftop climb and inspection will range from 0.07% to 0.28%. Applying these probabilities to the number of inspections (described above) and assuming that any enhancement of fall safety will be roughly equivalent to a fifteen-minute labor expense in the installation of an anchor ($67) suitable for use with a personal lifeline and full-body harness (fully supplied at the baseline), OSHA estimates that the costs for addressing hazards identified in rooftop climbs and inspections will total $1.85 million. (See Ex. [OSHA Excel Workbook], Tab annual_28.)

Summing employer expenditures for roof inspections and the costs of correcting the hazards identified in those inspections, total costs will be approximately $36.1 million.

Slaughtering facility platforms. Final § 1910.28(b)(14) is a new provision not in the proposal that requires employers to protect each employee on the unprotected working side of a slaughtering facility platform that is four feet (1.2 m) or more above a lower level from falling by using guardrails or travel restraint systems. When the employer can demonstrate that using guardrail systems or travel restraint systems is not feasible, employees may perform the work without guardrails or a travel restraint system provided that the work operation for which guardrails or travel restraint systems are infeasible is in process, the employer limits access to the platform to authorized employees, and trains the authorized employees in accordance with § 1910.30.

To derive compliance costs for this provision, OSHA estimated that, of the 3,817 establishments in NAICS 3116, Animal slaughtering and processing, 25 percent are currently in compliance. The Agency based this estimate on comments by the United Food and Commercial Workers at the OSHA public hearing (Ex. 329 (1/20/2011), pp. 63, 90) indicating that a few large meatpacking plants already installed travel restraint systems for fall protection on slaughter (kill) platforms. OSHA believes that, while the meatpacking plants identified in the rulemaking record determined that travel restraint systems are technologically feasible, other affected plants will choose instead to install guardrails at a cost that is potentially lower than the cost of travel restraint systems. Therefore, the Agency estimated that, on average, 10 platforms per establishment will need fall protection and that each establishment will install two portable guardrails, at an initial cost of $256 per guardrail, on the unprotected working side of slaughter-facility platforms stations, with the installation taking 10 minutes of labor per guardrail (production worker wage = $17.19/hour). OSHA estimates that initial costs for 2,863 establishments in NAICS 3116 will total $14.7 million. Annualized over 10 years at a seven percent discount rate, compliance costs will sum to a little under $2.1 million per year for employers in animal slaughtering and processing facilities.

Walking-working surfaces not otherwise addressed. In final § 1910.28(b)(15), OSHA introduces a duty to provide fall protection for surfaces not otherwise addressed in this section. Among the surfaces affected by this catch-all paragraph are stepbolts. OSHA determined that this requirement for protection on stepbolts will primarily affect establishments in NAICS 51, Information, and NAICS 7113, Promoters of performing arts, sports, and similar events, and that the preferred fall protection will be ladder

[152] OSHA letter to Mr. O'Dea available at: *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24682.*

[153] OSHA letter to Mr. Harkins available at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24552.*

[154] OSHA letter to Mr. Cole available at: *https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24802.*

safety systems. For NAICS 51, OSHA estimated there were 97,000 step-bolt structures requiring ladder safety systems across 16 four-digit NAICS industries (6,063 structures per NAICS industry). After accounting for significant baseline use of ladder safety systems (80 percent in OSHA's estimation), the Agency assigned costs for the purchase and installation of these systems at $908/unit. Similarly, for NAICS 7113, OSHA assigned costs for the purchase and installation of ladder safety systems ($908/unit) for 2,613 structures with stepbolts (the estimated baseline use of ladder safety systems was again 80 percent). Annualized over 10 years at a seven percent discount rate, costs were $2.7 million.

Fall Protection Systems and Falling-Object Protection—Criteria and Practices (§ 1910.29)

For proposed § 1910.29, OSHA determined that two requirements would impose significant new burdens on employers. Below are the details of OSHA's approach to estimating costs for this section of the standard.

Inspection of manila, plastic, or synthetic rope. The final regulatory text for § 1910.29(b)(15) requires inspection of manila, plastic, or synthetic rope used as rails and specifies that employers conduct such inspections as frequently as necessary to ensure that the rope meets the strength requirements specified in that section. The estimated inspection cost, then, would be the product of the:

• Number of guardrail systems;
• Proportion that use manila, plastic, or synthetic rope used as toprails or midrails;
• Number of inspections per year;
• Time required for each inspection (hours); and
• Average wage per inspector per industry ($/hr.).

For the PEA, OSHA lacked data on the proportion of guardrail systems that use manila, plastic, or synthetic rope as top rails or midrails. However, OSHA considered it likely that employers would include the inspection of these alternate materials for toprails and siderails in the inspections performed under § 1910.22, the general inspection requirements for walking-working surfaces for safety. Therefore, OSHA allocated no additional costs to this provision in the PEA.

For this FEA, OSHA estimated that a small percentage of employers would identify defective rope (in rail systems) as a result of the inspections implied by final § 1910.29(b)(15) and that these employers would purchase and install replacement rope. At $2.12 per foot for an estimated 20-foot (rescue-grade) guardrail rope with a working load limit of 900 lb. to 1,195 lb., and after accounting for baseline compliance with current floor guarding regulations (see Ex. [OSHA Excel Workbook], tab annual_29_b), and with an installation time of 10 minutes, OSHA estimates that the costs for repair or replacement of guardrail rope will total $0.67 million.

Outdoor advertising. Final § 1910.29(h) concerns the use of qualified climbers in the outdoor-advertising/billboard industry. Qualified climbers are an option available only to this industry for two years following publication of the final standard. Final paragraph (h) requires that qualified climbers:

• Be physically capable of performing the climbing duties (§ 1910.29(h)(1));
• Undergo training or an apprenticeship program (§ 1910.29(h)(2));
• Be retrained as necessary (§ 1910.29(h)(2));
• Have the skill necessary to climb ladders, as demonstrated through formal classroom training or on-the-job training, and personal observation (§ 1910.29(h)(3)); and
• Perform climbing duties as one of their routine work activities (§ 1910.29(h)(4));

For the purposes of estimating costs, OSHA in the PEA assumed that 90 percent of the employees in the outdoor advertising industry who climb already had training as qualified climbers. Thus, there would be one-time costs associated with qualifying the remaining 10 percent of climbers. OSHA annualized these costs over 10 years at a rate of seven percent. The industry incurs annual costs for:

• Classroom training of new employees (§ 1910.29(h)(2) and (h)(3)));
• Retraining of employees as necessary (§ 1910.29(h)(2));
• Employer performance observation (§ 1910.29(h)(3)); and
• Administrative costs to document training and retraining.

For calculating one-time costs in the PEA, OSHA estimated that 713 out of 7,132 of the employees (10 percent) who perform construction, installation, maintenance, and repair operations in NAICS 5418 (Advertising and related services) would need to undergo training to be qualified climbers.

The National Association of Tower Erectors developed a climber-training standard with varying levels of expertise (authorized, competent, and competent rescuer), but does not offer training itself (NATE, 2006). The OSHA Training Institute offers three-day and four-day training courses in fall protection, the fees for which range from $549 to $795. Commercial courses in fall protection reviewed by ERG on the internet in the mid-2000s ranged from one to five days with costs ranging from $500 to $2,500 per course (ERG, 2007). The prices include materials and the trainer's time.

For the purpose of estimating costs, OSHA in the PEA estimated that employers could meet the requirements in the proposed standard by sending employees to a four-day training course at a cost of $1,500 for the course and $684 for the employee's time (based on an average wage of $21.39/hour for 32 hours), for a total of $2,184. Furthermore, the Agency estimated that the administrative tasks to document the training would require 15 minutes of a supervisor's time ($36.22/hour) for every 10 employees trained. OSHA in the PEA estimated that the one-time cost to qualify the estimated 713 climbers would be $1.56 million, and the annualized cost would be $0.22 million per year.[155] For this FEA, the Agency updated the employee's wage rate ($22.76/hour), the supervisor's wage rate ($36.07/hour), and the number of affected employees (10 percent of 8,000, or 800 employees), resulting in an estimated one-time cost of $1.78 million, with an annualized cost of $0.25 million at a seven percent discount rate over 10 ten years.

For the purposes of estimating the annual costs associated with this provision, OSHA, consistent with the method presented in the PEA, applied the following unit estimates and assumptions:

• A supervisor observes each of the estimated 8,000 qualified climbers for 15 minutes per quarter or 1 hour per qualified climber per year;
• A supervisor spends 15 minutes per year per qualified climber on administrative tasks for training and retraining;
• Ten percent of the climbers need retraining;
• Retraining consists of an eight-hour refresher course at a cost of $500; and
• The turnover rate is 47 percent;
• In the absence of this rule, no newly-hired workers would receive training that is compliant with the rule's requirements.

Based on these estimates and assumptions, OSHA determined that the annual cost of this provision would be $12.2 million, of which $11.6 million

[155] Employers may offer on-the-job training, and would presumably do so if the costs are less than the costs of commercial training. Thus, the estimated costs presented here may be conservative.

involves training new hires.[156] OSHA requested comment in the proposal on the assumptions and unit-cost estimates that it applied in its analysis of costs for qualified-climber training. In a post-hearing comment, the Outdoor Advertising Association of America (OAAA) provided data on the estimated number of sign structures (120,000 units), professional climbers (1,800 climbers), and climbs on fixed ladders (14,400 climbs per day) for OAAA member companies (Ex. 260). Although OAAA's figure for the number of climbers (1,800) is considerably lower than OSHA's estimate (8,000), OSHA notes that not all outdoor advertisers are OAAA members. Without further data on the number of professional climbers in the industry, OSHA was not able to further refine its preliminary estimate that all employees in NAICS 5418, Advertising and Related Services, involved with construction, installation, maintenance, and repair operations would be affected by the requirement for qualified-climber training. Therefore, other than applying the Census-related update from 7,132 affected workers to 8,000 affected workers, OSHA applied the PEA methodology to this FEA without change.

Training Requirements (§ 1910.30)

Fall hazards and equipment hazards. Final § 1910.30(a) addresses training with respect to fall hazards for employees who use personal fall protection systems or who must receive the training specified elsewhere in subpart D before the employer exposes employees to a fall hazard. This provision requires that a qualified person conduct the training and the training:

- Include the types of fall hazards found in the workplace;
- Describe the procedures employees are to follow to minimize these hazards;
- Address the correct and safe procedures for installing, inspecting, operating, maintaining, and disassembling the personal fall protection systems the employee uses; and
- Address the correct and safe use of personal fall protection systems and equipment specified by this section, including, but not limited to, proper hook-up, anchoring, and tie-off techniques, and methods of equipment inspection and storage, as specified by the manufacturer.

Final § 1910.30(b) addresses training with respect to equipment hazards. In particular, employers must train employees in the proper:

- Care, storage, use, and inspection of equipment covered by subpart D before their use in accordance with recognized industry practices and manufacturer's recommendations;
- Placement and securing of dockboards to prevent unintentional movement;
- Rigging and safe use of rope descent systems; and
- Set-up and use of designated areas.

OSHA included the costs for training required under final § 1910.27(b)(2) (Use of rope descent systems), § 1910.28(b)(1) (Unprotected sides and edges), and § 1910.28(b)(4) (Dockboards) in the cost estimate for final § 1910.30.

In a previous analysis, ERG estimated the number and percent of employees by industry that use personal protective equipment (PPE) such as body belts and body harnesses (ERG, 1999; Ex. 318). For the PEA, OSHA applied these industry-specific percentages to the number of at-risk employees in 2007 to estimate the number of employees that need the type of training required under § 1910.30. For this FEA, OSHA applied the preliminary industry-specific PPE percentages to the number of at-risk employees to derive an estimate of employees requiring PPE training.

Some companies already provide this training. OSHA used data from the NOES survey (described above) to estimate, by NAICS code, the level of training already provided. For the purpose of estimating costs in the PEA, OSHA assumed that employees not already trained and using personal fall protection systems would undergo six hours of training on fall hazards and equipment hazards to address the requirements in proposed § 1910.30(a) and (b)(1). For this FEA, OSHA applied the PEA's per-employee estimate of six hours of training for determining the costs of final § 1910.30(a) and (b)(1).

In the PEA cost model, OSHA assigned employees in the utility, sewage, and communications industry sectors (NAICS 2211–2213 and 5121–5191) an additional half-day of training to specifically address the proposed requirements for step bolts (for a total of 10 hours of training). Similarly, the Agency assigned employees in NAICS codes 4881 through 4884 (support activities for transportation by air, rail, water, and road, respectively) a half-day of training specifically to address requirements for dockboards. OSHA assigned window washers, found in NAICS 5617 (Services to buildings and dwellings), an entire day of training on rope descent systems (for a total of 14 hours of training). OSHA applied these preliminary training-cost estimates to this FEA. In addition, for this FEA, OSHA applied an hour of training on the use of fall protection equipment to employees in every NAICS code, except those codes listed immediately above, for which OSHA's PPE cost survey (ERG, 1999) indicated the presence of employees who use fall protection equipment.

As specified in the final standard, a qualified person provides the required training. For the purpose of estimating costs, OSHA (as it did in the PEA and also in this FEA) assumed that the qualified person conducts the training at the workplace for a fee of $500 per day. The training fee includes instruction, travel, lodging, and per diem expenses, as well as hand-out materials. Employers incur this fee for every 10 employees (*i.e.,* a class size of 10 employees). OSHA estimates that a supervisor would spend 15 minutes per employee per year performing administrative tasks such as maintaining and updating training records.

The estimated total initial one-time cost for final § 1910.30(a) and (b) is $123.6 million. The annualized cost over 10 years at a discount rate of seven percent is $17.6 million. There also is an annual cost for training new employees on PPE and dockboards. OSHA applied BLS hires rates to estimate the annual number of new employees requiring training;[157] the estimated annual cost for this requirement is $54.6 million.

Ameren Corporation appeared to believe that OSHA's time estimates of course durations used in its cost algorithms for training implied that the Agency would enforce minimal time standards for training. Ameren stated, ''There should be no time requirement. This moves away from performance based completely. The training should

[156] OSHA assumes that qualified climbers could not transfer their training from one employer to another employer.

[157] The BLS 2007 hires rates applied in the analysis are as follows: Mining and Logging (NAICS 1133, 2111)—45.4 percent; Durable Goods Manufacturing (NAICS 321, 33)—29.8 percent; Nondurable Goods Manufacturing (NAICS 31, 322, 323, 324, 325, 326)—36.9 percent; Transportation, Warehousing, and Utilities (NAICS 22, 48–49)—36.3 percent; Wholesale Trade (NAICS 42)—34.9 percent; Retail Trade (NAICS 44–45)—58.8 percent; Information (NAICS 51): 31.2 percent; Finance and Insurance (NAICS 52): 31.7 percent; Real Estate and Rental Leasing (NAICS 53)—47.6 percent; Professional and Business Services (NAICS 54–56)—63.1 percent; Educational Services (NAICS 61)—30.7 percent; Health Care and Social Assistance (NAICS 62)—35.4 percent; Arts, Entertainment, and Recreation (NAICS 71)—81.8 percent; Accommodation and Food Services (NAICS 72)—82.8 percent; and Other Services (NAICS 81)—41.9 percent. The annual number of affected new employees totals 233,328 within 6.9 million affected establishments, or 0.03 employees per affected establishment.

cover the elements of all the fall protection systems that an employee will encounter and the uses, restrictions, etc. of each'' (Ex. 189). In response, OSHA notes that the time estimates used in its cost analyses for training and other requirements for a safety program are only to illustrate the Agency's estimates of typical or average times to complete these requirements, and that actual times may vary substantially from these estimates.

Retraining. Final § 1910.30(c) concerns the need to retrain employees whenever the employer has reason to believe that retraining is necessary for safety purposes. This need can occur because of changes in the workplace, fall protection systems, or fall protection equipment that render previous training invalid; or finding that employee knowledge or use of fall protection systems or equipment is no longer adequate. In the PEA, OSHA assumed that retraining already occurs at establishments that have training programs in place. For the remaining employees, OSHA assumed that five percent require retraining each year. OSHA estimated that the retraining course consists of a one-hour supervisor-led refresher course that focuses on the areas in which the employee is deficient. For this FEA, the estimated annual costs for retraining total $2.0 million.

b. Estimated Compliance Costs by Provision in the Final Standard for Subpart I

Hazard assessment. Final § 1910.132(d) requires an employer to assess the workplace to determine if hazards are present or are likely to be present. In the PEA, OSHA assumed that the time needed by an employer to walk around the workplace, assess the potential hazard, and determine the appropriate PPE and training needed by the employees would vary with the size of the establishment. OSHA used the number of employees as an indicator of establishment size. OSHA estimated the time required for the hazard assessment as:

- 1 to 19 employees: 1 hour
- 20 to 99 employees: 2 hours
- 100 to 499 employees: 3 hours
- 500+ employees: 4 hours

Furthermore, OSHA assumed:

- All establishments in the forestry, oil and gas, utility, manufacturing, and transportation sectors (NAICS 1131 through 3399 and 4811 through 4931) would perform a hazard assessment because of the high level of risk involved in these sectors;
- Half the establishments in wholesale and retail sales (NAICS 4231 through 4543) would have slip, trip, or fall hazards such that they would be required to perform a hazard assessment;
- One-quarter of the establishments in the service industries (NAICS 5111 through 8139) would have slip, trip, or fall hazards such that they would be required to perform a hazard assessment; and
- According to the original Regulatory Impact Analysis for PPE and as reported in the 2013 Information Collection Request for PPE in general industry, 47 percent of establishments conduct the initial hazard assessment as a usual and customary practice.[158]

This analysis resulted in a one-time cost of $79.0 million in the PEA, with an annualized cost of $11.3 million at seven-percent discount rate over 10 years. For this FEA, after adjusting for differences in wages and industry size and composition since the publication of the NPRM, one-time costs for the hazard-assessment requirement were $85.2 million, with annualized costs of $12.1 million.

In addition to the costs for assessing hazards in walking-working environments where the use of fall protection will be necessary, OSHA anticipates that employers will incur expenditures to address any hazards identified during the assessments. According to 2005 OSHA inspection data, the likelihood of a compliance violation of current Subpart D ranges from 0.24 percent (of inspections) for the Finance and Insurance industry sector to 0.81 percent for Wholesale Trade sector. Multiplying these noncompliance rates by the annual number of new employers entering business (determined by NAICS code as the product of a 7 percent establishment turnover rate and the number of establishments) and the cost of a typical correction—the purchase and ten-minute installation of a 6-ft. portable guardrail ($256 per guardrail + labor)—OSHA estimates that the costs for correcting hazards identified by the assessments required under § 1910.132(d) will total $0.52 million. (See Ex. [OSHA Excel Workbook], tabs Compliance and Hazard Assessment & Training.)

Summing the costs for hazard assessment and hazard correction implied by compliance with final § 1910.132(d), OSHA estimates that total costs for this provision will be approximately $12.7 million.

Ameren Corporation questioned whether, in light of existing OSHA standards, OSHA's assignment of costs for this provision was necessary. Ameren stated, ''This seems to be redundant whereas currently assessing fall protection needs is performed in accordance to the specific standard in which it is addressed'' (Ex. 189). In response, OSHA notes that, prior to the publication of the fall protection requirements in final subpart I, no standard explicitly requiring hazard assessment for fall protection in the workplace existed for general industry; therefore, OSHA must account for the incremental compliance burden resulting from these requirements.

PPE training. Final § 1910.132(f) requires that employers train employees before they use PPE in the workplace. OSHA included the costs for this final provision in the costs for § 1910.30, described earlier.

PPE inspection. Final § 1910.140(c)(18) requires employers to inspect that personal fall protection systems before the initial use during each work shift for mildew, wear, damage, and other deterioration, and remove defective components from service. For the purposes of estimating costs, OSHA in the PEA assumed that *on average* each production employee who requires fall protection wears a personal fall protection system regularly, performs the required inspection *once a week* at the beginning of every workweek, works 50 weeks per year, and takes one minute to inspect the fall protection system (wage rates varied across four-digit NAICS codes). Beginning with a baseline estimate of the number of workers using fall protection (2.1 million employees), OSHA accounted for current PPE inspection (''current compliance'') by applying results from the NIOSH NOES database. In its use of that survey, OSHA regarded the percentage of employers conducting safety training as a reasonable proxy for PPE inspection. Reducing the affected workforce by the percentage currently conducting PPE inspection, OSHA derived a final estimate of 362,000 affected employees. OSHA's estimated cost for this provision in the PEA was approximately $7.3 million per year; for this FEA, the Agency estimated the cost to perform the inspection to be $10.2 million a year.

Inspection of personal fall arrest systems will likely lead to the discovery of defective PPE, resulting in costs to repair or replace out-of-compliance PPE. OSHA expects that most employers will

[158] See the Information Collection Request For Personal Protective Equipment (PPE) For General Industry (29 CFR Part 1910, Subpart I)) Office of Management and Budget (OMB) Control No. 1218–0205 (January 2013), p. 5. Docket No. OSHA–2013–0004, Document ID 0002.

opt to replace faulty PPE; to simplify the calculation of costs, OSHA conservatively chose one of the most expensive types of PPE needing replacement, a full-body harness ($118 per unit) and applied a non-compliance rate to the percentage of employers who at the baseline (*i.e.,* lacking NIOSH NOES training) are currently not conducting PPE inspection. To estimate the rate of non-compliance, OSHA identified current Subpart M, Fall Protection, § 1926.502, Fall protection systems criteria and practices, in the construction CFR, as the standard analogous to final § 1910.140. The OSHA inspection database for the most recent fiscal year (2015) reports that of 38,029 inspections in NAICS 23, Construction, 544 inspections, or 1.43 percent, resulted in citations for violation of § 1926.502.[159] Applying this PPE criteria violation rate in Construction, 1.43 percent, to the number of affected establishments in general industry, and multiplying that product times the unit cost of harnesses, OSHA estimates that the cost for replacing defective PPE under § 1910.140 will total $0.85 million.

Summing the costs for PPE inspection and PPE replacement, OSHA estimates that employers will incur $11.0 million in new costs associated with the final provisions under § 1910.140.

Rule Familiarization

For this final economic analysis, OSHA has added an estimate for the compliance expenditures incurred by employers to gain familiarity with the final rule. OSHA estimated costs for rule familiarization by applying the methodology described above for Hazard Assessment and Training (§ 1910.132(d)), shown in the following exhibit. All other training costs associated with the final standard are addressed above under § 1910.30.

For the industries with less than 100 percent share needing hazard assessment, OSHA applied the estimated percentage to the time assumptions shown in Exhibit V–3. For example, for a very small (<20 employees) retail establishment: 50% needing familiarization * 10 minutes = 5 minutes per employer. For the industries where 100 percent of establishments will conduct hazard assessment, the average unit time per employment range (1–19, 20–99, etc.) shown in the exhibit was multiplied times the entire number of number of establishments whose employment falls within the range, by four-digit NAICS industry.[160] All affected NAICS industries and establishments were costed. Labor costs were calculated using supervisor loaded wage, by NAICS industry. Costs for rule familiarization are expected to total $28.5 million in first-year costs, or $4.1 million per year when annualized over ten years.

Exhibit V-3 Rule Familiarization

Baseline Assumptions			
Rule Familiarization (minutes)		Share of Establishments Needing Hazard Assessment	
		Forestry, etc.	100.0%
		Oil and gas	100.0%
		Utility	100.0%
		Manufacturing	100.0%
1-19 Employees	10	Transportation	100.0%
20-99 Employees	15	Wholesale	50.0%
100-499 Employees	20	Retail	50.0%
500+ Employees	30	Service	25.0%

Source: US Dept. of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis – Safety.

[159] See *https://www.osha.gov/pls/imis/industryprofile.stand?p_esize=&p_stand=19260502&p_state=FEFederal&p_type=2* and *https://www.osha.gov/pls/imis/industry.search?p_logger=1&sic=&naics=23&State=All&officetype=All&Office=All&endmonth=10&endday=01&endyear=2014&startmonth=09&startday=30&startyear=2015&owner=&scope=&FedAgnCode=.*

[160] For example, for NAICS 2211: Electric power generation, transmission and distribution, in the Utility industry sector, the cost calculation was as follows: ((1,529 very small establishments * 0.17 hours) + (152 small establishments * 0.25 hours) + (30 mid-size establishments * 0.33 hours) + (44 large establishments * 0.5 hours)) * ($54.24 production worker supervisor hourly wage for NAICS 2211) = $17,620. Analogous calculations were performed for each industry and summed to produce a total of $28.5 million in first-year costs. See Ex. [OSHA Excel workbook], tab Rule Familiarization.

7. Cost Summary

Tables V–25 through V–27 summarize the costs by industry for each paragraph in the final standard. Table V–25 lists the first-year costs, which employers incur once to comply with the new requirements. For evaluating economic impacts, OSHA annualized these one-time costs over a 10-year period at a discount rate of 7 percent. Total first-year costs for final subparts D and I are $319.5 million, with annualized costs for the first year of $45.5 million.

Table V–26 lists the recurring annual costs, such as inspections, training new employees, and maintaining safe conditions when fall hazards remain; OSHA estimates these costs to be $259.0 million. Table V–27 lists the annual costs by industry, which include the sum of the recurring costs and the annualized one-time costs; OSHA estimated these costs at $305.0 million.

Listing annualized costs in descending order by section of the rule, OSHA projects that the most costly provisions address training programs ($74.2 million), scaffolds and rope descent systems ($71.6 million), duty to have fall protection and falling-object protection ($55.9 million), and general requirements ($33.2 million). Of these final costs, the most significant change in costs from the PEA involve the costs associated with the duty to have fall protection and falling-object protection (§ 1910.28) ($55.9 million in FEA vs. $0.09 million in the PEA) because the strengthened requirements for fixed ladders, roof edges, slaughtering platforms, and step bolts lead to additional employer expenditures for equipment and labor.

For the category with the second largest compliance costs, scaffolds and rope descent systems, the final standard provides greater specificity than the proposal regarding the need for proper rigging, including sound anchorages and tiebacks. The final rule at § 1910.27(b)(1)(i) and (ii) states that before any rope descent system is used, the building owner must inform the employer, in writing that the building owner has identified, tested, certified, and maintained each anchorage so it is capable of supporting at least 5,000 pounds (22.2 kN) in any direction, for each employee attached and, moreover, that the employer must ensure that no employee uses any anchorage before the employer has obtained written information from the building owner that each anchorage meets the requirements of paragraph (b)(1)(i). Finally, the employer must keep the information on building anchorages for the duration of the job. The information must be based on an annual inspection conducted by a qualified person, with certification of each anchorage performed by a qualified person, as necessary, but at least every 10 years. As described earlier in this cost analysis, OSHA assumed that building owners and employers would comply with this requirement by scheduling periodic inspections and certifications of building anchorages.

Because of the hazards associated with cleaning windows of office buildings and other tall structures while suspended on scaffolds or other devices (see Table V–6 for the number of reported fatalities in NAICS 561, Administrative and Support Services), OSHA raised the issue of proper safety during window cleaning in the 2003 notice that reopened the rulemaking record, and in the 2010 NPRM. In those notices, OSHA requested comment on the hazards associated with window cleaning and the safe practices recommended and implemented for the use of rope descent systems (68 FR 23534; 75 FR 28862). OSHA based its analysis of the costs of ensuring sound anchorages and rigging, described above, as well as the Agency's analysis of the costs for protecting workers on rope descent systems and suspended scaffolds, on the experiences and observations of the industry representatives who responded to OSHA's request for comment in 2003 and in OSHA's 2010 NPRM; therefore, the Agency believes that the record fully supports this cost analysis.

BILLING CODE 4510–29–P

Table V-25
First-Year Costs for the Final Standards on Walking-Working Surfaces by Paragraph and Industry

		One-Time Compliance Costs									
		§1910.22	§1910.23	§1910.24	§1910.27	§1910.28	§1910.29	§1910.30			
NAICS	Title	General Require-ments	Ladders	Step Bolts and Manhole Steps	Scaffolds and Rope Descent Systems	Duty to Have Fall Protection	Fall Protection Systems Criteria and Practices	Training Program	Subpart I – Personal Protective Equipment	Rule Familiari-zation	Total
11	Agriculture, Forestry, Fishing, and Hunting	$0	$3,499	$0	$0	$0	$0	$82,299	$233,034	$88,181	**$407,014**
21	Mining	$0	$77,574	$0	$0	$0	$0	$2,227,998	$303,452	$38,800	**$2,647,823**
22	Utilities	$0	$255,214	$0	$0	$1,515,369	$0	$5,845,491	$1,340,822	$122,655	**$9,079,550**
31-33	Manufacturing	$0	$1,090,980	$0	$0	$19,738,717	$0	$18,101,934	$10,819,814	$7,441,716	**$57,193,161**
42	Wholesale Trade	$0	$1,041,883	$0	$0	$0	$0	$22,018,269	$7,190,500	$451,397	**$30,702,049**
44-45	Retail Trade	$0	$2,269,667	$0	$0	$0	$0	$20,152,641	$19,493,268	$3,438,156	**$45,353,732**
48-49	Transportation	$0	$247,720	$0	$0	$22,623	$0	$5,208,568	$7,538,873	$9,129,714	**$22,147,499**
51	Information	$0	$960,867	$0	$0	$19,289,763	$0	$16,927,032	$1,820,813	$155,354	**$39,153,828**
52	Finance and Insurance	$0	$42,339	$0	$0	$0	$0	$394,333	$7,689,196	$505,346	**$8,631,214**
53	Real Estate	$0	$1,122,286	$0	$0	$0	$0	$2,581,443	$3,290,153	$100,622	**$7,094,505**
54	Professional, Scientific, and Technical Services	$0	$411,344	$0	$0	$20,628,640	$1,783,330	$7,431,045	$6,354,017	$1,653,497	**$38,261,872**
55	Management of Companies and Enterprises	$0	$167,126	$0	$0	$0	$0	$3,702,958	$881,601	$250,475	**$4,998,419**

Table V-25
First-Year Costs for the Final Standards on Walking-Working Surfaces by Paragraph and Industry (continued)

NAICS	Title	One-Time Compliance Costs									
		§1910.22	§1910.23	§1910.24	§1910.27	§1910.28	§1910.29	§1910.30			
		General Require-ments	Ladders	Step Bolts and Manhole Steps	Scaffolds and Rope Descent Systems	Duty to Have Fall Protection	Fall Protection Systems Criteria and Practices	Training Program	Subpart I – Personal Protective Equipment	Rule Familiari-zation	Total
56	Administrative and Support, Waste Management and Remediation Services	$0	$1,187,391	$0	$3,250,000	$3,313,958	$0	$10,254,174	$2,595,784	$1,424,800	**$22,026,107**
61	Educational Services	$0	$298,035	$0	$0	$1,557	$0	$0	$714,625	$1,090,094	**$2,104,311**
62	Health Care	$0	$43,697	$0	$0	$0	$0	$1,079,226	$5,301,379	$1,087,208	**$7,511,510**
71	Arts, Entertainment, and Recreation	$0	$198,390	$0	$0	$1,255,837	$0	$0	$808,054	$723,482	**$2,985,763**
72	Accommodation and Food Services	$0	$193,370	$0	$0	$0	$0	$2,026,529	$4,709,513	$331,714	**$7,261,126**
81	Other Services	$0	$1,856,804	$0	$0	$0	$0	$5,528,678	$4,117,553	$437,534	**$11,940,569**
Total		**$0**	**$11,468,187**	**$0**	**$3,250,000**	**$65,766,463**	**$1,783,330**	**$123,562,617**	**$85,198,710**	**$28,470,746**	**$319,500,053**

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

Table V-26
Recurring Annual Costs for the Final Standards on Walking-Working Surfaces by Paragraph and Industry

NAICS	Title	Recurring Compliance Costs									
		§1910.22	§1910.23	§1910.24	§1910.27	§1910.28	§1910.29	§1910.30			
		General Requirements	Ladders	Step Bolts and Manhole Steps	Scaffolds and Rope Descent Systems	Duty to Have Fall Protection	Fall Protection Systems Criteria and Practices	Training Program	Subpart I – Personal Protective Equipment	Rule Familiarization [a]	Total
11	Agriculture, Forestry, Fishing, and Hunting	$77,491	$8,206	$0	$0	$0	$2,055	$37,959	$7,313	NA	**$133,024**
21	Mining	$69,064	$41,639	$0	$0	$52,282	$1,050	$1,025,785	$221,975	NA	**$1,411,795**
22	Utilities	$152,035	$106,776	$17,888,009	$0	$114,808	$2,319	$2,169,123	$424,226	NA	**$20,857,296**
31-33	Manufacturing	$2,706,603	$557,737	$0	$0	$1,299,152	$52,965	$6,119,290	$1,661,117	NA	**$12,396,863**
42	Wholesale Trade	$4,459,417	$634,102	$0	$0	$1,714,428	$87,022	$7,865,600	$1,984,496	NA	**$16,745,065**
44-45	Retail Trade	$6,528,405	$1,964,987	$0	$0	$3,900,027	$137,238	$12,246,404	$1,796,394	NA	**$26,573,456**
48-49	Transportation	$1,519,820	$231,425	$0	$0	$976,066	$29,059	$1,934,756	$490,733	NA	**$5,181,859**
51	Information	$1,097,685	$393,559	$75,214	$0	$686,926	$20,731	$5,453,433	$1,178,402	NA	**$8,905,949**
52	Finance and Insurance	$1,423,407	$432,055	$0	$0	$2,366,678	$21,264	$132,531	$41,942	NA	**$4,417,877**
53	Real Estate	$927,405	$806,534	$0	$0	$1,907,789	$16,032	$1,429,548	$281,073	NA	**$5,368,381**
54	Professional, Scientific, and Technical Services	$4,087,399	$875,058	$0	$0	$4,458,801	$12,225,546	$4,761,927	$804,887	NA	**$27,213,617**
55	Management of Companies and Enterprises	$229,080	$139,923	$0	$0	$251,583	$4,168	$2,366,262	$405,328	NA	**$3,396,345**

Table V-26
Recurring Annual Costs for the Final Standards on Walking-Working Surfaces by Paragraph and Industry (continued)

		Recurring Compliance Costs									
		§1910.22	§1910.23	§1910.24	§1910.27	§1910.28	§1910.29	§1910.30			
NAICS	Title	General Requirements	Ladders	Step Bolts and Manhole Steps	Scaffolds and Rope Descent Systems	Duty to Have Fall Protection	Fall Protection Systems Criteria and Practices	Training Program	Subpart I – Personal Protective Equipment	Rule Familiari-zation [a]	Total
56	Administrative and Support, Waste Management and Remediation Services	$1,379,070	$956,872	$0	$71,125,818	$19,276,147	$30,807	$6,232,062	$854,682	NA	**$99,855,459**
61	Educational Services	$391,706	$150,463	$0	$0	$404,817	$7,106	$53,205	$0	NA	**$1,007,296**
62	Health Care	$2,729,005	$426,058	$0	$0	$3,055,553	$63,090	$389,550	$112,151	NA	**$6,775,407**
71	Arts, Entertainment, and Recreation	$512,352	$239,450	$50,491	$0	$1,282,056	$10,097	$34,427	$0	NA	**$2,128,872**
72	Accommodation and Food Services	$2,181,327	$488,931	$0	$0	$1,933,120	$44,928	$1,709,797	$198,915	NA	**$6,557,018**
81	Other Services	$2,714,124	$1,186,568	$0	$0	$2,852,594	$59,793	$2,642,283	$585,553	NA	**$10,040,915**
	Total	$33,185,393	$9,640,343	$18,013,714	$71,125,818	$46,532,828	$12,815,270	$56,603,941	$11,049,187		$258,966,494

[a] Costs for rule familiarization are first-year costs and will not recur in subsequent years.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

Table V-27
Annualized Costs for the Final Standards on Walking-Working Surfaces by Paragraph and Industry

		Annualized Compliance Costs									
		§1910.22	§1910.23	§1910.24	§1910.27	§1910.28	§1910.29	§1910.30			
NAICS	Title	General Require-	Ladders	Step Bolts and Manhole Steps	Scaffolds and Rope Descent Systems	Duty to Have Fall Protection	Fall Protection Systems Criteria and Practices	Training Program	Subpart I – Personal Protective Equipment	Rule Familiari-zation	Total
11	Agriculture, Forestry, Fishing, and Hunting	$77,491	$8,704	$0	$0	$0.00	$2,055	$49,676	$42,213	$12,555	**$192,695**
21	Mining	$69,064	$52,684	$0	$0	$52,282	$1,050	$1,343,002	$265,887	$5,524	**$1,789,493**
22	Utilities	$152,035	$143,112	$17,888,009	$0	$330,562	$2,319	$3,001,389	$616,692	$17,463	**$22,151,583**
31-33	Manufacturing	$2,706,603	$713,068	$0	$0	$4,109,501	$52,965	$8,696,598	$3,240,843	$1,059,533	**$20,579,110**
42	Wholesale Trade	$4,459,417	$782,443	$0	$0	$1,714,428	$87,022	$11,000,506	$3,073,123	$64,269	**$21,181,208**
44-45	Retail Trade	$6,528,405	$2,288,136	$0	$0	$3,900,027	$137,238	$15,115,687	$4,681,899	$489,516	**$33,140,909**
48-49	Transportation	$1,519,820	$266,695	$0	$0	$979,287	$29,059	$2,676,339	$1,584,553	$1,299,866	**$8,355,618**
51	Information	$1,097,685	$530,365	$75,214	$0	$3,433,355	$20,731	$7,863,461	$1,443,903	$22,119	**$14,486,832**
52	Finance and Insurance	$1,423,407	$438,083	$0	$0	$2,366,678	$21,264	$188,675	$1,158,972	$71,950	**$5,669,028**
53	Real Estate	$927,405	$966,323	$0	$0	$1,907,789	$16,032	$1,797,087	$766,104	$14,326	**$6,395,066**
54	Professional, Scientific, and Technical Services	$4,087,399	$933,624	$0	$0	$7,395,855	$12,479,452	$5,819,940	$1,766,095	$235,421	**$32,717,786**
55	Management of Companies and Enterprises	$229,080	$163,718	$0	$0	$251,583	$4,168	$2,893,480	$533,612	$35,662	**$4,111,304**

Table V-27
Annualized Costs for the Final Standards on Walking-Working Surfaces by Paragraph and Industry (continued)

NAICS	Title	Annualized Compliance Costs									
		§1910.22	§1910.23	§1910.24	§1910.27	§1910.28	§1910.29	§1910.30			
		General Require-ments	Ladders	Step Bolts and Manhole Steps	Scaffolds and Rope Descent Systems	Duty to Have Fall Protection	Fall Protection Systems Criteria and Practices	Training Program	Subpart I – Personal Protective Equipment	Rule Familiari-zation	Total
56	Administrative and Support, Waste Management and Remediation Services	$1,379,070	$1,125,930	$0	$71,588,545	$19,747,980	$30,807	$7,692,026	$1,249,160	$202,859	**$103,016,377**
61	Educational Services	$391,706	$192,896	$0	$0	$405,039	$7,106	$53,205	$107,403	$155,205	**$1,312,559**
62	Health Care	$2,729,005	$432,280	$0	$0	$3,055,553	$63,090	$543,207	$917,695	$154,794	**$7,895,624**
71	Arts, Entertainment, and Recreation	$512,352	$267,696	$50,491	$0	$1,460,859	$10,097	$34,427	$123,181	$103,008	**$2,562,109**
72	Accommodation and Food Services	$2,181,327	$516,463	$0	$0	$1,933,120	$44,928	$1,998,329	$910,366	$47,229	**$7,631,761**
81	Other Services	$2,714,124	$1,450,935	$0	$0	$2,852,594	$59,793	$3,429,442	$1,220,007	$62,295	**$11,789,190**
	Total	**$33,185,393**	**$11,273,155**	**$18,013,714**	**$71,588,545**	**$55,896,492**	**$13,069,176**	**$74,196,478**	**$23,701,708**	**$4,053,594**	**$304,978,255**

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

BILLING CODE 4510–29–C

G. Economic Feasibility and Regulatory Flexibility Screening Analysis

1. Introduction

OSHA determined that the costs of complying with the requirements of final subparts D and I will not impose substantial economic impacts on employers in the industries affected by the final rule. The costs imposed by the final standards are modest, and the increased safety and reduction in injuries and fatalities associated with the standards will reduce employers' direct and indirect costs. OSHA based this final economic-impacts analysis on the PEA, the rulemaking record, and revisions to OSHA's preliminary data as described above in section C (''Profile of Affected Industries, Firms, and Workers'') and section F (''Costs of Compliance'').

Table V–28 summarizes OSHA's final estimate of impacts (annualized costs) for the two-digit NAICS industry groups affected by the final standards. ''Minimum'' and ''Maximum'' refer to the lowest and highest costs among the four-digit NAICS industries categorized within the two-digit group. The following section discusses OSHA's methodology for assessing the significance of the impacts at the aggregate level presented in Table V–29 and at levels of greater industry detail.

2. Economic Screening Analysis

To determine whether the final rule's projected costs of compliance would raise issues of economic feasibility for employers in affected industries, *i.e.,* would adversely affect the competitive structure of the industry, OSHA first compared compliance costs, annualized at a 7 percent discount rate, to industry revenues and profits. OSHA then examined specific factors affecting individual industries for which compliance costs represent a significant share of revenue, or for which the record contains other evidence that the standards could have a significant impact on the competitive structure of the industry.

As noted, OSHA examined the potential impacts of the final rule two ways, *i.e.,* as a percentage of revenues and as a percentage of profits. Table V–29 presents the estimated average receipts and profits by establishment and industry. In the PEA, OSHA, applying the methodology employed by ERG (ERG, 2007), estimated 2006 receipts based on 2002 receipts and payroll data from U.S. Census Bureau, *Statistics of U.S. Businesses, 2002,* and payroll data from U.S. Census Bureau, *Statistics of U.S. Businesses, 2006*. For that calculation, OSHA assumed that the ratio of receipts to payroll remained unchanged between 2002 and 2006.

For this FEA, OSHA applied *Statistics of U.S. Businesses, 2007* data on establishments, firms, and revenue at the four-digit NAICS level. OSHA estimated profits from ratios of net income to total receipts as reported for 2000–2008 (nine-year average) by the U.S. Internal Revenue Service, *Corporation Source Book* (IRS, 2009). Profit data were not available at disaggregated levels for all industries; therefore, OSHA used profit rates at more highly aggregated levels for such industries.

BILLING CODE 4510–29–P

Table V-28
Summary of Cost Impacts Associated with OSHA's Final Standards for Subparts D and I

NAICS	Sector Title	Average Cost per Establishment, Annualized with a 7% Discount Rate		Ratio of Average Annualized Cost to Revenues		Ratio of Average Annualized Cost to Profits	
		Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
11	Agriculture, Forestry, Fishing, and Hunting	$9	$15	0.001%	0.001%	0.015%	0.039%
21	Mining*	$237	$237	0.001%	0.001%	0.005%	0.005%
22	Utilities	$240	$3,444	0.000%	0.169%	0.014%	3.114%
31-33	Manufacturing	$17	$634	0.000%	0.002%	0.000%	0.072%
42	Wholesale Trade	$18	$91	0.000%	0.001%	0.001%	0.030%
44-45	Retail Trade	$10	$94	0.000%	0.004%	0.006%	0.197%
48-49	Transportation	$18	$321	0.000%	0.004%	0.000%	0.172%
51	Information	$23	$898	0.000%	0.005%	0.002%	0.083%
52	Finance and Insurance	$9	$109	0.000%	0.001%	0.000%	0.017%
53	Real Estate	$11	$23	0.000%	0.002%	0.000%	0.046%
54	Professional, Scientific, and Technical Services	$13	$414	0.001%	0.020%	0.020%	0.390%
55	Management	$81	$81	0.001%	0.001%	0.012%	0.012%
56	Administrative and Support, Waste Management and Remediation Services	$12	$522	0.001%	0.087%	0.010%	2.076%
61	Educational Services	$11	$71	0.000%	0.003%	0.001%	0.034%
62	Health Care	$7	$79	0.000%	0.002%	0.001%	0.036%
71	Arts, Entertainment, and Recreation	$11	$97	0.000%	0.006%	0.003%	0.072%
72	Accommodation and Food Services	$9	$34	0.001%	0.003%	0.021%	0.058%
81	Other Services	$7	$35	0.000%	0.005%	0.010%	0.152%

*Includes oil and gas extraction.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

Table V-29
Average Cost Impacts on Establishments Affected by OSHA's Final Standards for Subparts D and I
(per Establishment, by 4-Digit NAICS Code)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
1131	Timber Tract Operations	$1,669,193	3.46%	*	$57,813	$4,220	$9.38	0.001%	0.016%
1132	Forest Nurseries and Gathering of Forest Products	$1,522,173	3.46%	*	$52,720	$2,424	$10.49	0.001%	0.020%
1133	Logging	$1,086,367	3.46%	*	$37,626	$142,951	$14.57	0.001%	0.039%
1141	Fishing	$1,161,385	5.50%	*	$63,834	$19,731	$9.57	0.001%	0.015%
1142	Hunting and Trapping	$687,832	5.50%	*	$37,806	$3,143	$9.61	0.001%	0.025%
1153	Support Activities for Forestry	$819,390	4.60%	*	$37,689	$20,224	$11.52	0.001%	0.031%
2111	Oil and Gas Extraction	$31,037,522	13.95%		$4,331,076	$1,789,493	$237.27	0.001%	0.005%
2211	Electric Power Generation, Transmission and Distribution	$45,816,490	4.33%		$1,984,050	$5,142,043	$535.02	0.001%	0.027%
2212	Natural Gas Distribution	$54,186,767	3.12%		$1,692,526	$546,912	$239.56	0.000%	0.014%
2213	Water, Sewage and Other Systems	$2,033,163	5.44%		$110,587	$16,462,628	$3,444.06	0.169%	3.114%
3111	Animal Food Manufacturing	$21,156,444	4.28%		$904,721	$280,026	$154.11	0.001%	0.017%
3112	Grain and Oilseed Milling	$87,088,549	4.28%	*	$3,724,202	$168,055	$202.48	0.000%	0.005%
3113	Sugar and Confectionery Product Manufacturing	$15,750,859	7.74%		$1,218,918	$91,129	$50.97	0.000%	0.004%
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	$38,180,019	6.70%		$2,556,980	$139,203	$83.46	0.000%	0.003%
3115	Dairy Product Manufacturing	$55,896,648	2.60%		$1,453,511	$139,328	$86.43	0.000%	0.006%

Table V-29
Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I
(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
3116	Animal Slaughtering and Processing	$40,957,523	2.15%		$880,691	$2,418,692	$633.66	0.002%	0.072%
3117	Seafood Product Preparation and Packaging	$16,864,564	2.15%	*	$362,631	$32,948	$48.10	0.000%	0.013%
3118	Bakeries and Tortilla Manufacturing	$5,471,622	8.78%		$480,359	$482,242	$46.96	0.001%	0.010%
3119	Other Food Manufacturing	$22,381,101	5.36%		$1,200,230	$203,393	$61.45	0.000%	0.005%
3121	Beverage Manufacturing	$22,087,717	6.67%	*	$1,473,559	$201,021	$50.76	0.000%	0.003%
3122	Tobacco Manufacturing	$384,255,294	17.89%		$68,725,423	$33,533	$307.64	0.000%	0.000%
3131	Fiber, Yarn, and Thread Mills	$21,210,811	3.45%	*	$731,436	$43,553	$102.72	0.000%	0.014%
3132	Fabric Mills	$14,424,042	3.45%	*	$497,400	$74,503	$56.53	0.000%	0.011%
3133	Textile and Fabric Finishing and Fabric Coating Mills	$6,380,810	3.45%	*	$220,037	$139,896	$103.63	0.002%	0.047%
3141	Textile Furnishings Mills	$7,732,758	3.68%	*	$284,230	$237,842	$92.08	0.001%	0.032%
3149	Other Textile Product Mills	$2,612,342	3.68%	*	$96,021	$199,917	$48.18	0.002%	0.050%
3151	Apparel Knitting Mills	$7,914,945	2.87%		$227,138	$77,494	$159.13	0.002%	0.070%
3152	Cut and Sew Apparel Manufacturing	$2,602,718	5.00%		$130,034	$149,487	$16.67	0.001%	0.013%
3159	Apparel Accessories and Other Apparel Manufacturing	$1,890,438	3.92%		$74,113	$19,153	$20.91	0.001%	0.028%
3161	Leather and Hide Tanning and Finishing	$5,655,201	5.36%	*	$302,869	$8,061	$33.04	0.001%	0.011%
3162	Footwear Manufacturing	$6,904,902	5.36%	*	$369,798	$13,218	$43.20	0.001%	0.012%
3169	Other Leather and Allied Product Manufacturing	$3,187,810	5.36%	*	$170,726	$16,148	$19.18	0.001%	0.011%
3211	Sawmills and Wood Preservation	$6,927,646	2.86%	*	$198,425	$144,935	$34.77	0.001%	0.018%
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	$11,371,370	2.86%	*	$325,704	$103,186	$53.63	0.000%	0.016%
3219	Other Wood Product Manufacturing	$4,758,750	2.86%	*	$136,302	$362,631	$34.44	0.001%	0.025%
3221	Pulp, Paper, and Paperboard Mills	$149,009,548	3.36%		$5,005,593	$283,761	$514.99	0.000%	0.010%

Table V-29

Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I

(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
3222	Converted Paper Product Manufacturing	$21,433,081	7.61%		$1,630,767	$535,529	$119.38	0.001%	0.007%
3231	Printing and Related Support Activities	$3,053,880	3.99%	*	$121,803	$830,069	$24.94	0.001%	0.020%
3241	Petroleum and Coal Products Manufacturing	$247,192,988	7.34%	*	$18,134,524	$610,089	$253.36	0.000%	0.001%
3251	Basic Chemical Manufacturing	$88,422,649	4.32%		$3,818,485	$613,576	$241.57	0.000%	0.006%
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	$97,133,198	7.67%		$7,448,757	$385,351	$358.13	0.000%	0.005%
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	$31,546,951	10.59%	*	$3,341,588	$138,825	$153.23	0.000%	0.005%
3254	Pharmaceutical and Medicine Manufacturing	$94,045,735	15.76%		$14,825,716	$368,253	$191.20	0.000%	0.001%
3255	Paint, Coating, and Adhesive Manufacturing	$17,178,798	5.06%		$868,584	$103,173	$54.13	0.000%	0.006%
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	$41,957,355	9.72%		$4,078,034	$209,286	$93.39	0.000%	0.002%
3259	Other Chemical Product and Preparation Manufacturing	$16,028,236	4.88%		$782,410	$210,268	$75.10	0.000%	0.010%
3261	Plastics Product Manufacturing	$14,344,173	3.88%		$556,085	$616,792	$51.17	0.000%	0.009%
3262	Rubber Product Manufacturing	$17,847,749	2.28%		$407,247	$131,414	$60.31	0.000%	0.015%
3271	Clay Product and Refractory Manufacturing	$5,817,784	3.18%		$184,875	$104,842	$67.21	0.001%	0.036%
3272	Glass and Glass Product Manufacturing	$11,056,358	3.67%		$405,980	$192,593	$91.62	0.001%	0.023%
3273	Cement and Concrete Product Manufacturing	$6,645,085	5.39%		$357,912	$558,111	$56.02	0.001%	0.016%
3274	Lime and Gypsum Product Manufacturing	$21,293,052	5.39%	*	$1,146,869	$49,885	$137.80	0.001%	0.012%

Table V-29
Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I
(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
3279	Other Nonmetallic Mineral Product Manufacturing	$5,983,085	4.57%	*	$273,573	$191,319	$54.90	0.001%	0.020%
3311	Iron and Steel Mills and Ferroalloy Manufacturing	$116,392,537	4.85%		$5,649,264	$245,795	$272.80	0.000%	0.005%
3312	Steel Product Manufacturing from Purchased Steel	$30,503,973	4.85%	*	$1,480,550	$122,082	$174.65	0.001%	0.012%
3313	Alumina and Aluminum Production and Processing	$67,170,007	4.74%		$3,184,968	$129,730	$211.98	0.000%	0.007%
3314	Nonferrous Metal (except Aluminum) Production and Processing	$58,260,176	4.50%	*	$2,619,617	$126,197	$134.54	0.000%	0.005%
3315	Foundries	$16,145,344	4.70%		$758,708	$288,012	$136.05	0.001%	0.018%
3321	Forging and Stamping	$12,189,149	4.60%		$560,163	$119,720	$44.94	0.000%	0.008%
3322	Cutlery and Handtool Manufacturing	$7,448,613	5.17%		$385,428	$58,336	$39.28	0.001%	0.010%
3323	Architectural and Structural Metals Manufacturing	$6,499,587	4.63%		$300,661	$468,074	$34.15	0.001%	0.011%
3324	Boiler, Tank, and Shipping Container Manufacturing	$20,030,822	3.69%		$738,345	$86,979	$55.40	0.000%	0.008%
3325	Hardware Manufacturing	$12,314,210	5.17%	*	$637,198	$38,507	$48.44	0.000%	0.008%
3326	Spring and Wire Product Manufacturing	$6,348,582	5.17%	*	$328,507	$73,028	$45.25	0.001%	0.014%
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	$2,424,124	5.71%	*	$138,388	$698,735	$27.65	0.001%	0.020%
3328	Coating, Engraving, Heat Treating, and Allied Activities	$4,307,509	4.59%		$197,541	$177,771	$28.85	0.001%	0.015%
3329	Other Fabricated Metal Product Manufacturing	$10,708,743	6.76%		$724,385	$267,737	$42.00	0.000%	0.006%
3331	Agriculture, Construction, and Mining Machinery Manufacturing	$28,804,013	6.07%		$1,747,589	$200,080	$65.30	0.000%	0.004%

Table V-29
Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I
(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
3332	Industrial Machinery Manufacturing	$10,319,645	6.27%		$646,632	$154,013	$40.06	0.000%	0.006%
3333	Commercial and Service Industry Machinery Manufacturing	$10,795,780	4.56%		$492,388	$105,495	$45.95	0.000%	0.009%
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	$22,423,255	4.26%		$954,775	$119,992	$65.86	0.000%	0.007%
3335	Metalworking Machinery Manufacturing	$3,631,078	5.10%		$185,209	$267,185	$33.36	0.001%	0.018%
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	$45,615,748	2.67%		$1,217,096	$83,416	$89.69	0.000%	0.007%
3339	Other General Purpose Machinery Manufacturing	$13,746,276	4.94%		$679,201	$294,204	$47.22	0.000%	0.007%
3341	Computer and Peripheral Equipment Manufacturing	$50,267,032	8.55%		$4,299,431	$75,815	$58.41	0.000%	0.001%
3342	Communications Equipment Manufacturing	$35,437,387	4.50%		$1,593,624	$119,106	$65.16	0.000%	0.004%
3343	Audio and Video Equipment Manufacturing	$14,502,526	3.71%		$537,492	$19,982	$37.70	0.000%	0.007%
3344	Semiconductor and Other Electronic Component Manufacturing	$25,667,299	6.48%		$1,663,983	$281,486	$59.22	0.000%	0.004%
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	$25,180,879	5.92%		$1,491,393	$306,704	$58.25	0.000%	0.004%
3346	Manufacturing and Reproducing Magnetic and Optical Media	$7,704,546	3.71%	*	$285,545	$29,430	$36.60	0.000%	0.013%
3351	Electric Lighting Equipment Manufacturing	$11,499,626	4.08%		$468,646	$51,269	$41.92	0.000%	0.009%
3352	Household Appliance Manufacturing	$68,995,349	4.08%		$2,811,779	$62,407	$178.31	0.000%	0.006%
3353	Electrical Equipment Manufacturing	$17,529,065	6.93%		$1,215,171	$122,133	$50.74	0.000%	0.004%

Table V-29
Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I
(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
3359	Other Electrical Equipment and Component Manufacturing	$23,392,557	5.01%		$1,172,872	$119,975	$55.44	0.000%	0.005%
3361	Motor Vehicle Manufacturing	$683,670,825	1.09%		$7,430,421	$164,166	$434.30	0.000%	0.006%
3362	Motor Vehicle Body and Trailer Manufacturing	$16,181,585	1.09%	*	$175,868	$122,285	$55.91	0.000%	0.032%
3363	Motor Vehicle Parts Manufacturing	$36,411,047	1.09%	*	$395,731	$442,003	$79.99	0.000%	0.020%
3364	Aerospace Product and Parts Manufacturing	$99,786,959	4.52%		$4,514,200	$325,282	$188.57	0.000%	0.004%
3365	Railroad Rolling Stock Manufacturing	$58,053,652	2.30%	*	$1,335,984	$29,786	$134.78	0.000%	0.010%
3366	Ship and Boat Building	$16,100,676	6.14%		$988,177	$685,968	$387.33	0.002%	0.039%
3369	Other Transportation Equipment Manufacturing	$20,370,353	6.07%		$1,237,056	$55,895	$53.28	0.000%	0.004%
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	$2,875,210	4.02%	*	$115,523	$441,182	$26.63	0.001%	0.023%
3372	Office Furniture (including Fixtures) Manufacturing	$6,636,712	4.02%	*	$266,657	$151,721	$36.87	0.001%	0.014%
3379	Other Furniture Related Product Manufacturing	$9,739,334	4.02%	*	$391,317	$38,681	$37.34	0.000%	0.010%
3391	Medical Equipment and Supplies Manufacturing	$6,578,304	9.84%		$647,148	$378,197	$31.02	0.000%	0.005%
3399	Other Miscellaneous Manufacturing	$3,824,768	5.38%		$205,958	$517,816	$27.30	0.001%	0.013%
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	$23,332,867	2.25%		$525,324	$1,777,741	$72.46	0.000%	0.014%
4232	Furniture and Home Furnishing Merchant Wholesalers	$6,230,631	2.74%	*	$170,702	$338,606	$26.72	0.000%	0.016%
4233	Lumber and Other Construction Materials Merchant Wholesalers	$8,055,209	2.70%		$217,330	$969,311	$49.37	0.001%	0.023%

Table V-29

Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I

(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]	Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	$12,095,350	2.66%	$321,734	$3,276,410	$90.72	0.001%	0.028%
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	$19,823,622	2.79%	$553,479	$382,838	$35.91	0.000%	0.006%
4236	Electrical and Electronic Goods Merchant Wholesalers	$14,084,946	2.13%	$299,857	$1,679,217	$57.16	0.000%	0.019%
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	$6,008,922	3.18%	$190,871	$1,164,598	$57.93	0.001%	0.030%
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	$7,119,832	3.49%	$248,387	$4,130,142	$69.13	0.001%	0.028%
4239	Miscellaneous Durable Goods Merchant Wholesalers	$6,872,271	2.74%	$188,282	$1,145,514	$33.21	0.000%	0.018%
4241	Paper and Paper Product Merchant Wholesalers	$11,244,399	2.02%	$227,508	$281,119	$24.56	0.000%	0.011%
4242	Drugs and Druggists' Sundries Merchant Wholesalers	$67,598,376	3.42%	$2,314,303	$204,212	$26.70	0.000%	0.001%
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	$8,222,667	4.68%	$385,068	$292,694	$18.05	0.000%	0.005%
4244	Grocery and Related Product Wholesalers	$19,115,018	2.81%	$537,009	$1,289,986	$38.37	0.000%	0.007%
4245	Farm Product Raw Material Merchant Wholesalers	$20,312,895	2.03%	$411,623	$174,787	$26.62	0.000%	0.006%
4246	Chemical and Allied Products Merchant Wholesalers	$13,083,132	3.26%	$426,296	$529,981	$42.26	0.000%	0.010%
4247	Petroleum and Petroleum Products Merchant Wholesalers	$90,011,601	1.90%	$1,709,053	$527,052	$75.04	0.000%	0.004%

Table V-29
Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I
(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	$26,590,428	3.77%		$1,002,394	$173,328	$41.67	0.000%	0.004%
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	$8,472,012	2.93%		$248,487	$755,925	$24.06	0.000%	0.010%
4251	Wholesale Electronic Markets and Agents and Brokers	$10,679,245	7.55%	*	$806,557	$2,087,749	$36.96	0.000%	0.005%
4411	Automobile Dealers	$14,688,872	0.98%		$143,533	$4,836,687	$94.40	0.001%	0.066%
4412	Other Motor Vehicle Dealers	$3,746,365	2.52%	**	$94,466	$674,656	$39.62	0.001%	0.042%
4413	Automotive Parts, Accessories, and Tire Stores	$1,352,711	1.24%	*	$16,800	$1,953,618	$33.08	0.002%	0.197%
4421	Furniture Stores	$2,037,942	3.06%	*	$62,273	$651,056	$22.27	0.001%	0.036%
4422	Home Furnishings Stores	$1,452,050	3.06%	*	$44,370	$1,209,934	$33.38	0.002%	0.075%
4431	Electronics and Appliance Stores	$2,211,558	3.29%	*	$72,720	$1,980,898	$37.75	0.002%	0.052%
4441	Building Material and Supplies Dealers	$4,282,358	7.66%	*	$328,165	$3,620,488	$53.28	0.001%	0.016%
4442	Lawn and Garden Equipment and Supplies Stores	$2,059,790	1.81%	**	$37,199	$622,155	$30.57	0.001%	0.082%
4451	Grocery Stores	$5,368,111	2.00%	*	$107,491	$1,272,999	$13.79	0.000%	0.013%
4452	Specialty Food Stores	$738,448	2.00%	*	$14,787	$415,375	$14.69	0.002%	0.099%
4453	Beer, Wine, and Liquor Stores	$1,180,880	2.07%	*	$24,431	$363,939	$11.96	0.001%	0.049%
4461	Health and Personal Care Stores	$2,898,089	3.06%	*	$88,567	$1,349,177	$15.09	0.001%	0.017%
4471	Gasoline Stations	$3,812,363	0.86%	*	$32,714	$3,375,083	$29.21	0.001%	0.089%
4481	Clothing Stores	$1,614,743	5.15%	*	$83,175	$1,526,162	$15.37	0.001%	0.018%
4482	Shoe Stores	$975,601	5.15%	*	$50,253	$283,268	$10.41	0.001%	0.021%
4483	Jewelry, Luggage, and Leather Goods Stores	$1,103,086	5.15%	*	$56,820	$565,222	$19.60	0.002%	0.035%

Table V-29

Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I

(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
4511	Sporting Goods, Hobby, and Musical Instrument Stores	$1,453,174	2.62%	*	$38,053	$1,395,992	$32.08	0.002%	0.084%
4512	Book, Periodical, and Music Stores	$1,663,461	2.62%	*	$43,560	$237,682	$14.30	0.001%	0.033%
4521	Department Stores	$28,241,156	4.15%	*	$1,171,729	$876,003	$86.60	0.000%	0.007%
4529	Other General Merchandise Stores	$8,240,378	4.15%	*	$341,894	$1,783,124	$47.75	0.001%	0.014%
4531	Florists	$326,775	3.23%	*	$10,551	$218,351	$11.05	0.003%	0.105%
4532	Office Supplies, Stationery, and Gift Stores	$1,101,750	3.23%	*	$35,574	$882,764	$21.70	0.002%	0.061%
4533	Used Merchandise Stores	$549,308	3.23%	*	$17,737	$293,779	$16.57	0.003%	0.093%
4539	Other Miscellaneous Store Retailers	$1,152,691	3.23%	*	$37,219	$1,241,751	$27.47	0.002%	0.074%
4541	Electronic Shopping and Mail-Order Houses	$10,145,815	3.75%	*	$380,719	$352,720	$21.16	0.000%	0.006%
4542	Vending Machine Operators	$1,445,311	3.75%	*	$54,235	$266,412	$51.65	0.004%	0.095%
4543	Direct Selling Establishments	$2,470,427	3.75%	*	$92,702	$894,880	$34.56	0.001%	0.037%
4811	Scheduled Air Transportation	$41,156,740	2.57%	*	$1,057,033	$979,771	$317.70	0.001%	0.030%
4812	Nonscheduled Air Transportation	$5,639,505	2.57%	*	$144,840	$299,128	$113.05	0.002%	0.078%
4831	Deep Sea, Coastal, and Great Lakes Water Transportation	$22,923,786	6.37%	*	$1,459,344	$258,929	$206.32	0.001%	0.014%
4832	Inland Water Transportation	$8,949,927	6.21%	*	$555,701	$216,198	$321.25	0.004%	0.058%
4841	General Freight Trucking	$2,164,805	6.21%	*	$134,413	$1,974,152	$28.82	0.001%	0.021%
4842	Specialized Freight Trucking	$1,396,222	2.51%	*	$35,106	$1,321,312	$24.97	0.002%	0.071%
4851	Urban Transit Systems	$3,402,520	2.51%	*	$85,551	$117,174	$125.72	0.004%	0.147%
4852	Interurban and Rural Bus Transportation	$3,260,821	2.13%	*	$69,439	$51,697	$101.77	0.003%	0.147%
4853	Taxi and Limousine Service	$787,904	2.13%	*	$16,778	$172,095	$22.97	0.003%	0.137%
4854	School and Employee Bus Transportation	$2,191,238	2.13%	*	$46,662	$288,063	$61.64	0.003%	0.132%
4855	Charter Bus Industry	$1,761,553	2.13%	*	$37,512	$61,874	$49.62	0.003%	0.132%

Table V-29

Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I

(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
4859	Other Transit and Ground Passenger Transportation	$1,103,620	2.13%	*	$23,502	$140,085	$40.38	0.004%	0.172%
4861	Pipeline Transportation of Crude Oil	$17,279,723	13.23%	*	$2,286,008	$64,821	$173.32	0.001%	0.008%
4862	Pipeline Transportation of Natural Gas	$14,061,312	13.23%	*	$1,860,231	$192,885	$130.42	0.001%	0.007%
4869	Other Pipeline Transportation	$8,319,902	13.23%	*	$1,100,675	$74,469	$80.77	0.001%	0.007%
4871	Scenic and Sightseeing Transportation, Land	$1,294,636	13.23%	*	$171,273	$17,600	$25.22	0.002%	0.015%
4872	Scenic and Sightseeing Transportation, Water	$756,354	4.42%	*	$33,457	$63,716	$33.89	0.004%	0.101%
4879	Scenic and Sightseeing Transportation, Other	$1,935,256	4.42%	*	$85,605	$10,545	$51.95	0.003%	0.061%
4881	Support Activities for Air Transportation	$3,678,342	4.42%	**	$162,710	$139,655	$25.72	0.001%	0.016%
4882	Support Activities for Rail Transportation	$3,281,636	3.19%	**	$104,720	$23,395	$22.98	0.001%	0.022%
4883	Support Activities for Water Transportation	$7,071,781	3.19%	**	$225,667	$49,775	$21.36	0.000%	0.009%
4884	Support Activities for Road Transportation	$699,173	3.19%	**	$22,311	$253,255	$24.88	0.004%	0.112%
4885	Freight Transportation Arrangement	$2,303,721	3.19%	**	$73,514	$400,787	$22.39	0.001%	0.030%
4889	Other Support Activities for Transportation	$3,901,796	3.19%	**	$124,510	$37,319	$21.86	0.001%	0.018%
4921	Couriers	$8,233,275	3.19%	**	$262,731	$462,649	$50.75	0.001%	0.000%
4922	Local Messengers and Local Delivery	$877,683	3.19%	**	$28,008	$84,784	$17.93	0.002%	0.000%
4931	Warehousing and Storage	$2,766,702	4.59%	*	$126,939	$599,482	$41.52	0.002%	0.033%
5111	Newspaper, Periodical, Book, and Directory Publishers	$6,341,521	11.69%	*	$741,028	$612,517	$26.54	0.000%	0.004%
5112	Software Publishers	$14,921,541	16.22%	*	$2,420,451	$398,626	$47.31	0.000%	0.002%
5121	Motion Picture and Video Industries	$3,770,904	6.24%	**	$235,135	$482,102	$22.83	0.001%	0.010%

Table V-29
Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I
(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
5122	Sound Recording Industries	$3,436,512	7.26%	**	$249,607	$231,829	$61.57	0.002%	0.025%
5151	Radio and Television Broadcasting	$5,673,895	6.79%	*	$384,986	$499,644	$51.21	0.001%	0.013%
5152	Cable and Other Subscription Programming	$63,287,418	6.79%	*	$4,294,186	$590,753	$897.80	0.001%	0.021%
5161	Internet Publishing and Broadcasting	$4,317,762	7.06%	*	$304,826	$208,741	$76.02	0.002%	0.025%
5171	Wired Telecommunications Carriers	$6,677,530	6.40%	*	$427,600	$8,032,878	$292.69	0.004%	0.068%
5172	Wireless Telecommunications Carriers (except Satellite)	$14,132,480	6.40%	*	$904,983	$990,461	$83.82	0.001%	0.009%
5173	Telecommunications Resellers	$4,228,606	6.40%	*	$270,782	$664,133	$194.36	0.005%	0.072%
5174	Satellite Telecommunications	$8,810,147	6.40%	*	$564,164	$331,470	$468.18	0.005%	0.083%
5175	Cable and Other Program Distribution	$19,054,522	6.40%	*	$1,220,169	$372,083	$69.86	0.000%	0.006%
5179	Other Telecommunications	$3,116,634	6.40%	*	$199,576	$204,943	$150.14	0.005%	0.075%
5181	Internet Service Providers and Web Search Portals	$7,432,832	7.21%	*	$535,810	$228,371	$53.61	0.001%	0.010%
5182	Data Processing, Hosting, and Related Services	$4,566,208	7.21%	*	$329,164	$399,575	$25.51	0.001%	0.008%
5191	Other Information Services	$1,719,247	8.78%	*	$150,944	$238,707	$56.47	0.003%	0.037%
5211	Monetary Authorities - Central Bank	$447,246,115	5.83%	*	$26,091,558	$11,359	$109.22	0.000%	0.000%
5221	Depository Credit Intermediation	$6,151,846	9.42%	*	$579,247	$1,581,993	$12.44	0.000%	0.002%
5222	Nondepository Credit Intermediation	$8,390,543	7.53%	*	$632,208	$602,292	$10.25	0.000%	0.002%
5223	Activities Related to Credit Intermediation	$1,436,047	10.33%	**	$148,352	$512,746	$10.97	0.001%	0.007%
5231	Securities and Commodity Contracts Intermediation and Brokerage	$10,955,044	5.99%	*	$655,768	$460,114	$11.58	0.000%	0.002%
5232	Securities and Commodity Exchanges	$12,985,622	5.99%	*	$777,318	$10,460	$26.68	0.000%	0.003%
5239	Other Financial Investment Activities	$4,369,976	31.09%	*	$1,358,418	$526,127	$10.54	0.000%	0.001%
5241	Insurance Carriers	$43,422,736	4.56%	*	$1,981,267	$559,524	$16.65	0.000%	0.001%

Table V-29
Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I
(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
5242	Agencies, Brokerages, and Other Insurance Related Activities	$1,152,217	4.56%	*	$52,573	$1,334,261	$9.02	0.001%	0.017%
5259	Other Investment Pools and Funds	$7,004,588	65.69%	*	$4,601,006	$70,153	$19.07	0.000%	0.000%
5311	Lessors of Real Estate	$1,233,252	13.62%	*	$167,951	$2,219,205	$19.25	0.002%	0.011%
5312	Offices of Real Estate Agents and Brokers	$825,065	8.22%	*	$67,809	$1,317,851	$11.87	0.001%	0.018%
5313	Activities Related to Real Estate	$940,128	13.62%	*	$128,032	$1,700,427	$19.72	0.002%	0.015%
5321	Automotive Equipment Rental and Leasing	$3,353,795	2.43%	**	$81,615	$302,029	$22.41	0.001%	0.027%
5322	Consumer Goods Rental	$751,790	3.69%	*	$27,733	$394,144	$12.58	0.002%	0.045%
5323	General Rental Centers	$986,659	3.69%	*	$36,398	$90,558	$16.66	0.002%	0.046%
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	$3,384,003	5.35%	**	$181,106	$343,243	$23.20	0.001%	0.013%
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	$8,804,010	29.11%	*	$2,562,541	$27,610	$10.75	0.000%	0.000%
5411	Legal Services	$1,262,524	8.86%	**	$111,912	$2,282,583	$11.93	0.001%	0.011%
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	$962,464	7.81%	**	$75,175	$1,815,056	$14.71	0.002%	0.020%
5413	Architectural, Engineering, and Related Services	$2,185,628	4.79%	**	$104,584	$3,377,083	$28.84	0.001%	0.028%
5414	Specialized Design Services	$693,485	5.48%	**	$37,986	$535,195	$15.39	0.002%	0.041%
5415	Computer Systems Design and Related Services	$2,347,291	5.02%	**	$117,759	$2,823,557	$24.18	0.001%	0.021%
5416	Management, Scientific, and Technical Consulting Services	$1,277,499	7.49%	**	$95,677	$3,013,196	$19.85	0.002%	0.021%
5417	Scientific Research and Development Services	$6,371,617	2.14%	**	$136,588	$1,205,748	$67.79	0.001%	0.050%

Table V-29
Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I
(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
5418	Advertising and Related Services	$2,066,208	5.13%	**	$106,075	$16,665,193	$413.79	0.020%	0.390%
5419	Other Professional, Scientific, and Technical Services	$872,522	6.72%	**	$58,646	$1,000,175	$13.46	0.002%	0.023%
5511	Management of Companies and Enterprises	$10,031,243	6.72%	**	$674,247	$4,111,304	$81.18	0.001%	0.012%
5611	Office Administrative Services	$2,183,588	12.73%	*	$278,006	$824,631	$27.49	0.001%	0.010%
5612	Facilities Support Services	$4,664,350	4.21%	*	$196,177	$306,042	$66.63	0.001%	0.034%
5613	Employment Services	$4,382,316	4.21%	**	$184,315	$4,696,124	$105.59	0.002%	0.057%
5614	Business Support Services	$1,739,445	2.66%	*	$46,341	$602,816	$16.96	0.001%	0.037%
5615	Travel Arrangement and Reservation Services	$1,876,077	4.21%	**	$78,905	$263,715	$11.82	0.001%	0.015%
5616	Investigation and Security Services	$1,676,921	3.30%	*	$55,384	$1,103,340	$43.74	0.003%	0.079%
5617	Services to Buildings and Dwellings	$597,526	4.21%	*	$25,131	$93,837,002	$521.82	0.087%	2.076%
5619	Other Support Services	$1,881,025	4.21%	*	$79,114	$525,654	$24.94	0.001%	0.032%
5621	Waste Collection	$3,974,964	5.44%	*	$216,254	$314,446	$31.90	0.001%	0.015%
5622	Waste Treatment and Disposal	$5,199,269	4.79%	*	$248,917	$207,062	$75.87	0.001%	0.030%
5629	Remediation and Other Waste Management Services	$1,989,353	4.79%	*	$95,241	$335,546	$37.82	0.002%	0.040%
6111	Elementary and Secondary Schools	$2,942,534	7.60%	**	$223,747	$379,982	$18.04	0.001%	0.008%
6112	Junior Colleges	$8,099,367	7.60%	**	$615,868	$61,617	$71.48	0.001%	0.012%
6113	Colleges, Universities, and Professional Schools	$41,213,603	7.60%	**	$3,133,842	$128,977	$32.07	0.000%	0.001%
6114	Business Schools and Computer and Management Training	$1,242,548	7.60%	**	$94,482	$95,558	$12.51	0.001%	0.013%
6115	Technical and Trade Schools	$1,597,997	7.60%	**	$121,510	$132,125	$16.48	0.001%	0.014%
6116	Other Schools and Instruction	$429,971	7.60%	**	$32,695	$425,488	$11.05	0.003%	0.034%

Table V-29
Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I
(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
6117	Educational Support Services	$1,573,883	7.60%	**	$119,677	$88,812	$13.10	0.001%	0.011%
6211	Offices of Physicians	$1,579,448	4.56%	*	$71,961	$2,109,888	$9.59	0.001%	0.013%
6212	Offices of Dentists	$741,849	7.66%	*	$56,811	$1,213,813	$9.60	0.001%	0.017%
6213	Offices of Other Health Practitioners	$418,968	7.78%	*	$32,616	$1,074,596	$8.63	0.002%	0.026%
6214	Outpatient Care Centers	$2,684,919	5.34%	*	$143,419	$393,215	$13.26	0.000%	0.009%
6215	Medical and Diagnostic Laboratories	$2,952,598	5.51%	*	$162,804	$147,860	$11.55	0.000%	0.007%
6216	Home Health Care Services	$2,096,085	5.51%	*	$115,577	$272,845	$11.16	0.001%	0.010%
6219	Other Ambulatory Health Care Services	$2,925,554	5.51%	*	$161,313	$122,287	$12.98	0.000%	0.008%
6221	General Medical and Surgical Hospitals	$120,584,628	5.24%	**	$6,317,681	$427,496	$79.11	0.000%	0.001%
6222	Psychiatric and Substance Abuse Hospitals	$24,937,464	5.24%	**	$1,306,526	$30,069	$41.88	0.000%	0.003%
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals	$21,388,067	5.24%	**	$1,120,566	$37,221	$30.26	0.000%	0.003%
6231	Nursing Care Facilities	$5,569,386	5.24%	**	$291,792	$222,149	$12.97	0.000%	0.004%
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	$785,805	5.24%	**	$41,170	$266,780	$8.45	0.001%	0.021%
6233	Community Care Facilities for the Elderly	$1,871,515	5.24%	**	$98,053	$200,122	$9.83	0.001%	0.010%
6239	Other Residential Care Facilities	$1,262,287	5.24%	**	$66,134	$64,009	$9.77	0.001%	0.015%
6241	Individual and Family Services	$1,088,904	5.24%	**	$57,050	$557,436	$9.66	0.001%	0.017%
6242	Community Food and Housing, and Emergency and Other Relief Services	$1,629,568	5.24%	**	$85,376	$127,891	$9.33	0.001%	0.011%
6243	Vocational Rehabilitation Services	$1,589,697	5.24%	**	$83,288	$70,917	$8.97	0.001%	0.011%
6244	Child Day Care Services	$395,571	5.24%	**	$20,725	$557,030	$7.45	0.002%	0.036%
7111	Performing Arts Companies	$1,501,694	8.99%	*	$134,955	$917,750	$97.09	0.006%	0.072%
7112	Spectator Sports	$6,550,026	8.99%	*	$588,639	$123,179	$26.60	0.000%	0.005%

Table V-29

Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I

(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
7113	Promoters of Performing Arts, Sports, and Similar Events	$2,484,632	8.99%	*	$223,289	$204,843	$32.17	0.001%	0.014%
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	$1,290,271	8.99%	*	$115,954	$47,060	$12.64	0.001%	0.011%
7115	Independent Artists, Writers, and Performers	$664,419	8.99%	*	$59,710	$214,595	$10.68	0.002%	0.018%
7121	Museums, Historical Sites, and Similar Institutions	$1,780,048	6.69%	**	$119,016	$89,021	$12.17	0.001%	0.010%
7131	Amusement Parks and Arcades	$4,407,449	4.94%	*	$217,892	$71,268	$23.01	0.001%	0.011%
7132	Gambling Industries	$11,700,473	4.94%	*	$578,439	$40,751	$14.93	0.000%	0.003%
7139	Other Amusement and Recreation Industries	$869,292	4.94%	*	$42,975	$853,644	$12.59	0.001%	0.029%
7211	Traveler Accommodation	$3,116,814	5.14%	*	$160,221	$1,859,525	$34.27	0.001%	0.021%
7212	RV (Recreational Vehicle) Parks and Recreational Camps	$593,501	5.14%	*	$30,509	$104,468	$14.05	0.002%	0.046%
7213	Rooming and Boarding Houses	$426,099	5.14%	*	$21,904	$27,891	$12.67	0.003%	0.058%
7221	Full-Service Restaurants	$875,776	4.61%	*	$40,338	$2,084,879	$9.50	0.001%	0.024%
7222	Limited-Service Eating Places	$700,332	4.61%	*	$32,257	$2,387,440	$8.95	0.001%	0.028%
7223	Special Food Services	$1,087,456	4.61%	*	$50,088	$723,843	$20.49	0.002%	0.041%
7224	Drinking Places (Alcoholic Beverages)	$393,703	4.61%	*	$18,134	$448,747	$9.56	0.002%	0.053%
8111	Automotive Repair and Maintenance	$538,051	3.25%	*	$17,494	$4,428,593	$26.62	0.005%	0.152%
8112	Electronic and Precision Equipment Repair and Maintenance	$1,966,318	4.90%	*	$96,394	$450,013	$34.84	0.002%	0.036%
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	$1,333,173	4.90%	*	$65,355	$764,001	$31.97	0.002%	0.049%

BILLING CODE 4510–29–C

Table V-29

Average Cost Impacts on Establishments Affected by OSHA's Final Revision to Subparts D and I

(per Establishment, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Average Receipts per Estab. [a]	Profit Rate [b]		Estimated Profits per Estab.	Estimated Cost of Final Rule, Annualized with a 7% Discount Rate	Average Annualized Cost per Estab.	Ratio of Average Annualized Cost to Revenues	Ratio of Average Annualized Cost to Profits
8114	Personal and Household Goods Repair and Maintenance	$405,873	4.90%	*	$19,897	$385,908	$16.82	0.004%	0.085%
8121	Personal Care Services	$239,324	5.12%	*	$12,244	$845,895	$7.48	0.003%	0.061%
8122	Death Care Services	$712,650	5.12%	*	$36,460	$227,795	$10.63	0.001%	0.029%
8123	Dry-cleaning and Laundry Services	$601,488	5.12%	*	$30,773	$538,804	$13.04	0.002%	0.042%
8129	Other Personal Services	$511,082	5.12%	*	$26,147	$509,719	$13.91	0.003%	0.053%
8131	Religious Organizations	$698,494	2.05%	*	$14,311	$1,746,732	$9.69	0.001%	0.068%
8132	Grantmaking and Giving Services	$5,741,985	2.05%	*	$117,647	$187,799	$11.48	0.000%	0.010%
8133	Social Advocacy Organizations	$1,228,071	2.05%	*	$25,162	$189,292	$12.27	0.001%	0.049%
8134	Civic and Social Organizations	$623,435	2.05%	*	$12,774	$440,275	$14.77	0.002%	0.116%
8139	Business, Professional, Labor, Political, and Similar Organizations	$1,221,752	2.05%	*	$25,032	$1,074,364	$16.87	0.001%	0.067%

[a] Estimated based on receipts data from U.S. Census Bureau, Statistics of U.S. Businesses, 2007.

[b] Estimated from average of the yearly ratios of net income to total receipts as reported by the U.S. Internal Revenue Service, Corporation Source Book, 2000–2008. Data were not available at disaggregated levels for all industries; OSHA used profit rates at more highly aggregated levels for such industries.

*Profit rate imputed from corresponding 3-digit NAICS industry.

**Profit rate imputed from corresponding 2-digit NAICS industry.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

OSHA compared the baseline financial data with total annualized incremental costs of compliance by computing compliance costs as a percentage of revenues and profits. The Agency considers this impact assessment for all firms, presented in Tables V–28 and V–29, to be a screening analysis and the first step in OSHA's analysis of whether the compliance costs potentially associated with the final standards would lead to significant impacts on establishments in the affected industries. The impact of the final standards on the viability of establishments in a given industry depends, to a significant degree, on the price elasticity of demand for the services sold by establishments in that industry.

Price elasticity refers to the relationship between the price charged for a service and the quantity of that service demanded; that is, the more elastic the relationship, the less able is an establishment to pass the costs of compliance through to its customers in the form of a price increase, and the more it will have to absorb the costs of compliance from its profits. When demand is inelastic, establishments can recover most of the costs of compliance by raising the prices they charge for that service; under this scenario, profit rates remain largely unchanged, and the industry remains largely unaffected. Therefore, any impacts are primarily on the consumers using the relevant services. However, when demand is elastic, establishments cannot recover all the costs simply by passing the cost increase through in the form of a price increase. Instead, they must absorb some of the increase from their profits, commonly by both reducing the quantity of goods and services produced and reducing total profits, though, in some cases, profits rate may remain unchanged. If demand is not perfectly elastic and if at least some of the costs in question are variable rather than fixed, ''when an industry is subject to a higher cost, it does not simply swallow it, it raises its price and reduces its output, and in this way shifts a part of the cost to its consumers and a part to its suppliers,'' as the court stated in *American Dental Association* v. *Secretary of Labor* (984 F.2d 823, 829 (7th Cir. 1993)).

The court's summary is in accordance with micro-economic theory (subject to some caveats discussed below). In the long run, firms can only remain in business if their profits are adequate to provide a return on investment that ensures that investment in the industry will continue. Over time, because of rising real incomes and productivity, firms in most industries are able to maintain adequate profits. As technology and costs change, however, the long-run demand for some products increases and the long-run demand for other products decreases. In the face of rising external costs, firms that otherwise have a profitable line of business may have to increase prices to stay viable. Commonly, increases in prices result in reduced quantity demanded, but rarely eliminate all demand for the product. Whether this decrease in production results in smaller production for each establishment within the industry or in closing some plants within the industry, or a combination of these two effects, depends on the cost and profit structure of individual firms within the industry.

If demand is completely inelastic (*i.e.,* price elasticity is 0), then the impact of variable compliance costs (that is, costs that depend directly on the quantity of output produced) that are 1 percent of revenues for each firm in the industry would result in a 1 percent increase in the price of the product or service, with no decline in quantity demanded. Such a situation represents an extreme case, but might be correct in situations in which there are few if any substitutes for the product or service in question, or if the products or services of the affected sector account for only a small portion of the income of its consumers.

If demand is perfectly elastic (*i.e.,* the price elasticity is infinitely large), then no increase in price is possible and before-tax profits would decrease by an amount equal to the costs of compliance (minus any savings resulting from improved employee health and/or reduced insurance costs) should the industry attempt to keep producing the same amount of goods and services. Under this scenario, if the costs of compliance are such a large percentage of profits that some or all plants in the industry can no longer invest in the industry and receive an adequate return on investment, then some or all of the firms in the industry will close. The scenario of perfectly elastic demand can only arise when there are other goods and services that are, in the eyes of the consumer, perfect substitutes for the goods and services the affected establishments produce.

A common intermediate case would be a price elasticity of one. In this situation, if the costs of compliance amount to 1 percent of revenues and are entirely variable rather than fixed, then production would decline by 1 percent and prices would rise by 1 percent over the long run. In this case, the industry revenues would stay the same, with somewhat lower production, but with similar profit rates. However, consumers would get less of the product or the service for their expenditures, and producers would have lower total profits; this, as the court described in *American Dental Association* v. *Secretary of Labor,* is the more typical case.

If compliance costs are fixed—that is, they do not depend on quantity of output produced—they cannot be passed through to consumers in the short run. In the medium- to long-run, however, some producers may exit the industry, or new producers may fail to enter an industry to replace natural exit, thus decreasing total supply, increasing prices, and reducing the portion of costs borne by producers that remain in the industry (except in the case of perfectly elastic demand, as discussed above).

However, there is still the question of whether these costs will reduce significantly the industry's competitive structure. For example, if an industry faces a 20 percent increase in costs due to a standard, and its product has an elasticity of demand of one, the industry may likely remain viable. However, if the standard leads to closing all small firms in the industry, this result would indicate that standard impaired the competitive structure of the industry. For this reason, when costs are a significant percentage of revenues, OSHA examines the differential costs by size of firm and other classifications that may be important.

As indicated by the impact estimates shown in Tables V–28 and V–29, OSHA determined that, for all affected establishments in general industry, revenue impacts will not exceed 0.2 percent for any affected industry group, and profit impacts will not exceed 3.1 percent for any affected industry group. Therefore, the economic impact of the final rule will most likely consist of a small increase in prices of less than 0.2 percent for the goods and services provided by the affected employers. It is unlikely that a price increase of the magnitude of 0.2 percent will significantly reduce the quantity of goods or services demanded by the public or any other affected customers or intermediaries. If industry can recoup substantially the compliance costs of the final rule with such a minimal increase in prices, there may be little effect on profits.

In general, for most establishments, it would be unlikely that they could not pass some of the compliance costs along in the form of increased prices. In the event that unusual circumstances may inhibit even a price increase of 0.2 percent, profits in the majority of affected industries would decrease by a maximum of about 0.1 percent.

In profit-earning entities, a combination of increases in prices or reduction in profits generally can absorb compliance costs. As discussed above, the extent to which the impacts of cost increases affect prices or profits depends on the price elasticity of demand for the products or services produced and sold by the entity.

Given the small incremental increases in prices potentially resulting from compliance with the final standards, and the lack of readily available substitutes for the products and services provided by the covered industry sectors, OSHA expects demand to be sufficiently inelastic in each affected industry to enable entities to substantially offset compliance costs through minor price increases without experiencing any significant reduction in total revenues or in net profits.

Positive net benefits of a regulation can only be realized in the presence of an externality or other market failure; until now, society externalized many of the costs associated with the injuries and fatalities resulting from the hazards addressed by the final rule. That is, the prices of goods and services did not reflect the costs incurred by society from the fall-related injuries and death that occur during the production of these goods and services. The workers who suffer the consequences associated with the fall hazards also assume some of the costs of production. To the extent that society externalizes fewer of these costs, the price mechanism will enable the market to produce a more socially efficient allocation of resources. However, reductions in externalities alone do not necessarily increase efficiency or social welfare unless the benefits outweigh the costs of achieving the reductions.

OSHA concludes that compliance with the requirements of the final standards is economically feasible in every affected industry sector. The Agency basis this conclusion on the criteria established by the OSH Act, as interpreted in relevant case law. In general, the courts hold that a standard is economically feasible if there is a reasonable likelihood that the estimated costs of compliance ‘‘will not threaten the existence or competitive structure of an industry, even if it does portend disaster for some marginal firms’’ (*United Steelworkers of America* v. *Marshall,* 647 F.2d 1189, 1272 (D.C. Cir. 1980)). As demonstrated by this FEA and the supporting evidence, the potential impacts associated with achieving compliance with the final rule fall well within the bounds of economic feasibility in each industry sector.

OSHA does not expect compliance with the requirements of the final standards to threaten the viability of entities, or the existence or competitive structure of any of the affected industry sectors. In addition, based on an analysis of the costs and economic impacts associated with this rulemaking and the review of the record, OSHA concludes that the effects of the final rule on international trade, employment, wages, and economic growth for the United States would be negligible.

H. Regulatory Flexibility Screening Analysis

1. Introduction

The Regulatory Flexibility Act, as amended in 1996, requires the preparation of a Final Regulatory Flexibility Analysis (FRFA) for any rule that determined to have a significant economic impact on a substantial number of small entities (5 U.S.C. 601–612). Under the provisions of the law, each such analysis must contain:

- A description of the impact of the rule on small entities;
- A statement of the need for, and objectives of, the rule;
- The response of the Agency to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration in response to the proposed rule, and a detailed statement of any revisions made to the proposed rule in the final rule as a result of these comments;
- A statement of the significant issues raised by the public comments in response to the initial regulatory flexibility analysis, a statement of the assessment of the agency of such issues, and a statement of any revisions made in the proposed rule as a result of such comments;
- A description and an estimate of the number of small entities to which the rule will apply, or an explanation of why no such estimate is available;
- A description of the projected reporting, recordkeeping, and other compliance requirements of the rule, including an estimate of the classes of small entities that will be subject to the requirements and the type of professional skills necessary for preparation of the report or record; and
- A description of the steps the agency took in the final rule to minimize the significant economic impact on small entities consistent with the stated objectives of the applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule, and why the agency rejected each of the other significant alternatives to the rule considered by the agency that affect the impact on small entities.

To determine the need for a FRFA, OSHA conducted a regulatory flexibility screening analysis to assess the potential impacts of the proposed standards on affected small entities. On the basis of the screening analysis, presented below, the Assistant Secretary certifies that it does not expect the final standards for walking-working surfaces and personal protective equipment to have a significant impact on a substantial number of small entities.

2. Impact of the Final Rule on Small Entities

Based on the PEA and comments in the rulemaking record, OSHA estimated compliance costs and economic impacts for small entities affected by the final rule. Tables V–2 and V–3 in Section C presented, respectively, the profiles for two classes of general industry entities: Those entities classified as small according to Small Business Administration (SBA) criteria, and those entities with fewer than 20 employees. OSHA assigned costs to small entities by first determining the per-employee compliance costs for those cost items that are a function of the number of affected employees at a facility, and the per-establishment cost for those items that do not vary with establishment size. OSHA then calculated, by industry, the average number of employees for each of the two classes of small entities, multiplied these averages by per-employee compliance cost, and then added the establishment-based cost to determine the average compliance cost for each class of small entity. The Agency then multiplied these average costs by the numbers of small entities to produce the total compliance costs in each industry incurred by small entities.

Table V–30 shows the resultant annualized compliance costs by industry sector for SBA-defined small entities, while Table V–31 shows the costs for entities with fewer than 20 employees. Compliance costs for SBA-defined small entities totaled $202.6 million, compared to $305.1 million for all entities. Compliance costs for entities with fewer than 20 employees totaled $161.6 million.

OSHA calculated the economic impacts of these costs by comparing average compliance costs with average receipts and profits. Tables V–32 and V–33 display the results of these calculations by four-digit NAICS industry sectors; these results are OSHA’s final assessment of impacts on

SBA-defined small entities and entities with fewer than 20 employees (''very small entities''). Among SBA-defined small entities, compliance costs were less than three percent of profits for nearly all industries, and larger than one percent for only two industries: NAICS 2213, Water, Sewage and Other Systems (5.3 percent); and NAICS 5617, Services to Buildings and Dwellings (2.6 percent). For entities with fewer than 20 employees, compliance costs as a percent of profits were less than five percent for nearly all industries, and larger than two percent for only two industries: NAICS 2213, Water, Sewage and Other Systems (11.7 percent); and NAICS 5617, Services to Buildings and Dwellings (4.2 percent).

For one industry group, chimney-cleaning services, found in NAICS 56179, Other Services to Buildings and Dwellings, OSHA estimates that, for the approximately 6,000 establishments providing chimney-cleaning services affected by the final rule, economic impacts could be significant. OSHA estimates that compliance costs could reach 0.6 percent of pre-regulation revenue if the establishments passed all costs forward to customers (primarily homeowners) or, at the other extreme, costs could approach 15.4 percent of pre-regulation profits if the establishments passed none of the costs forward to customers, but instead absorbed the costs from profits. For several reasons, OSHA believes that demand for chimney-cleaning services is relatively inelastic and, therefore, cost impacts are more likely to result in price adjustments than profit reduction.

On the question of passing compliance costs forward to customers, the National Chimney Sweep Guild noted in a pre-hearing comment:

> Unless the homeowner is willing to pay for this added time, then each job becomes less profitable. Furthermore, the additional time required to perform the work would significantly reduce the number of jobs that could be performed per day to the point where the business would have to double its staff to perform the same number of jobs and the business would no longer be profitable. Especially in the current economic climate, homeowners are generally unwilling to absorb these added costs. (Ex. 296, p. 29.)

OSHA disagrees with this comment because, first, all employers providing chimney-cleaning services would face the new requirements at the same time and, therefore, would have few incentives to hold the price of the services steady at pre-regulation levels with the expectation of gaining enough additional business to offset the compliance costs.

Second, chimney-cleaning services involve almost exclusively domestic American businesses. Therefore, international-trade factors would not present competitive pressures to keep prices at the baseline levels (thereby reducing profits).

Third, under the final rule, in the event that conventional fall protection is infeasible or creates a greater hazard, employers could develop a fall protection plan, the costs of which are likely to be minimal because templates for such plans should be readily available on the Internet. In such cases, employers likely would pass the cost forward to customers.

Finally, OSHA believes the increase in price resulting from the cost increase would be modest. Accordingly, the price increase would not dissuade homeowners from continuing a contractual relationship with chimney-cleaning services.

BILLING CODE 4510–19–P

Table V-30
Compliance Costs for Small Business Entities Affected by OSHA's Final Standards for Subparts D and I (by 2-Digit NAICS)

		Annualized Compliance Costs									
		§1910.22	§1910.23	§1910.24	§1910.27	§1910.28	§1910.29	§1910.30			
NAICS	Industry Sector	General Requirements	Ladders	Step Bolts and Manhole Steps	Scaffolds and Rope Descent Systems	Duty to Have Fall Protection	Fall Protection Systems Criteria and Practices	Training Program	Subpart I – Personal Protective Equipment	Rule Familiarization	Total
11	Agriculture, Forestry, Fishing, and Hunting	$75,555	$7,446	$0	$0	$0	$1,715	$47,567	$40,885	$12,109	**$185,277**
21	Mining	$59,092	$16,841	$0	$0	$44,733	$336	$429,312	$108,529	$4,727	**$663,570**
22	Utilities	$48,742	$6,938	$13,424,305	$0	$200,072	$339	$122,066	$64,112	$4,511	**$13,871,085**
31-33	Manufacturing	$322,494	$50,874	$0	$0	$2,102,713	$5,448	$457,674	$255,967	$662,880	**$3,858,051**
42	Wholesale Trade	$3,349,628	$371,386	$0	$0	$1,284,338	$41,827	$5,028,015	$1,704,499	$48,279	**$11,827,971**
44-45	Retail Trade	$3,105,583	$613,478	$0	$0	$1,898,927	$39,923	$3,816,793	$1,805,842	$145,240	**$11,425,785**
48-49	Transportation	$1,098,774	$542,998	$0	$0	$698,493	$33,911	$1,724,780	$989,990	$917,174	**$6,006,120**
51	Information	$567,821	$395,851	$47,127	$0	$2,032,604	$12,368	$5,906,845	$995,444	$13,600	**$9,971,660**
52	Finance and Insurance	$731,164	$106,681	$0	$0	$1,141,954	$5,218	$24,526	$445,224	$39,767	**$2,494,535**
53	Real Estate	$747,452	$573,713	$0	$0	$1,536,235	$9,619	$1,009,192	$527,265	$9,417	**$4,412,892**
54	Professional, Scientific, and Technical Services	$3,666,117	$505,586	$0	$0	$6,647,887	$7,594,974	$2,802,184	$1,243,441	$211,830	**$22,672,017**
55	Management	$94,060	$8,087	$0	$0	$103,300	$206	$142,934	$72,696	$14,643	**$435,926**

Table V-30
Compliance Costs for Small Business Entities Affected by OSHA's Final Standards for Subparts D and I (by 2-Digit NAICS) (continued)

		Annualized Compliance Costs									
		§1910.22	§1910.23	§1910.24	§1910.27	§1910.28	§1910.29	§1910.30			
NAICS	Industry Sector	General Requirements	Ladders	Step Bolts and Manhole Steps	Scaffolds and Rope Descent Systems	Duty to Have Fall Protection	Fall Protection Systems Criteria and Practices	Training Program	Subpart I – Personal Protective Equipment	Rule Familiarization	Total
56	Administrative and Support, Waste Management and Remediation Services	$1,144,497	$322,456	$0	$68,752,074	$18,796,713	$12,686	$2,149,143	$516,112	$142,534	**$91,836,215**
61	Educational Services	$330,318	$79,334	$0	$0	$338,081	$4,428	$16,866	$87,246	$108,826	**$965,099**
62	Health Care	$2,129,746	$262,302	$0	$0	$2,426,089	$39,935	$95,903	$600,735	$107,778	**$5,662,488**
71	Arts, Entertainment, and Recreation	$474,730	$133,040	$47,438	$0	$1,393,096	$6,154	$15,432	$113,316	$97,065	**$2,280,271**
72	Accommodation and Food Services	$1,646,380	$238,887	$0	$0	$1,467,974	$26,664	$683,389	$587,747	$36,906	**$4,687,946**
81	Other Services	$2,455,900	$1,025,781	$0	$0	$2,595,068	$36,028	$2,245,884	$948,318	$54,486	**$9,361,465**
Total		$22,048,051	$5,261,679	$13,518,870	$68,752,074	$44,708,275	$7,871,777	$26,718,506	$11,107,367	$2,631,772	$202,618,373

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

Table V-31
Compliance Costs for Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Standards for Subparts D and I
(by 2-Digit NAICS)

Annualized Compliance Costs

		§1910.22	§1910.23	§1910.24	§1910.27	§1910.28	§1910.29	§1910.30			
NAICS	Industry Sector	General Requirements	Ladders	Step Bolts and Manhole Steps	Scaffolds and Rope Descent Systems	Duty to Have Fall Protection	Fall Protection Systems Criteria and Practices	Training Program	Subpart I – Personal Protective Equipment	Rule Familiarization	Total
11	Agriculture, Forestry, Fishing, and Hunting	$72,203	$5,263	$0	$0	$0	$1,216	$33,309	$37,252	$11,508	**$160,749**
21	Mining	$53,442	$7,388	$0	$0	$40,456	$147	$188,344	$65,109	$4,275	**$359,161**
22	Utilities	$37,746	$5,673	$12,735,080	$0	$183,559	$323	$94,240	$45,047	$3,696	**$13,105,363**
31-33	Manufacturing	$254,924	$8,897	$0	$0	$630,179	$976	$73,912	$164,962	$516,440	**$1,650,288**
42	Wholesale Trade	$2,941,272	$179,044	$0	$0	$1,126,862	$20,752	$2,396,338	$1,126,039	$40,629	**$7,830,936**
44-45	Retail Trade	$2,781,933	$404,161	$0	$0	$1,701,622	$26,330	$2,449,700	$1,509,492	$130,567	**$9,003,805**
48-49	Transportation	$1,000,293	$219,188	$0	$0	$646,898	$14,259	$444,013	$832,076	$752,653	**$3,909,381**
51	Information	$496,930	$30,565	$42,015	$0	$1,803,063	$1,953	$242,619	$128,425	$12,248	**$2,757,819**
52	Finance and Insurance	$1,165,870	$126,595	$0	$0	$1,888,291	$5,803	$181,413	$858,438	$36,682	**$4,263,092**
53	Real Estate	$673,968	$272,122	$0	$0	$1,320,164	$5,282	$607,848	$484,887	$8,645	**$3,372,916**
54	Professional, Scientific, and Technical Services	$3,347,380	$257,471	$0	$0	$4,221,593	$1,088,569	$1,829,663	$1,114,558	$198,782	**$12,058,016**
55	Management	$25,870	$768	$0	$0	$28,411	$20	$13,565	$16,387	$4,027	**$89,046**

Table V-31
Compliance Costs for Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Standards for Subparts D and I
(by 2-Digit NAICS) (continued)

Annualized Compliance Costs

		§1910.22	§1910.23	§1910.24	§1910.27	§1910.28	§1910.29	§1910.30			
NAICS	Industry Sector	General Requirements	Ladders	Step Bolts and Manhole Steps	Scaffolds and Rope Descent Systems	Duty to Have Fall Protection	Fall Protection Systems Criteria and Practices	Training Program	Subpart I – Personal Protective Equipment	Rule Familiarization	Total
56	Administrative and Support, Waste Management and Remediation Services	$1,013,294	$144,580	$0	$63,961,723	$17,438,527	$6,664	$1,024,149	$359,357	$122,048	**$84,070,342**
61	Educational Services	$268,560	$23,608	$0	$0	$270,800	$2,038	$2,674	$67,844	$83,001	**$718,525**
62	Health Care	$1,870,417	$161,644	$0	$0	$2,146,925	$24,750	$23,072	$494,656	$83,261	**$4,804,725**
71	Arts, Entertainment, and Recreation	$413,898	$53,175	$42,783	$0	$1,219,682	$2,788	$5,671	$97,859	$87,676	**$1,923,532**
72	Accommodation and Food Services	$1,313,863	$92,945	$0	$0	$1,174,721	$10,269	$264,755	$440,448	$31,859	**$3,328,860**
81	Other Services	$2,309,512	$788,129	$0	$0	$2,437,663	$29,298	$1,769,636	$835,344	$52,104	**$8,221,687**
Total		$20,041,375	$2,781,217	$12,819,878	$63,961,723	$38,279,415	$1,241,436	$11,644,922	$8,678,181	$2,180,100	$161,628,246

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Standards for Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
1131	Timber Tract Operations	500	$468,335	389	$1,203,946	3.46%	*	$41,699	$3,638	$9.35	0.001%	0.022%
1132	Forest Nurseries and Gathering of Forest Products	500	$165,443	169	$978,953	3.46%	*	$33,906	$1,772	$10.49	0.001%	0.031%
1133	Logging	500	$9,576,634	9,714	$985,859	3.46%	*	$34,145	$139,577	$14.37	0.001%	0.042%
1141	Fishing	20	$2,184,360	2,039	$1,071,290	5.50%	*	$58,882	$19,368	$9.50	0.001%	0.016%
1142	Hunting and Trapping	20	$224,921	323	$696,350	5.50%	*	$38,274	$3,080	$9.54	0.001%	0.025%
1153	Support Activities for Forestry	100	$1,005,318	1,641	$612,625	4.60%	*	$28,179	$18,845	$11.48	0.002%	0.041%
2111	Oil and Gas Extraction	500	$65,881,686	6,453	$10,209,466	13.95%		$1,424,662	$667,011	$103.36	0.001%	0.007%
2211	Electric Power Generation, Transmission and Distribution	20	$71,561,117	1,551	$46,138,696	4.33%		$1,998,003	$408,472	$263.36	0.001%	0.013%
2212	Natural Gas Distribution	20	$26,658,582	441	$60,450,299	3.12%		$1,888,167	$29,221	$66.26	0.000%	0.004%
2213	Water, Sewage and Other Systems	100	$4,692,243	3,918	$1,197,612	5.44%		$65,140	$13,436,129	$3,429.33	0.286%	5.265%
3111	Animal Food Manufacturing	500	$13,482,404	1,173	$11,493,951	4.28%		$491,520	$177,057	$150.94	0.001%	0.031%
3112	Grain and Oilseed Milling	500	$12,159,386	461	$26,376,108	4.28%	*	$1,127,932	$82,017	$177.91	0.001%	0.016%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3113	Sugar and Confectionery Product Manufacturing	500	$7,534,539	1,587	$4,747,662	7.74%		$367,409	$82,769	$52.15	0.001%	0.014%
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	500	$22,320,630	1,221	$18,280,614	6.70%		$1,224,283	$57,621	$47.19	0.000%	0.004%
3115	Dairy Product Manufacturing	500	$22,955,544	1,031	$22,265,319	2.60%		$578,977	$53,560	$51.95	0.000%	0.009%
3116	Animal Slaughtering and Processing	500	$35,753,664	3,109	$11,500,053	2.15%		$247,280	$1,822,315	$586.14	0.005%	0.237%
3117	Seafood Product Preparation and Packaging	500	$5,841,258	574	$10,176,408	2.15%	*	$218,819	$18,060	$31.46	0.000%	0.014%
3118	Bakeries and Tortilla Manufacturing	500	$16,114,228	9,408	$1,712,822	8.78%		$150,370	$457,061	$48.58	0.003%	0.032%
3119	Other Food Manufacturing	500	$27,225,372	2,761	$9,860,693	5.36%		$528,799	$115,780	$41.93	0.000%	0.008%
3121	Beverage Manufacturing	500	$19,574,647	3,338	$5,864,184	6.67%	*	$391,223	$160,069	$47.95	0.001%	0.012%
3122	Tobacco Manufacturing	500	$1,445,606	72	$20,077,861	17.89%		$3,590,997	$11,689	$162.35	0.001%	0.005%
3131	Fiber, Yarn, and Thread Mills	500	$1,981,174	281	$7,063,009	3.45%	*	$243,562	$18,183	$64.82	0.001%	0.027%
3132	Fabric Mills	500	$8,428,933	1,107	$7,614,212	3.45%	*	$262,569	$37,323	$33.72	0.000%	0.013%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3133	Textile and Fabric Finishing and Fabric Coating Mills	500	$6,016,388	1,259	$4,778,704	3.45%	*	$164,789	$118,792	$94.35	0.002%	0.057%
3141	Textile Furnishings Mills	500	$4,609,735	2,418	$1,906,425	3.68%	*	$70,074	$208,222	$86.11	0.005%	0.123%
3149	Other Textile Product Mills	500	$7,523,532	3,994	$1,883,709	3.68%	*	$69,239	$187,312	$46.90	0.002%	0.068%
3151	Apparel Knitting Mills	500	$1,531,845	433	$3,537,748	2.87%		$101,524	$64,182	$148.23	0.004%	0.146%
3152	Cut and Sew Apparel Manufacturing	500	$18,921,683	8,772	$2,157,055	5.00%		$107,768	$142,692	$16.27	0.001%	0.015%
3159	Apparel Accessories and Other Apparel Manufacturing	500	$1,296,347	884	$1,466,456	3.92%		$57,491	$17,903	$20.25	0.001%	0.035%
3161	Leather and Hide Tanning and Finishing	500	$962,480	230	$4,184,696	5.36%	*	$224,115	$7,399	$32.17	0.001%	0.014%
3162	Footwear Manufacturing	500	$708,810	274	$2,586,898	5.36%	*	$138,544	$8,587	$31.34	0.001%	0.023%
3169	Other Leather and Allied Product Manufacturing	500	$1,865,997	821	$2,272,834	5.36%	*	$121,724	$15,343	$18.69	0.001%	0.015%
3211	Sawmills and Wood Preservation	500	$18,421,888	3,662	$5,030,554	2.86%	*	$144,087	$117,626	$32.12	0.001%	0.022%
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	500	$9,105,606	1,444	$6,305,821	2.86%	*	$180,614	$65,612	$45.44	0.001%	0.025%
3219	Other Wood Product Manufacturing	500	$30,432,601	9,405	$3,235,790	2.86%	*	$92,681	$277,993	$29.56	0.001%	0.032%
3221	Pulp, Paper, and Paperboard Mills	750	$7,736,635	217	$35,652,696	3.36%		$1,197,661	$171,900	$792.17	0.002%	0.066%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3222	Converted Paper Product Manufacturing	750	$36,539,855	2,941	$12,426,409	7.61%		$945,481	$426,427	$145.02	0.001%	0.015%
3231	Printing and Related Support Activities	500	$58,682,825	31,414	$1,868,047	3.99%	*	$74,506	$727,802	$23.17	0.001%	0.031%
3241	Petroleum and Coal Products Manufacturing	500	$48,140,351	1,096	$43,923,678	7.34%	*	$3,222,320	$167,276	$152.62	0.000%	0.005%
3251	Basic Chemical Manufacturing	500	$49,507,084	1,290	$38,377,584	4.32%		$1,657,316	$165,598	$128.37	0.000%	0.008%
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	500	$20,518,018	685	$29,953,311	7.67%		$2,297,000	$279,299	$407.74	0.001%	0.018%
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	500	$6,412,264	633	$10,129,959	10.59%	*	$1,073,008	$63,493	$100.30	0.001%	0.009%
3254	Pharmaceutical and Medicine Manufacturing	500	$21,206,858	1,385	$15,311,811	15.76%		$2,413,810	$103,922	$75.03	0.000%	0.003%
3255	Paint, Coating, and Adhesive Manufacturing	500	$10,450,584	1,446	$7,227,237	5.06%		$365,419	$61,518	$42.54	0.001%	0.012%
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	500	$20,115,249	1,938	$10,379,385	9.72%		$1,008,822	$114,669	$59.17	0.001%	0.006%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]	Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3259	Other Chemical Product and Preparation Manufacturing	500	$14,882,426	2,068	$7,196,531	4.88%	$351,295	$111,380	$53.86	0.001%	0.015%
3261	Plastics Product Manufacturing	500	$74,870,708	9,146	$8,186,170	3.88%	$317,356	$361,097	$39.48	0.000%	0.012%
3262	Rubber Product Manufacturing	500	$13,874,745	1,628	$8,522,571	2.28%	$194,467	$63,085	$38.75	0.000%	0.020%
3271	Clay Product and Refractory Manufacturing	500	$4,378,014	1,304	$3,357,373	3.18%	$106,689	$60,813	$46.64	0.001%	0.044%
3272	Glass and Glass Product Manufacturing	500	$5,294,032	1,726	$3,067,226	3.67%	$112,626	$82,989	$48.08	0.002%	0.043%
3273	Cement and Concrete Product Manufacturing	500	$33,888,989	5,020	$6,750,795	5.39%	$363,606	$308,718	$61.50	0.001%	0.017%
3274	Lime and Gypsum Product Manufacturing	500	$1,384,991	202	$6,856,391	5.39% *	$369,293	$17,215	$85.22	0.001%	0.023%
3279	Other Nonmetallic Mineral Product Manufacturing	500	$9,176,165	2,937	$3,124,333	4.57% *	$142,858	$134,955	$45.95	0.001%	0.032%
3311	Iron and Steel Mills and Ferroalloy Manufacturing	750	$18,680,495	730	$25,589,719	4.85%	$1,242,030	$195,786	$268.20	0.001%	0.022%
3312	Steel Product Manufacturing from Purchased Steel	1000	$11,597,089	497	$23,334,183	4.85% *	$1,132,555	$100,911	$203.04	0.001%	0.018%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3313	Alumina and Aluminum Production and Processing	750	$9,481,337	421	$22,520,990	4.74%		$1,067,867	$99,216	$235.67	0.001%	0.022%
3314	Nonferrous Metal (except Aluminum) Production and Processing	750	$16,396,272	676	$24,254,840	4.50%	*	$1,090,597	$92,323	$136.57	0.001%	0.013%
3315	Foundries	500	$17,218,659	1,796	$9,587,227	4.70%		$450,527	$153,234	$85.32	0.001%	0.019%
3321	Forging and Stamping	500	$21,580,191	2,301	$9,378,614	4.60%		$431,002	$90,443	$39.31	0.000%	0.009%
3322	Cutlery and Handtool Manufacturing	500	$6,243,986	1,333	$4,684,161	5.17%		$242,382	$43,863	$32.91	0.001%	0.014%
3323	Architectural and Structural Metals Manufacturing	500	$58,158,410	12,517	$4,646,354	4.63%		$214,933	$380,218	$30.38	0.001%	0.014%
3324	Boiler, Tank, and Shipping Container Manufacturing	500	$10,822,634	1,214	$8,914,855	3.69%		$328,605	$51,547	$42.46	0.000%	0.013%
3325	Hardware Manufacturing	500	$4,402,513	673	$6,541,624	5.17%	*	$338,496	$24,733	$36.75	0.001%	0.011%
3326	Spring and Wire Product Manufacturing	500	$6,481,270	1,395	$4,646,072	5.17%	*	$240,411	$59,605	$42.73	0.001%	0.018%
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	500	$50,649,664	24,638	$2,055,754	5.71%	*	$117,359	$662,763	$26.90	0.001%	0.023%
3328	Coating, Engraving, Heat Treating, and Allied Activities	500	$19,921,419	5,526	$3,605,034	4.59%		$165,326	$155,507	$28.14	0.001%	0.017%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]	Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3329	Other Fabricated Metal Product Manufacturing	500	$28,666,675	5,625	$5,096,298	6.76%	$344,735	$179,844	$31.97	0.001%	0.009%
3331	Agriculture, Construction, and Mining Machinery Manufacturing	500	$24,737,429	2,640	$9,370,238	6.07%	$568,508	$113,707	$43.07	0.000%	0.008%
3332	Industrial Machinery Manufacturing	500	$17,768,488	3,510	$5,062,247	6.27%	$317,202	$120,147	$34.23	0.001%	0.011%
3333	Commercial and Service Industry Machinery Manufacturing	500	$10,377,208	2,013	$5,155,096	4.56%	$235,120	$72,958	$36.24	0.001%	0.015%
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	500	$10,739,286	1,397	$7,687,392	4.26%	$327,327	$54,324	$38.89	0.001%	0.012%
3335	Metalworking Machinery Manufacturing	500	$20,422,820	7,595	$2,688,982	5.10%	$137,156	$239,486	$31.53	0.001%	0.023%
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	500	$7,115,536	704	$10,107,295	2.67%	$269,678	$30,341	$43.10	0.000%	0.016%
3339	Other General Purpose Machinery Manufacturing	500	$33,262,361	5,361	$6,204,507	4.94%	$306,563	$189,510	$35.35	0.001%	0.012%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]	Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3341	Computer and Peripheral Equipment Manufacturing	1,000	$10,655,606	1,184	$8,999,667	8.55%	$769,758	$69,111	$58.37	0.001%	0.008%
3342	Communications Equipment Manufacturing	750	$15,471,516	1,517	$10,202,121	4.50%	$458,791	$92,625	$61.08	0.001%	0.013%
3343	Audio and Video Equipment Manufacturing	750	$3,407,537	496	$6,870,034	3.71%	$254,617	$18,776	$37.85	0.001%	0.015%
3344	Semiconductor and Other Electronic Component Manufacturing	500	$29,325,434	4,039	$7,260,568	6.48%	$470,695	$159,175	$39.41	0.001%	0.008%
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	500	$32,498,798	4,395	$7,395,335	5.92%	$438,005	$146,103	$33.25	0.000%	0.008%
3346	Manufacturing and Reproducing Magnetic and Optical Media	500	$2,180,159	750	$2,906,879	3.71% *	$107,735	$21,226	$28.30	0.001%	0.026%
3351	Electric Lighting Equipment Manufacturing	500	$7,317,724	1,102	$6,643,417	4.08%	$270,740	$36,167	$32.83	0.000%	0.012%
3352	Household Appliance Manufacturing	500	$1,896,622	279	$6,797,928	4.08%	$277,037	$28,767	$103.11	0.002%	0.037%
3353	Electrical Equipment Manufacturing	500	$13,308,052	1,971	$6,751,929	6.93%	$468,065	$97,933	$49.69	0.001%	0.011%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3359	Other Electrical Equipment and Component Manufacturing	500	$21,773,278	1,743	$12,491,840	5.01%		$626,324	$70,267	$40.31	0.000%	0.006%
3361	Motor Vehicle Manufacturing	1,000	$4,735,259	276	$17,156,736	1.09%		$186,467	$148,429	$537.79	0.003%	0.288%
3362	Motor Vehicle Body and Trailer Manufacturing	500	$15,196,178	1,851	$8,209,713	1.09%	*	$89,227	$71,247	$38.49	0.000%	0.043%
3363	Motor Vehicle Parts Manufacturing	500	$55,365,541	4,227	$13,098,070	1.09%	*	$142,355	$180,026	$42.59	0.000%	0.030%
3364	Aerospace Product and Parts Manufacturing	1,000	$13,091,579	1,275	$10,267,905	4.52%		$464,503	$283,376	$222.26	0.002%	0.048%
3365	Railroad Rolling Stock Manufacturing	1,000	$1,508,526	141	$10,698,766	2.30%	*	$246,210	$22,754	$161.38	0.002%	0.066%
3366	Ship and Boat Building	500	$11,479,976	1,612	$7,121,573	6.14%		$437,085	$230,217	$142.81	0.002%	0.033%
3369	Other Transportation Equipment Manufacturing	500	$5,488,371	986	$5,566,299	6.07%		$338,032	$38,221	$38.76	0.001%	0.011%
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	500	$25,553,757	16,089	$1,588,275	4.02%	*	$63,815	$368,702	$22.92	0.001%	0.036%
3372	Office Furniture (including Fixtures) Manufacturing	500	$15,486,586	3,866	$4,005,842	4.02%	*	$160,951	$122,548	$31.70	0.001%	0.020%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3379	Other Furniture Related Product Manufacturing	500	$5,000,204	888	$5,630,860	4.02%	*	$226,243	$27,325	$30.77	0.001%	0.014%
3391	Medical Equipment and Supplies Manufacturing	500	$28,982,721	11,227	$2,581,520	9.84%		$253,960	$285,223	$25.41	0.001%	0.010%
3399	Other Miscellaneous Manufacturing	500	$43,667,832	18,259	$2,391,579	5.38%		$128,783	$454,148	$24.87	0.001%	0.019%
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	100	$88,349,621	16,942	$5,214,828	2.25%		$117,408	$894,270	$52.78	0.001%	0.045%
4232	Furniture and Home Furnishing Merchant Wholesalers	100	$57,631,397	10,468	$5,505,483	2.74%	*	$150,835	$248,336	$23.72	0.000%	0.016%
4233	Lumber and Other Construction Materials Merchant Wholesalers	100	$61,158,220	12,190	$5,017,184	2.70%		$135,364	$512,225	$42.02	0.001%	0.031%
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	100	$99,564,895	25,371	$3,924,436	2.66%		$104,389	$1,261,769	$49.73	0.001%	0.048%
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	100	$79,191,947	6,957	$11,382,651	2.79%		$317,806	$217,881	$31.32	0.000%	0.010%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]	Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
4236	Electrical and Electronic Goods Merchant Wholesalers	100	$116,205,481	19,024	$6,108,282	2.13%	$130,040	$791,810	$41.62	0.001%	0.032%
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	100	$47,399,143	10,751	$4,408,710	3.18%	$140,041	$583,565	$54.28	0.001%	0.039%
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	100	$197,666,925	41,809	$4,727,813	3.49%	$164,938	$2,439,487	$58.35	0.001%	0.035%
4239	Miscellaneous Durable Goods Merchant Wholesalers	100	$159,740,319	30,313	$5,269,697	2.74%	$144,375	$835,162	$27.55	0.001%	0.019%
4241	Paper and Paper Product Merchant Wholesalers	100	$36,553,039	8,752	$4,176,774	2.02%	$84,509	$186,075	$21.26	0.001%	0.025%
4242	Drugs and Druggists' Sundries Merchant Wholesalers	100	$34,187,543	5,838	$5,856,288	3.42%	$200,496	$115,976	$19.87	0.000%	0.010%
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	100	$81,945,442	14,426	$5,680,399	4.68%	$266,013	$252,181	$17.48	0.000%	0.007%
4244	Grocery and Related Product Wholesalers	100	$204,506,779	26,532	$7,708,002	2.81%	$216,545	$681,757	$25.70	0.000%	0.012%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
4245	Farm Product Raw Material Merchant Wholesalers	100	$55,679,278	3,844	$14,484,724	2.03%		$293,520	$105,896	$27.55	0.000%	0.009%
4246	Chemical and Allied Products Merchant Wholesalers	100	$50,173,511	7,934	$6,324,060	3.26%		$206,061	$287,804	$36.28	0.001%	0.018%
4247	Petroleum and Petroleum Products Merchant Wholesalers	100	$204,677,503	4,478	$45,709,900	1.90%		$867,895	$294,762	$65.83	0.000%	0.008%
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	100	$32,849,344	2,999	$10,952,519	3.77%		$412,883	$87,205	$29.08	0.000%	0.007%
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	100	$91,126,788	24,660	$3,695,365	2.93%		$108,386	$515,371	$20.90	0.001%	0.019%
4251	Wholesale Electronic Markets and Agents and Brokers	100	$387,328,579	53,561	$7,231,541	7.55%	*	$546,167	$1,589,585	$29.68	0.000%	0.005%
4411	Automobile Dealers	20	$443,192,194	44,316	$10,000,839	0.98%		$97,724	$1,356,335	$30.61	0.000%	0.031%
4412	Other Motor Vehicle Dealers	100	$57,025,140	15,120	$3,771,504	2.52%	**	$95,100	$564,057	$37.31	0.001%	0.039%
4413	Automotive Parts, Accessories, and Tire Stores	100	$42,888,527	32,330	$1,326,586	1.24%	*	$16,475	$939,806	$29.07	0.002%	0.176%
4421	Furniture Stores	100	$35,470,338	19,802	$1,791,250	3.06%	*	$54,735	$410,300	$20.72	0.001%	0.038%
4422	Home Furnishings Stores	100	$30,067,318	26,202	$1,147,520	3.06%	*	$35,064	$648,103	$24.73	0.002%	0.071%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
4431	Electronics and Appliance Stores	20	$38,835,791	30,335	$1,280,230	3.29%	*	$42,096	$696,841	$22.97	0.002%	0.055%
4441	Building Material and Supplies Dealers	100	$116,471,660	45,176	$2,578,176	7.66%	*	$197,571	$1,559,771	$34.53	0.001%	0.017%
4442	Lawn and Garden Equipment and Supplies Stores	100	$33,831,920	16,635	$2,033,779	1.81%	**	$36,730	$481,335	$28.94	0.001%	0.079%
4451	Grocery Stores	100	$110,655,741	65,430	$1,691,208	2.00%	*	$33,865	$790,579	$12.08	0.001%	0.036%
4452	Specialty Food Stores	100	$17,713,135	23,426	$756,131	2.00%	*	$15,141	$337,519	$14.41	0.002%	0.095%
4453	Beer, Wine, and Liquor Stores	100	$30,450,794	26,833	$1,134,826	2.07%	*	$23,478	$320,512	$11.94	0.001%	0.051%
4461	Health and Personal Care Stores	100	$80,787,975	43,539	$1,855,531	3.06%	*	$56,706	$614,009	$14.10	0.001%	0.025%
4471	Gasoline Stations	100	$235,407,146	65,359	$3,601,756	0.86%	*	$30,907	$1,791,895	$27.42	0.001%	0.089%
4481	Clothing Stores	100	$33,291,641	40,794	$816,092	5.15%	*	$42,037	$611,963	$15.00	0.002%	0.036%
4482	Shoe Stores	100	$6,858,608	6,641	$1,032,767	5.15%	*	$53,198	$68,997	$10.39	0.001%	0.020%
4483	Jewelry, Luggage, and Leather Goods Stores	100	$18,847,729	19,038	$990,006	5.15%	*	$50,995	$354,928	$18.64	0.002%	0.037%
4511	Sporting Goods, Hobby, and Musical Instrument Stores	100	$26,098,603	31,702	$823,248	2.62%	*	$21,558	$710,405	$22.41	0.003%	0.104%
4512	Book, Periodical, and Music Stores	100	$6,664,077	9,053	$736,118	2.62%	*	$19,276	$125,471	$13.86	0.002%	0.072%
4521	Department Stores	100	$634,076	394	$1,609,330	4.15%	*	$66,771	$7,006	$17.78	0.001%	0.027%
4529	Other General Merchandise Stores	100	$8,449,800	10,002	$844,811	4.15%	*	$35,051	$189,005	$18.90	0.002%	0.054%
4531	Florists	100	$6,272,242	18,941	$331,146	3.23%	*	$10,692	$209,493	$11.06	0.003%	0.103%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
4532	Office Supplies, Stationery, and Gift Stores	500	$17,012,759	28,693	$592,924	3.23%	*	$19,145	$544,680	$18.98	0.003%	0.099%
4533	Used Merchandise Stores	100	$7,323,864	13,005	$563,158	3.23%	*	$18,184	$198,837	$15.29	0.003%	0.084%
4539	Other Miscellaneous Store Retailers	100	$39,861,928	36,844	$1,081,911	3.23%	*	$34,934	$909,311	$24.68	0.002%	0.071%
4541	Electronic Shopping and Mail-Order Houses	100	$44,357,730	14,940	$2,969,058	3.75%	*	$111,413	$237,352	$15.89	0.001%	0.014%
4542	Vending Machine Operators	100	$5,134,462	4,518	$1,136,446	3.75%	*	$42,645	$181,494	$40.17	0.004%	0.094%
4543	Direct Selling Establishments	20	$22,403,680	19,679	$1,138,456	3.75%	*	$42,720	$488,472	$24.82	0.002%	0.058%
4811	Scheduled Air Transportation	1,500	$9,851,112	538	$18,310,617	2.57%	*	$470,274	$864,379	$1,606.65	0.009%	0.342%
4812	Nonscheduled Air Transportation	1,500	$8,890,730	2,304	$3,858,824	2.57%	*	$99,107	$264,726	$114.90	0.003%	0.116%
4831	Deep Sea, Coastal, and Great Lakes Water Transportation	20	$8,477,469	838	$10,116,311	6.37%	*	$644,012	$170,817	$203.84	0.002%	0.032%
4832	Inland Water Transportation	500	$2,084,918	580	$3,594,686	6.21%	*	$223,194	$183,302	$316.04	0.009%	0.142%
4841	General Freight Trucking	500	$74,888,330	58,091	$1,289,155	6.21%	*	$80,044	$1,367,747	$23.54	0.002%	0.029%
4842	Specialized Freight Trucking	500	$55,163,013	47,947	$1,150,500	2.51%	*	$28,927	$1,143,121	$23.84	0.002%	0.082%
4851	Urban Transit Systems	100	$824,244	566	$1,456,261	2.51%	*	$36,615	$51,925	$91.74	0.006%	0.251%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
4852	Interurban and Rural Bus Transportation	100	$554,776	224	$2,476,679	2.13%	*	$52,741	$18,923	$84.48	0.003%	0.160%
4853	Taxi and Limousine Service	500	$4,978,224	7,290	$682,884	2.13%	*	$14,542	$162,816	$22.33	0.003%	0.154%
4854	School and Employee Bus Transportation	100	$3,320,869	3,045	$1,090,597	2.13%	*	$23,224	$137,140	$45.04	0.004%	0.194%
4855	Charter Bus Industry	500	$1,781,963	1,118	$1,593,885	2.13%	*	$33,942	$52,919	$47.33	0.003%	0.139%
4859	Other Transit and Ground Passenger Transportation	500	$3,828,458	3,196	$1,197,890	2.13%	*	$25,509	$126,394	$39.55	0.003%	0.155%
4861	Pipeline Transportation of Crude Oil	1,500	$860,780	42	$20,494,772	13.23%	*	$2,711,340	$23,669	$563.54	0.003%	0.021%
4862	Pipeline Transportation of Natural Gas	500	$2,298,538	84	$27,363,548	13.23%	*	$3,620,040	$12,249	$145.82	0.001%	0.004%
4869	Other Pipeline Transportation	500	$1,137,749	56	$20,316,946	13.23%	*	$2,687,815	$5,561	$99.30	0.000%	0.004%
4871	Scenic and Sightseeing Transportation, Land	500	$559,211	635	$880,647	13.23%	*	$116,505	$15,916	$25.06	0.003%	0.022%
4872	Scenic and Sightseeing Transportation, Water	500	$1,127,304	1,821	$619,058	4.42%	*	$27,384	$61,569	$33.81	0.005%	0.123%
4879	Scenic and Sightseeing Transportation, Other	100	$392,857	188	$2,089,665	4.42%	*	$92,436	$9,690	$51.54	0.002%	0.056%
4881	Support Activities for Air Transportation	100	$7,164,833	3,947	$1,815,260	4.42%	**	$80,297	$412,902	$104.61	0.006%	0.130%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
4882	Support Activities for Rail Transportation	100	$1,272,169	480	$2,650,352	3.19%	**	$84,575	$120,434	$250.90	0.009%	0.297%
4883	Support Activities for Water Transportation	100	$5,416,618	1,765	$3,068,905	3.19%	**	$97,931	$130,434	$73.90	0.002%	0.075%
4884	Support Activities for Road Transportation	100	$5,813,392	9,249	$628,543	3.19%	**	$20,057	$312,411	$33.78	0.005%	0.168%
4885	Freight Transportation Arrangement	100	$27,524,202	12,667	$2,172,906	3.19%	**	$69,339	$272,517	$21.51	0.001%	0.031%
4889	Other Support Activities for Transportation	100	$1,868,396	1,551	$1,204,640	3.19%	**	$38,441	$25,461	$16.42	0.001%	0.043%
4921	Couriers	1,500	$4,178,767	3,747	$1,115,230	3.19%	**	$35,588	$353,871	$94.44	0.008%	0.265%
4922	Local Messengers and Local Delivery	500	$4,150,565	4,330	$958,560	3.19%	**	$30,588	$77,208	$17.83	0.002%	0.058%
4931	Warehousing and Storage	100	$39,951,180	7,410	$5,391,522	4.59%	*	$247,368	$179,796	$24.26	0.000%	0.010%
5111	Newspaper, Periodical, Book, and Directory Publishers	500	$43,902,360	16,643	$2,637,887	11.69%	*	$308,246	$398,651	$23.95	0.001%	0.008%
5112	Software Publishers	500	$23,859,487	5,601	$4,259,862	16.22%	*	$691,000	$226,680	$40.47	0.001%	0.006%
5121	Motion Picture and Video Industries	500	$25,078,127	17,429	$1,438,874	6.24%	**	$89,721	$394,399	$22.63	0.002%	0.025%
5122	Sound Recording Industries	100	$1,654,218	3,425	$482,983	7.26%	**	$35,081	$207,546	$60.60	0.013%	0.173%
5151	Radio and Television Broadcasting	20	$10,268,764	4,606	$2,229,432	6.79%	*	$151,272	$174,604	$37.91	0.002%	0.025%
5152	Cable and Other Subscription Programming	500	$3,601,413	341	$10,561,328	6.79%	*	$716,609	$160,191	$469.77	0.004%	0.066%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
5161	Internet Publishing and Broadcasting	500	$5,485,257	2,333	$2,351,160	7.06%	*	$165,988	$177,116	$75.92	0.003%	0.046%
5171	Wired Telecommunications Carriers	1,500	$16,702,548	2,004	$8,334,605	6.40%	*	$533,712	$5,879,440	$2,933.85	0.035%	0.550%
5172	Wireless Telecommunications Carriers (except Satellite)	1,500	$8,683,535	1,711	$5,075,123	6.40%	*	$324,989	$413,650	$241.76	0.005%	0.074%
5173	Telecommunications Resellers	1,500	$13,331,322	3,107	$4,290,738	6.40%	*	$274,760	$753,777	$242.61	0.006%	0.088%
5174	Satellite Telecommunications	1,000	$3,001,157	530	$5,662,560	6.40%	*	$362,606	$288,672	$544.66	0.010%	0.150%
5175	Cable and Other Program Distribution	1,000	$2,796,836	947	$2,953,364	6.40%	*	$189,121	$122,259	$129.10	0.004%	0.068%
5179	Other Telecommunications	1,000	$2,226,640	1,260	$1,767,175	6.40%	*	$113,162	$192,504	$152.78	0.009%	0.135%
5181	Internet Service Providers and Web Search Portals	1,000	$7,943,835	3,747	$2,120,052	7.21%	*	$152,828	$200,636	$53.55	0.003%	0.035%
5182	Data Processing, Hosting, and Related Services	1,000	$22,685,667	7,112	$3,189,773	7.21%	*	$229,941	$184,911	$26.00	0.001%	0.011%
5191	Other Information Services	1,000	$3,073,430	3,349	$917,716	8.78%	*	$80,572	$189,407	$56.56	0.006%	0.070%
5211	Monetary Authorities - Central Bank	1,000	$302,753	53	$5,712,321	5.83%	*	$333,247	$5,985	$112.92	0.002%	0.034%
5221	Depository Credit Intermediation	20	$182,794,953	15,010	$12,178,211	9.42%	*	$1,146,679	$185,843	$12.38	0.000%	0.001%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
5222	Nondepository Credit Intermediation	100	$109,214,617	23,197	$4,708,135	7.53%	*	$354,747	$236,702	$10.20	0.000%	0.003%
5223	Activities Related to Credit Intermediation	20	$25,947,702	27,577	$940,918	10.33%	**	$97,202	$301,270	$10.92	0.001%	0.011%
5231	Securities and Commodity Contracts Intermediation and Brokerage	100	$43,913,430	12,731	$3,449,331	5.99%	*	$206,477	$146,774	$11.53	0.000%	0.006%
5232	Securities and Commodity Exchanges	100	$829,893	117	$7,093,103	5.99%	*	$424,592	$3,100	$26.50	0.000%	0.006%
5239	Other Financial Investment Activities	100	$117,296,054	43,788	$2,678,726	31.09%	*	$832,689	$459,208	$10.49	0.000%	0.001%
5241	Insurance Carriers	100	$89,744,365	6,849	$13,103,280	4.56%	*	$597,869	$86,030	$12.56	0.000%	0.002%
5242	Agencies, Brokerages, and Other Insurance Related Activities	20	$96,095,730	130,229	$737,898	4.56%	*	$33,668	$1,153,096	$8.85	0.001%	0.026%
5259	Other Investment Pools and Funds	20	$4,149,107	1,965	$2,111,505	65.69%	*	$1,386,955	$28,360	$14.43	0.00%	0.001%
5311	Lessors of Real Estate	100	$99,265,980	95,427	$1,040,229	13.62%	*	$141,664	$1,681,882	$17.62	0.002%	0.012%
5312	Offices of Real Estate Agents and Brokers	100	$70,375,455	100,495	$700,288	8.22%	*	$57,554	$1,123,102	$11.18	0.002%	0.019%
5313	Activities Related to Real Estate	100	$55,573,813	73,945	$751,556	13.62%	*	$102,351	$1,207,599	$16.33	0.002%	0.016%
5321	Automotive Equipment Rental and Leasing	500	$8,909,501	4,629	$1,924,714	2.43%	**	$46,838	$75,614	$16.33	0.001%	0.035%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
5322	Consumer Goods Rental	100	$8,145,582	12,034	$676,881	3.69%	*	$24,970	$145,586	$12.10	0.002%	0.048%
5323	General Rental Centers	100	$3,512,015	3,167	$1,108,941	3.69%	*	$40,909	$54,139	$17.09	0.002%	0.042%
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	100	$20,012,355	8,368	$2,391,534	5.35%	**	$127,991	$157,061	$18.77	0.001%	0.015%
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	100	$8,060,046	2,335	$3,451,840	29.11%	*	$1,004,711	$21,210	$9.08	0.000%	0.001%
5411	Legal Services	100	$168,755,635	180,282	$936,065	8.86%	**	$82,974	$2,136,675	$11.85	0.001%	0.014%
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	500	$59,259,539	107,843	$549,498	7.81%	**	$42,920	$1,449,633	$13.44	0.002%	0.031%
5413	Architectural, Engineering, and Related Services	100	$144,115,123	98,918	$1,456,915	4.79%	**	$69,714	$2,125,094	$21.48	0.001%	0.031%
5414	Specialized Design Services	100	$23,155,463	34,304	$675,008	5.48%	**	$36,974	$510,832	$14.89	0.002%	0.040%
5415	Computer Systems Design and Related Services	500	$130,320,040	102,538	$1,270,944	5.02%	**	$63,761	$1,955,349	$19.07	0.002%	0.030%
5416	Management, Scientific, and Technical Consulting Services	100	$119,314,020	141,356	$844,068	7.49%	**	$63,215	$2,230,048	$15.78	0.002%	0.025%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
5417	Scientific Research and Development Services	100	$47,783,246	13,440	$3,555,301	2.14%	**	$76,215	$376,368	$28.00	0.001%	0.037%
5418	Advertising and Related Services	500	$54,654,241	36,283	$1,506,332	5.13%	**	$77,332	$11,247,212	$309.99	0.021%	0.401%
5419	Other Professional, Scientific, and Technical Services	500	$50,054,663	64,099	$780,896	6.72%	**	$52,488	$839,864	$13.10	0.002%	0.025%
5511	Management of Companies and Enterprises	100	$75,486,690	20,794	$3,630,215	6.72%	**	$244,004	$448,375	$21.56	0.001%	0.009%
5611	Office Administrative Services	100	$42,852,939	25,338	$1,691,252	12.73%	*	$215,323	$481,328	$19.00	0.001%	0.009%
5612	Facilities Support Services	500	$4,603,262	1,500	$3,068,841	4.21%	*	$129,072	$76,594	$51.06	0.002%	0.040%
5613	Employment Services	100	$44,575,894	23,151	$1,925,441	4.21%	**	$80,982	$533,594	$23.05	0.001%	0.028%
5614	Business Support Services	100	$28,391,249	29,302	$968,918	2.66%	*	$25,813	$367,799	$12.55	0.001%	0.049%
5615	Travel Arrangement and Reservation Services	100	$16,631,010	16,703	$995,690	4.21%	**	$41,877	$172,249	$10.31	0.001%	0.025%
5616	Investigation and Security Services	100	$17,080,251	19,479	$876,855	3.30%	*	$28,960	$384,732	$19.75	0.002%	0.068%
5617	Services to Buildings and Dwellings	100	$82,911,097	172,700	$480,087	4.21%	*	$20,192	$89,103,422	$515.94	0.107%	2.555%
5619	Other Support Services	100	$26,157,479	18,223	$1,435,410	4.21%	*	$60,372	$311,286	$17.08	0.001%	0.028%
5621	Waste Collection	500	$14,389,120	7,666	$1,877,005	5.44%	*	$102,117	$186,579	$24.34	0.001%	0.024%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
5622	Waste Treatment and Disposal	100	$5,060,315	1,534	$3,298,771	4.79%	*	$157,930	$75,692	$49.34	0.001%	0.031%
5629	Remediation and Other Waste Management Services	100	$13,326,878	7,883	$1,690,585	4.79%	*	$80,937	$232,298	$29.47	0.002%	0.036%
6111	Elementary and Secondary Schools	100	$55,736,852	16,490	$3,380,040	7.60%	**	$257,015	$271,750	$16.48	0.000%	0.006%
6112	Junior Colleges	500	$2,336,568	288	$8,113,083	7.60%	**	$616,911	$19,858	$68.95	0.001%	0.011%
6113	Colleges, Universities, and Professional Schools	100	$13,007,384	1,718	$7,571,236	7.60%	**	$575,709	$25,819	$15.03	0.000%	0.003%
6114	Business Schools and Computer and Management Training	100	$7,444,657	6,832	$1,089,675	7.60%	**	$82,858	$85,144	$12.46	0.001%	0.015%
6115	Technical and Trade Schools	500	$7,026,736	6,442	$1,090,769	7.60%	**	$82,941	$105,258	$16.34	0.001%	0.020%
6116	Other Schools and Instruction	100	$13,872,429	35,635	$389,292	7.60%	**	$29,601	$393,156	$11.03	0.003%	0.037%
6117	Educational Support Services	100	$7,107,117	5,917	$1,201,135	7.60%	**	$91,333	$77,080	$13.03	0.001%	0.014%
6211	Offices of Physicians	100	$265,079,147	189,252	$1,400,668	4.56%	*	$63,816	$1,807,322	$9.55	0.001%	0.015%
6212	Offices of Dentists	100	$90,979,014	120,488	$755,088	7.66%	*	$57,824	$1,157,098	$9.60	0.001%	0.017%
6213	Offices of Other Health Practitioners	100	$45,983,749	112,089	$410,243	7.78%	*	$31,937	$965,995	$8.62	0.002%	0.027%
6214	Outpatient Care Centers	500	$33,986,651	12,233	$2,778,276	5.34%	*	$148,406	$163,526	$13.37	0.000%	0.009%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
6215	Medical and Diagnostic Laboratories	500	$20,124,407	7,464	$2,696,196	5.51%	*	$148,667	$85,946	$11.51	0.000%	0.008%
6216	Home Health Care Services	20	$24,316,866	15,764	$1,542,557	5.51%	*	$85,056	$171,902	$10.90	0.001%	0.013%
6219	Other Ambulatory Health Care Services	100	$12,200,189	5,449	$2,238,978	5.51%	*	$123,456	$66,395	$12.18	0.001%	0.010%
6221	General Medical and Surgical Hospitals	20	$29,788,752	1,674	$17,794,953	5.24%	**	$932,315	$21,324	$12.74	0.000%	0.001%
6222	Psychiatric and Substance Abuse Hospitals	20	$4,235,063	326	$12,990,991	5.24%	**	$680,625	$4,347	$13.33	0.000%	0.002%
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals	20	$2,962,810	401	$7,388,554	5.24%	**	$387,102	$6,753	$16.84	0.000%	0.004%
6231	Nursing Care Facilities	500	$41,876,375	7,832	$5,346,830	5.24%	**	$280,132	$100,545	$12.84	0.000%	0.005%
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	100	$14,585,730	8,036	$1,815,049	5.24%	**	$95,094	$68,213	$8.49	0.000%	0.009%
6233	Community Care Facilities for the Elderly	100	$19,733,146	14,491	$1,361,752	5.24%	**	$71,345	$125,759	$8.68	0.001%	0.012%
6239	Other Residential Care Facilities	100	$6,041,833	3,523	$1,714,968	5.24%	**	$89,851	$32,833	$9.32	0.001%	0.010%
6241	Individual and Family Services	100	$50,250,251	40,591	$1,237,965	5.24%	**	$64,860	$382,358	$9.42	0.001%	0.015%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
6242	Community Food and Housing, and Emergency and Other Relief Services	100	$19,349,321	9,325	$2,074,994	5.24%	**	$108,713	$86,660	$9.29	0.000%	0.009%
6243	Vocational Rehabilitation Services	100	$8,265,697	4,249	$1,945,328	5.24%	**	$101,920	$33,711	$7.93	0.000%	0.008%
6244	Child Day Care Services	100	$23,735,204	59,716	$397,468	5.24%	**	$20,824	$443,692	$7.43	0.002%	0.036%
7111	Performing Arts Companies	500	$11,640,787	9,255	$1,257,784	8.99%	*	$113,035	$897,260	$96.95	0.008%	0.086%
7112	Spectator Sports	100	$17,228,395	4,194	$4,107,867	8.99%	*	$369,167	$90,496	$21.58	0.001%	0.006%
7113	Promoters of Performing Arts, Sports, and Similar Events	20	$8,206,151	5,982	$1,371,807	8.99%	*	$123,282	$185,112	$30.94	0.002%	0.025%
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	500	$4,029,130	3,620	$1,113,019	8.99%	*	$100,025	$45,715	$12.63	0.001%	0.013%
7115	Independent Artists, Writers, and Performers	500	$12,619,303	20,044	$629,580	8.99%	*	$56,579	$214,084	$10.68	0.002%	0.019%
7121	Museums, Historical Sites, and Similar Institutions	100	$9,970,695	6,778	$1,471,038	6.69%	**	$98,355	$77,873	$11.49	0.001%	0.012%
7131	Amusement Parks and Arcades	100	$2,438,790	2,555	$954,517	4.94%	*	$47,189	$40,212	$15.74	0.002%	0.033%
7132	Gambling Industries	500	$8,341,034	1,988	$4,195,691	4.94%	*	$207,423	$24,338	$12.24	0.000%	0.006%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
7139	Other Amusement and Recreation Industries	100	$45,100,926	61,465	$733,766	4.94%	*	$36,275	$729,434	$11.87	0.002%	0.033%
7211	Traveler Accommodation	100	$53,634,734	43,818	$1,224,034	5.14%	*	$62,922	$729,551	$16.65	0.001%	0.026%
7212	RV (Recreational Vehicle) Parks and Recreational Camps	100	$3,904,302	6,809	$573,403	5.14%	*	$29,476	$90,069	$13.23	0.002%	0.045%
7213	Rooming and Boarding Houses	100	$827,450	2,117	$390,860	5.14%	*	$20,092	$25,738	$12.16	0.003%	0.061%
7221	Full-Service Restaurants	500	$127,043,572	188,281	$674,755	4.61%	*	$31,079	$1,742,715	$9.26	0.001%	0.030%
7222	Limited-Service Eating Places	100	$114,142,231	173,832	$656,624	4.61%	*	$30,244	$1,504,625	$8.66	0.001%	0.029%
7223	Special Food Services	100	$10,765,010	15,095	$713,151	4.61%	*	$32,847	$228,401	$15.13	0.002%	0.046%
7224	Drinking Places (Alcoholic Beverages)	100	$17,750,257	46,253	$383,764	4.61%	*	$17,676	$437,994	$9.47	0.002%	0.054%
8111	Automotive Repair and Maintenance	100	$82,369,042	152,030	$541,795	3.25%	*	$17,616	$3,851,769	$25.34	0.005%	0.144%
8112	Electronic and Precision Equipment Repair and Maintenance	20	$10,041,369	11,232	$893,997	4.90%	*	$43,826	$207,343	$18.46	0.002%	0.042%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	100	$22,502,761	21,850	$1,029,875	4.90%	*	$50,487	$553,520	$25.33	0.002%	0.050%
8114	Personal and Household Goods Repair and Maintenance	500	$7,534,240	21,868	$344,533	4.90%	*	$16,890	$336,963	$15.41	0.004%	0.091%
8121	Personal Care Services	100	$22,490,631	96,852	$232,216	5.12%	*	$11,880	$722,467	$7.46	0.003%	0.063%
8122	Death Care Services	20	$12,218,211	15,760	$775,267	5.12%	*	$39,663	$155,848	$9.89	0.001%	0.025%
8123	Dry-cleaning and Laundry Services	20	$13,570,864	33,896	$400,368	5.12%	*	$20,483	$337,527	$9.96	0.002%	0.049%
8129	Other Personal Services	20	$11,794,640	25,713	$458,703	5.12%	*	$23,468	$298,050	$11.59	0.003%	0.049%
8131	Religious Organizations	20	$112,912,515	178,395	$632,935	2.05%	*	$12,968	$1,614,463	$9.05	0.001%	0.070%
8132	Grantmaking and Giving Services	20	$84,918,809	14,131	$6,009,398	2.05%	*	$123,126	$145,943	$10.33	0.000%	0.008%
8133	Social Advocacy Organizations	20	$15,775,057	13,019	$1,211,695	2.05%	*	$24,826	$129,562	$9.95	0.001%	0.040%
8134	Civic and Social Organizations	20	$16,708,923	26,900	$621,150	2.05%	*	$12,727	$295,983	$11.00	0.002%	0.086%

Table V-32
Average Cost Impacts on Small Business Entities Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	SBA Employment Size Criterion [a]	Estimated Receipts, 2007 ($1,000)[b]	Entities [c]	Average Receipts per Entity	Profit Rate [d]	Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
8139	Business, Professional, Labor, Political, and Similar Organizations	20	$68,099,014	60,844	$1,119,240	2.05% *	$22,932	$832,384	$13.68	0.001%	0.060%

[a] SBA criteria specified in dollar terms converted to size-class definition based on average revenues for different size establishments. Most restrictive criterion for 6-digit NAICS applied to the 4-digit NAICS level.

[b] Estimated based on 2007 receipts and payroll data from U.S. Census Bureau, Statistics of U.S. Businesses, 2007, and payroll data from U.S. Census Bureau, Statistics of U.S. Businesses, 2007.

[c] U.S. Census Bureau, Statistics of U.S. Businesses, 2007.

[d] Estimated from average of the yearly ratios of net income to total receipts as reported by the U.S. Internal Revenue Service, Corporation Source Book, 2000 – 2008. Data were not available at disaggregated levels for all industries; OSHA used profit rates at more highly aggregated levels for such industries.

*Profit rate imputed from corresponding 3-digit NAICS industry.

**Profit rate imputed from corresponding 2-digit NAICS industry.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
1131	Timber Tract Operations	$335,491	371	$904,288	3.46%	*	$31,320	$3,472	$9.36	0.001%	0.030%
1132	Forest Nurseries and Gathering of Forest Products	$102,025	154	$662,500	3.46%	*	$22,946	$1,603	$10.41	0.002%	0.045%
1133	Logging	$6,646,269	9,231	$719,994	3.46%	*	$24,937	$118,162	$12.80	0.002%	0.051%
1141	Fishing	$1,025,214	2,039	$502,802	5.50%	*	$27,636	$19,368	$9.50	0.002%	0.034%
1142	Hunting and Trapping	$91,616	312	$293,641	5.50%	*	$16,140	$2,974	$9.53	0.003%	0.059%
1153	Support Activities for Forestry	$598,327	1,528	$391,575	4.60%	*	$18,011	$17,473	$11.44	0.003%	0.063%
2111	Oil and Gas Extraction	$12,698,328	5,836	$2,175,862	13.95%		$303,627	$363,229	$62.24	0.003%	0.020%
2211	Electric Power Generation, Transmission and Distribution	$8,364,773	630	$13,277,417	4.33%		$574,969	$165,917	$263.36	0.002%	0.046%
2212	Natural Gas Distribution	$6,872,831	351	$19,580,715	3.12%		$611,604	$23,257	$66.26	0.000%	0.011%
2213	Water, Sewage and Other Systems	$2,032,054	3,766	$539,579	5.44%		$29,349	$12,918,006	$3,430.17	0.636%	11.688%
3111	Animal Food Manufacturing	$2,065,748	819	$2,522,281	4.28%		$107,861	$116,158	$141.83	0.006%	0.131%
3112	Grain and Oilseed Milling	$1,071,553	277	$3,868,422	4.28%	*	$165,427	$43,318	$156.38	0.004%	0.095%
3113	Sugar and Confectionery Product Manufacturing	$929,203	1,587	$585,509	7.74%		$45,311	$45,519	$28.68	0.005%	0.063%
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	$1,176,242	684	$1,719,652	6.70%		$115,168	$19,128	$27.96	0.002%	0.024%
3115	Dairy Product Manufacturing	$1,352,029	620	$2,180,692	2.60%		$56,706	$23,329	$37.63	0.002%	0.066%
3116	Animal Slaughtering and Processing	$3,158,449	2,262	$1,396,308	2.15%		$30,024	$1,288,628	$569.69	0.041%	1.897%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3117	Seafood Product Preparation and Packaging	$714,342	351	$2,035,162	2.15%	*	$43,761	$9,316	$26.54	0.001%	0.061%
3118	Bakeries and Tortilla Manufacturing	$3,254,708	7,651	$425,396	8.78%		$37,346	$265,090	$34.65	0.008%	0.093%
3119	Other Food Manufacturing	$2,874,924	1,786	$1,609,700	5.36%		$86,323	$63,356	$35.47	0.002%	0.041%
3121	Beverage Manufacturing	$2,861,636	2,722	$1,051,299	6.67%	*	$70,136	$78,796	$28.95	0.003%	0.041%
3122	Tobacco Manufacturing	$210,222	40	$5,255,550	17.89%		$939,974	$5,482	$137.04	0.003%	0.015%
3131	Fiber, Yarn, and Thread Mills	$161,969	172	$941,680	3.45%	*	$32,473	$8,288	$48.19	0.005%	0.148%
3132	Fabric Mills	$752,579	704	$1,069,004	3.45%	*	$36,864	$16,980	$24.12	0.002%	0.065%
3133	Textile and Fabric Finishing and Fabric Coating Mills	$968,489	942	$1,028,120	3.45%	*	$35,454	$84,783	$90.00	0.009%	0.254%
3141	Textile Furnishings Mills	$1,206,278	2,053	$587,568	3.68%	*	$21,597	$159,838	$77.86	0.013%	0.360%
3149	Other Textile Product Mills	$1,796,901	3,302	$544,186	3.68%	*	$20,002	$137,795	$41.73	0.008%	0.209%
3151	Apparel Knitting Mills	$239,222	283	$845,307	2.87%		$24,258	$37,967	$134.16	0.016%	0.553%
3152	Cut and Sew Apparel Manufacturing	$4,656,884	7,163	$650,130	5.00%		$32,481	$104,981	$14.66	0.002%	0.045%
3159	Apparel Accessories and Other Apparel Manufacturing	$345,953	730	$473,908	3.92%		$18,579	$11,984	$16.42	0.003%	0.088%
3161	Leather and Hide Tanning and Finishing	$118,817	186	$638,801	5.36%	*	$34,212	$4,645	$24.97	0.004%	0.073%
3162	Footwear Manufacturing	$147,147	206	$714,306	5.36%	*	$38,255	$5,090	$24.71	0.003%	0.065%
3169	Other Leather and Allied Product Manufacturing	$364,186	682	$533,997	5.36%	*	$28,599	$11,946	$17.52	0.003%	0.061%
3211	Sawmills and Wood Preservation	$2,832,987	2,626	$1,078,822	2.86%	*	$30,900	$58,933	$22.44	0.002%	0.073%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	$826,879	735	$1,125,005	2.86%	*	$32,223	$17,531	$23.85	0.002%	0.074%
3219	Other Wood Product Manufacturing	$5,497,108	6,913	$795,184	2.86%	*	$22,776	$142,413	$20.60	0.003%	0.090%
3221	Pulp, Paper, and Paperboard Mills	$171,342	85	$2,015,788	3.36%		$67,715	$4,231	$49.78	0.002%	0.074%
3222	Converted Paper Product Manufacturing	$2,449,745	1,434	$1,708,330	7.61%		$129,981	$48,017	$33.48	0.002%	0.026%
3231	Printing and Related Support Activities	$15,154,719	26,396	$574,129	3.99%	*	$22,899	$528,799	$20.03	0.003%	0.087%
3241	Petroleum and Coal Products Manufacturing	$2,630,614	696	$3,779,618	7.34%	*	$277,280	$40,301	$57.90	0.002%	0.021%
3251	Basic Chemical Manufacturing	$2,982,163	753	$3,960,376	4.32%		$171,027	$34,499	$45.82	0.001%	0.027%
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	$1,288,686	356	$3,619,904	7.67%		$277,596	$18,727	$52.60	0.001%	0.019%
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	$1,173,567	445	$2,637,229	10.59%	*	$279,347	$22,488	$50.53	0.002%	0.018%
3254	Pharmaceutical and Medicine Manufacturing	$1,748,241	852	$2,051,926	15.76%		$323,473	$27,781	$32.61	0.002%	0.010%
3255	Paint, Coating, and Adhesive Manufacturing	$1,714,532	1,009	$1,699,239	5.06%		$85,916	$28,434	$28.18	0.002%	0.033%
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	$4,456,775	1,419	$3,140,786	9.72%		$305,268	$45,520	$32.08	0.001%	0.011%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3259	Other Chemical Product and Preparation Manufacturing	$2,270,151	1,476	$1,538,043	4.88%		$75,079	$44,024	$29.83	0.002%	0.040%
3261	Plastics Product Manufacturing	$6,380,425	5,175	$1,232,932	3.88%		$47,797	$117,239	$22.65	0.002%	0.047%
3262	Rubber Product Manufacturing	$1,016,240	961	$1,057,482	2.28%		$24,129	$22,166	$23.07	0.002%	0.096%
3271	Clay Product and Refractory Manufacturing	$562,304	991	$567,411	3.18%		$18,031	$24,988	$25.22	0.004%	0.140%
3272	Glass and Glass Product Manufacturing	$1,014,564	1,403	$723,139	3.67%		$26,553	$40,229	$28.67	0.004%	0.108%
3273	Cement and Concrete Product Manufacturing	$4,685,193	3,200	$1,464,123	5.39%		$78,859	$103,727	$32.41	0.002%	0.041%
3274	Lime and Gypsum Product Manufacturing	$249,479	150	$1,663,193	5.39%	*	$89,582	$9,884	$65.90	0.004%	0.074%
3279	Other Nonmetallic Mineral Product Manufacturing	$2,086,188	2,199	$948,698	4.57%	*	$43,379	$62,365	$28.36	0.003%	0.065%
3311	Iron and Steel Mills and Ferroalloy Manufacturing	$2,056,197	532	$3,865,032	4.85%		$187,594	$21,759	$40.90	0.001%	0.022%
3312	Steel Product Manufacturing from Purchased Steel	$657,376	278	$2,364,662	4.85%	*	$114,772	$22,233	$79.98	0.003%	0.070%
3313	Alumina and Aluminum Production and Processing	$681,201	220	$3,096,368	4.74%		$146,819	$8,652	$39.33	0.001%	0.027%
3314	Nonferrous Metal (except Aluminum) Production and Processing	$1,409,782	420	$3,356,624	4.50%	*	$150,928	$15,143	$36.06	0.001%	0.024%
3315	Foundries	$1,026,010	945	$1,085,725	4.70%		$51,021	$29,036	$30.73	0.003%	0.060%
3321	Forging and Stamping	$1,579,508	1,237	$1,276,886	4.60%		$58,680	$29,948	$24.21	0.002%	0.041%
3322	Cutlery and Handtool Manufacturing	$835,570	982	$850,886	5.17%		$44,029	$24,435	$24.88	0.003%	0.057%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3323	Architectural and Structural Metals Manufacturing	$9,287,056	8,801	$1,055,227	4.63%		$48,813	$192,805	$21.91	0.002%	0.045%
3324	Boiler, Tank, and Shipping Container Manufacturing	$930,447	650	$1,431,457	3.69%		$52,764	$17,305	$26.62	0.002%	0.050%
3325	Hardware Manufacturing	$523,764	425	$1,232,386	5.17%	*	$63,770	$11,271	$26.52	0.002%	0.042%
3326	Spring and Wire Product Manufacturing	$891,955	918	$971,629	5.17%	*	$50,277	$29,673	$32.32	0.003%	0.064%
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	$13,479,668	19,866	$678,530	5.71%	*	$38,736	$443,836	$22.34	0.003%	0.058%
3328	Coating, Engraving, Heat Treating, and Allied Activities	$3,589,774	3,891	$922,584	4.59%		$42,309	$83,321	$21.41	0.002%	0.051%
3329	Other Fabricated Metal Product Manufacturing	$3,828,778	3,914	$978,226	6.76%		$66,171	$90,917	$23.23	0.002%	0.035%
3331	Agriculture, Construction, and Mining Machinery Manufacturing	$2,415,764	1,698	$1,422,711	6.07%		$86,318	$50,866	$29.96	0.002%	0.035%
3332	Industrial Machinery Manufacturing	$2,596,623	2,406	$1,079,228	6.27%		$67,625	$57,265	$23.80	0.002%	0.035%
3333	Commercial and Service Industry Machinery Manufacturing	$1,703,014	1,427	$1,193,423	4.56%		$54,431	$36,488	$25.57	0.002%	0.047%
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	$1,488,447	852	$1,747,004	4.26%		$74,387	$20,194	$23.70	0.001%	0.032%
3335	Metalworking Machinery Manufacturing	$4,516,187	5,710	$790,926	5.10%		$40,343	$140,209	$24.56	0.003%	0.061%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	$674,860	412	$1,638,010	2.67%		$43,705	$11,282	$27.38	0.002%	0.063%
3339	Other General Purpose Machinery Manufacturing	$4,485,758	3,478	$1,289,752	4.94%		$63,726	$84,836	$24.39	0.002%	0.038%
3341	Computer and Peripheral Equipment Manufacturing	$1,184,942	861	$1,376,239	8.55%		$117,712	$20,516	$23.83	0.002%	0.020%
3342	Communications Equipment Manufacturing	$1,214,742	970	$1,252,311	4.50%		$56,317	$25,967	$26.77	0.002%	0.048%
3343	Audio and Video Equipment Manufacturing	$1,134,996	386	$2,940,404	3.71%		$108,977	$9,458	$24.50	0.001%	0.022%
3344	Semiconductor and Other Electronic Component Manufacturing	$2,663,466	2,340	$1,138,233	6.48%		$73,790	$62,019	$26.50	0.002%	0.036%
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	$3,459,177	3,011	$1,148,847	5.92%		$68,043	$73,363	$24.36	0.002%	0.036%
3346	Manufacturing and Reproducing Magnetic and Optical Media	$472,619	604	$782,482	3.71%	*	$29,000	$13,201	$21.86	0.003%	0.075%
3351	Electric Lighting Equipment Manufacturing	$757,044	739	$1,024,417	4.08%		$41,748	$16,649	$22.53	0.002%	0.054%
3352	Household Appliance Manufacturing	$215,667	182	$1,184,984	4.08%		$48,292	$16,513	$90.73	0.008%	0.188%
3353	Electrical Equipment Manufacturing	$1,609,761	1,349	$1,193,299	6.93%		$82,723	$34,450	$25.54	0.002%	0.031%
3359	Other Electrical Equipment and Component Manufacturing	$1,396,826	1,053	$1,326,520	5.01%		$66,510	$27,925	$26.52	0.002%	0.040%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
3361	Motor Vehicle Manufacturing	$673,906	199	$3,386,462	1.09%		$36,805	$8,377	$42.10	0.001%	0.114%
3362	Motor Vehicle Body and Trailer Manufacturing	$1,316,723	1,099	$1,198,110	1.09%	*	$13,022	$26,013	$23.67	0.002%	0.182%
3363	Motor Vehicle Parts Manufacturing	$3,143,710	2,604	$1,207,262	1.09%	*	$13,121	$61,697	$23.69	0.002%	0.181%
3364	Aerospace Product and Parts Manufacturing	$952,110	778	$1,223,792	4.52%		$55,362	$23,745	$30.52	0.002%	0.055%
3365	Railroad Rolling Stock Manufacturing	$178,826	78	$2,292,641	2.30%	*	$52,760	$5,005	$64.16	0.003%	0.122%
3366	Ship and Boat Building	$912,085	1,132	$805,729	6.14%		$49,451	$49,509	$43.74	0.005%	0.088%
3369	Other Transportation Equipment Manufacturing	$870,578	787	$1,106,198	6.07%		$67,178	$23,746	$30.17	0.003%	0.045%
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	$7,068,716	13,942	$507,009	4.02%	*	$20,371	$256,512	$18.40	0.004%	0.090%
3372	Office Furniture (including Fixtures) Manufacturing	$2,187,158	2,542	$860,408	4.02%	*	$34,570	$55,008	$21.64	0.003%	0.063%
3379	Other Furniture Related Product Manufacturing	$497,967	599	$831,331	4.02%	*	$33,402	$12,149	$20.28	0.002%	0.061%
3391	Medical Equipment and Supplies Manufacturing	$4,979,198	9,679	$514,433	9.84%		$50,608	$208,813	$21.57	0.004%	0.043%
3399	Other Miscellaneous Manufacturing	$10,214,575	15,011	$680,473	5.38%		$36,642	$295,958	$19.72	0.003%	0.054%
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	$33,451,668	14,357	$2,329,990	2.25%		$52,458	$501,763	$34.95	0.001%	0.067%
4232	Furniture and Home Furnishing Merchant Wholesalers	$18,262,085	9,080	$2,011,243	2.74%	*	$55,103	$179,423	$19.76	0.001%	0.036%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]	Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
4233	Lumber and Other Construction Materials Merchant Wholesalers	$25,935,646	10,114	$2,564,331	2.70%	$69,186	$293,753	$29.04	0.001%	0.042%
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	$38,820,283	22,167	$1,751,265	2.66%	$46,583	$771,584	$34.81	0.002%	0.075%
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	$32,860,040	5,660	$5,805,661	2.79%	$162,095	$141,848	$25.06	0.000%	0.015%
4236	Electrical and Electronic Goods Merchant Wholesalers	$46,511,965	16,343	$2,845,987	2.13%	$60,589	$501,217	$30.67	0.001%	0.051%
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	$19,118,111	8,995	$2,125,415	3.18%	$67,513	$330,580	$36.75	0.002%	0.054%
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	$80,469,787	35,458	$2,269,440	3.49%	$79,173	$1,434,641	$40.46	0.002%	0.051%
4239	Miscellaneous Durable Goods Merchant Wholesalers	$63,584,707	27,588	$2,304,796	2.74%	$63,145	$624,737	$22.65	0.001%	0.036%
4241	Paper and Paper Product Merchant Wholesalers	$13,922,220	7,623	$1,826,344	2.02%	$36,952	$147,058	$19.29	0.001%	0.052%
4242	Drugs and Druggists' Sundries Merchant Wholesalers	$11,642,767	5,110	$2,278,428	3.42%	$78,004	$95,993	$18.79	0.001%	0.024%
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	$27,245,980	13,010	$2,094,234	4.68%	$98,073	$221,939	$17.06	0.001%	0.017%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
4244	Grocery and Related Product Wholesalers	$80,915,470	22,501	$3,596,083	2.81%		$101,027	$472,400	$20.99	0.001%	0.021%
4245	Farm Product Raw Material Merchant Wholesalers	$25,139,956	3,154	$7,970,817	2.03%		$161,522	$68,999	$21.88	0.000%	0.014%
4246	Chemical and Allied Products Merchant Wholesalers	$22,290,891	6,866	$3,246,561	3.26%		$105,785	$195,123	$28.42	0.001%	0.027%
4247	Petroleum and Petroleum Products Merchant Wholesalers	$45,454,555	3,322	$13,682,888	1.90%		$259,797	$149,032	$44.86	0.000%	0.017%
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	$5,130,058	2,034	$2,522,152	3.77%		$95,079	$46,415	$22.82	0.001%	0.024%
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	$42,740,152	22,114	$1,932,719	2.93%		$56,687	$415,471	$18.79	0.001%	0.033%
4251	Wholesale Electronic Markets and Agents and Brokers	$238,856,931	51,680	$4,621,845	7.55%	*	$349,068	$1,352,827	$26.18	0.001%	0.007%
4411	Automobile Dealers	$76,951,315	31,917	$2,410,982	0.98%		$23,559	$976,862	$30.61	0.001%	0.130%
4412	Other Motor Vehicle Dealers	$24,554,359	13,141	$1,868,530	2.52%	**	$47,116	$361,426	$27.50	0.001%	0.058%
4413	Automotive Parts, Accessories, and Tire Stores	$23,913,475	30,240	$790,790	1.24%	*	$9,821	$751,181	$24.84	0.003%	0.253%
4421	Furniture Stores	$16,108,088	18,005	$894,645	3.06%	*	$27,337	$325,614	$18.08	0.002%	0.066%
4422	Home Furnishings Stores	$19,194,753	24,937	$769,730	3.06%	*	$23,520	$533,143	$21.38	0.003%	0.091%
4431	Electronics and Appliance Stores	$21,198,389	28,687	$738,955	3.29%	*	$24,298	$658,984	$22.97	0.003%	0.095%
4441	Building Material and Supplies Dealers	$44,680,922	38,531	$1,159,610	7.66%	*	$88,863	$985,880	$25.59	0.002%	0.029%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
4442	Lawn and Garden Equipment and Supplies Stores	$15,823,886	14,726	$1,074,554	1.81%	**	$19,406	$333,394	$22.64	0.002%	0.117%
4451	Grocery Stores	$42,786,245	57,220	$747,750	2.00%	*	$14,973	$672,311	$11.75	0.002%	0.078%
4452	Specialty Food Stores	$11,369,036	21,967	$517,551	2.00%	*	$10,363	$298,109	$13.57	0.003%	0.131%
4453	Beer, Wine, and Liquor Stores	$23,311,870	26,079	$893,894	2.07%	*	$18,494	$309,639	$11.87	0.001%	0.064%
4461	Health and Personal Care Stores	$51,251,763	39,978	$1,281,999	3.06%	*	$39,178	$546,497	$13.67	0.001%	0.035%
4471	Gasoline Stations	$136,136,010	60,944	$2,233,789	0.86%	*	$19,168	$1,422,279	$23.34	0.001%	0.122%
4481	Clothing Stores	$19,159,562	38,954	$491,851	5.15%	*	$25,335	$581,858	$14.94	0.003%	0.059%
4482	Shoe Stores	$3,686,713	6,177	$596,845	5.15%	*	$30,743	$63,979	$10.36	0.002%	0.034%
4483	Jewelry, Luggage, and Leather Goods Stores	$13,320,887	18,537	$718,611	5.15%	*	$37,015	$333,541	$17.99	0.003%	0.049%
4511	Sporting Goods, Hobby, and Musical Instrument Stores	$16,513,942	30,028	$549,951	2.62%	*	$14,401	$576,122	$19.19	0.003%	0.133%
4512	Book, Periodical, and Music Stores	$3,370,695	8,449	$398,946	2.62%	*	$10,447	$115,897	$13.72	0.003%	0.131%
4521	Department Stores	$153,401	340	$451,179	4.15%	*	$18,719	$5,661	$16.65	0.004%	0.089%
4529	Other General Merchandise Stores	$4,396,395	9,408	$467,304	4.15%	*	$19,388	$162,282	$17.25	0.004%	0.089%
4531	Florists	$5,114,023	18,405	$277,861	3.23%	*	$8,972	$201,905	$10.97	0.004%	0.122%
4532	Office Supplies, Stationery, and Gift Stores	$10,315,311	27,053	$381,300	3.23%	*	$12,312	$428,235	$15.83	0.004%	0.129%
4533	Used Merchandise Stores	$4,674,662	12,084	$386,847	3.23%	*	$12,491	$176,952	$14.64	0.004%	0.117%
4539	Other Miscellaneous Store Retailers	$27,496,826	35,066	$784,145	3.23%	*	$25,319	$763,589	$21.78	0.003%	0.086%
4541	Electronic Shopping and Mail-Order Houses	$15,013,728	13,757	$1,091,352	3.75%	*	$40,953	$197,881	$14.38	0.001%	0.035%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
4542	Vending Machine Operators	$2,148,565	4,200	$511,563	3.75%	*	$19,196	$139,090	$33.12	0.006%	0.173%
4543	Direct Selling Establishments	$20,664,119	18,151	$1,138,456	3.75%	*	$42,720	$450,544	$24.82	0.002%	0.058%
4811	Scheduled Air Transportation	$537,306	375	$1,432,816	2.57%	*	$36,799	$15,926	$42.47	0.003%	0.115%
4812	Nonscheduled Air Transportation	$2,249,805	1,966	$1,144,357	2.57%	*	$29,391	$167,459	$85.18	0.007%	0.290%
4831	Deep Sea, Coastal, and Great Lakes Water Transportation	$1,172,391	629	$1,863,897	6.37%	*	$118,657	$126,034	$200.37	0.011%	0.169%
4832	Inland Water Transportation	$486,388	465	$1,045,996	6.21%	*	$64,946	$143,621	$308.86	0.030%	0.476%
4841	General Freight Trucking	$28,653,374	53,000	$540,630	6.21%	*	$33,568	$1,031,369	$19.46	0.004%	0.058%
4842	Specialized Freight Trucking	$24,476,198	43,755	$559,392	2.51%	*	$14,065	$887,392	$20.28	0.004%	0.144%
4851	Urban Transit Systems	$170,505	408	$417,904	2.51%	*	$10,508	$34,651	$84.93	0.020%	0.808%
4852	Interurban and Rural Bus Transportation	$71,672	156	$459,436	2.13%	*	$9,784	$12,140	$77.82	0.017%	0.795%
4853	Taxi and Limousine Service	$2,123,731	6,692	$317,354	2.13%	*	$6,758	$137,453	$20.54	0.006%	0.304%
4854	School and Employee Bus Transportation	$516,198	2,107	$244,992	2.13%	*	$5,217	$83,737	$39.74	0.016%	0.762%
4855	Charter Bus Industry	$415,346	776	$535,240	2.13%	*	$11,398	$28,219	$36.37	0.007%	0.319%
4859	Other Transit and Ground Passenger Transportation	$813,347	2,464	$330,092	2.13%	*	$7,029	$85,492	$34.70	0.011%	0.494%
4861	Pipeline Transportation of Crude Oil	$43,441	28	$1,551,464	13.23%	*	$205,250	$2,660	$95.00	0.006%	0.046%
4862	Pipeline Transportation of Natural Gas	$226,559	63	$3,596,167	13.23%	*	$475,752	$5,338	$84.73	0.002%	0.018%
4869	Other Pipeline Transportation	$77,499	35	$2,214,257	13.23%	*	$292,933	$1,900	$54.30	0.002%	0.019%
4871	Scenic and Sightseeing Transportation, Land	$240,790	536	$449,235	13.23%	*	$59,431	$13,258	$24.73	0.006%	0.042%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
4872	Scenic and Sightseeing Transportation, Water	$635,038	1,717	$369,853	4.42%	*	$16,360	$57,923	$33.74	0.009%	0.206%
4879	Scenic and Sightseeing Transportation, Other	$96,661	171	$565,269	4.42%	*	$25,004	$8,701	$50.88	0.009%	0.203%
4881	Support Activities for Air Transportation	$2,270,226	3,385	$670,672	4.42%	**	$29,667	$215,904	$63.78	0.010%	0.215%
4882	Support Activities for Rail Transportation	$353,878	335	$1,056,352	3.19%	**	$33,709	$40,621	$121.26	0.011%	0.360%
4883	Support Activities for Water Transportation	$1,183,478	1,404	$842,933	3.19%	**	$26,899	$57,447	$40.92	0.005%	0.152%
4884	Support Activities for Road Transportation	$3,568,487	8,660	$412,065	3.19%	**	$13,149	$264,757	$30.57	0.007%	0.233%
4885	Freight Transportation Arrangement	$13,522,609	11,567	$1,169,068	3.19%	**	$37,306	$243,147	$21.02	0.002%	0.056%
4889	Other Support Activities for Transportation	$667,588	1,381	$483,409	3.19%	**	$15,426	$21,040	$15.24	0.003%	0.099%
4921	Couriers	$1,561,375	3,321	$470,152	3.19%	**	$15,003	$75,774	$22.82	0.005%	0.152%
4922	Local Messengers and Local Delivery	$1,649,091	3,918	$420,901	3.19%	**	$13,431	$68,183	$17.40	0.004%	0.130%
4931	Warehousing and Storage	$3,746,452	3,827	$978,953	4.59%	*	$44,915	$81,179	$21.21	0.002%	0.047%
5111	Newspaper, Periodical, Book, and Directory Publishers	$8,965,402	14,080	$636,747	11.69%	*	$74,406	$313,825	$22.29	0.004%	0.030%
5112	Software Publishers	$4,271,962	4,524	$944,289	16.22%	*	$153,175	$163,281	$36.09	0.004%	0.024%
5121	Motion Picture and Video Industries	$11,216,140	16,359	$685,625	6.24%	**	$42,752	$368,305	$22.51	0.003%	0.053%
5122	Sound Recording Industries	$1,654,218	3,425	$482,983	7.26%	**	$35,081	$206,089	$60.17	0.012%	0.172%
5151	Radio and Television Broadcasting	$1,956,657	3,621	$540,364	6.79%	*	$36,665	$137,264	$37.91	0.007%	0.103%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
5152	Cable and Other Subscription Programming	$445,376	293	$1,520,055	6.79%	*	$103,139	$92,702	$316.39	0.021%	0.307%
5161	Internet Publishing and Broadcasting	$1,339,867	2,074	$646,030	7.06%	*	$45,609	$157,333	$75.86	0.012%	0.166%
5171	Wired Telecommunications Carriers	$1,935,085	1,393	$1,389,149	6.40%	*	$88,955	$115,886	$83.19	0.006%	0.094%
5172	Wireless Telecommunications Carriers (except Satellite)	$1,222,843	1,452	$842,178	6.40%	*	$53,929	$56,728	$39.07	0.005%	0.072%
5173	Telecommunications Resellers	$3,308,774	2,789	$1,186,366	6.40%	*	$75,970	$320,493	$114.91	0.010%	0.151%
5174	Satellite Telecommunications	$545,539	478	$1,141,295	6.40%	*	$73,084	$145,413	$304.21	0.027%	0.416%
5175	Cable and Other Program Distribution	$764,231	802	$952,906	6.40%	*	$61,020	$42,280	$52.72	0.006%	0.086%
5179	Other Telecommunications	$916,967	1,176	$779,734	6.40%	*	$49,931	$174,645	$148.51	0.019%	0.297%
5181	Internet Service Providers and Web Search Portals	$2,172,820	3,350	$648,603	7.21%	*	$46,756	$177,233	$52.91	0.008%	0.113%
5182	Data Processing, Hosting, and Related Services	$4,575,616	6,048	$756,550	7.21%	*	$54,537	$151,854	$25.11	0.003%	0.046%
5191	Other Information Services	$1,136,006	2,988	$380,189	8.78%	*	$33,379	$168,039	$56.24	0.015%	0.168%
5211	Monetary Authorities - Central Bank	$63,481	39	$1,627,718	5.83%	*	$94,958	$3,874	$99.32	0.006%	0.105%
5221	Depository Credit Intermediation	$10,303,960	7,589	$1,357,749	9.42%	*	$127,843	$93,962	$12.38	0.001%	0.010%
5222	Nondepository Credit Intermediation	$15,089,018	20,967	$719,656	7.53%	*	$54,224	$213,631	$10.19	0.001%	0.019%
5223	Activities Related to Credit Intermediation	$11,348,802	26,119	$434,504	10.33%	**	$44,887	$285,342	$10.92	0.003%	0.024%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
5231	Securities and Commodity Contracts Intermediation and Brokerage	$12,849,193	12,049	$1,066,412	5.99%	*	$63,835	$138,785	$11.52	0.001%	0.018%
5232	Securities and Commodity Exchanges	$102,641	107	$959,265	5.99%	*	$57,422	$2,830	$26.45	0.003%	0.046%
5239	Other Financial Investment Activities	$38,925,295	42,067	$925,317	31.09%	*	$287,637	$440,498	$10.47	0.001%	0.004%
5241	Insurance Carriers	$7,474,769	6,199	$1,205,802	4.56%	*	$55,018	$75,082	$12.11	0.001%	0.022%
5242	Agencies, Brokerages, and Other Insurance Related Activities	$51,149,567	126,015	$405,901	4.56%	*	$18,520	$1,115,783	$8.85	0.002%	0.048%
5259	Other Investment Pools and Funds	$4,149,107	1,965	$2,111,505	65.69%	*	$1,386,955	$28,360	$14.43	0.001%	0.001%
5311	Lessors of Real Estate	$62,856,475	91,585	$686,318	13.62%	*	$93,467	$1,452,695	$15.86	0.002%	0.017%
5312	Offices of Real Estate Agents and Brokers	$49,266,887	100,495	$490,242	8.22%	*	$40,291	$1,071,829	$10.67	0.002%	0.026%
5313	Activities Related to Real Estate	$26,694,360	68,879	$387,554	13.62%	*	$52,779	$949,172	$13.78	0.004%	0.026%
5321	Automotive Equipment Rental and Leasing	$3,112,600	4,140	$751,836	2.43%	**	$18,296	$47,935	$11.58	0.002%	0.063%
5322	Consumer Goods Rental	$3,801,386	10,893	$348,975	3.69%	*	$12,874	$113,211	$10.39	0.003%	0.081%
5323	General Rental Centers	$1,842,468	2,867	$642,647	3.69%	*	$23,707	$42,492	$14.82	0.002%	0.063%
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	$7,140,211	7,207	$990,733	5.35%	**	$53,022	$103,379	$14.34	0.001%	0.027%
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	$3,197,850	2,051	$1,559,166	29.11%	*	$453,819	$16,335	$7.96	0.001%	0.002%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
5411	Legal Services	$86,321,366	173,334	$498,006	8.86%	**	$44,144	$2,043,531	$11.79	0.002%	0.027%
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	$31,004,051	101,937	$304,149	7.81%	**	$23,756	$1,289,515	$12.65	0.004%	0.053%
5413	Architectural, Engineering, and Related Services	$49,779,421	90,424	$550,511	4.79%	**	$26,342	$1,571,948	$17.38	0.003%	0.066%
5414	Specialized Design Services	$16,869,744	33,480	$503,875	5.48%	**	$27,600	$470,029	$14.04	0.003%	0.051%
5415	Computer Systems Design and Related Services	$47,470,852	96,593	$491,452	5.02%	**	$24,655	$1,391,906	$14.41	0.003%	0.058%
5416	Management, Scientific, and Technical Consulting Services	$62,747,767	136,280	$460,433	7.49%	**	$34,483	$1,926,990	$14.14	0.003%	0.041%
5417	Scientific Research and Development Services	$8,652,898	10,974	$788,491	2.14%	**	$16,903	$233,457	$21.27	0.003%	0.126%
5418	Advertising and Related Services	$25,585,465	33,795	$757,078	5.13%	**	$38,867	$6,589,286	$194.98	0.026%	0.502%
5419	Other Professional, Scientific, and Technical Services	$28,685,212	59,528	$481,878	6.72%	**	$32,389	$709,639	$11.92	0.002%	0.037%
5511	Management of Companies and Enterprises	$9,968,751	5,719	$1,743,093	6.72%	**	$117,161	$92,777	$16.22	0.001%	0.014%
5611	Office Administrative Services	$14,369,977	22,481	$639,205	12.73%	*	$81,381	$339,828	$15.12	0.002%	0.019%
5612	Facilities Support Services	$1,024,783	978	$1,047,835	4.21%	*	$44,071	$22,864	$23.38	0.002%	0.053%
5613	Employment Services	$6,422,772	14,288	$449,522	4.21%	**	$18,906	$185,941	$13.01	0.003%	0.069%
5614	Business Support Services	$11,223,697	25,890	$433,515	2.66%	*	$11,549	$298,570	$11.53	0.003%	0.100%
5615	Travel Arrangement and Reservation Services	$6,855,300	15,806	$433,715	4.21%	**	$18,242	$154,950	$9.80	0.002%	0.054%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
5616	Investigation and Security Services	$6,349,455	16,410	$386,926	3.30%	*	$12,779	$234,090	$14.27	0.004%	0.112%
5617	Services to Buildings and Dwellings	$46,551,737	160,667	$289,741	4.21%	*	$12,186	$82,401,545	$512.87	0.177%	4.209%
5619	Other Support Services	$11,505,781	16,611	$692,660	4.21%	*	$29,132	$236,800	$14.26	0.002%	0.049%
5621	Waste Collection	$5,000,141	6,550	$763,380	5.44%	*	$41,531	$116,202	$17.74	0.002%	0.043%
5622	Waste Treatment and Disposal	$1,332,275	1,277	$1,043,285	4.79%	*	$49,948	$51,484	$40.32	0.004%	0.081%
5629	Remediation and Other Waste Management Services	$4,410,114	6,739	$654,417	4.79%	*	$31,330	$137,596	$20.42	0.003%	0.065%
6111	Elementary and Secondary Schools	$3,918,185	8,116	$482,773	7.60%	**	$36,710	$115,800	$14.27	0.003%	0.039%
6112	Junior Colleges	$124,349	176	$706,528	7.60%	**	$53,724	$10,162	$57.74	0.008%	0.107%
6113	Colleges, Universities, and Professional Schools	$604,290	868	$696,187	7.60%	**	$52,937	$12,509	$14.41	0.002%	0.027%
6114	Business Schools and Computer and Management Training	$3,173,380	6,367	$498,411	7.60%	**	$37,899	$79,074	$12.42	0.002%	0.033%
6115	Technical and Trade Schools	$2,641,692	5,671	$465,825	7.60%	**	$35,421	$91,412	$16.12	0.003%	0.046%
6116	Other Schools and Instruction	$7,652,439	32,864	$232,852	7.60%	**	$17,706	$361,383	$11.00	0.005%	0.062%
6117	Educational Support Services	$2,292,614	5,525	$414,953	7.60%	**	$31,553	$71,774	$12.99	0.003%	0.041%
6211	Offices of Physicians	$129,926,765	173,483	$748,931	4.56%	*	$34,122	$1,649,307	$9.51	0.001%	0.028%
6212	Offices of Dentists	$77,594,755	116,943	$663,526	7.66%	*	$50,813	$1,121,750	$9.59	0.001%	0.019%
6213	Offices of Other Health Practitioners	$34,382,489	108,837	$315,908	7.78%	*	$24,593	$935,956	$8.60	0.003%	0.035%
6214	Outpatient Care Centers	$6,227,506	9,406	$662,078	5.34%	*	$35,366	$119,111	$12.66	0.002%	0.036%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
6215	Medical and Diagnostic Laboratories	$5,832,723	6,099	$956,341	5.51%	*	$52,732	$69,165	$11.34	0.001%	0.022%
6216	Home Health Care Services	$3,547,660	9,898	$358,422	5.51%	*	$19,763	$107,935	$10.90	0.003%	0.055%
6219	Other Ambulatory Health Care Services	$2,165,857	4,056	$533,988	5.51%	*	$29,444	$47,304	$11.66	0.002%	0.040%
6221	General Medical and Surgical Hospitals	$346,216	170	$2,036,565	5.24%	**	$106,700	$2,166	$12.74	0.001%	0.012%
6222	Psychiatric and Substance Abuse Hospitals	$75,942	95	$799,389	5.24%	**	$41,882	$1,267	$13.33	0.002%	0.032%
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals	$165,024	236	$699,254	5.24%	**	$36,635	$3,975	$16.84	0.002%	0.046%
6231	Nursing Care Facilities	$1,277,862	1,768	$722,773	5.24%	**	$37,868	$14,693	$8.31	0.001%	0.022%
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	$1,334,305	4,311	$309,512	5.24%	**	$16,216	$34,460	$7.99	0.003%	0.049%
6233	Community Care Facilities for the Elderly	$2,816,143	10,036	$280,604	5.24%	**	$14,701	$81,308	$8.10	0.003%	0.055%
6239	Other Residential Care Facilities	$640,339	2,018	$317,314	5.24%	**	$16,625	$17,430	$8.64	0.003%	0.052%
6241	Individual and Family Services	$11,026,791	30,530	$361,179	5.24%	**	$18,923	$281,337	$9.22	0.003%	0.049%
6242	Community Food and Housing, and Emergency and Other Relief Services	$4,921,088	6,950	$708,070	5.24%	**	$37,097	$61,117	$8.79	0.001%	0.024%
6243	Vocational Rehabilitation Services	$941,893	2,096	$449,376	5.24%	**	$23,544	$15,529	$7.41	0.002%	0.031%
6244	Child Day Care Services	$8,780,725	49,092	$178,863	5.24%	**	$9,371	$361,559	$7.36	0.004%	0.079%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
7111	Performing Arts Companies	$4,788,609	8,161	$586,767	8.99%	*	$52,732	$785,913	$96.30	0.016%	0.183%
7112	Spectator Sports	$2,209,037	3,798	$581,632	8.99%	*	$52,270	$78,768	$20.74	0.004%	0.040%
7113	Promoters of Performing Arts, Sports, and Similar Events	$4,115,319	5,395	$762,802	8.99%	*	$68,552	$166,947	$30.94	0.004%	0.045%
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	$2,588,703	3,511	$737,312	8.99%	*	$66,261	$44,123	$12.57	0.002%	0.019%
7115	Independent Artists, Writers, and Performers	$11,280,670	19,734	$571,636	8.99%	*	$51,372	$209,715	$10.63	0.002%	0.021%
7121	Museums, Historical Sites, and Similar Institutions	$2,170,237	5,711	$380,010	6.69%	**	$25,408	$61,819	$10.82	0.003%	0.043%
7131	Amusement Parks and Arcades	$882,679	2,108	$418,728	4.94%	*	$20,701	$30,691	$14.56	0.003%	0.070%
7132	Gambling Industries	$1,189,840	1,466	$811,623	4.94%	*	$40,124	$15,208	$10.37	0.001%	0.026%
7139	Other Amusement and Recreation Industries	$16,815,436	50,769	$331,215	4.94%	*	$16,374	$571,007	$11.25	0.003%	0.069%
7211	Traveler Accommodation	$16,791,521	33,973	$494,261	5.14%	*	$25,408	$402,878	$11.86	0.002%	0.047%
7212	RV (Recreational Vehicle) Parks and Recreational Camps	$2,708,188	6,233	$434,492	5.14%	*	$22,335	$72,991	$11.71	0.003%	0.052%
7213	Rooming and Boarding Houses	$602,779	2,034	$296,352	5.14%	*	$15,234	$23,605	$11.61	0.004%	0.076%
7221	Full-Service Restaurants	$46,000,251	141,430	$325,251	4.61%	*	$14,981	$1,237,649	$8.75	0.003%	0.058%
7222	Limited-Service Eating Places	$41,062,798	141,803	$289,576	4.61%	*	$13,338	$1,183,552	$8.35	0.003%	0.063%
7223	Special Food Services	$4,347,542	12,836	$338,699	4.61%	*	$15,600	$153,837	$11.98	0.004%	0.077%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
7224	Drinking Places (Alcoholic Beverages)	$11,021,710	42,226	$261,017	4.61%	*	$12,022	$384,773	$9.11	0.003%	0.076%
8111	Automotive Repair and Maintenance	$61,365,164	146,321	$419,387	3.25%	*	$13,636	$3,235,699	$22.11	0.005%	0.162%
8112	Electronic and Precision Equipment Repair and Maintenance	$4,809,092	10,607	$453,389	4.90%	*	$22,226	$195,806	$18.46	0.004%	0.083%
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	$11,472,207	20,429	$561,565	4.90%	*	$27,529	$425,170	$20.81	0.004%	0.076%
8114	Personal and Household Goods Repair and Maintenance	$5,893,106	21,460	$274,609	4.90%	*	$13,462	$304,497	$14.19	0.005%	0.105%
8121	Personal Care Services	$15,098,462	92,503	$163,221	5.12%	*	$8,351	$685,594	$7.41	0.005%	0.089%
8122	Death Care Services	$8,487,669	14,826	$572,485	5.12%	*	$29,289	$146,612	$9.89	0.002%	0.034%
8123	Dry-cleaning and Laundry Services	$7,395,375	31,666	$233,543	5.12%	*	$11,948	$315,321	$9.96	0.004%	0.083%
8129	Other Personal Services	$6,445,815	24,514	$262,944	5.12%	*	$13,452	$284,152	$11.59	0.004%	0.086%
8131	Religious Organizations	$49,432,764	162,152	$304,854	2.05%	*	$6,246	$1,467,465	$9.05	0.003%	0.145%
8132	Grantmaking and Giving Services	$37,560,115	14,131	$2,657,994	2.05%	*	$54,459	$145,943	$10.33	0.000%	0.019%
8133	Social Advocacy Organizations	$6,178,824	11,696	$528,285	2.05%	*	$10,824	$116,396	$9.95	0.002%	0.092%
8134	Civic and Social Organizations	$8,291,139	24,642	$336,464	2.05%	*	$6,894	$271,138	$11.00	0.003%	0.160%

Table V-33
Cost Impacts on Very Small Business Entities (Fewer than 20 Employees) Affected by OSHA's Final Revision to Subparts D and I
(per Entity, by 4-Digit NAICS Code) (continued)

NAICS	Industry	Estimated Receipts, 2007 ($1,000)[a]	Entities [b]	Average Receipts per Entity	Profit Rate [c]		Estimated Profits per Entity	Estimated Cost of the Final Rule	Average Cost per Entity	Ratio of Average Cost to Revenues	Ratio of Average Cost to Profits
8139	Business, Professional, Labor, Political, and Similar Organizations	$29,068,582	56,541	$514,115	2.05%	*	$10,534	$773,516	$13.68	0.003%	0.130%

[a] Estimated based on 2007 receipts and payroll data from U.S. Census Bureau, Statistics of U.S. Businesses, 2007, and payroll data from U.S. Census Bureau, Statistics of U.S. Businesses, 2007.

[b] U.S. Census Bureau, Statistics of U.S. Businesses, 2007.

[c] Estimated from average of the yearly ratios of net income to total receipts as reported by the U.S. Internal Revenue Service, *Corporation Source Book*, 2000–2008. Data were not available at disaggregated levels for all industries; profit rates at more highly aggregated levels are used for such industries.

N/A: Data not available.

*Profit rate imputed from corresponding 3-digit NAICS industry.

** Profit rate imputed from corresponding 2-digit NAICS industry.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

BILLING CODE 4510–29–C

OSHA's impact analysis for small entities indicates that one other industry, NAICS 2213—Water, sewage and other systems, will experience significant profit impacts under a worst-case scenario: Costs are 5.3 percent of profits for entities defined as small by the SBA, and costs are 11.7 percent of profits for entities with fewer than twenty employees. While profit impacts at these levels suggest that utilities in NAICS 2213 may have to reduce operations substantially if they are unable to pass forward to customers the approximately $3,441 in annualized compliance costs, OSHA expects that most water and sewage employers will not experience profit impacts of that severity. First, whereas the estimate of revenue per small entity (fewer than 100 employees) in 2007 is approximately $823,000 (Tables V–2 and V–32), according to 2012 Census data, revenue per small entity in NAICS 2213 rose to $956,000. Assuming those higher per-entity revenues continued up until the scheduled compliance with this final standard, the impacts of costs on revenue and profit would be less severe than suggested using the 2007 receipts data.

Moreover, there is reason to think that OSHA's data understates actual profits for small utilities. Many small utilities are organized as cooperatives and a modest percentage of utilities file income tax returns as S Corporations, and the tax law allows both types of entities to pass profits back to members without being taxed as income at the business level. According to IRS data,[161] of the 3,216 tax returns filed by utilities (NAICS 22) as S corporations in 2012, only 2,693 S-corporation utilities reported net income, suggesting that of the 5,973 firms in NAICS 22 in 2012, just under 9 percent ((3,216 S returns filed—2,693 S returns with net income)/ 5,973 total returns in NAICS 22) may have had profit that was not reported as income on the corporate return. However, they would have been included in the balance sheet data that formed the basis for the calculation of the average profit rate, 5.4 percent, for NAICS 2213. As evidence supporting this conclusion, IRS data indicate that for S utility corporations that reported net income, 2012 profit rates averaged 9.7 percent.[162] Therefore, if the overall nine-year (2000–2008) average profit rate for NAICS 2213 underestimates the actual profit rate for the industry, impacts resulting from compliance with this final standard may be overstated in Tables V–32 and V–33.

3. A Statement of the Need for, and Objectives of, the Rule

Employees in general industry performing construction, installation, maintenance, and repair tasks are exposed to a range of significant slip, trip, and fall hazards that cause serious injury and death. OSHA estimates that approximately 202,100 serious injuries and 345 fatalities occur annually among these employees. Although employers could prevent some of these incidents with increased compliance with existing safety standards, research and analyses conducted by OSHA found that many preventable injuries and fatalities would continue to occur even if employers achieved full compliance with the existing standards. Without counting incidents that employers could potentially prevent by complying fully with existing standards, OSHA estimates that full compliance with these final standards would prevent 5,842 additional injuries and 29 fatalities annually, even with full compliance with the existing standard.

As explained above, additional benefits associated with this rulemaking involve providing updated, clear, and consistent safety standards regarding fall protection in general industry to the relevant employers, employees, and interested members of the public. The existing OSHA standards for walking-working surfaces in general industry are over 30 years old and inconsistent with the more recently promulgated standards addressing fall protection in construction. OSHA believes that the final updated standards are easier to understand and to apply than the existing standard, thereby benefiting employers and employees by facilitating compliance and improving safety.

4. Response to Comments Filed by the Small Business Administration

The Small Business Administration's Chief Counsel for Advocacy (SBA Advocacy) submitted comments into the rulemaking record following publication of the NPRM. SBA Advocacy's comments (Ex. 124) covered four broad areas; OSHA addresses each area below.

Area 1: ''OSHA should not include vague, overly-broad, 'general duty clause' type requirements.''

OSHA's response: SBA Advocacy expressed concern that some provisions, such as proposed § 1910.22(a)(3) which required employers to ''ensure that all surfaces are designed, constructed and maintained free of recognized hazards,'' lacked detail and precise definition, and would, therefore, place an unreasonable compliance burden on employers. In the final standards, OSHA revised the proposed language of paragraph (a)(3) to provide specific examples of the types of hazards addressed by this provision—*e.g.,* protruding or sharp objects, spills. The final regulatory text no longer requires that employers identify and correct all ''recognized'' hazards.

Area 2: ''OSHA should further synchronize the proposed general industry rule with the existing construction standard.''

OSHA's response: OSHA believes that, to the extent possible given the technological and work-organization differences between general industry and construction, the final standards mesh closely with the construction fall protection standards. Whenever possible, to avoid duplication, inconsistency, or overlap, the final standards reference the OSHA construction standards (for example, § 1910.27(a), Scaffolds; § 1910.28(b)(12), Scaffolds and rope descent systems; and § 1910.29(b), Guardrail systems reference part 1926).

Area 3: ''OSHA should not expand its reading of Section 1910.22 to regulate combustible dust.''

OSHA's response: As noted in this preamble and in the preamble to the NPRM, OSHA interprets the housekeeping provisions in subpart D as applying to combustible-dust accumulations associated with fire and explosion hazards. Regarding this interpretation, one court stated that ''the housekeeping standard is not limited to tripping and falling hazards, but may be applied to [a] significant accumulation of combustible dust'' (*Con Agra, Inc.* v. *Occupational Safety and Health Review Commission,* 672 F.2d 699, 702 (8th Cir. 1982), citing *Bunge Corp.* v. *Secretary of Labor,* 638 F.2d 831, 834 (5th Cir. 1981), which reached the same conclusion). Following publication of the NPRM, OSHA received no evidence that the regulated community had technological or economic concerns about including combustible dust in the scope of the housekeeping section of final subpart D. Therefore, OSHA will continue to regulate combustible-dust hazards on walking-working surfaces in this final standard.

Area 4: ''OSHA should not regulate commercial motor vehicles (trucks) under the proposed rule.''

OSHA's response: Based on comments and testimony received on both the 2003 Reopening Notice and the 2010 Proposed Rule, OSHA finds it is sometimes feasible to provide fall protection for rolling stock where it is not contiguous or next to a structure.

[161] See *https://www.irs.gov/uac/soi-tax-stats-s-corporation-statistics*, Table 1: Returns of Active Corporations, Form 1120S and Table 2: Returns with Net Income, Form 1120S.

[162] See *https://www.irs.gov/uac/soi-tax-stats-s-corporation-statistics*, Table 2: Returns with Net Income, Form 1120S. For Utilities in 2012, Total net income (less deficit) = $689,965 thousand, or $690.0 million, and Total Receipts = $7,112,150 thousand, or $7.1 billion. Profit rate = $690 million/$7.1 billion = 9.7 percent.

However, OSHA still believes that additional information and data analysis is needed in order to determine an appropriate course of action. Therefore, this Final Rule does not include any specific requirements for fall protection on rolling stock and motor vehicles and OSHA's current existing enforcement policies on rolling stock and motor vehicles will remain in effect. This issue is discussed further in the Summary and Explanation for final rule § 1910.21(a).

5. Issues Raised Regarding the Small Business Regulatory Enforcement Fairness Act

The U.S. Chamber of Commerce (''the Chamber'') addressed the absence of a review process under the Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 601 *et seq.*) (SBREFA) during this rulemaking, stating:

> OSHA's decision to forgo SBREFA panel review for this rulemaking is even more troubling when one considers that the agency has undertaken SBREFA reviews with a number of rulemakings that have impacted a smaller number of workplaces and employees than this proposed walking-working surfaces revision will impact. . . . [T]his rulemaking will have a direct effect on a wide array of employers, both large and small, across all types of operations. This rulemaking is broader in application than many of the rulemakings noted above, with new requirements for training, and associated levels of personal protection. There are a large number of variables that will determine how these requirements will actually impact employers, especially small employers, and the agency would have benefited from the opportunity to obtain data and information from small employers. This is particularly true with respect to OSHA's effort to synchronize the general industry and construction industry provisions where small businesses are most likely to be confused and would have been able to provide useful input on achieving this goal. The scope of this regulation is so broad, and it will impose fall protection on so many workplaces for the first time, that OSHA should have conducted a panel to gather from affected entities direct information on how to better tailor this regulation. The Chamber urges OSHA to conduct a SBREFA panel review before proceeding to a final regulation. (Ex. 202, p. 2.)

In response to the concerns of the Chamber and the other stakeholders that expressed similar views (*i.e.,* the Sheet Metal and Air Conditioning Contractors National Association (Ex. 165) and the National Federation of Independent Business (Ex. 173), OSHA notes that throughout the rulemaking process, during the public hearings and on other occasions (including during the 2003 reopening of the record for a request for information), OSHA solicited and received comment from small firms on a variety of issues. Topics that involved input from small firms included, for example, safety on fixed ladders in outdoor advertising (Exs. 136; 229), the design of guardrails and gates at ladderway openings (Exs. 68; 366), use of rope descent systems for window cleaning (Exs. 69; 76), and protection of utility workers when ascending and descending stepbolts (Ex. 155). In developing and finalizing its final standards for subparts D and I, OSHA thoroughly considered the concerns expressed by small firms and other stakeholders representing the views of small firms, and revised requirements as appropriate.

6. Information Regarding the Small Entities Covered by the Final Rule

OSHA's analysis of the impacts of this final rule includes an analysis of the type and number of small entities impacted by the final rule. The final rule primarily impacts workers performing installation, maintenance, and repair tasks throughout general industry. To determine the number of small entities potentially affected by this rulemaking, OSHA used the definitions of small entities developed by the Small Business Administration for each industry. In section C of this FEA, OSHA discussed its methodology for determining the number of affected small entities, and presented its estimates of the number in Table V–2. As shown in that table, OSHA estimates that the final standards would cover 5.1 million small entities, employing 43.8 million workers, including 2.3 million workers directly exposed to slip, trip, and fall hazards. Industries (four-digit NAICSs) expected to have the highest number of affected at-risk employees include automotive repair and maintenance (390,000 employees), wired telecommunications carriers (170,000 employees), and lessors of real estate (84,000).

7. Administrative Costs for Employers

OSHA issued the existing standards in subpart D in 1971 under Section 6(a) of the Occupational Safety and Health Act of 1970 (the Act) (29 U.S.C. 655). During the period since OSHA issued existing subpart D, interested parties recommended revisions to its standards. In addition, the majority of the existing OSHA standards for walking-working surfaces are inconsistent with numerous national consensus standards and the more recently issued OSHA standards addressing fall protection elsewhere in general industry (*e.g.,* § 1910.66, Powered platforms for building maintenance) and construction (*e.g.,* § 1926 Subpart M—Fall Protection).

Section F, Costs of Compliance, above described, for categories of employee training, the administrative costs for employers. Accordingly, OSHA does not consider the costs to document the training and retraining of employees to be recordkeeping, but rather typical expenses involved in administering a safety program.

8. Minimizing the Economic Impact on Small Entities

OSHA evaluated several alternatives to the final standards to ensure that the requirements would accomplish the stated objectives of applicable statutes and minimize the economic impact on small entities. For example, OSHA considered an alternative that would exempt small entities from the rule; however, the Agency rejected this alternative because it would unduly jeopardize the safety and health of affected employees. Throughout Section IV of this document, Summary and Explanation of the Final Rule, OSHA discusses other alternatives considered, generally in response to public comment.

In developing the final rule, especially establishing compliance or reporting requirements or timetables that affect small entities, OSHA took the resources available to small entities into account. OSHA clarified, consolidated, and simplified the compliance and reporting requirements applicable to small entities to the extent practicable. Wherever possible, OSHA allowed the employer multiple options to control fall hazards. Therefore, OSHA made every effort to provide maximum flexibility in the choice of controls required by the final rule.

To demonstrate the relative economic efficiency (*i.e.,* cost effectiveness) of the final subpart D standards, OSHA selected eight provisions from these standards for which it considered alternative controls, but rejected these controls as inefficient from a cost-effectiveness perspective. The table below presents OSHA's evaluation of the potential impacts associated with these alternative controls for the eight provisions.

BILLING CODE 4510–29–P

Table V-34

Impacts Associated with Regulatory Alternatives for Selected Provisions in Final Subpart D

Provision	Control(s) Specified by Provision	Alternative Control(s)	Potential Impacts of Alternative Control(s)
Section 1910.23, paragraph (a) Ladders	Covers all ladders except for machine-integrated or firefighting, rescue, and tactical law-enforcement ladders.	All ladders in scope.	Probably not significant in costs, but not justified with respect to benefits.
Section 1910.24, paragraphs (a)(1), (a)(7), and (b)(2) Step bolts and manhole steps	Design changes to step bolts and manhole steps on new installations performed on or after 60 days after the standard's effective date must meet specified strength and design criteria.	Eliminate grandfathering of older structures.	Requirement to ensure that all step bolts and manhole steps meet the strength and design criteria in revised subpart D would require technical resources that could exceed the capacity of affected industries in the near term given the need to inspect all existing manholes and make changes to many of them; benefits would not justify the large costs.
Section 1910.25, paragraph (b)(8) Stairways	When employees use ship stairs and spiral stairs as the primary means of egress, the stairs must meet the requirements specified by the standard.	Prohibit ship stairs and spiral stairs in all new installations.	Potentially large costs with few benefits.
Section 1910.26(b) Dockboards	This provision requires that dockboards put into service at least 60 days after the effective date of the final rule be designed, constructed, and maintained to prevent transfer vehicles (such as hand trucks) from running off the edge. An exception allows the employer to use dockboards that do not have run-off protection when the employer can demonstrate that there is no hazard of the equipment running off the edge.	Specify the means of achieving the desired performance (specific dockboard design requirements).	Probably modest costs but with few benefits.

Table V-34
Impacts Associated with Regulatory Alternatives for Selected Provisions in Final Subpart D (continued)

Provision	Control(s) Specified by Provision	Alternative Control(s)	Potential Impacts of Alternative Control(s)
Section 1910.27(b)(2)(i) Use of rope descent systems	Paragraph (b)(2)(i) prohibits the use of a rope descent system (RDS) at heights greater than 300 feet (91.4 m) above grade unless the employer demonstrates that it is not feasible to access such heights by any other means or that those means pose a greater hazard than using a rope descent system.	Allow use of RDS at all heights.	As OSHA demonstrated earlier in this FEA, impacts of the primary choice will be manageable due to the current availability of (1) powered platforms, swing-stage equipment, or other systems for washing windows on tall buildings, and (2) the managerial and technical expertise for combining RDS and other types of equipment. The impact of the alternative control would be heightened risk of exposure to unexpected wind gusts and other factors that could jeopardize safe control of the RDS for descents greater than 300 feet.
Section 1910.28 Duty to have fall protection and falling-object protection	The final rule allows employers to choose from several options in providing fall protection across generic walking-working surfaces. These include conventional fall protection systems such as guardrail systems, safety-net systems, and personal fall protection systems (restraint systems, personal fall arrest systems, and positioning systems) and, in some instances, non-conventional means. An example of non-conventional means would be establishing a designated area in which an employee is to work.	Provided detailed specifications, on a surface by surface basis, the means of achieving compliance.	Depending on specifications, costs could be substantial with modest benefits.

BILLING CODE 4510–29–C

Table V-34
Impacts Associated with Regulatory Alternatives for Selected Provisions in Final Subpart D (continued)

Provision	Control(s) Specified by Provision	Alternative Control(s)	Potential Impacts of Alternative Control(s)
Section 1910.28(b)(8) Repair pits, service pits, and assembly pits less than 10 feet in depth	This provision requires employers to limit access to the edge (within 6 feet (1.8 m)) of the pit to trained, authorized employees ((b)(8)(i)); mark the floor or place warning lines and stanchions to designate the unprotected area ((b)(8)(ii)); and post caution signs to warn employees of the unprotected area ((b)(8)(iii)).	Require conventional fall protection systems such as guardrails, or personal fall arrest or travel restraint systems.	Potentially significant costs with feasibility/practicability concerns.
Section 1910.28(b)(9) Fixed ladders (that extend more than 24 feet (7.3 m) above a lower level	This provision requires no fall protection for employees exposed to falls from fixed ladders of 24 feet (7.3 m) in length or less above a lower level. If the employer uses an existing cage or well, each section must be offset from adjacent sections with landing platforms at maximum intervals of 50 feet (15.2 m). If an employer uses a ladder safety system or personal fall arrest system, there must be rest platforms at maximum intervals of 150 feet (45.7 m).	For fixed ladders, require employers to provide cages, wells, landing platforms, and ladder safety systems comprehensively.	Major costs and modest benefits; tens of thousands of fixed ladders would need cages, wells, and landing platforms.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

OSHA also considered non-regulatory alternatives in determining the appropriate approach to reducing occupational hazards associated with work on elevated or slippery surfaces in general industry. The Agency discusses these alternatives in Section B of this FEA.

I. Sensitivity Analyses

1. Introduction

In this subsection, OSHA presents the results of two different types of sensitivity analysis to demonstrate how robust the estimates of net benefits are to changes in selected cost and benefit parameters. In the first sensitivity analysis (the ''standard sensitivity analysis''), OSHA makes a series of isolated changes to individual cost and benefit parameters to determine their effects on the Agency's estimates of annualized costs, benefits, and net benefits. In the second sensitivity analysis—the ''break-even sensitivity analysis''—OSHA investigates isolated changes to individual cost and benefit parameters, but with the objective of determining the magnitude of the changes needed for annualized costs to equal annualized benefits. The Agency is conducting these analyses for informational purposes only.

2. Sensitivity Analysis for Specific Parameters

OSHA provides below a sensitivity analysis of some assumptions underlying the Agency's estimates of the annualized costs and benefits of the final rule. The calculations underlying the Agency's estimate that the compliance costs, benefits, and economic impacts associated with this rulemaking are generally linear and additive. Accordingly, the changes in the costs or benefits should generally be proportional to variations in the relevant input parameters. For example, if the estimated time for supervisors to inspect the conditions of walking-working surfaces (to ensure that they are free of hazards) increased by 100 percent, the corresponding labor costs for that task also should increase by 100 percent.

OSHA evaluated a series of such changes in input parameters to test the validity of the general conclusions derived from the economic analysis. Overall, OSHA found these conclusions to be robust as even sizeable changes in the values of several input parameters did not substantially alter the estimates of the costs, benefits, or net benefits. Furthermore, the rule produces significant positive net benefits regardless of the revisions made to costs, benefits, or the discount rate. Table V–35 below provides the summary results of these sensitivity tests. In each sensitivity test, parameters other than the ones tested remained unchanged.

In the first sensitivity test, OSHA adjusted the estimated noncompliance rates applied to the costs for the requirements for inspections and hazard corrections in final § 1910.22(d). When OSHA doubles the noncompliance rates (deriving noncompliance rates that range from 6 percent to 27 percent), annualized costs rise by $33.2 million (10.9 percent), with total compliance costs summing to $338.2 million, and net benefits are reduced by an equal amount ($33.32 million), to a level of $276.4 million. In the benefits sensitivity analysis, OSHA also considered the effect of changing these provisions on benefits.

In the second sensitivity test on costs, when OSHA increased by 100 percent the estimated time for supervisors to inspect walking-working surfaces for the presence of hazards (from one hour to two hours), the estimated total costs of compliance increased by $33 million annually, or about 11 percent of overall costs. In the third sensitivity test on costs, OSHA increased a set of values for variables critical to the estimated compliance costs for fall protection on fixed ladders as follows:

- Increased the estimate of the number of fixed ladders per establishment by 100 percent (0.45 to 0.9); and
- Increased the installation time for ladder safety systems by 100 percent (two hours to four hours).

This sensitivity test increased the estimated annualized compliance costs by $0.4 million annually, about 0.1 percent of overall costs.

In the fourth sensitivity test on costs, OSHA extended from 20 years to 25 years after publication of the rule the date when OSHA would no longer accept cages and wells for fall protection, thereby requiring employers to install other forms of fall protection such as ladder safety systems on fixed ladders that extend more than 24 feet above a lower level. This sensitivity test decreased the estimated annualized compliance costs by $1.0 million annually, or about 0.3 percent of overall costs.

In the fifth sensitivity test on costs, OSHA retrofitted all fixed ladders over 20 feet in length with ladder safety systems (not just those ladders that extend more than 24 feet above a lower level) according to a 20-year deadline specified by final § 1910.28(b)(9)(i)(D), with the result that costs increased by $10.1 million annually, or 3.3 percent of overall costs.

OSHA believes this stringent test represents a highly unlikely scenario because the current consensus standard for fixed ladders—ANSI A14.3–2008, American National Standard for Ladders—Fixed—Safety Requirements—requires use of a ladder safety system only for single climbs in excess of 24 feet, whereas the 2002 version of that standard prescribed the use of ladder safety systems for climbs in excess of 50 feet. Furthermore, current § 1910.27(d)(5) permits the use of ladder safety devices instead of cages on tower, water-tank, and chimney ladders over 20 feet in unbroken length. In addition, evidence in the record suggests that firms with a choice of a cage/platform or ladder safety systems generally install ladder safety systems for ladders reaching heights above 30 feet, and that safety engineers are now designing solutions using ladder safety systems for fall protection during all long ladder climbs (Exs. 127; 369). Therefore, OSHA believes that only a small percentage of fixed ladders, *i.e.,* ladders between 24 and 30 feet in height, would require retrofitting with ladder safety systems 20 years after publication of the final rule.

In a sixth sensitivity test on costs, OSHA increased by 100 percent the estimated time for employee training, which increased the estimated costs of compliance by $54.1 million annually, or about 18 percent of overall costs.

Finally, in a seventh sensitivity test on costs, OSHA increased by 100 percent the estimated time for a supervisor to conduct a hazard assessment needed before issuing personal fall protection equipment. This sensitivity test increased the estimated costs of compliance by $11.6 million annually, or roughly 4 percent of overall costs.

In addition, OSHA examined the effect on annualized costs and benefits of changing the discount rate. Changing the discount rate from seven percent, used in the base case, to three percent would reduce the estimated costs of the final rule from $305.0 million to $297.0 million per year (while leaving estimated annual benefits unaffected), thereby increasing the estimated net benefits by $7.9 million. For both this scenario and for the primary (seven-percent rate) scenario, with the exception of the 20-year deadline for installation of specific types of fall protection on certain fixed ladders, OSHA assumed that employers would incur all costs (first-year and recurring) upon implementation of the final standards (*i.e.,* no phase-in provisions).

OSHA also assumed that the benefits outlined in this section will begin accruing once the rule takes effect.

OSHA recognizes that there is not one uniform approach to estimating the marginal cost of labor. For the economic analysis in support of the final rule, OSHA has estimated the marginal costs of labor as wages plus a fringe benefit rate of 41.5% (which includes some fixed costs such as health insurance). However, this approach does not account for overhead costs. For illustrative purposes in the context of this sensitivity analysis, OSHA has modified the cost estimates by including an overhead rate when estimating the marginal cost of labor. It is important to note that there is not one broadly accepted overhead rate in academic literature and estimating the most appropriate overhead rate for this FEA would require significant modeling, including as regards the interaction between overhead costs and the equipment and other costs that have been separately estimated. Further, the Department has not further analyzed an appropriate quantitative adjustment. Therefore, DOL adopted for the purposes of this specific exercise an overhead rate of 17%. This rate has been used by the EPA in its final rules (see for example, EPA Electronic Reporting under the Toxic Substances Control Act Final Rule, June 17, 2013), and is based upon a Chemical Manufacturers Association study.[163]

Using an overhead rate of 17% would increase costs by $24.4 million per year, or 8.0 percent above the best estimate of costs. (See Table V–35)

OSHA also performed sensitivity tests on a set of input parameters used to estimate the benefits of the final rule. In the first test, OSHA estimated that the final preventability rates for falls from ladders (20 percent), falls from roofs (20 percent), and falls to lower levels not elsewhere classified (5 percent) did not increase from the estimates applied in the PEA, but instead remained the same for this FEA (*i.e.,* 15 percent, 15 percent, and 2.5 percent, respectively). As a result of using the (lower) preliminary preventability rates, the estimated monetized benefits fell by $89.6 million annually relative to final monetized benefits, or about 15 percent of overall benefits.

In a second benefits sensitivity test, OSHA reduced the preventability rate for falls on the same level from 1 percent to 0 percent. As a result, monetized benefits fell 13.8 percent ($85.0 million) to $530.0 million, and net benefits fell to $225.0 million.

In a third benefits sensitivity test, OSHA doubled the preventability rate for falls on the same level from 1 percent to 2 percent. As a result, monetized benefits rose 13.8 percent ($85.0 million) to $699.6 million, and net benefits rose to $394.6 million.

BILLING CODE 4510–29–P

[163] The uncertainty surrounding the appropriate amount of overhead cost to include in loaded wages may be observed in the range of estimates that other Agencies have included for overhead rates specific to their requirement. For example, recent regulatory impact analyses conducted by agencies of the Department of Health and Human Services (HHS) have featured doubling of base wages to account for both fringe benefits and overhead. DOL's Employee Benefits Security Administration (EBSA) includes overhead costs that are substantially higher than EPA's and more variable across employee types than HHS's, as presented in detail at *www.dol.gov/ebsa/pdf/labor-cost-inputs-used-in-ebsa-opr-ria-and-pra-burden-calculations-march–2016.pdf.*

Table V-35
Sensitivity Tests for the Economic Analysis of the Final Standards on Walking-Working Surfaces

Cost Parameters

Variable	OSHA's Current Estimate	New Parameter Value	Change in Annualized Costs (million)	Percentage Change in Annualized Costs	Annualized Costs (million)	Net Benefit (million)
OSHA's Best Estimate of Total Annualized Costs:					**$305.0**	**$310.0**
Floor Guarding Non-Compliance Rate (applied in inspection costs)	Non-compliance rate doubles	6% to 27%	$33.2	10.9%	$338.2	$276.4
Supervisor time to inspect walking-working surfaces for hazards	Average of 30 minutes per establishment per quarter (2 hours per year)	4 hours	$32.8	10.8%	$337.8	$287.2
Number of fixed Ladders per establishment; time to install ladder safety system; percent of fixed ladders added or replaced each year	Number of fixed ladders per establishment: 0.45	0.9 ladders	$0.4	0.1%	$305.3	$319.6
	Time to install ladder safety system: 2 hours	4 hours				
	Grace period for retrofitting fixed ladders with safety devices: 20 years	25 years	-$1.0	-0.3%	$304.0	$320.9
	Retrofitting all ladders longer than 20 feet instead of ladders between 24 and 30 feet	3,059,106 ladders	$10.1	3.3%	$315.1	$309.9

Table V-35 (continued)
Sensitivity Tests for the Economic Analysis of the Final Standards on Walking-Working Surfaces

Cost Parameters						
Variable	OSHA's Current Estimate	New Parameter Value	Change in Annualized Costs (million)	Percentage Change in Annualized Costs	Annualized Costs (million)	Net Benefit (million)
OSHA's Best Estimate of Total Annualized Costs:					**$305.0**	**$310.0**
Employee training	Employee time for initial and annual training: 6 hours and 1 hour (4 hours for some NAICS industries) for, respectively, training on fall hazards and equipment hazards	12 hours 2 hours 8 hours	$54.1	17.7%	$359.1	$265.9
	Supervisor administrative time per employee: 0.25 hours	0.5 hours				
Supervisor time to conduct hazard assessment needed to issue personal fall protection equipment	Establishments with:		$11.6	3.8%	$316.6	$308.4
	1-19 employees – 1 hour	2 hours				
	20-99 employees – 2 hours	4 hours				
	100-499 employees – 3 hours	6 hours				
	500+ employees – 4 hours	8 hours				
Discount rate	7 percent	3%	-$8.0	-2.6%	$297.0	$327.9
17% Overhead Rate Included	Base wage rate calculated with 17% overhead included	17%	$24.4	8.0%	$329.4	$295.6

BILLING CODE 4510–29–C

Table V-35 (continued)
Sensitivity Tests for the Economic Analysis of the Final Standards on Walking-Working Surfaces

Benefit Parameters						
Variable	OSHA's Best Estimate	New Parameter Value	Change in Annualized Benefits (million)	Percentage Change in Annualized Benefits	Annualized Benefits (million)	Net Benefit (million)
OSHA's Best Estimate of Total Annualized Benefits:					**$615.0**	**$310.0**
Preventability rates for falls from ladders, roofs, or lower levels not elsewhere classified	Ladders – 20%	15%	-$89.6	-14.6%	$525.0	$220.0
	Roofs – 20%	15%				
	Lower Levels, N.E.C. – 5%	2.5%				
Preventability Rate for Falls on Same Level	Percentage falls prevented reduced to 0%	0%	-$85.0	-13.8%	$529.6	$224.6
	Percentage falls prevented doubles to 2%	2%	$85.0	13.8%	$699.6	$394.6

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

OSHA's benefits estimates are most sensitive when it comes to estimating the percentage of current injuries and fatalities avoided by full compliance with the final standards. OSHA closely examined available reports of fatalities related to the provisions in the existing and final standards and found that full compliance with the final standards would prevent 29 fatalities, or approximately 9 percent of all slip-, trip-, and fall-related fatalities in general industry (including, among the global group, accidents not directly addressed by the final standards). The true benefits of the final rule depend on how well these fatalities represent actual fall-related fatalities in general industry that compliance with the final rule would prevent. OSHA believes that the benefits in this FEA (see Table V–11) are representative of actual prevented fatalities; however, an average estimate such as presented here can mask year-to-year variations.

The Agency believes that its estimate of annual fatalities involving slips, trips, and falls (about 345) in general industry is a much less sensitive estimate of actual fatalities than the estimate of the percentage of fatalities avoided. The estimate of the annual number of baseline fatalities is derived from 7 years of recent accident data with percent-distributed averages corroborated by 11 prior years of data, whereas the estimate of percentage of fatalities avoided is based on professional judgment (the determinations from which were placed into the record and reviewed by rulemaking stakeholders). Furthermore, as noted earlier, OSHA believes that its benefits estimates are low. Specifically, the Agency believes the training and work-practices requirements specified by the final standards would likely improve the use and application of safety equipment (including personal fall protection equipment), thereby further reducing fatalities and injuries.

In conclusion, these sensitivity tests demonstrate that even with relatively large variations in the input parameters, there are no large changes in the estimates of compliance costs or benefits.

3. Sensitivity Analysis With Respect to Noncompliance and Possible Overestimation of Benefits

In the benefits section, OSHA noted that an article by Seong and Mendeloff suggested that OSHA had, in a period of 17 to 27 years ago, estimated reductions in fatalities that were not in fact reflected in the observed data over the next ten years. All of the analyses in question assumed full compliance with the rule, as does this analysis. The resulting failures to meet observed declines could have been the result of either failure to comply with OSHA's rule, or overestimates of the effectiveness of OSHA's rule. OSHA believes that it was a combination of the two—there were both overestimates of effectiveness and failures to comply with the rule. Unfortunately, there are no studies that enable us to distinguish between the two phenomena. Further, OSHA believes that its estimates for this rule reflect lessons learned from the Seong and Mendeloff article. Still OSHA believes it is important to analyze the possibilities that the article might reflect OSHA's current practice and that it might reflect the possibility that OSHA's overestimates are solely due to noncompliance with the rule.

In Appendix A, OSHA derives a set of factors for reducing OSHA's benefits estimates based on the assumption that Seong and Mendeloff's observations correctly state the standard's effectiveness rates. These factors represent a possible correction to OSHA's base estimates. The exact possible correction factors and their limitations are given in Appendix A to this FEA.

Using these correction factors, OSHA found that the standard would prevent from 9 fatalities and 1,753 non-fatal injuries (=0.3*29 and 0.3*5,842), with a value of $184 million, to 14 fatalities and 2,746 non-fatal injuries (=0.47*29 and 0.47*5,842), with a value of $289 million. If application of these correction factors to OSHA's estimation methodology better represent the true benefits of the rule, then this lower range of benefits would be more compliant with OMB Circular A–4, than the 29 fatalities and 5,842 non-fatal injures presented at the summary results elsewhere in this FEA.

If lack of employer compliance is the only driver of the disparities between OSHA's estimates and actual declines in fatalities and if non-compliance is close to homogeneous across employers covered by this rule (in other words, if baseline slip, trip and fall injuries are not largely concentrated amongst bad actors who do not attempt to comply with OSHA standards), then the appropriate cost estimates to compare to the above benefits estimate would be $91 million (=0.3*$305 million) to $143 million (=0.47*$305 million), and net benefits remain positive.

To the extent that OSHA has not corrected any overestimation of effectiveness that is not the result of noncompliance, then costs could exceed benefits. As noted, OSHA is aware of the possible overestimation for reasons other than less than full compliance and has tried to correct this overestimation.

4. Break-Even Sensitivity Analysis

This break-even sensitivity analysis determines how much cost and benefits would have to vary for the costs to equal benefits. According to the Agency's models for estimating costs and monetized benefits, the final standards generate considerable positive net benefits; that is, expected benefits are much greater than expected costs. Only significant errors in OSHA's analysis would bring true net benefits to, or below, zero. Therefore, in the first break-even sensitivity test in this analysis, which addresses cost, for net monetized benefits to fall to zero, for example, the Agency would have to underestimate the number of buildings with anchorages subject to inspection and certification by two-fold (from about 750,000 buildings to 1.5 million buildings), and would also have to underestimate the number of employees requiring training by four-fold (from 504,000 to 2.0 million). In this case, estimated compliance costs would rise to roughly $593 million annually, thereby approaching the value of estimated monetized benefits and reducing the net monetized benefits approximately to zero.

In a second break-even sensitivity test in this analysis, which addresses benefits, OSHA examined how much its estimate of the final rule's aggregate benefits in terms of avoided fatalities and injuries would have to decline for the costs to equal the benefits, thereby eliminating the net monetized benefits. Net monetized benefits would decline to zero if, for example, the Agency overestimated fatalities prevented by the final standards by roughly 93 percent (if prevented fatalities were 15 rather than 29) and overestimated injuries prevented by the standards by roughly 108 percent (if prevented injuries were 2,814 rather than 5,842).

OSHA believes that a ten percent overestimate of fatalities is unlikely given the conservative (low) accident preventability rates projected for many provisions of the final standards. Further, OSHA notes, as discussed earlier, that some of the other benefits of the rule are non-quantifiable, such as the benefits resulting from making several provisions in this final standard compatible with provisions in the Agency's construction fall protection standards. OSHA believes that these benefits would increase the overall net benefits of the final rule.

J. References

American National Standard Institute-International Window Cleaning Association (ANSI–IWCA, 2001). Window Cleaning Safety. IWCA I–14.1–2001, October 2001.

Amodeo, Linda (Amodeo, 2003). Comments submitted to OSHA Docket S029. Linda Amodeo, Vice President, City Wide Building Services, Inc., July 24, 2003. Ex. OSHA–S029–2006–0662–0074.

Ashford, N.A., 2006. ''Workers' Compensation,'' in *Environmental and Occupational Medicine, Fourth Edition,* W.N. Rom & S. Markowitz (Eds.), Lippincott-Raven Publishers, Philadelphia, pp. 1712–1719.

Ashford, N.A., C. Ayers, and R.F. Stone, 1985. Using Regulation to Change the Market for Innovation. Harvard Environmental Law Review 9(2): 871–906.

Bureau of Labor Statistics (BLS, 2012). *Survey of Occupational Injuries and Illnesses in Cooperation with Participating State Agencies.* U.S. Department of Labor. March 2012.

Bureau of Labor Statistics (BLS, 2011). *Employer Costs for Employee Compensation—June 2011. http://www.bls.gov/news.release/ecec.htm.* Accessed September 8, 2011.

Bureau of Labor Statistics (BLS, 2009). *Occupational Employment Statistics,* 2009. *http://www.bls.gov/oes/home.htm.*

Bureau of Labor Statistics (BLS, 2007) Job Openings and Labor Turnover Survey (JOLTS). *http://data.bls.gov/pdq/querytool.jsp?survey=jt.* Accessed June 7, 2016.

Bureau of Labor Statistics (BLS, 2007). *Consumer Price Index, All Urban Consumers, U.S. City Average,* June 15, 2007. *ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt.*

California Department of Industrial Relations (CA–DIR, 2012). California Code of Regulations, Title 8, Section 3286, ''Manual Boatswain's Chairs and Controlled Descent Apparatus.'' California Labor Code Section 142.3. Accessed March 20, 2012.

Cohen, Alexander and Michael Colligan (Cohen and Colligan, 1998). *Assessing Occupational Safety and Health Training: A Literature Review.* DDHS (NIOSH) Publication 98–145, June 1998. Docket OSHA–2007–0072 (Ex. OSHA–2007–0072–0047).

Council on Tall Buildings and Urban Habitat (CTBUH, 2012). *http://www.ctbuh.org/. The Skyscraper Center; The Global Tall Building Database of the CTBUH. http://www.skyscrapercenter.com/index.php.*

Council on Tall Buildings and Urban Habitat (CTBUH, 2006). Web Site: *http://www.ctbuh.org/.* Database hosted by Emporis. *http://buildings.emporis.com/?nav=theplatformconcept&lng=3.*

Department of Energy (DOE, 2013). *2009 Residential Energy Consumption Surveys.* Housing Characteristics Tables. Table HC2.1: ''Structural and Geographic Characteristics of U.S. Homes, By Housing Unit Type, 2009.'' Energy Information Administration, 2013. *http://www.eia.gov/consumption/residential/data/2009/index.cfm?view=characteristics.*

Department of Energy (DOE, 2006). *2003 Commercial Buildings Energy Consumption Survey.* Table B10: ''Number of Floors, Number of Buildings and Floorspace for Non-Mall Commercial Buildings.'' Energy Information Administration, 2006. *http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/detailed_tables_2003.html.*

Department of Energy (DOE, 2004). *2001 Residential Energy Consumption Surveys. 2001 Housing Characteristics Tables.* Table HC1–1a: ''Housing Unit Characteristics by Climate Zone, Million U.S. Households, (2001).'' Energy Information Administration, 2004. *http://www.eia.doe.gov/emeu/recs/recs2001/detail_tables.html.*

DiChacho, Rosita (DiChacho, 2006). Personal communication between Rosita DiChacho, New York Department of Labor, Division of Safety & Health, Engineering Services Unit and Maureen F. Kaplan, Eastern Research Group, August 23, 2006.

Eastern Research Group, Inc. (ERG, 2007). *Technical and Analytical Support and Docket Review for OSHA's Preliminary Analysis of Costs, Benefits, and Economic Impacts for OSHA's Proposed Standard for Walking and Working Surfaces.* Final Report. Prepared under Contract No. GS10F0125P for the U.S. Department of Labor, Occupational Safety and Health Administration, Directorate of Evaluation and Analysis, Office of Regulatory Analysis, July 27, 2007. Docket OSHA–2007–0072 (Ex. OSHA–2007–0072–0046).

Eastern Research Group, Inc. (ERG, 1999). *PPE Cost Survey: Final Report.* Prepared under Contract No. J–9–F–9–0010 for the U.S. Department of Labor, Occupational Safety and Health Administration, Office of Regulatory Analysis, June 23, 1999. Docket OSHA–S042–2006–0667 (Ex. OSHA–S042–2006–0667–0318).

Federal Motor Carrier Safety Administration (FMCSA, 2010). ''Safety Requirements for Operators of Small Passenger-Carrying Commercial Motor Vehicles Used in Interstate Commerce; Final Rule.'' **Federal Register** 75: 4996. *http://www.fmcsa.dot.gov/rules-regulations/administration/rulemakings/final/Safety-Requirements-Small%20Passenger-Carrying-CMVs-in-Interstate.pdf.* Accessed May 29, 2013.

Institute of Electrical and Electronics Engineers (IEEE, 2006). *IEEE Standard for Fall Protection for Utility Work.* IEEE Standard 1307–2004. *http://standards.ieee.org/reading/ieee/std/numerical.html.* Accessed by ERG on July 24, 2006.

International Window Cleaning Association (IWCA, 2014). ''The High Cost of Non Compliance with the ANSI/IWCA I–14 Window Cleaning Safety Standard'' and ''IWCA Resources for Building Owners & Property Managers.'' *http://www.iwca.org/.*

Kreidenweis, Andy (Kreidenweis, 2003). Comments submitted to OSHA Docket S–029. Andy Kreidenweis, Braco Window Cleaning Service Inc., July 30, 2003. Docket OSHA–S029–2006–0662 (Ex. OSHA–S029–2006–0662–0186).

Lebel, Marc (Lebel, 2003). Comments submitted to OSHA Docket S–029. Marc Lebel, President, Pro-Bel Enterprises Limited, July 18, 2003. Docket OSHA–S029–2006–0662 (Ex. OSHA–S029–2006–0662–0069).

Leigh, J.P., and J.P. Marcin, 2012. ''Workers' Compensation Benefits and Shifting Costs for Occupational Injury and Illness,'' *Journal of Occupational and Environmental Medicine,* April, 54(4): 445–50.

Lebel, Marc (Lebel, 2003). Comments submitted to OSHA Docket S–029. Marc Lebel, President, Pro-Bel Enterprises Limited, July 18, 2003. Docket OSHA–S029–2006–0662 (Ex. OSHA–S029–2006–0662–0069).

Minnesota Office of the Revisor of Statutes (Minnesota, 2012). Minnesota Rule 5205.0730, ''Window Cleaning; Building Maintenance.'' 2011 Minnesota Statutes, 182.655, ''Occupational Safety and Health Standards.'' *https://www.revisor.mn.gov/rules/?id=5205.0730.* Accessed on March 30, 2012.

National Academy of Social Insurance (NASI, 2012). ''Workers' Compensation: Benefits, Coverage, and Costs, 2010,'' August. Available at *http://www.nasi.org/research/2012/report-workers-compensation-benefits-coverage-costs-2010.*

National Association of Tower Erectors (NATE, 2006). Web site: *http://www.natehome.com/MemberBenefitsServices/NATECLIMBERTRAININGSTANDARD/Index.cfm*).

National Coalition Against the Misuses of Pesticides (NCAMP, 1997). ''Poison Poles—A Report About Their Toxic Trail and Safer Alternatives.'' *Estimate of Pole Miles and Distribution Poles by State, 1997. http://www.beyondpesticides.org/wood/pubs/poisonpoles/.*

National Cooperative Highway Research Program (NCHRP, 2004). *NCHRP Report 500: Guidance for Implementation of the AASHTO Strategic Highway Safety Plan.* Volume 8: ''A Guide for Reducing Collisions Involving Utility Poles.'' Transportation Research Board, 2004. *http://safety.transportation.org/htmlguides/utl_pole/exec_sum.htm.*

National Council on Compensation Insurance, (NCCI, 2013). ''ABCs of Experience Rating.'' Available at *https://www.ncci.com/NCCIMain/Education/ExperienceRating/Pages/default.aspx.*

National Fire Protection Association (NFPA, 2006). *Standard 101. Life Safety Code, 2006 Edition.* Section 7.2.2.2.3, ''Spiral stairs.'' *http://www.nfpa.org/freecodes/free_access_document.asp.*

National Institute for Occupational Safety and Health (NIOSH, 2004). *Worker Health Chartbook, 2004.* U.S. Department of Health and Human

Services, Centers for Disease Control and Prevention, NIOSH, September 2004. *http://www.cdc.gov/niosh/docs/2004–146/pdfs/2004–146.pdf.* Accessed May 29, 2013.

Neuhauser, F.W., S.S. Seabury, and J. Mendeloff, 2013. ''The Impact of Experience Rating on Small Employers: Would Lowering the Threshold for Experience Rating Improve Safety?'' Rand Working Papers WR–955. *http://www.rand.org/pubs/working_papers/WR955.html.*

National Institute for Occupational Safety and Health (NIOSH, 1988). U.S. Department of Health and Human Services. Centers for Disease Control. National Institute for Occupational Safety and Health. *National Occupational Exposure Survey.* Volume III: ''Analysis of Management Interview Responses,'' March 1988.

Occupational Safety and Health Administration (OSHA, 2012a). Accident Investigation Search, 2012. *http://www.osha.gov/pls/imis/accidentsearch.html.*

Occupational Safety and Health Administration (OSHA, 2012b). OSHA, Directorate of Training and Education. Resource Center Loan Program. Training Materials by Subject. *http://www.osha.gov/dte/resource_center/catalog.html.*

Occupational Safety and Health Administration (OSHA, 2010). ''Walking-Working Surfaces and Personal Protective Equipment (Fall Protection Systems)''; Proposed Rule. **Federal Register** 75: 28862–29153. May 24, 2010. Docket OSHA–2007–0072 (Ex. OSHA–2007–0072–0001).

Occupational Safety and Health Administration (OSHA, 2009). Analysis of OSHA Integrated Management Information System Inspection Data, 1995–2001. January 2009. Docket OSHA–2007–0072 (Ex. OSHA–2007–0072–0049).

Occupational Safety and Health Administration (OSHA, 2006a). Accident Investigation Search, 2006. *http://www.osha.gov/pls/imis/accidentsearch.html.*

Occupational Safety and Health Administration (OSHA, 2006b). Standard Interpretations: 2/10/2006—''The use of ship's stairs instead of fixed stairs in general industry.'' *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=25301.*

Occupational Safety and Health Administration (OSHA, 2006c). Standard Interpretations: 2/10/2006—''Circumstances under which installation of fixed industrial stairs with a slope between 50 degrees and 70 degrees from the horizontal would be considered a de minimis violation.'' *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=25299.*

Occupational Safety and Health Administration (OSHA, 2003a). Standard Interpretations: 05/05/2003—''Standards applicable to step bolts and manhole steps; load requirements for step bolts.'' *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24564* corrected 4/4/2005.

Occupational Safety and Health Administration (OSHA, 2003b). ''Walking and Working Surfaces; Personal Protective Equipment (Fall Protection Systems)''; Proposed Rule. **Federal Register** 68: 23528–23568, May 2, 2003.

Occupational Safety and Health Administration (OSHA, 1996). ''Safety Standards for Scaffolds Used in the Construction Industry''; Final Rule. **Federal Register** 61: 46026–46126, August 30, 1996.

Occupational Safety and Health Administration (OSHA, 1994). ''Background Document to the Regulatory Impact and Regulatory Flexibility Assessment for the PPE Standard.'' Office of Regulatory Analysis, March 15, 1994. Docket OSHA–S060–2006–0681 (Ex. OSHA–S060–2006–0681–0333).

Occupational Safety and Health Administration (OSHA, 1993). ''Fixed Ladders Used on Outdoor Advertising Structures/Billboards in the Outdoor Advertising Industry.'' OSHA Instruction STD 1–1.14, January 26, 1993. *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=DIRECTIVES&p_id=1756.*

Occupational Safety and Health Administration (OSHA, 1991a). December 5, 1989, letter from Mr. Thomas J. Shepich to Mr. Carl Pedersen regarding Descent Control Devices. Memorandum to Regional Administrators from Patricia K. Clark, Director, Directorate of Compliance Programs, March 12, 1991. Docket OSHA–S029–2006–0662 (Ex. OSHA–S029–2006–0662–0019).

Occupational Safety and Health Administration (OSHA, 1991b). ''Grant of Variance.'' **Federal Register** 56: 8801, March 1, 1991. *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=13148.* Accessed by ERG on August 26, 2006.

Occupational Safety and Health Administration (OSHA, 1990a). ''Preliminary Regulatory Impact and Regulatory Flexibility Analysis of Proposed Subparts D and I of 29 CFR Part 1910 Walking and Working Surfaces.'' Occupational Safety and Health Administration, Office of Regulatory Analysis, March 6, 1990. Docket OSHA–S041–2006–0666 (Ex. OSHA–S041–2006–0666–0689).

Occupational Safety and Health Administration (OSHA, 1990b). ''Application of Gannett Outdoor Companies for a Variance Concerning Fixed Ladders.'' **Federal Register** 55: 26796–26797, June 29, 1990. *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=13085.*

Occupational Safety and Health Administration (OSHA, 1981). Standard Interpretations: 12/02/1981—''Alternating tread type stair is approved as safe for use.'' *http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=18983.*

Office of Management and Budget (OMB, 2007). *North American Industry Classification System—2007.* Executive Office of the President, 2007.

Office of Management and Budget (OMB, 2005). *Regulatory Reform of the U.S. Manufacturing Sector.* March 2005. *http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/reports/manufacturing_initiative.pdf.*

Office of Management and Budget (OMB, 2003). *Regulatory Analysis.* Circular A–4, September 17, 2003. *http://www.whitehouse.gov/omb/circulars/a004/a-4.pdf.*

Platts.com (Platts, 2007). *2007 UDI Directory of Electric Power Producers and Distributors,* 115th Edition, Electrical World Directory. The McGraw-Hill Companies, 2007.

Seong, Si Kyung and John Mendeloff (Seong and Mendeloff, 2008). ''Assessing the Accuracy of OSHA's Projections of the Benefits of New Safety Standards.'' *American Journal of Industrial Medicine* 45(4): 313–328, 2004.

Small Business Administration (SBA, 2010). *Table of Small Business Size Standards Matched to North American Industry Classification System Codes, 2010. http://www.sba.gov/content/table-small-business-size-standards.*

Small Business Administration (SBA, 1996). *Regulatory Flexibility Act of 1980* (Pub. L. 96–354), amended by the *Small Business Regulatory Enforcement Fairness Act of 1996* (Pub. L. 104–121).

U.S. Census Bureau (Census Bureau, 2002/2006). *Statistics of U.S. Businesses, 2002/2006. http://www.census.gov/csd/susb/index.html.*

U.S. Environmental Protection Agency (U.S. EPA, 2010). *Guidelines for Preparing Economic Analyses.* EPA 240–R–10–001, December 2010. *http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/Guidelines.html.*

U.S. Internal Revenue Service (IRS, 2013). 2010 Corporation Source Book, Publication 1053. *http://www.irs.gov/uac/SOI-Tax-Stats-Corporation-Source-Book:-U.S.-Total-and-Sectors-Listing* Accessed by OSHA on 4/19/2013.

U.S. Internal Revenue Service (IRS, 2009). *Corporation Source Book. http://www.irs.gov/uac/SOI-Tax-Stats-Corporation-Source-Book:-U.S.-Total-and-Sectors-Listing.* Accessed, 2009.

U.S. Internal Revenue Service (IRS, 2003). *Corporation Source Book, 2003. http://www.irs.gov/taxstats/bustaxstats/article/0,,id=149687,00.html.*

Urban Institute/Brookings, 2012. ''Historical Average Federal Tax Rates for All Households,'' Tax Policy Center, October. Available at *http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=456.*

Viscusi, Kip and Joseph Aldy (Viscusi and Aldy, 2003). ''The Value of a Statistical Life: A Critical Review of Market Estimates Throughout the World.'' *The Journal of Risk and Uncertainty,* 27–1 (2003): 5–76.

Workers' Compensation Research Institute (WCRI, 1993). ''Income Replacement in California.'' *WCRI Research Brief,* Special Edition. Volume 9, number 4S, Cambridge, MA, December 1993. Also available in Docket OSHA–S777–2006–0938 (Ex. 0266).

Wright, Michael C. (Wright, 2003). Comments submitted to OSHA Docket S–029. Michael C. Wright, LJB, Inc. (Ex. OSHA–S029–2006–0662–0350).

Zeolla, Robert J. (Zeolla, 2003). Comments submitted to OSHA Docket S–029. Robert J. Zeolla, Jr., President, Sunset Window Cleaning Company. June 5, 2003 (Ex. OSHA–S029–2006–0662–0348).

Appendix A. Derivation of Prevention Factor Adjustments

To derive possible quantitative adjustment factors from the Seong and Mendeloff study OSHA examined each of their case studies. In most cases, Seong and Mendeloff did not derive a quantitative difference between what happened and what OSHA estimated. Instead their goal was to qualitatively establish that overestimation was routine and in some cases extremely large. To derive quantitative estimates from this data requires making some assumptions. First, OSHA has assumed that all declines that actually occurred are attributable to a new standard. This will tend to overestimate the effectiveness of standards. Second, in some cases declines take place over time, and are significant over the long run but show little effect in the first year. If there is no decline in early years but a major one thereafter, OSHA has developed two estimates, one based on the first year and one based on what happened over time.

- Scaffolding for General Industry (61 FR 46026, August 30, 1996): OSHA originally predicted that the scaffolding rule would reduce fatalities by 59 percent, whereas Seong and Mendeloff find an actual reduction of 21 percent, yielding a realized-to-projected effectiveness ratio of 0.36 (=0.21/0.59).
- Electrical Work Practices for General Industry (55 FR 31984, August 6, 1990)—OSHA's predicted reduction was 41.4 percent. The actual decrease was negligible immediately upon finalization of the rule and up to 48 percent in the latter portion of the post-implementation decade, thus yielding a range of ratios from 0 (=0/0.414) if the immediate post-implementation result is interpreted as the amount attributable to the rule, or up to 0.61 (=0.25/0.414 where 0.25 is the annualization over a ten-year period with a 7 percent discount rate of a reduction pattern that rises linearly from 0 immediately upon finalization to 48 percent after a decade) if the longer-term reduction is interpreted as attributable to the rule.
- Process Safety Management (PSM) in General Industry (57 FR 6356, February 24, 1992)—OSHA's predicted reduction was 40 percent in the first five years and at least 80 percent in subsequent years, and the actual decrease was a reduction of around 50 percent in the first year (though a substantial portion of this was probably attributable to the rule taking effect in a recession) and then no further decreases in subsequent years, yielding a ratio of 0.88 (=0.54/0.61 where 0.54 and 0.61 are annualizations over a ten-year period with a 7 percent discount rate of the reduction patterns just listed).
- Permit-Required Confined Spaces for General Industry (58 FR 4462, January 14, 1993)—OSHA's predicted reduction was 85 percent, and the actual decrease is described by Seong and Mendeloff as probably at least 50 percent (though the discussion of relative results in greater- and lesser-affected states undermines the claim of the rule's effectiveness), yielding a ratio of 0.59 (=0.5/0.85).
- Electrical Power Generation (59 FR 4320, January 31, 1994)—OSHA's predicted reduction was 68 percent, but actual deaths ''dipped in 1993, the year the standard became effective, then went back to their pre-standard levels through 1997,'' and subsequently dropped by one-third or one-half, depending on the measure used. The resulting ratios range from approximately 0 (=0/0.68) if the immediate post-implementation result is interpreted as the amount attributable to the rule, up to 0.41 (=0.28/0.68 where 0.28 is the annualization over a ten-year period with a 7 percent discount rate of a reduction pattern of zero in the first four years and 50 percent subsequently) if the longer-term reduction is interpreted as attributable to the rule.
- Logging Operations (59 FR 51672, October 12, 1994)—OSHA's predicted reduction was 70 percent, but there is no indication that injuries decreased at all, yielding a ratio of 0 (=0/0.7).

The average of the six ratios ranges from 0.3, if the lower end of a range is used, to 0.47, if the higher end is used.

Appendix B. Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards (2006–2010 OSHA IMIS)

BILLING CODE 4510–29–P

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
Fall From Ladder (Type Unspecified)								
200677102 / 311087571	2007	Employee Is Killed in Fall From Ladder Cleaning Windows	At approximately 11:00 a.m. on December 4, 2007, Employee #1, a window cleaner, was cleaning windows on the fourth floor of a building. The employer provided a boatswain chair, rope, and other window washing equipment and briefly showed Employee # 1 how to assemble correctly the metallic ladder. The employer did not provide any job specific training and did not develop a site-specific fall protection plan. Employee #1 was not using any fall protection devices and was not using the boatswain chair that was provided. He was descending a ladder when he lost his balance and fell 30 ft straight down parallel to the ladder and hit the middle section of the ladder before striking his head on the ground. He sustained a blunt trauma to the head and was bleeding through the eyes, mouth and	7349: Building Maintenance Services, NEC	1	Ladder	Fall (From Elevation)	Other
Fall From Fixed Ladders								
202087847 / 309444396	2006	Employee Is Killed in Fall From Fixed Ladder	At approximately 7:15 a.m. on November 27, 2006, Employee #1 was working in the filling/packaging department at a cat litter manufacturing plant. He was ascending a fixed ladder to retrieve a defective package from a conveyor. The ladder was damaged and lightly coated with cat litter dust. Employee #1 was killed when he fell from the 12-ft tall ladder and struck his head on the concrete floor.	2812: Alkalies and Chlorine Manufacturing	1	Ladder	Fall (From Elevation)	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200823839 / 311250302	2008	Employee Dies After Sustaining Leg Injury From Fall	At approximately 8:00 p.m. on May 21, 2008, Employee #1 was feeding a plastic sheet into . . . [a] trim press . . . . He used fixed industrial stairs to access the canopy and feed the sheet into the trim press. The stairs to this trim press had a missing top rail on one of the open sides and the rungs had worn slip resistant material. As he worked, he may have slipped or lost his balance, falling from the ladder. He struck the ground and sustained blunt force trauma to his left thigh. The accident was not reported that day, and Employee #1 visited a medical center and emergency room on May 22 and May 23. On the evening of May 23, he was admitted to the intensive care, where he continued to receive treatment, but died at 2:40 a.m. on May 24.	3089: Plastics Products, NEC	1	Bodily Motion	Other	Other
			Fall From Step Ladder					
201681913 / 310853262	2009	Employee Is Killed in Fall From Ladder	On January 29, 2009, Employee #1, a truck driver, and Coworker #1, a mechanic, were working on a reefer semi-trailer in the maintenance shop. The refrigeration unit had been removed from the front of the semi-trailer and plywood had been bolted over the hole. Employee #1 and Coworker #1 positioned two portable step ladders in front of the semi- trailer in order to apply sealant on the plywood and semi-trailer seam. Employee #1 climbed a damaged 8-ft step ladder to apply sealant to the top seam. He fell off the ladder onto the concrete floor and suffered severe injuries and died. Although there were no witnesses, it appeared that Employee #1 was standing on the top step of the damaged ladder when he fell. The employer had not provided ladder safety training.	4214: Local Trucking With Storage	1	Ladder	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200515070 / 314596982	2010	Employee Falls From Ladder and Dies	On June 10, 2010, Employee #1, along with coworker #1, 2, 3, 4 and 5 were on site to do construction work to the interior of a building. They were working on a construction of a new, handicapped building entrance, construction of a new foyer, and construction of a common bathroom area. Employee #1 along with Coworkers #1 and 3 were working on the common bathroom area. Each employee was working independently on different sections of the bathroom. The bathroom was framed in at this point, with some sheet rock already installed. They were continuing installation of sheetrock. Coworker #1 was working near the outside windows (west), Employee #1 was working in the opposite side of the bathroom (east), on the upper, more intricate pieces of the wall, and Coworker #3 was working on the top of a utility closet in the bathroom (central section of bathroom). Each one could see the other one working. Employee #1 was utilizing a step ladder to reach the higher portions of the bathroom. The heights were greater than 10 ft. The step ladder being used was a . . . 12- ft. fiberglass stepladder. The step ladder was propped up against the wall near the corner so Employee #1 could reach the upper corner to finish the pieces surrounding the existing structural steel of the building. Employee #1 was not utilizing the step ladder in accordance with the manufacturer's recommendations . . . . Employee #1 remained in the common bathroom area, working, while Coworker #1, 2, 3 and 4 took their lunch breaks . . . Coworker #3 went to the last known working location of Employee #1, the bathroom, and found him lying lifeless at the base of the step ladder he was using. Coworker #3 immediately ran out to the other employees, and called 911. The Minneapolis Police and EMS arrived at the scene. Employee #1 was treated by the EMS, and later pronounced DOA.	6512: Nonresidential Building Operators	1	Working Surface	Fall (From Elevation)	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
			Fall From Rolling Ladder					
200082865 / 310182233	2007	Employee Is Killed When He Falls	On January 26, 2007, Employee #1 was inventorying material that was stored on metal shelving racks. He was using a rolling ladder to reach the upper shelves of the rack. He could not reach the material stored on an upper shelf located 10 ft off the floor and climbed onto the rack. He fell from the rack and landed on the floor. He received back and head injuries and was hospitalized and died later.	5943: Stationery Stores	1	Ladder	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
200263945 / 314914094	2010	Employee Is Killed in Fall From Rolling Ladder Tower	On September 13, 2010, Employee #1, working in the tool department, attempted to assist a customer by climbed a rolling ladder tower to access product located on product racking approximately nine feet from floor level. Employee #1 left the top level of the ladder stand and climbed onto the product rack. Employee #1 then attempted to reboard the ladder stand from the storage rack when he fell approximately 9 feet to the concrete floor. Employee #1 suffered fatal head injuries.	5211: Lumber and Other Building Materials	1	Ladder	Fall (From Elevation)	Other
			Fall From Ladder (Others)					
200830990 / 307606905	2006	Employee Is Brain Dead in Fall From Ladder	On February 7, 2006, an employee fell approximately 7 ft, when the portable metal ladder stand that he was using tipped over. The employee suffered severe head trauma and was later pronounced brain dead. A wheel was missing from the ladder at the time of the inspection.	7699: Repair Services, NEC	1	Ladder	Fall (From Elevation)	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
202450326 / 309674034	2006	Employee Is Killed in Fall From Platform	On January 12, 2006, Employee #1 was working alone at night, greasing fittings on a loading platform that was 11 feet above the ground. The loading platform consisted of an adjustable ladder leading to a guardrail system, which lowers to the top of a tanker truck when loading. The guardrails become fall protection for employees, when they are opening the valves on the top of the truck. When there are no trucks at the loading platform, the adjustable ladder assembly is kept in the raised, stored position. An automatic foot locks the clips into place over a "pin" or "bolt" to keep the assembly from descending inadvertently. It is believed that Employee #1 leaned against the adjustable ladder assembly while greasing fittings on the platform and the assembly descended unexpectedly, causing him to lose his balance and fall to the ground, striking his head on the concrete pad area, resulting in his death. The accident was not witnessed. Inspection of the ladder assembly revealed that the "pin" or "bolt" part of the foot lock was missing.	2874: Phosphatic Fertilizers	1	Ladder	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
202087946 / 309444941	2007	Employee Dies in Fall From Crane	At approximately 12:15 a.m. on January 12, 2007, Employee #1 was working as part of a crew that was cleaning and serving a 370-[t]on . . . [c]rane. The maintenance crew had parked and locked out the crane, and removed the worm gear box casing, so that the service crew could access the worm gear. The trolley was parked approximately 90-in. away from the trolley stop. This left one side of the platform open to an approximate 110 ft to 115 ft fall hazard. Employee #1 was descending a 6-ft metal rung ladder from the bridge of the crane and was killed when he slipped and fell while attempting to place his foot on the trolley rail. He struck the crane during his fall and landed on the new worm gear which was lying on the ground.	8999: Services, NEC	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200555217 / 311523609	2008	Employee Falls From Ladder, Later Dies	At approximately 8:30 a.m. on April 15, 2008, Employee #1was descending a ladder on oil drilling rig #6. Employee #1 was wearing a body harness that was hooked into the rig's counter weighted ladder climbing device. For some reason, the self-retracting lifeline was not in place. Employee #1 fell approximately 60 ft to the rig floor. Employee #1 sustained head and back injuries. Employee #1 was flown to a local hospital, where he died on April 17, 2008.	1381: Drilling Oil and Gas Wells	1	Working Surface	Fall (From Elevation)	Other
201282910 / 311037931	2008	Employee Dies After Fall From Ladder	At approximately 8:15 a.m. on February 18, 2008, Employee #1 responded to a call to repair a leaking tractor-trailer. Upon arrival at the site, Employee #1 used a 12-foot folding ladder to reach the top of the trailer, which measured 13.25 feet high. While sealing the leak, Employee #1 fell from the ladder. He landed on his back and struck his head on the ground. Employee #1 was taken to a nearby hospital, where he died.	7549: Automotive Services, NEC	1	Bodily Motion	Struck Against	Work-Surface/Facil.-Layout Cond.
200997674 / 313126807	2009	Employee Falls From Crane	On June 6, 2009, Employee #1, a maintenance supervisor . . . was on a charging crane, he was going up an 88-foot vertical ladder on the crane trolley, while his crew was about to-do a cable change on the 75-ton auxiliary hook. Employee #1 slipped off the ladder and fell backwards approximately 80 feet to the ground, he was also observed hitting a spreader beam on the floor level during the fall and severing his right leg. Employee #1 was pronounced dead at the scene by paramedics and the Coroner Investigator. No fall protection equipment was used by Employee #1 or any the other employees on the crew. Fall protection was available by company and Employee #1 had knowledge of its availability.	3312: Blast Furnaces and Steel Mills	1	Ladder	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
201682085 / 314284340	2010	Employee Is Killed in Fall From Ladder	On September 8, 2010, Employee #1 was retrieving items from a warehouse shelving unit. She used a 14-ft . . . roll[ing] ladder, and she fell to the ground. She was found cold, unconscious and lying on her back at the base of the ladder. The safety brake mechanism on the ladder was disengaged, and it was reported that Employee #1 had been experiencing dizzy spells for the past week. Employee #1 was killed.	4226: Special Warehousing and Storage, NEC	1	Ladder	Fall (From Elevation)	Other
Fall From Roof								
201773066 / 310364385	2006	HVAC Maintenance Worker Falls Off Roof and Killed	On October 27, 2006, a maintenance contractor was on the roof of a building to service an HVAC unit. He fell approximately 25 feet from the roof, and was killed.	7349: Building Maintenance Services, NEC	1	Buildings / Structures	Fall (From Elevation)	Other
201751575 / 309197861	2006	Employee Is Killed in Fall From Roof	At approximately 3:27 p.m. on October 17, 2006, an employee was up on the roof 25 feet from the ground winterizing a swamp-cooler. At the time of the accident, the employee was putting on the side panels of the swamp-cooler, when he lost his footing and fell down 10-ft to the second level and then to the ground striking his head on the pavement as he landed. He was semi-conscious, when he was transported to the hospital where he remained until his death on October 22, 2006. At the time of the accident, the employe[r] did not have a fall protection system in place.	5812: Eating Places	1	Ladder	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200355691 / 310498415	2006	Employee Is Killed After Being Engulfed in Silo	On September 24, 2006, Employee #1, a mill supervisor, was working alone at a country animal feed grain mill. He climbed 55 ft up a 70 ft caged ladder mounted between two wet corn silos. Employee #1 then cross over a guardrail and proceeded across the silo's conical-shaped, 30-degree-sloped roof. He opened a roof access hatch that measured 30-in. wide by 36-in. long, which led to an area classified as a permit-required confined space. After Employee #1 could not be located, rescue operations were initiated at 2:10 p.m. Emergency responders removed approximately 30,000 bushels of corn by hand before finding Employee #1 at 2:01 a.m. the following morning. He was killed. Employee #1 was not wearing fall protection equipment even though the equipment was available.	2048: Prepared Feeds, NEC	1	Dust / Particles/ Chips	Other	Work-Surface/Facil.-Layout Cond.
200901890 / 307412270	2006	Employee Sustains Concussion, Is Killed in Fall Through Roof	On August 4, 2006, Employee #1 was working for a firm that provided building cleaning and maintenance services. He fell through a roof and sustained a concussion. He was killed.	7349: Building Maintenance Services, NEC	1	Buildings / Structures	Fall (From Elevation)	Other
202260758 / 308100460	2006	Employee Is Killed in Fall From Roof	On July 5, 2006, Employee #1 was changing a photoelectric cell of an outdoor lamp, located on the roof of the second-story building. Employee #1 fell to the ground from the building roof approximately 20 ft. He sustained bruises, contusions, and abrasions. Employee #1 was transported to the hospital, where he died a few hours later.	8999: Services, NEC	1	Other	Fall (From Elevation)	Other
201282258 / 309617694	2006	Employee Is Killed in Fall From Trailer	On May 25, 2006, Employee #1 was covering a trailer full of bark with a tarp, when he lost his balance. He fell approximately 10 ft and landed upon the ground, sustaining severe head trauma that killed him.	2431: Millwork	1	Motor Vehicle (Indus)	Fall(From Elevation)	Work-Surface/Facil-Layout Cond

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
201353026 / 308436013	2006	Employee Is Killed in Fall From Roof	On February 1, 2006, Employee #1 was working as a heating, ventilation, and air conditioning (HVAC) mechanic, performing scheduled maintenance on the HVAC units at a . . . restaurant. There were three HVAC units on the restaurant roof, which was about 15-feet high. Along the edge of the roof, there was a 15-inch wide, 19-inch high parapet. Employee #1 climbed a portable metal ladder and took a garden-type water hose, connected to a spigot at ground level, onto the roof. Carrying the hose to the opposite side of the roof from where the ladder was located, he apparently walked either backward or sideways, not watching where he was walking. He walked into the parapet wall and fell from the roof, sustaining injuries to his head, knees, left hand, and left wrist. He was taken to a local hospital, where he was pronounced dead. The cause of death was a closed head injury due to blunt impact to his head and neck. His injuries included head fractures, hemorrhage, and contusions.	7623: Refrigeration Service and Repair	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
202461596 / 310112602	2006	Employee Falls From Elevation and Is Killed	On May 9, 2006, an employee was engaged in a roof cleaning operation consisting of cleaning lint collection traps from dryer stacks. A forklift basket attachment, not secured to the forklift blades, containing cleaning equipment, was lifted to the roof approximately 20 ft above the ground. Upon completion of the cleaning operation, the employee stepped onto the basket attachment to load a hand truck, when the attachment flipped off the forks. The employee fell from the attachment onto a metal tote located at ground level. The employee was then struck by the falling attachment, which weighed approximately 400 lbs. The employee was transported to . . . [the h]ospital where he died from chest trauma at approximately 6:00 p.m.	7218: Industrial Launderers	1	Other	Struck By	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200023240 / 309779502	2006	Employee Is Killed in Fall From Roof	Employee #1 was passing from one section of a roof to another when he fell approximately 17.5 feet from the roof edge to the concrete sidewalk and was killed.	7349: Building Maintenance Services, NEC	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
200676393 / 310210455	2006	Employee Is Killed in Fall From Roof	Employee #1 was working on the roof installing safety lines and fell approximately 45 ft to the ground. Employee #1 was killed.	5039: Construction Materials, NEC	1	Materials Handlg Eq.	Struck By	Materials Handlg. Equip./Method
201169430 / 126199819	2007	Employee Is Killed in Fall From Roof	At 2:54 p.m. on December 26, 2007, Employee#1, an apartment building maintenance worker, was patching a roof leak approximately 25 feet from the edge of a building's roof. Employee #1 was killed when he fell approximately 26 feet from the edge of the roof over the building's boiler room to an interior courtyard below. An investigation was pending.	6531: Real Estate Agents and Managers	1	Other	Fall (From Elevation)	Weather, Earthquake, Etc.
200677029 / 311086672	2007	Employee Is Killed in Fall From Sloped Roof	At 9:00 p.m. on October 19, 2007, Employee #1 was painting a sloped roof of a gas station, with use of the artificial portable lamps. He was working from the top of the tile roof where the eave was 12-ft., 4-in. high. Employee #1 slipped and fell to the ground. He was transported to a local hospital and remained in a coma until October 25, 2007, when he died. There were no actual eye witnesses to the accident. Employee #1 was not wearing a fall protection at the time of accident.	9999: Non-classifiable Establishments	1	Other	Fall (From Elevation)	Overhead Moving/Falling Obj. Accid.
201762945 / 311063762	2007	Employee Is Killed in Fall From Roof	On July 23, 2007, Employee #1 was on a roof cleaning cooking vents. His supervisor heard a loud noise and found Employee #1 on the ground. Employee #1 was pronounced dead at the hospital.	5812: Eating Places	1	Buildings/ Structures	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200603660 / 311308225	2007	Employee Killed in Fall From Roof	On July 19, 2007, Employee #1 was attempting to step onto a ladder from a roof when he fell to the ground, and suffered fatal injuries.	7342: Disinfecting & Pest Control Services	1	Ladder	Fall (From Elevation)	Other
201773090 / 310952981	2007	Employee Is Killed in Fall During Refrigeration Installation	On May 31, 2007, an employee was installing a refrigeration unit on the roof. There was a sudden release of air which startled the employee. The employee stepped back and fell 42 feet. The employee was killed.	4222: Refrigerated Warehousing and Storage	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
200090603 / 310156914	2007	Employee Is Killed in Fall	Employee #1 was a property manager for a hospital. Employee #1 was performing a roof examination in an area that had been repaired several times. Employee #1 had been assigned to the roof top chiller replacement project which was near[ing] . . . completion. Employees of the roofing company that did the chiller replacement were on the roof completing punch list items for final payment. Employee #1 fell 150 ft and was killed.	8062: General Medical & Surgical Hospitals	1	Other	Fall (From Elevation)	Other
200823466 / 309770055	2007	Employee Is Asphyxiated When Engulfed in Sand	At approximately 2:30 p.m. on January 17th, 2007, Employee #1 was on the roof of a building next to the hopper of sand attempting to break the frozen sand loose in the hopper. Employee #1 fell into the hopper and became engulfed. There was no fall protection provided for Employee #1 working around the hopper or on the roof. Employee #1 was asphyxiated.	3272: Concrete Products, NEC	1	Dirt / Sand / Stone	Caught in or Between	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200841732 / 309292282	2008	Fatal Fall From A Roof	On November 05, 2009, at approximately 9:40 AM, Employees #1 and #2 were performing roofing work on the roof of building #3 at [a steel plant]. The employees were replacing 27.5-in. wide and 10-ft., 6-in. long, 2.5-in. corrugation, light green translucent roof sheets with 35.5-in. by 12-ft. corrugated sheet metal. Both employees were exposed to 40 ft., 7 in. fall hazards from the eave of the roof and an approximate 70-ft. fall hazard through a fiberglass panel that gave way under the weight of the . . . accident victim. Both employees were wearing harnesses; however, neither employee was tied off at the time of the accident. The lifeline was connected by placing a locking type snap hook at the peak of the roof, in such a manner, as to negate the locking mechanism of the snap hook. At the time of the . . . accident, both employees were installing the last piece of corrugated sheet metal. As Employee #1 was screwing in the corrugated sheet metal, Employee #2 was standing beside and a little behind Employee #1, in order to help hold him in place due to the slippery condition of the corrugated sheet metal. Employee #2 slipped and fell backward through a fiberglass panel, which gave way under Employee #2's weight. Employee #2 fell approximately 70 ft. to his death into the interior of the building. Employee #2 landed on a dirt floor, inside the building. Employee #2 died from severe brain trauma.	3312: Blast Furnaces and Steel Mills	1	Buildings / Structures	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
202549242 / 309303717	2008	Employee Is Killed in Fall From Roof	On October 30, 2008, Employee #1 was in the process of installing a fumigation tent over a two-story residence. After erecting a 24 ft extension ladder, he carried a tarp bundle, weighing approximately 120 lb to the roof. As he sat the bundle on the roof, he lost his balance, causing him to slide off the roof. The roof had an approximate slope of 30 degrees. During the fall, the bundle hit a roof extension on the first story before hitting the ground level. Employee #1 cleared the first story roof, but struck the concrete walkway on the ground level, killing him. He fell about 18 feet.	7342: Disinfecting & Pest Control Services	1	Other	Fall (From Elevation)	Other
200631927 / 311683684	2008	Employee Is Killed in Fall From Roof to Warehouse Floor	At 1:30 p.m. on Sunday, July 20, 2008, a storm with strong winds and heavy rain came through the Weirton, West Virginia area, setting off a fire alarm sensor and damaging the roof of the 12th Street Warehouse at the Eagle Manufacturing Company. Company officials made a decision that afternoon to have the maintenance crew clean up the damage area the following morning. Once the debris was removed, the maintenance crew covered the area with a tarp, and a contractor would be called in to do the repairs. The employees had just finish removing the damaged layer of roofing and insulation, and were leaving the roof area, when Employee #1, instead of traveling back over the good area of the roof, walked across the damage area. Employee #1 fell through a soft spot, falling approximately 35 feet to the floor of the warehouse. Employee #1 suffered head injuries, and died while on the way to the hospital.	3999: Manufacturing Industries, NEC	1	Working Surface	Fall (From Elevation)	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200002749 / 312215882	2008	Employee Is Killed in Fall From Roof	At approximately 8:00 a.m. on June 18, 2008, an employee was working on the roof of a modular home section that had been constructed inside the company's facility in Boonville, MO. The employee was preparing a unit for transport. Specifically, he was covering the roof with a protective plastic wrap. He fell 13.8 feet to a concrete floor. The employee was transported by medical helicopter to the University of Missouri Hospital in Columbia, MO, where he died shortly after his arrival.	2452: Prefabricated Wood Buildings	1	Working Surface	Fall(From Elevation)	Work-Surface/Facil-Layout Cond
201391745 / 308815588	2008	Employee Is Killed in Fall From Roof	On April 1, 2008, Employee #1, a maintenance foreman, was working alone and was notified that the belt that opened the flue damper vent to the furnace had broken. He climbed a fixed ladder to access the roof to investigate the problem with the flue. He fell through the roof, landing on the furnace room floor approximately 30 feet below. He died from the impact of landing on the furnace room floor.	3341: Secondary Nonferrous Metals	1	Working Surface	Fall (From Elevation)	Other
201169711 / 126201045	2008	Employee Is Killed When He Falls From Roof	On March 4, 2008, Employee #1 and a building manager were making measurements on the flat roof of a 3-story apartment building, using a 50-ft tape measure. The building was 30 feet high and had a 2-ft parapet wall. They started at the North side of the roof, and progressed to the South side. At the 200 feet mark, the manager bent down to hold one end of the tape while Employee #1 walked backwards with the tape toward the parapet wall. When the manager turned around to face the parapet wall, Employee #1 had fallen off the roof. There had been no fall arrest systems, personal fall restraint or positioning system provided. Employee #1 was killed in the fall.	6531: Real Estate Agents and Managers	1	Other	Fall (From Elevation)	Work-Surface/Facil-Layout Cond
201573391 / 310472055	2008	Employee Falls From Roof and Is Killed	On February 28, 2008, Employee #1 was cleaning ice and snow off the roof of a hotel, and he slid off the roof. He fell approximately six stories. Employee #1 was killed.	3444: Sheet Metal Work	1	Working Surface	Fall(From Elevation)	Weather, Earthquake, Etc.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200555951 / 313028276	2009	Employee Is Killed in Fall From Unguarded Roof	On December 21, 2009, Employee #1 was replacing damaged polyethylene sheeting on an existing exterior of a building with an unguarded roof edge. He did not have fall protection. During his work, he lost his balance and fell approximately 11 ft to the ground. He struck the ground and was killed.	7539: Automotive Repair Shops, NEC	1	Working Surface	Fall(From Elevation)	Work-Surface/Facil-Layout Cond
201074291 / 312679921	2009	Worker Erecting Fumigation Tent Is Killed in Fall From Roof	At approximately 9:00 a.m. on October 5, 2009, Employee #1 was working fulltime for a pest control company. He and a coworker had arrived at a two-story, detached, single-family home at about 8:00 a.m. and were erecting a tent around it to fumigate it. Employee #1 was on the roof, when he fell approximately 19 feet. He landed on a wooden fence on the south side of the house and sustained a fractured neck. The coworker called emergency services, and the Oceanside, CA, Fire Department responded. Employee #1 was pronounced dead at the scene	7342: Disinfecting & Pest Control Services	1	Other	Fall(From Elevation)	Other
201638780 / 313477267	2009	Employee Is Killed in Fall From Roof	On September 15, 2009, Employee #1, a service technician, was moving a satellite dish on a roof when he lost his balance. He slid down the roof and fell approximately 10 ft to the ground below. Employee #1 died.	4841: Cable and Other Pay TV Services	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil-Layout Cond
200514891 / 313731770	2009	Employee Is Killed Falling From A Roof	On September 3, 2009, Employee #1 and a coworker, fell from a roof edge while window washing. The coworker, on a boatswains chair, fell from edge due to counter weights not installed on outrigger. Employee #1 fell from the roof after grabbing the outrigger in an attempt to stop it from falling off roof edge. Employee #1 was killed.	7349: Building Maintenance Services, NEC	1	Working Surface	Fall (From Elevation)	Other
200925287 / 313390163	2009	Worker Is Killed in Fall From Roof	Between 3:35 p.m. and 4:25 p.m. on June 10, 2009, Employee #1, of . . . Corporation, was installing an antenna on a roof. He fell 30-40 feet to the pavement and died.	3829: Measuring & Controlling Devices, NEC	1	Other	Fall (From Elevation)	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
201781168 / 109332866	2009	Employee Falls From Roof, Later Dies	At approximately 5:00 p.m. on March 13, 2009, Employee #1 was working alone removing old paint using a water blast machine on a flat roof of a building, when he fell approximately 35 ft from the edge of the roof. Employee #1 was taken to the hospital, where he later died from his injuries.	5999: Misc. Retail Stores, NEC	1	Other	Fall (From Elevation)	Other
200925600 / 312945629	2009	Employee Dies After Fall From Roof	On February 10, 2009, Employee #1 was an inspector for a company that performed special inspections. He was on the roof of a four story residential building being constructed. The roof had a 5:12 pitch. He was expecting the nail pattern for the roof sheathing and was walking along the ridge. He lost his footing, slid down the roof, and fell approximately 40 to 45 ft to the ground. Employee #1 died at the hospital. He had not been wearing a harness with a secured lanyard nor was he otherwise protected from fall hazards while performing this job.	8711: Engineering Services	1	Buildings / Structures	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
314190943 / 314190943	2010	Employee Is Killed in Fall From Roof	On September 23, 2010, Employee #1 was located on the roof of a three-story building to remove a tree limb that was too close to the roof, causing damage. As Employee #1 cut the limb with a hand saw, it broke prematurely due to the weight on the cut. Employee #1 was knocked from the roof, landing on the lower level of the building, and was killed. The accident investigation revealed that Employee #1 was not wearing any type of fall arrest equipment at the time of the incident.	6513: Apartment Building Operators	1	Hand Tool (Manual)	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
202560942 / 314424573	2010	Worker Is Killed After Falling From Roof	On April 18, 2010, Employee #1, of [a restaurant], was conducting maintenance work on an air conditioning unit. While working on air conditioning unit, Employee #1 fell from roof and died. No other information was provided.	5812: Eating Places	1	Ladder	Fall (From Elevation)	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
202080438 / 314309139	2010	Employee Dies After Fall From Roof	On February 23, 2010, Employee #1 was inspecting a roof, when he fell approximately 23 feet to the ground. He died from his injuries on March 10, 2010.	6411: Insurance Agents, Brokers, & Service	1	Other	Fall (From Elevation)	Other
201720398 / 313453821	2010	Employee Is Killed in Fall From Metal Roof	On January 27, 2010, Employee #1 was working on approximately 30-ft high metal roof. The aluminum metal sheet was deteriorated and broke under his weight. Employee #1 fell to the ground and was taken to the hospital. Employee #1 died later that day. He was not using a fall arrest system.	5093: Scrap and Waste Materials	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
			Fall Through Skylight					
200623890 / 310305727	2006	Worker Is Killed in Fall Through Skylight	On August 7, 2006, Employee #1 was working for a firm that made fabricated structural metal products. Along with two coworkers, he was on a roof conducting maintenance work. While walking on the roof back to an aerial lift, he fell through a skylight. He sustained a head injury, and he was killed.	3448: Prefabricated Metal Buildings	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
201330925 / 310189584	2006	Employee Is Killed in Fall Through Skylight	Employee #1 was working on the roof of a structure, when he fell through a skylight. He was killed.	6513: Apartment Building Operators	1	Buildings / Structures	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200901841 / 307411108	2006	Employee Is Killed in Fall From Skylight Opening	On July 11, 2006, Employee #1 was instructed by his supervisor to caulk the edges of a skylight on the facility's metal roof to prevent water from leaking down onto the working surface of the roof set department. Once Employee #1 completed the job, he asked his supervisor come back up to the roof and look at the finished project. As the supervisor Employee #1 approached the repaired skylight, Employee #1 stepped onto the skylight with his left foot. Employee #1 fell through the skylight and the skylight opening onto the concrete floor below. Employee was fatally injured as a result of the accident.	2452: Prefabricated Wood Buildings	1	Working Surface	Fall (From Elevation)	Other
201992492 / 310281589	2006	Employee Is Killed in Fall Through Skylight	At approximately 5:19 p.m. on July 5, 2006, Employee #1 was cleaning a roof. He fell through the skylight and was killed.	4225: General Warehousing and Storage	1	Bodily Motion	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
201320843 / 309858801	2006	Employee Is Killed in Fall Through Apartment Roof Skylight	On June 22, 2006, Employee #1 and a coworker were working as maintenance employees. They were changing a condenser unit on the roof of an apartment building. Employee #1 was transporting the replacement unit on a hand truck, when he tripped and fell through a skylight. He fell approximately twenty-five feet, and he was killed.	6513: Apartment Building Operators	1	Buildings / Structures	Fall (From Elevation)	Materials Handlg Equip./Method
200530665 / 308265891	2006	Mechanic Is Killed in Fall Through Skylight	On May 2, 2006, Employee #1 was performing maintenance on a roof-top air conditioning unit. He fell through a skylight and was killed.	7623: Refrigeration Service and Repair	1	Other	Fall (From Elevation)	Other
200373942 / 309796928	2006	Employee Is Killed in Fall Through Skylight	Employee #1 and a coworker were cleaning out gutters from the roof of a warehouse. Employee #1 fell approximately 18 feet through a fiberglass skylight to the concrete floor. Employee #1 was killed.	5211: Lumber and Other Building Materials	1	Other	Fall (From Elevation)	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200514602 / 311662720	2007	Employee Is Killed in Fall Through Skylight	On December 5, 2007, Employee #1 was clearing ice on top of a roof and fell through skylight and died.	7349: Building Maintenance Services, NEC	1	Other	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
202472114 / 311332241	2007	Employee Dies in Fall Through Skylight	Employee #1 and a coworker were reroofing a metal roof on an existing warehouse, approximately 40 feet from the ground. The roof had fiberglass skylights, which had begun to leak and were being covered over by the new roof. They had covered approximately one-half of the 10-ft by 12-ft skylight, when Employee #1 fell through the skylight. Employee #1 sustained severe internal injuries from the 40-foot fall and died later in the day at the hospital.	3441: Fabricated Structural Metal	1	Buildings / Structures	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
201262219 / 311120968	2007	Employee Killed By Fall Through Roof Skylight	On June 29, 2007, at approximately 12:30 p.m., Employee #1 was killed as a result of a 30-foot fall through a skylight on the roof. Employee #1 was paired with another worker painting HVAC units on the roof as part of the company's yearly maintenance program. The employer did not provide fall protection barrier guards around the skylight, or personal fall protection for the employees working adjacent to the skylight. The weather conditions were hot, and the employees were taking a break near the skylight. An eyewitness stated that Employee #1 sat on the edge of the skylight and fell through it to the ground. Employee #1 was attended on the ground by plant employees until Emergency Medical help arrived. Employee #1 was transported to . . . [the h]ospital . . . where he died.	3411: Metal Cans	1	Buildings / Structures	Fall (From Elevation)	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
202473849 / 307185066	2007	Employee Is Injured in Fall Through Skylight, Later Dies	On June 15, 2007, an employee, a general laborer, was on the roof of the building, alone, and engaged in cleaning a skylight with a broom. The broom broke, and he lost his balance, falling through the unguarded skylight. The employee fell over 15 feet to the concrete floor below. The employee was not wearing any personal fall protection gear such as a harness, lanyard, etc. No means of fall protection was used at the jobsite at the time of the incident. The employee's supervisor was not onsite, but was aware of the task that the employee was performing. The employer did not establish safe procedures for employees to follow when cleaning skylights, such as the use of personal fall protection devices and/or guardrails. A coworker was working inside the building, and took the employee to . . . [the h]ospital. The employee sustained internal injuries and was treated and released from the hospital after five days. The employee died eight days after the incident.	6531: Real Estate Agents and Managers	1	Other	Fall (From Elevation)	Other
201371119 / 310226568	2007	Employee Is Killed in Fall Through Skylight	On February 15, 2007, an employee, a second shift foreman fell through a skylight, while traversing across the snow covered roof of the foundry while en route to the sand bin house. As he approached the northwest corner of the roof, he stepped on the corner of the snow covered sky light. He apparently lost his balance and fell onto the dome shaped plastic cover. The cover broke under his weight causing him to fall approximately 30 feet to the concrete floor of the foundry. Several coworkers immediately ran to his aid and called the emergency medical services. He was made comfortable until the paramedics arrived, who attempted cardio pulmonary resuscitation. The employee was non-responsive and was transported to the . . . hospital . . . where he was pronounced dead	3321: Gray and Ductile Iron Foundries	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
202367744 / 312566276	2008	Employee Is Killed in Fall	On October 23, 2008, Employee #1 fell through a skylight to a concrete floor and was killed.	5734: Computer and Software Stores	1	Other	Fall (From Elevation)	Other
200033264 / 311376826	2008	Employee Is Killed in Fall From Roof	On September 14, 2008, Employee #1, a trailer mechanic . . . and other trailer mechanics were instructed to seal portions of the roof from the leaks. The trailer mechanics were instructed to do this job twice a year. Employee #1 was working at the Northeast corner of the roof. While sealing the roof, he fell through a skylight 18 ft to the ground. Employee #1 was killed. None of the working trailer mechanics was wearing fall protection.	7539: Automotive Repair Shops, NEC	1	Buildings / Structures	Fall (From Elevation)	Other
202549366 / 309303055	2008	Employee Falls Through Skylight, Later Dies	On September 9, 2008, Employee #1 was installing corrugated sheet metal decking on top of the existing metal decking on the roof of a 32-ft. high industrial building. There were several skylights on the roof covered by translucent green plastic sheets, approximately 16 ft. by 3 ft. The plastic covering for the skylights also needed replacing. Employee #1 was replacing one of the skylight covers. He removed the old cover and had not yet installed the new cover when he fell through the opening to the trash processing area. He struck a metal hopper, approximately 20 ft below, and then fell another 10 ft to the floor. Employee #1 suffered multiple skeletal and visceral injuries and died later at the hospital.	4212: Local Trucking Without Storage	1	Other	Fall (From Elevation)	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
201763059 / 311661094	2008	Employee Is Killed in Fall Through Skylight	On January 7, 2008, Employee #1, a journeyman lineman, was working as part of a four-man crew to replace a burned-out, pole-mounted transformer. The pole was inaccessible by truck because of its proximity to an industrial strip center on its south side and a drainage ditch, with a slope of approximately 12 degrees, on its north side. The pole was located approximately 253 feet east of a hard-surface parking lot. The crew determined that they would replace the transformer manually, using a jib, blocks, and generator-powered electric cathead. The crew had difficulty lowering the old transformer to the ground because the industrial strip center, located 66 inches south of the pole, prevented a good angle on the tag lines. However, they did successfully remove the old transformer. Because of the difficulty they had experienced in removing the old transformer, the crew decided that they would raise the new transformer to the level of the roof and then throw the tag lines onto the roof. The crew thought this would result in a better tag line angle, which would allow them to pull the transformer away from the pole and facilitate positioning and bolting it into place. The cathead was used to raise the transformer to the level of the roof, and Employee #1 threw his tag line onto the roof. Employee #1 and a helper then walked over to a ladder, which was erected approximately 240 feet west of the pole. They climbed the ladder and walked east across the 1 to 12 pitch metal roof of the industrial strip center building. The helper walked east along the edge of the building, while Employee #1 walked southeast, approximately 50 feet. Employee #1 stepped onto a fiberglass skylight and fell approximately 17 feet to the concrete floor of the shop. Employee #1 was killed and declared dead at the scene.	4911: Electric Services	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
202529566 / 309915676	2009	Employee Is Killed in Fall Through Unguarded Skylight	At approximately 3:30 p.m. on July 22, 2009, Employee #1 and his supervisor were on a roof to remove bees from an air conditioning unit. The bees chased Employee #1, and he fell through an unguarded skylight located partway between the hatch and the air conditioner. He fell 25 ft striking a concrete floor and died.	5531: Auto and Home Supply Stores	1	Buildings / Structures	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
201262862 / 315148437	2010	Employee Is Killed in Fall Through Skylight	At approximately 12:20 p.m. on December 22, 2010, Employee #1 was working at a facility of a firm that manufactured rubber and plastic hoses and belts. Employee #1 had been employed at the facility since August 10, 2010, and he had been with the corporation since July 1, 1984. Employee #1 was on the roof to investigate the origin of a water leak from a chiller. The employer had three other employees who went up onto the roof on a regular basis to check equipment and conduct other inspection checks. Employee #1 was a plant manager and would not normally have gone up to the roof to view the leaking chiller. The supervisor of maintenance, however, wanted to show Employee #1 where the leak was coming from and how they were going to fix it. The supervisor of maintenance stated that he did not see if Employee #1 slipped. He did see Employee #1 lose his balance while near the skylight and fall through. The supervisor of maintenance was the only one accompanying Employee #1 while he was on the roof. Employee #1 fell through a skylight made of an acrylic plastic dome. It was not equipped with a skylight guard or standard railing on all four sides. He fell 23 feet. Employee #1 was rushed to the hospital, but he was pronounced dead at approximately 3:00 p.m. According to the medical examiner's report, Employee #1 sustained multiple . . . traumatic injuries resulting from the fall	3052: Rubber and Plastics Hose and Belting	1	Buildings / Structures	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
202625380 / 314956145	2010	Employee Falls Through Skylight and Later Dies From Injuries	On September 11, 2010, Employee #1, a machinery maintenance worker, fell through the skylight, falling 17 feet to a concrete floor. Employee #1 was treated and transported by . . . [the f]ire [d]epartment to the . . . hospital. Employee #1 expired on September 27, 2010 at 3:10 p.m. as a result of the injuries received from the fall.	2068: Salted and Roasted Nuts and Seeds	1	Buildings / Structures	Fall (From Elevation)	Other
200785004 / 314178146	2010	Employee Falls Through Skylight and Is Killed	On July 31, 2010, Employee #1 was repairing roof structure leaks. He was removing metal roofing screws, applying silicone, and reinstalling metal roofing screws to the roof structure. The employee walked onto an unguarded existing skylight and fell approximately 22 ft. Employee #1 was killed as a result of the blunt force injury from the fall.	5712: Furniture Stores	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
200644698 / 313691917	2010	Employee Is Killed in Fall Through Skylight	On May 15, 2010, Employee #1 was repairing a roof and fell through a skylight. He fell 22 feet to the concrete and was killed.	3999: Manufacturing Industries, NEC	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil-Layout Cond
Fall From Surface Due to Slip or Trip								
201488541 / 125761775	2006	Employee Dies From Accidental Overdose	On March 8, 2006, Employee #1 was found unconscious, lying on the floor in the toilet room of the store. There were no witnesses to the accident, but there was evidence that Employee #1 had slipped on a liquid, fell and struck his head. He was treated at . . . [the m]edical [c]enter for a head injury, cervical strain, and thoracic strain. No permanent disability was anticipated. Employee #1 was prescribed medication for pain. He died in his sleep at approximately 4:45 p.m. the next day, from an accidental overdose of the prescribed medication.	5813: Drinking Places	1	Drugs / Alcohol	Ingestion	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
201859147 / 310576269	2007	Worker Suffers Concussion in Fall on Ice and Later Dies	At approximately 4:00 p.m. on January 30, 2007, a worker was placing a chain in front of the bay entrance to prevent customer usage. Because of cold inclement weather, he slipped and fell on the ice, hitting his head. The employee first went to a chiropractor, who recommended that the worker go to a hospital emergency room. The worker went to [the h]ospital, where he later died from a concussion.	7542: Carwashes	1	Working Surface	Fall (Same Level)	Weather, Earthquake, Etc.
202454880 / 310493713	2008	Employee Slipped and Fell on Concrete, Later Dies	At approximately 1:30 p.m. on September 22, 2008, Employee #1, a teacher at a public middle school, told her classroom aide that she was going to the restroom. Employee #1 was walking to the restroom when she apparently fell on a broken concrete walkway. Shortly thereafter, a campus security guard found Employee #1 laying on her left side on the broken concrete walkway. Employee #1 was transported to the hospital where she died on September 25, 2008, of unspecified causes.	8211: Elementary and Secondary Schools	1	Working Surface	Fall (Same Level)	Work-Surface/Facil.-Layout Cond.
201149689 / 309300846	2008	Employee Falls and Strikes Head, Later Dies	On February 27, 2008, Employee #1 was walking from one corner of the maintenance shop office towards the entrance door of the shop, approximately 10 ft away. As he walked, he stepped over a battery charging unit, automatic battery charger, Part Number 395101, Model Number 12050. An electrical cord connecting the battery charger to an electrical outlet and a cord connecting the battery charger to the floor scrubber were in place. His foot caught the cords, and he fell onto the tile floor. Employee #1 did not break his fall with his hands and struck his head and face on the floor. He was hospitalized and later died.	8211: Elementary and Secondary Schools	1	Other	Fall (Same Level)	Other
201955804 / 313588337	2009	Employee Slips and Strikes Head, Later Dies	At approximately 4:15 p.m. on July [25], [2009], Employee #1 was walking through the kitchen in a restaurant, slipped and fell on a slick floor. She struck the back of her head, was hospitalized, and died the next day.	5812: Eating Places	1	Working Surface	Fall (Same Level)	Work-Surface/Facil-Layout Cond

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200033769 / 315154005	2010	Employee Is Killed in Fall on Platform	On December 16, 2010, Employee #1 was working on an exterior loading platform for tankers. He was assigned to separate cooking grease and water that was stored in a silo. While using the grease loading arm and related piping to fill an empty tanker truck with grease, Employee #1 apparently slipped, struck his head on the platform, and was killed. There were no witnesses to the accident.	2013: Sausages and Other Prepared Meats	1	Buildings / Structures	Fall (Same Level)	Work-Surface/Facil-Layout Cond
202519856 / 312577059	2010	Employee Slips and Falls on Wet Surface, Is Killed	Employee #1, an employee of a transportation company, slipped and fell on a wet slippery floor in the receiving bay of a milk-producing facility. Employee #1 hit his head on the concrete floor and sustained an acute subdural hematoma brain injury. Employee #1 was killed.	4221: Farm Product Warehousing and Storage	1	Other	Fall (Same Level)	Work-Surface/Facil-Layout Cond
200651693 / 312555451	2010	Employee Fractures Ankle in Fall, Later Dies of Blood Clot	Employee #1 slipped on a wet floor and fell at a restaurant. Prior to the incident another employee had been asked to clean up the water station at the restaurant. The station cart was moved so the corner of the carpet could be flipped up to sweep under it. A little bit of water was swept into the main aisle after which the carpet was put back in place along with the cart. The employee then continued sweeping until she heard Employee #1 fall. Employee #1 fractured her left ankle. Employee #1 died two days later from a blood clot.	5812: Eating Places	1	Water	Fall (Same Level)	Work-Surface/Facil-Layout Cond
Fall From Scaffold								

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
202464509 / 310195946	2006	Employee Dies After Fall From Scaffold	On November 16, 2006, Employee #1 was an inmate, applying drywall compound to walls of the . . . [c]onference [r]oom. He was using a rolling scaffold, with one plank at the 4-ft level. The scaffold rolled when he stepped down, causing him to lose his balance. As he fell, his foot became caught in the top bar of the scaffold, which caused him to flip over backwards and strike the back of his head on the floor. Employee #1 was treated in the . . . [e]mergency [r]oom for a blunt force head trauma injury to the back of the head, and lacerations to his hand, left elbow, and nose. He was hospitalized . . . [later] had craniotomy surgery and evacuation of a hematoma. After surgery, he remained comatose and breathing with a ventilator, until his death on November 27, 2006.	9223: Correctional Institutions	1	Bodily Motion	Fall (From Elevation)	Other
201954864 / 310384003	2006	Employee Falls From Outrigger Scaffold and Dies	At approximately 9:30 a.m. on October 9, 2006, Employee #1, a window washer, was working on an existing building and was using a rolling counter-weighted portable outrigger beam scaffold with Sky Genie descent device attached to the seat board. The outrigger beam scaffold was not adequately counter-weighted, and was not tied back. In addition, a coworker moved the scaffold horizontally while Employee #1 occupied it. The coworker moving the scaffold was adjacent to the unprotected roof edge and was not wearing fall protection. As the scaffold was moved to the elevated roof position and Employee #1 descended down to the next row of windows, the two sections of the outrigger beam separated due to the lack of a safety retaining pin. Employee #1, on the seat board, was also not attached to a life line, the locking devices in use were not self-closing and self-locking, and the available lanyard was not positive-locking. The outrigger beam separated from the roof and both the scaffold and Employee #1 fell approximately 20 ft to the ground. Employee #1 sustained unspecified fractures and died on November 11, 2006, from complications following his injuries.	7349: Building Maintenance Services, NEC	1	Machine	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200980670 / 307815050	2006	Employee Is Killed in Fall From Scaffold	On February 14, 2006, Employee #1 was working from scaffolding that was approximately 30-feet tall. The scaffolding was directly above a drilling rig cellar that was about 10-feet deep. While Employee #1, thought to be collecting tools, was on the scaffold, he fell into the cellar, killing him. Employee #1's hard hat was found on the scaffolding directly above the cellar, with Employee #1 below. The accident investigation revealed that Employee #1 was not wearing fall protection, and the injuries found on his body were consistent with a fall from a scaffold. There were no witnesses.	1381: Drilling Oil and Gas Wells	1	Other	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
202341905 / 311442859	2007	One Employee Is Killed, One Is Injured in Fall From Scaffold	On December 7, 2007, Employees #1 and #2 were preparing to do window washing from the roof of a 46-story building. A two-point suspended scaffold platform detached from the building's permanent window washing rig that was anchored to the roof. It slid out into position to go down, when the cables slipped from their attachment points. Employees #1 and #2 fell with the scaffold to the ground. Employees #1 was pronounced dead on the scene and Employee #2 was transported in critical condition to Cornell hospital. Employees #1 and #2 did not put on their safety harnesses or install their life lines. The life lines and harnesses, and a bucket of hot water and soap were found on the roof next to the scaffold rig. Two new cables were installed just 30 days earlier, and this was the first time the scaffold was being used after the cable installation.	7349: Building Maintenance Services, NEC	1	Buildings / Structures	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
202472106 / 311106298	2007	Employee Is Killed in Fall From Boatswain Chair	On June 15, 2007, an employee was making sure that a coworker, a new trainee, was geared up properly and that all of his equipment was properly secured. Both men were in the process of cleaning the windows of a seven story resort building. They were using a boatswain chair as the chosen form of scaffolding. As the coworker was getting ready to access his chair, the employee told him to wait and watch him to see the safest and most effective way to gain access to the chair and begin the descent down the building. The employee apparently did not check his own gear before accessing the chair. When he climbed over the parapet wall, he fell to the ground. The coworker called the emergency medical services as he went down stairs to see how the employee was doing. Once there, the coworker began cardio-pulmonary resuscitation until the help arrived. The employee was killed.	7349: Building Maintenance Services, NEC	1	Bodily Motion	Fall (From Elevation)	Other
200643831 / 310999206	2007	Employee Falls Off Scaffold, Later Dies	On June 12, 2007, Employee #1 was working on a scaffold, taking measurements, at a height of 15 feet. He fell to the concrete slab below and later died from his injuries.	5051: Metals Service Centers and Offices	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
200624237 / 310711106	2007	Employee Dies After Fall in Church Sanctuary	On January 6, 2007, Employee #1 was using a scaffold or a ladder to reach the 25-ft high ceiling in a church sanctuary. He was either replacing ceiling tiles or repairing a light fixture. He received unspecified injuries when he fell. He was hospitalized and died on January 14, 2007.	7349: Building Maintenance Services, NEC	1	Working Surface	Fall (From Elevation)	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200643708 / 309790806	2007	Employee Slips and Falls From Work Platform and Is Killed	Employee #1 was working on an airplane from a work platform approximately 7 ft above the ground when he apparently slipped and fell to the ground fatally striking his head. The platform had a guardrail on only three sides and the ladder side was open with no means of fall prevention. Employee #1 was killed.	9711: National Security	1	Bodily Motion	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
201311925 / 311916837	2008	Worker Falls Off A Scaffold and Is Killed	On October 14, 2008, an employee was applying stucco to the front of a single family house while working on a 20-ft scaffold. He fell backwards off the scaffold striking his head on a concrete driveway. He suffered a concussion and was killed.	3471: Plating and Polishing	1	Other	Card-Vasc./Resp. Fail.	Other
200074391 / 314619925	2010	Employee Dies Falling From High Scaffold	Employee #1 and two coworkers were on a 25-ft scaffold, setting it up in order to perform maintenance on an aircraft. The center of the work platform was equipped with sliding floor panels, which allowed the sections of floor to open up around the tail of the aircraft. On top of the floor panels was a rolling platform the maintenance workers would stand on, while servicing the aircraft. Employee #1 and a coworker, pushed the rolling platform toward the tail of the aircraft, to put it into position, and discovered that six of the sliding floor panels directly below were open instead of closed. Subsequently, Employee #1 fell through the opening in the floor of the platform as he pushed the rolling platform forward, landing on the concrete ground below. Employee #1 passed away as a result of injuries suffered.	4581: Airports, Flying Fields, & Services	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
201859162 / 310565171	2006	Employee Is Killed in Fall From Work Platform	On December 13, 2006, Employee #1 was working from the work platform of a stair ladder (platform ladder) that was approximately 14.9 feet from a concrete floor. While he was working, Employee #1 fell down the steps of the platform ladder and was killed.	5211: Lumber and Other Building Materials	1	Ladder	Fall (From Elevation)	Other

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
201762903 / 311046049	2007	Employee Is Killed in Fall From Scaffolding	On May 26, 2007, Employee #1 and several other employees were scheduled to sandblast and paint the inside of a petrochemical tank that was approximately 45 feet in diameter and approximately 60 feet in height. The tank had a floating roof, which was lowered to allow installation of the scaffolding from which the men would work. Employee #1 attempted to lower himself from the scaffold using the ladder installed on the ends of the scaffolding. One witness said that the ladder broke as Employee #1 was descending and he fell approximately 20 feet to the floating roof. Attempts were made by the other employees present to render CPR, but they failed to revive Employee #1. He was pronounced dead at the scene a short time later. (Note: Employee fell from ladder, not scaffold.)	2911: Petroleum Refining	1	Ladder	Fall (From Elevation)	Other
200556223 / 314767468	2010	Employee Dies After Fall From Scaffold	At approximately 7:00 a.m. on October 8, 2010, Employee #1 was a foreman and was climbing a scaffold ladder on the south side of the exterior of the building. He was climbing to the work area on a scaffold platform at a higher level. Employee #1 was approximately 27 ft above the lower landing when a coworker heard a loud noise that was not described. The coworker called out to Employee #1 but he did not respond. Coworkers then observed Employee #1 release his grip on the ladder. Employee #1 was injured when he fell approximately 41 ft to the ground. Employee #1 died from an illness or injury that was not specified.	9999: Nonclassifiable Establishments	1	Bodily Motion	Fall(From Elevation)	Other
Fall From Stairs/Stairway/Steps								
202004685 / 308991082	2006	Employee Falls Down Stairway and Is Killed	Employee #1, a high school teacher, . . . slipped, tripped, or otherwise fell down a thirteen-step stairway and was killed. The stairway width was no greater than 44 in., but the enclosed wall side of the stairway did not have a handrail.	8211: Elementary and Secondary Schools	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
201992948 / 311240899	2007	Employee Falls, Strikes Head and Dies	On June 27, 2007, Employee #1 was walking down a stairway and tripped. He struck his head on a fixed ladder at the bottom of the stairs, and died several days later. (ORA Note: Did not fall from a ladder, slipped/tripped on stairway.)	7011: Hotels and Motels	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
			Window Cleaning					
202342184 / 312497647	2008	Employee Is Killed in Fall While Window Washing	At approximately 4:30 p.m. on August 26, 2008, an employee, a self-employed window washer was performing his quarterly cleaning of the double hung windows of a co-op unit owner. He was using a positioning belt and fell from the 12 story because the seven inch anchor bolts failed. He was pronounced dead on the scene. It appears that the anchor bolts may have been inadvertently cut during a recent unit window replacement.	7349: Building Maintenance Services, NEC	1	Working Surface	Fall (From Elevation)	Other
202023644 / 311897995	2008	Employee Is Killed in Fall While Window Washing	On April 17, 2008, Employee #1, a window washer, fell 40 feet when the anchor point came apart while he was pressure washing the window landings. Employee #1 suffered fatal injuries from the fall.	7349: Building Maintenance Services, NEC	1	Buildings / Structures	Fall (From Elevation)	Other
			Chimney					

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
202498119 / 311734842	2008	Employee Is Killed By Fall While Cleaning Chimney	On February 20, 2008, Employee #1 was attempting to clean a house chimney. According to the Coroner's report, Employee #1 sustained impact injuries to the head and neck. Based on the chimney sweep process and the home owner interview, Employee #1 walked across two sections of the house roof to gain access to the chimney top. Employee #1 was equipped with only one ladder to gain access to the porch roof and primary roof levels, with the final destination being the roof peak. A section of aluminum ladder was observed secured to the main roof of the house with hooks that overlapped the peak of the roof. Employee #1 had used a 12-foot section of ladder to access the porch roof from the ground. He then had to pull that section up onto the porch roof and set it up to access the ladder on the main roof. The section of ladder Employee #1 used to access the porch roof was also lying on the ground along with the cleaning equipment he had used to clean the flu. There were no witnesses to Employee #1 falling. It is not known if Employee #1 was climbing the section of ladder while accessing the main roof from the porch or if he fell while setting the ladder up to access the main roof. The minimum height Employee #1 could have fallen would be approximately 15 feet. (The ground slopped away from the end of the porch where the employee was found) The metal sloped porch roof was snow covered. Neither a personal fall arrest system nor guard rails were used. Employee #1 was working alone which was against company policy, which states that two people are required on these worksites. The home owner even told Employee #1 to come back if it was not safe. The cause of death was head and neck injuries.	7349: Building Maintenance Services, NEC	1	Ladder	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
Other Falls								
202358974 / 310006804	22006	Employee Is Killed in Fall From Metal Deck	On July 21, 2006, Employee #1, a wireless communications technician, was walking on a metal deck that provided access to a cellular phone antenna inside of an existing church steeple. The metal deck did not have guardrails or mesh protecting the edge. He walked off of the open-sided metal deck, fell 44 feet, and landed on his head. He was pronounced dead at the scene. Employee #1 was not using a personal fall arrest system.	8748: Business Consulting, NEC	1	Buildings / Structures	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
201923836 / 308320605	2006	Employee Is Killed in Fall From Reactor	Employee #1 was working atop a plant reactor when he fell approximately 21 feet and was killed. The grates of a walking surface were removed for maintenance.	2819: Industrial Inorganic Chemicals, NEC	1	Bodily Motion	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
200922425 / 311565048	2007	Employee Falls Through Ceiling Tile, Later Dies	On December 10, 2007, Employee #1 was removing speakers from the ten movie theaters at that location. Employee #1 was walking on the speaker platform which is located 12-ft 9-in. above the floor level in order to remove the speakers. Employee #1 apparently stepped through an opening on the platform and fell to the floor. Employee #1 was airlifted to the hospital in critical condition and died of his injuries on December 13, 2007.	7832: Motion Picture Theaters, Ex Drive-in	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
200643781 / 310998232	2007	Employee Is Killed in Fall From Top of Tanker	Employee #1 was walking on the top of a paving maintenance supply tanker without fall protection, when he fell approximately 12 feet 6 inches to the concrete floor. He was killed.	2891: Adhesives and Sealants	1	Motor Vehicle (Indus.)	Fall (From Elevation)	Other
201613668 / 311702112	2007	Employee Is Killed in Fall in Silo	At approximately 6:15 am on December 21, 2007, Employee #1 was riding a vertical conveyor man-lift to the top of the grain silo tower. When Employee #1 reached a height of approximately 95 ft, he slipped and fell through the man-lift floor opening below. Employee #1 struck his head then landed on a cross member of the structure. Employee #1 sustained unspecified fractures and was unable to free himself. Employee #1 died at the scene.	7363: Help Supply Services	1	Buildings / Structures	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
201353331 / 310031315	2007	Employee Is Killed in Fall From Resort Balcony	On April 1, 2007, an employee was working as a maintenance worker at a hotel resort. A guest could not get into his room on the fifth floor, so the employee attempted to get into the room. The employee was not able to open the door with the room key, and he could not open the door using the black box which is a device which acts like a master key. The employee entered the adjacent room and went to the balcony. The employee intended to get into the locked room by crossing from one balcony to the balcony of the locked room. The space between the two balconies was approximately six feet. A wall air conditioning unit was between the two balconies, and it slightly protruded from the wall. The employee climbed atop the balcony wall and stepped onto the air conditioning unit. The employee slipped and fell approximately 36 feet to the concrete floor of the second level of the resort. He died at the scene from his injuries, which included skull fractures.	6531: Real Estate Agents and Managers	1	Working Surface	Fall (From Elevation)	Other
200357457 / 312453376	2008	Employee Is Killed in Fall From Catwalk	On November 17, 2008, Employee #1 and a coworker were tightening a bolt on a inclined conveyor belt approximately 50 feet high. Employee #1 was walking down the conveyor catwalk when a section of the catwalk plank gave way. He was not wearing a safety harness, and he fell approximately 38 feet to the ground. Emergency medical services were contacted, and Employee #1 was rushed to the hospital, where he was pronounced dead.	3271: Concrete Block and Brick	1	Other	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.
200902245 / 310990205	2008	Employee Falls Into Paper Machine and Is Killed	On August 15, 2008, an employee was cleaning off the After Dryer Hood on the Number 16 paper machine using compressed air. The employee had been walking on a catwalk located on top of the hood on the east side. The employee left the catwalk and walked onto the top of the hood and fell in to the machine on to the dryer belt when the panel he was standing on gave way beneath him. The employee died of the injuries he received in the fall.	2621: Paper Mills	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Fatal Accidents on Walking-Working Surfaces Preventable by the Final Standards, continued (2006-2010 OSHA IMIS)

Accident Summary Number / Accident Inspection Number	Year	Brief Description of Accident	Abstract	SIC: Description	Number of Fatalities	Source of Injury	Event Type	Environmental Factor
200555324 / 311525745	2008	Employee Falls From Derrick and Is Killed	At approximately 1:30 p.m. on August 13, 2008, Employee #1, a derrickman, climbed a derrick of a rig to access the monkey board. This was the first time the monkey board had been accessed at this location. He was to prepare the monkey board to receive pipe that will be tripped into the hole. While securing the rear guardrail on the monkey board, the employee either tripped or slipped, which allowed the section to rotate past the point of where it was to be pinned. As it rotated, he was still holding onto the section. Employee #1 fell approximately 25 ft and was killed. The employee was not using fall protection.	1389: Oil and Gas Field Services, NEC	1	Working Surface	Fall (From Elevation)	Work-Surface/Facil.-Layout Cond.

Source: U.S. Department of Labor, OSHA, Directorate of Standards and Guidance, Office of Regulatory Analysis-Safety.

BILLING CODE 4510–29–C

VI. Federalism

OSHA has reviewed the final rule in accordance with Executive Order (E.O.) 13132 on Federalism (64 FR 43255 (8/10/1999)). This E.O. requires that Federal agencies, to the extent possible, refrain from limiting state policymaking discretion; consult with states prior to taking action that restricts state policy options; and take action that has federalism implications only where (1) there is ''constitutional and statutory authority'' for such action, and (2) the problem is of ''national significance'' (E.O. 13132, Section 3(b)).

Section 4 of E.O. 13132 allows Federal agencies to preempt state law, but only (1) where the Federal statute contains an express preemption provision or there is some other clear evidence that Congress intended preemption of state law, or (2) where the exercise of state authority conflicts with the exercise of Federal authority under the Federal statute. The E.O. further provides that Federal agencies must limit any such preemption of state law to the extent possible.

The final rule complies with E.O. 13132. The FEA (Section V) and other information in the rulemaking record shows that worker exposure to walking-working surface hazards, particularly fall hazards, is very widespread. Workers throughout general industry are exposed to walking-working surface hazards that can result in slips, trips and falls and other injuries and fatalities. According to the Bureau of Labor Statistics (BLS) data, slips, trips, and falls are a leading cause of workplace fatalities and injuries in general industry. As discussed in the Analysis of Risk section (Section II), workplace deaths due to slips, trips, and falls are second only to motor-vehicle accidents as the leading cause of worker fatalities.

Congress enacted the Occupational Safety and Health Act of 1970 (OSH Act) (29 U.S.C. 651 *et seq.*) ''to assure so far as possible every working man and woman in the nation safe and healthful working conditions'' (29 U.S.C. 651(b)). To achieve that objective, Congress expressly authorizes the Secretary of Labor to promulgate occupational safety and health standards applicable to businesses affecting interstate commerce (29 U.S.C. 655(a)).[164]

Section 18 of the OSH Act addresses the role of states in regulating workplace safety and health issues (29 U.S.C. 667). Section 18(a) provides that the OSH Act does not prevent states from asserting jurisdiction under state law over a workplace safety and health issue with respect to which no Federal OSHA standard is in effect (29 U.S.C. 667(a)). Where Federal OSHA has regulated an occupational safety and health issue, Section 18(b) gives states the option of developing and enforcing their own occupational safety and health standards through establishment of a State Plan. Section 18(b) specifies: ''Any State which, at any time, desires to assume responsibility for development and enforcement therein of occupational safety and health standards relating to any occupational safety or health issue with respect to which a Federal standard has been promulgated . . . shall submit a State plan for the development of such standards and their enforcement.''

Section 18(c) provides that the Secretary of Labor will issue approval of a State Plan if the plan provides for the development and enforcement of standards for occupational safety and health that are at least as effective in providing safe and healthful workplaces as federal OSHA standards. (29 U.S.C. 667(c)). State Plan standards may have different or additional requirements from OSHA's standards.

Currently, 27 U.S. states and territories, including New York, have OSHA-approved State Plans. However, the New York State Plan is limited in coverage; it is one of five state and local government only State Plans (29 CFR part 1956, subpart F). As such, the New York State Plan only covers state and local government workers and does not cover private sector employers or employees.

Approximately 40 years before Congress passed the OSH Act, New York's legislature had enacted a statute addressing the ''[p]rotection of the public and of persons engaged at window cleaning and cleaning of exterior surfaces of buildings''[165] (N.Y. Lab. Law sec. 202). Section 202 requires that workers be provided with safe means for cleaning windows and exterior surfaces, and not be required or allowed to clean any window or exterior surface unless such means are in place for the ''prevention of accidents and for the protection of the public and of such persons engaged in such work'' (N.Y. Lab. Law sec. 202). The statute applies to all employers whose employees clean windows and exterior surfaces of covered buildings as well as to owners, lessees, agents, and managers of such buildings.

Section 202 also authorized the Industrial Board of Appeals (Industrial Board) to ''make rules to effectuate the purposes of the section.'' It specifies that those rules shall be applicable exclusively throughout the state, notwithstanding any other general or local law or regulation, and that the Commissioner of Labor shall have ''exclusive authority'' to enforce sec. 202 and the rules issued thereunder (N.Y. Lab. Law sec. 202). Pursuant to sec. 202, the Industrial Board has issued regulations for the ''protection of persons engaged at window cleaning;'' however, they do not include specific provisions directed at protecting the public (N.Y. Comp. Codes R. & Regs. part 21). The regulations specify, among other things, that employees shall not be permitted to clean windows other than ''in accordance with an *authorized means and methods*'' (N.Y. Comp. Codes R. & Regs. sec. 21.3(b)(2) (emphasis added)). The following means and methods are the only ones the regulations authorize employers to use for cleaning windows:

- Working from safe surfaces;
- Working from window sills or ledges;
- Working from ladders;
- Working from boatswain's chairs;
- Working from scaffolds (12 N.Y. Comp. Codes & Regs. sec. 21.4).

The authorized means and methods do not include rope descent systems (RDS)[166] or identify whether

[164] The OSH Act defines an ''occupational safety and health standard'' as ''a standard which requires conditions, or the adoption or use of one or more practices, means, methods, operations or processes, reasonably necessary or appropriate to provide safety and healthful employment and places of employment'' (29 U.S.C. 652(8)).

[165] New York Lab. Law sec. 2(13) defines ''public building'' to include ''a factory building, an office building, a mercantile building, a hotel building, a theatre building, a warehouse building, an apartment building, a state or municipal building, a school, a college or university building, a building containing a place of public assembly maintained or leased for pecuniary gain, or any other building more than one story high except a dwelling house less than three stories high or occupied by less than three families'' (*See also,* N.Y. Comp. Codes R. & Regs. sec. 21.2(k)). Section 202 excepts the following public buildings from coverage: Multiple dwellings six or fewer stories in height; any building three or fewer stories in height in cities, towns or villages with a population of less than 40,000; and windows or exterior surfaces of any building the Industrial Board of Appeals may exempt from the requirement.

[166] The final rule defines a rope descent system as a suspension system that allows an employee to descend in a controlled manner and, as needed, stop at any point during the descent. A rope descent system usually consists of a roof anchorage, support rope, a descent device, carabiner(s) or shackle(s), and a chair (seatboard). A rope descent system also is called controlled descent equipment or apparatus. Rope descent systems do not include industrial rope access systems (final § 1910.21(b)). The final rule requires that RDSs be used in

Continued

''boatswain's chairs'' [167] include RDSs. However, New York State Department of Labor (NYSDOL) advisory standards on practices and procedures for the use of boatswain's chairs expressly prohibit employers from using controlled descent devices (CDDs) [168] for window cleaning (Advisory Standards for Construction, Operation and Maintenance of Suspended Scaffolds used for Window Cleaning and Light Maintenance, 101–1, 101–3 Design Components, sec. 9(b)(ii)).

The final rule (§ 1910.27(b)), on the other hand, allows employers to use RDSs for activities performed at elevated heights, including window cleaning. Final § 1910.27(b)(2)(i) limits the use of RDSs to elevations not exceeding 300 feet above grade; however, employers may use RDSs at greater heights if they can demonstrate that it is not feasible to access such heights by any method other than an RDS or other means pose a greater hazard than using an RDS.

OSHA received many comments on the proposed rule. Many stakeholders, including window cleaning companies and window cleaners, supported allowing employers to use RDSs, including at heights above 300 feet (*e.g.,* Exs. 138; 147; 163; 184; 221; 242; 243; 329 (1/19/2011, pgs. 326–29). Also, many stakeholders, including many New York window cleaners, opposed the proposed rule (*e.g.,* Exs. 131; 224; 311; 313; 314; 316; 319; 329 (1/19/2011; pgs. 5–8, 17–19; 354). They urged that OSHA, like New York, prohibit the use of RDSs for window cleaning and indicated concerns about the potential preemptive effect of the final rule on New York's window cleaning laws and regulations.

The question of whether a state law is preempted by Federal law is one of congressional intent (*Gade* v. *National Solid Wastes Management,* 505 U.S. 88, 96 (1992)). In *Gade,*[169] a five-justice majority said the language of Section 18 of the OSH Act indicates Congress' intent to preempt state occupational safety and health regulations relating to an issue that Federal OSHA already has regulated, unless the state has an OSHA-approved State Plan (*Id.,* at 98).

A four-justice plurality determined the state law, absent an approved State Plan, is impliedly pre-empted'' (*Id.,* at 98 (Congress' intent is ''implicitly contained in the [OSH Act's] structure and purpose'')). The plurality said language in Section 18(b) requiring that a state ''shall submit a State plan'' for approval if it desires to assume responsibility for developing and enforcing standards on an occupational safety and health issue that Federal OSHA has regulated, evidences Congress' intent to preempt where there is no approved plan:

> The unavoidable implication of [Section 18(b)] is that a State may not enforce its own occupational safety and health standards without obtaining the Secretary's approval (*Id.,* at 99).

The plurality noted that other parts of Section 18 also support preemption absent an approved plan (*Id.,* at 100–102). Looking at Section 18 as a whole, the plurality was persuaded that Congress sought ''to promote occupational safety and health while at the same time avoiding duplicative, and possibly counterproductive, regulation'' (*Id.,* at 102). Therefore, they concluded that, absent an approved plan, any state regulation of an OSHA-regulated occupational safety or health issue is preempted as being in conflict with ''the full purposes and objectives'' of the OSH Act. The plurality also concluded that allowing a state without a -State Plan to supplement Federal OSHA standards, even non-conflicting laws,[170] would be inconsistent with the ''federal scheme of establishing uniform federal standards, on one hand, and encouraging States to assume full responsibility of their own OSH programs, on the other'' (*Id.,* at 103).

The Court also reached the same conclusion regarding the preemptive effect of a law that regulates public as well as workplace safety and health (*i.e.,* a ''dual impact'' law). The five-justice majority said that any state law ''designed to promote safety and health in the workplace falls neatly within the Act's definition of an 'occupational safety and health standard' '' (*Id.,* at 105). According to the Court, the fact such a state law also may have a non-occupational purpose or impact ''does not render it any less of an occupational safety and health standard for purposes of preemption analysis'':

> [I]t would defeat the purpose of section 18 if a state could enact measures stricter than OSHA's and largely accomplished through regulation of worker safety and health simply by asserting a non-occupational purpose for the legislation' (*Id.,* at 106, citing *National Solid Wastes Management Assn.* v. *Killian,* 918 F.2d 671, 679 (7th Cir. 1990)).

Therefore, the Court said it must look at the ''effects of the law'' as well legislature's professed purpose (*Id.,* at 105). Applying this test, the Court determined that, in the absence of an approved state plan, the OSH Act preempts all state law that ''constitutes, in a direct, clear and substantial way, regulation of worker health and safety'' (*Id.,* at 107).[171]

Based on the following, OSHA finds that sec. 202 ''directly, substantially, and specifically regulates occupational safety and health.'' Although the title of sec. 202 specifies that its purpose is ''[p]rotection of the public and of persons engaged at window cleaning and cleaning of exterior surfaces of buildings,'' the language in sec. 202 clearly indicates it is promulgated primarily for the protection of workers rather than the public. For example, Section 202 directs employers and contractors to ''provide safe means'' for workers to clean windows and building surfaces and ''require his employees . . . to use the equipment and safety devices'' while cleaning windows and building surfaces, but does not contain any requirements directed at members of the public. As such, protection of the

---

conjunction with a separate personal fall arrest system to protect workers if a fall occurs (§ 1910.27(b)(2)(vi)).

[167] Existing § 1910.21(f)(2) defines a boatswain's chair as a ''seat supported slings attached to a suspended rope, designed to accommodate one workman in a sitting position.'' OSHA's construction cranes and derricks standard, revised in 2010, defines boatswain's chair as ''a single-point adjustable suspension scaffold consisting of a seat or sling (which may be incorporated into a full body harness) designed to support one employee in a sitting position'' (29 CFR 1926.1401). In the proposed rule OSHA characterized rope descent systems as ''a variation of a single-point adjustable suspension scaffold'' (proposed § 1910.21(b)). Several stakeholders said OSHA's characterization was not accurate because RDS and controlled descent devices only travel downward whereas single-point adjustable suspension scaffolds, such as boatswain's chairs, can go up and down. (Exs. 62; 168; 205). The final rule clarifies that RDS are not a boatswain's chair or a type of single-point adjustable suspension scaffold (final § 1910.21(b)).

[168] The definition of ''rope descent system'' (RDS) in final § 1910.21(b) states that RDS also are called CDDs.

[169] *Gade* addressed the preemptive effect of OSHA's Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120) on Illinois laws establishing training and license requirements for hazardous waste equipment operators and workers. Illinois did not have an approved State Plan at the time.

[170] OSHA notes that New York's laws and regulations and final § 1910.27 are not non-conflicting regulations. Rather, it is ''a physical impossibility'' for employers and employees to comply with both the final rule, which allows the use of RDSs, and New York's regulations, which prohibit their use (*Gade,* 505 U.S. at 98). If employers use RDSs in accordance with final § 1910.27(b) to clean windows up to 300 feet above grade, they violate New York's regulations.

[171] OSHA notes that the Court in *Gade* recognized an exception to the OSH Act's preemption of state regulations for ''laws of general applicability'' (*Gade,* 505 U.S. 107). Laws of general applicability regulate the conduct of workers ''simply as members of the general public'' (*Id.*). Like the Court, OSHA has consistently taken the position the OSH Act does not preempt state laws promulgated primarily for the purpose of protecting public safety, such as building, electrical and fire codes (CSP 01–03–004, The Effect of Preemption on the State Agencies without 18(b) Plans (3/13/1981)).

public appears to be a residual benefit of sec. 202's requirements to protect workers. The legislative history of sec. 202 also reinforces that it is primarily ''directed at workplace safety'' (*Gade,* at 107). Section 202, as originally enacted in 1930, only applied to ''persons engaged at window cleaning.'' It wasn't until 1970 that the legislature expanded the scope of sec. 202 to cover ''protection of the public.''

The title of the Industrial Board regulations that implement sec. 202, ''Protection of persons employed at window cleaning—structural requirements, equipment and procedure,'' also support that sec. 202 is primarily directed to protecting workers (N.Y. Comp. Codes R. & Regs. Part 21). The regulations' findings of fact reinforce this:

> The board finds that the trade, occupation or process of cleaning the windows of public buildings involves such elements of danger to the lives, health or safety of persons employed therein as to require special regulations for the protection of such persons, in that such trade, occupation or process necessarily involves the constant hazard of falling from dangerous heights and creates a substantial risk of serious injury to such persons and others (12 N.Y. Comp. Codes & Regs. 21.0).

In addition to the ''authorized means and methods'' employers must use to clean windows, the regulations as well as the advisory standards also establish work practice and equipment requirements employers and workers must follow. Like OSHA standards, New York's laws and regulations establish the means and methods ''reasonably necessary or appropriate to provide safety and health employment and places of employment'' for workers who clean windows and exterior surfaces of public buildings.

Looking at sec. 202 and its implementing regulations and advisory standards as a whole, the substantial effect they have on workplace safety and health shows they are occupational safety and health standards within the meaning of the OSH Act. Since New York's laws regulate the same occupational safety and health issue as the final rule, pursuant to *Gade,* they can be saved from preemption only if New York has an OSHA-approved State Plan. As mentioned, New York has an approved State Plan, but it only covers state and local government employees. New York has not submitted a State Plan covering private employees for approval by the Secretary of Labor. Absent such a plan, New York's laws and regulations, to the extent that they cover private employees, are preempted as being in conflict with ''the full purposes and objectives'' of the OSH Act (*Gade,* at 98). That said, New York's laws remain in effect for state and local government employees, and, to the extent that New York's laws are at least as effective as OSHA's standard, state and local government employees are prohibited from using RDS when they clean windows.

Finally, OSHA notes Congress saved two areas from federal preemption. In addition to section 18(a), discussed above, Section 4(b)(4) of the OSH Act evidences Congress' clear intent to preserve state laws that that create liability for personal injury (*Gade,* 505 U.S. at 96). Section 4(b)(4) states: ''Nothing in this Act shall be construed to supersede or in any manner affect any workmen's compensation law or to enlarge or diminish of affect in any other manner, the common law or statutory rights, duties or liabilities of employers and employees under any law with respect to injuries, diseases, or death of employees arising out of, or in the course of, employment'' (29 U.S.C. 653(b)(4)).

Section 202 creates a private right of action for violations of the window cleaning regulations (N.Y. Comp. Codes R. & Regs. Part 21), which the New York courts have consistently upheld (See *e.g., Pollard* v. *Trivia Bldg. Corp.,* 291 N.Y. 19 (1943); *Bauer* v. *Female Academy of the Sacred Heart* (767 N.E.2d 1136 (N.Y. 2002)).

Since *Gade,* courts routinely have upheld state tort laws against preemption challenges so long as the state laws do not create conflict with an OSHA standard (See *Lindsey* v. *Caterpillar,* 480 F.3d. 202,212 (3d. Cir. 2007) (''We join with those courts whose holdings have formed a 'solid consensus that [Section 4(b)(4)] operates to save state tort rules from preemption' '')). Explaining the rationale behind Section 4(b)(4)'s savings clause, the courts noted that the OSH Act is primarily preventive in nature and does not provide private remedies for injuries (*Irwin* v. *St. Joseph's Intercommunity Hospital,* 665 N.Y.S.2d 773, 778–79 (App. Div. 1997) (citing cases)).

Although Section 4(b)(4) does not protect NYSDOL's ability to enforce § 202 and the regulations implementing it, OSHA believes § 202 survives preemption to the extent that it provides workers with a private right of action for damages for injuries.

VII. State-Plan Requirements

When Federal OSHA promulgates a new standard or more stringent amendment to an existing standard, the 27 States and U.S. Territories with their own OSHA-approved occupational safety and health plans must:

- Amend their standards to reflect the new standard or amendment; or
- Show OSHA why such action is unnecessary; for example, because an existing State standard covering this area is ''at least as effective'' as the new Federal standard or amendment (29 CFR 1953.5(a)).

The State standard must be at least as effective as the final Federal rule, must be applicable to both the private and public (State and local government employees) sectors, and must be completed within 6 months of the promulgation date of the final Federal rule. When OSHA promulgates a new standard or amendment that does not impose additional or more stringent requirements than an existing standard, State-Plan States are not required to amend their standards, although the Agency may encourage them to do so.

The 21 States and one U.S. Territory with OSHA-approved occupational safety and health plans covering private employers and State and local government employees are: Alaska, Arizona, California, Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Washington, and Wyoming. In addition, four States and one U.S. Territory have OSHA-approved State Plans that apply to State and local government employees only: Connecticut, Illinois, New Jersey, New York, and the Virgin Islands.

This final rule results in more stringent requirements for the work it covers. Therefore, States and Territories with OSHA-approved State Plans must adopt comparable amendments to their standards within 6 months of the date of publication of this final rule in the **Federal Register** unless they demonstrate that such amendments are not necessary because their existing standards are at least as effective in protecting workers as this final rule. Each State Plan's existing requirements will continue to be in effect until it adopts the required revisions.

VIII. Unfunded Mandates Reform Act

OSHA reviewed this final rule according to the Unfunded Mandates Reform Act of 1995 (''UMRA''; 2 U.S.C. 1501 *et seq.*) and Executive Order 13132 (64 FR 43255 (Aug. 10, 1999)). As discussed in the Final Economic Analysis and Final Regulatory Flexibility Screening Analysis, OSHA estimates that compliance with this final rule would require general industry private-sector employers to expend about $246.5 million each year. However, while this final rule establishes a federal mandate in the private sector, it is not a significant regulatory action within the meaning of Section 202 of the UMRA (2 U.S.C. 1532).

OSHA standards do not apply to State or local governments except in States that have elected, under a voluntary agreement, to adopt a State Plan that OSHA has approved. State Plan States enforce compliance with their State standards on public sector entities, and these agreements specify that these State standards must be equivalent to OSHA standards. Thus, although OSHA has included compliance costs for the affected public-sector entities in its analysis of the expected impacts associated with the final rule, the final rule does not involve any unfunded mandates being imposed on any State or local government entity. Consequently, this final rule does not meet the definition of a ''Federal intergovernmental mandate'' (see Sec. 421(5) of the UMRA (2 U.S.C. 658(5))). Therefore, for the purposes of the UMRA, the Agency certifies that this final rule does not mandate that State, local, and tribal governments adopt new, unfunded regulatory obligations.

IX. Consultation and Coordination With Indian Tribal Governments

OSHA reviewed this final rule in accordance with Executive Order 13175, (65 FR 67249 (Nov. 9, 2000)) and determined that it does not have ''tribal implications'' as defined in that order. The final rule does not have substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.

X. Office of Management and Budget Review Under the Paperwork Reduction Act of 1995

The final general industry Walking-Working Surfaces (29 CFR part 1910, subpart D) and Personal Protective Equipment (Fall Protection PPE) (29 CFR part 1910, subpart I) standards, like the proposed rule, contain collection of information (paperwork) requirements that are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (PRA–95) (44 U.S.C. 3501 *et seq.*), and OMB regulations (5 CFR part 1320). The PRA–95 defines ''collection of information'' to mean, ''the obtaining, causing to be obtained, soliciting, or requiring the disclosure to third parties or the public, of facts or opinions by or for an agency, regardless of form or format'' (44 U.S.C. 3502(3)(A)).

Under PRA–95, a Federal agency cannot conduct or sponsor a collection of information unless OMB approves it and the collection of information displays a currently valid OMB control number. In addition, notwithstanding any other provision of law, no employer shall be subject to penalty for failing to comply with a collection of information that does not display a currently valid OMB control number.

OSHA has OMB approval for the collection of information requirements contained in both existing subparts D and I. These Information Collection Requests (ICRs) (paperwork burden hour and cost analysis), both of which expire August 31, 2019, are titled:

- Standard on Walking-Working Surfaces (29 CFR part 1910, subpart D), OMB control number 1218–0199; and
- Personal Protective Equipment (PPE) for General Industry (29 CFR part 1910, subpart I), OMB control number 1218–0205.

In accordance with PRA–95 (44 U.S.C. 3506(c)(2)), OSHA included revised ICRs for subparts D and I in the proposed rule and solicited public comment (75 FR 28862, 29129 (5/24/2010)). OSHA also submitted the revised ICRs to OMB for review as PRA–95 requires (44 U.S.C. 3507(d)). On July 26, 2010, OMB issued a Notice of Action (NOA) for the revised subpart D ICR, filing comment on the request that did not approve the request at that time and stating: ''Terms of the previous clearance remain in effect.''

On October 11, 2010, OMB issued a NOA for the revised subpart I ICR, also filing comment on the proposed revisions to the ICR and stating: ''OMB is not approving the collection of information in the proposed rule at this time. Prior to publication of the final rule, the agency should provide a summary of all comments related to the information collection requirements contained in the proposed rule and a description of any changes made in response to these comments.'' OSHA did not receive any public comments on the burden estimates in the proposed revised ICRs. However, the Agency received a number of comments on the proposed rule, discussed earlier in this preamble, that include information relevant to the paperwork analysis. OSHA addresses these comments in detail in the final ICR for subparts D and I.

Concurrent with publication of this final rule, the Department is submitting ICRs to revise the authority for the information collections under the Paperwork Reduction Act. The Department will publish an additional **Federal Register** notice to announce the final OMB disposition on those requests.

Title: Standard on Walking—Working Surfaces (29 CFR part 1910, subpart D).

Type of Review: Revision of a currently approved collection.

OMB Control Number: 1218–0199.

Affected Public: Business or other for-profits; Federal Government; State, Local, or Tribal Government.

Total Estimated Number of Respondents: 750,000.

Total Estimated Number of Responses: 1,032,860.

Total Estimated Annual Burden Hours: 498,803.

Total Estimated Annual Cost Burden (Capital and start-up cost component): $54,697,500.

Description of Collections of Information:

Final subpart D contains several new collection of information requirements and removes three existing collection of information requirements from this ICR.

Final § 1910.22—General requirements. Final § 1910.22(b), like the proposal, requires that employers ensure each walking-working surface can support the maximum intended load for that surface. The existing rule requires that building officials mark on plates the loads they have approved and securely affix them in a conspicuous place in the space to which they relate. The existing rule also requires that the plates not be removed or defaced and be replaced, if they are.

This final rule replaces the specifications in the existing rule (§ 1910.22(d)(1)) with performance-based language and, in so doing, deletes the collection of information requirement. In the preamble of the proposed and final rules, OSHA explained that the specification requirement in the existing rule was not necessary for two reasons: (1) Load-limit information is available in building plans and from other sources, and (2) maximum loads are taken into consideration when surfaces are designed.

Under the final rule, employers can obtain information about current walking-working surfaces from plates posted in accordance with the existing rule. For new buildings, structures and walking-working surfaces, employers can obtain information on load limits in various ways, such as from building plans, local codes, third-party certification, or self-evaluations.

Final § 1910.23—Ladders. Final § 1910.23 (b)(10) requires that any ladder with structural or other defects immediately be tagged ''Dangerous: Do

Not Use,'' or with ''similar language in accordance with § 1910.145, and removed from service until it is repaired or replaced.'' Section 1910.145 specifies that, depending on the nature of the hazard, tags must contain a ''signal'' word and ''major message'' (§ 1910.145(f)(4)). The ''signal'' word must be ''Danger,'' ''Caution,'' ''Biological Hazard,'' or ''BIOHAZARD'' or the tag may use the biological hazard symbol (§ 1910.145(f)(4)(i)(A)). The major message, which can be in written text, pictographs or both, must indicate ''the specific hazardous condition or instruction to be communicated to the employee'' (§ 1910.145(f)(4)(i)(B) and (f)(4)(iii)).

The existing rule also requires tagging defective ladders, but the requirement only applies to portable wood and metal ladders (§§ 1910.25(d)(1)(x) and 1910.26(c)(2)(vii), respectively). In addition, the subpart D ICR only takes paperwork burden hours and costs for portable metal ladders, not wood ones. This is because the existing standard for wood ladders provides the specific language that employers must use for the tags on defective ladders (''Dangerous: Do Not Use''). When OSHA supplies the exact language that employers must provide to employees, the Agency is not required to take paperwork burdens because the requirement does not come within the definition of ''collection of information'' under PRA–95 (5 CFR 1320.3(c)(2)).

In the proposed rule, the Agency proposed removing the word ''Dangerous'' from the existing tag language and requiring that tags state ''Do Not Use'' or similar language that complies with § 1910.145. After further analysis, however, OSHA concluded that retaining the signal word is necessary to get workers' attention in order to provide them with basic information that a hazard exists and they must not use the ladder. OSHA did not receive any comments on proposed paragraph (b)(10).

OSHA notes that the final rule applies the tagging requirement to all ladders final § 1910.23 covers, which includes fixed ladders, mobile ladder stands and mobile ladder stand platforms in addition to portable wood and metal ladders. As a result, the final rule expands the collection of information requirement.

Section 1910.27—Scaffolds and rope descent systems. Final § 1910.27, like the proposed rule, establishes requirements for scaffolds and rope descent systems (RDS) used in general industry. The requirements are designed to protect workers whose duties require them to work at elevations, whether on scaffolds or RDS.

Final paragraph § 1910.27(a), like the proposed rule, replaces the existing general industry scaffold standards (§§ 1910.28 and 1910.29) with the requirement that employers ensure scaffolds used meet the requirements in the construction scaffolds standards (29 CFR part 1926, subpart L). As the record indicated, many general industry employers use scaffolds to perform both general industry and construction activities. OSHA believes that allowing employers to comply with the same scaffold requirements regardless of whether they are performing general industry or construction activities will increase understanding of and compliance with the final rule, and thus, provide greater protection for workers.

By replacing the existing general industry requirements, the final rule deletes the collection of information requirement in existing § 1910.28(e)(3). That provision requires that employers ensure outrigger scaffolds are constructed and erected in accordance with table D–16, if they are not designed by a licensed professional engineer, and keep a copy of the detailed drawings and specifications at the job.

Final paragraph § 1910.27(b), like the proposal, adds new requirements that addresses the use of RDS. Final paragraphs (b)(1)(i) and (ii) contain a new collection of information requirement. Final paragraph (b)(1) requires that, before any RDS is used, the building owner must inform the employer in writing (final paragraph (b)(1)(i)), and the employer must obtain written information from the building owner (final paragraph (b)(1)(ii)), that the building owner has identified, tested, certified, and maintained each anchorage to ensure it is capable of supporting at least 5,000 pounds in any direction for each worker attached. The final rule specifies that the written information the building owner provides must be based on:

- An annual inspection; and
- A certification of each anchorage, as necessary, and at least every 10 years.

The requirement that anchorages be certified ''as necessary'' means the building owner must have a qualified person recertify any anchorage when the owner knows or has reason to believe recertification is needed (final paragraph (b)(1)(i)). The final rule gives building owners flexibility in determining when anchorage recertification is necessary. As discussed in Section IV, factors or conditions indicating that recertification may be needed include, but are not limited to, an accident involving the use of an RDS; a report of damage to an anchorage, major alteration to the building; exposure of the anchorage to destructive industrial substances; and location of the building in an area that might accelerate corrosion, such as areas having exposure to high rainfall, high humidity, or sea air.

Final paragraph (b)(1)(ii) requires that employers keep the written information obtained from the building owner for the duration of the job.

OSHA believes the requirement that building owners provide written information on anchorages to employers is essential to ensure that employers know the anchorages are safe for their workers who use RDS. In addition, the requirement that employers retain the written information throughout the job is important to keep workers informed about which anchorages are safe to use. This is particularly true if the job involves multiple workshifts or work crews, the employer adds new workers during the job, or there are changes in on-site supervisors.

Final § 1910.28—Duty to have fall protection and falling object protection. Final § 1910.28 requires that employers provide protection for each employee exposed to fall and falling object hazards.

Final paragraph (b)(1)(ii) is a new requirement. The provision requires that when the employer can demonstrate that it is not feasible or creates a greater hazard to use a guardrail, safety net, or personal fall protection systems on residential roofs, the employer must develop and implement a fall protection plan that meets the requirements of 29 CFR 1926.502(k). This requirement was added to the final rule based on public comment to allow employers greater flexibility in using PPE on residential roofs and to be more consistent with OSHA's construction's fall protection standard.

Final paragraph (b)(8)(iii), like the proposal, is a new requirement that addresses fall hazards associated with repair, service, and assembly pits less than 10 feet deep. The provision requires that employers post readily-visible warning signs in pit areas that state ''Caution—Open Pit'' and also comply with the requirements in § 1910.145.

The proposed standard would have required that employers post caution signs stating ''Caution—Open Floor'' or a ''similar legend.'' In the revised ICR published in the proposed rule, OSHA said proposed § 1910.28(b)(8)(iii) contains a new collection of information requirement and took a paperwork burden. The final rule, however, does not permit employers to post signs that contain a ''similar legend;'' it requires that employers must post signs that state ''Caution—Open Floor.'' Therefore, OSHA is not taking paperwork burden hours or costs because, as mentioned, information supplied by the Federal government to the recipient for the purpose of disclosure to the public is not a collection of information under PRA–95.

Title: Personal Protective Equipment (PPE) for General Industry (29 CFR part 1910, subpart I).

Type of Review: Revision of a currently approved collection.

OMB Control Number: 1218–0205.

Affected Public: Business or other for-profits; Federal Government; State, Local, or Tribal Government.

Total Estimated Number of Respondents: 3,500,000.

Total Estimated Number of Responses: 2,220,281.

Total Estimated Annual Burden Hours: 3,745,218.

Total Estimated Annual Cost Burden (Capital and start-up cost component): $0.

Description of Collections of Information:

Final § 1910.140, like the proposed rule, adds a new section to subpart I that addresses personal fall protection systems, such as personal fall arrest systems, travel restraint systems and positioning systems. Although final § 1910.140 does not contain any collection of information requirements, employers whose workers use a personal fall protection system also must comply with § 1910.132. Section 1910.132(d)(2) requires employers certify in writing they have performed the required workplace hazard assessment (§ 1910.132(d)(1)) to determine whether fall or falling-object hazards are present, or likely to be present, that make the use of personal fall protection systems necessary. The written certification must identify the date and workplace assessed and the person who is certifying that the hazard assessment was performed. In addition, the written document must identify that it is a workplace hazard assessment certification. The written certification requirement is a collection of information under PRA–95.

At the time OSHA published the proposed rule, general industry employers also were required to comply with § 1910.132(f)(4). That provision required employers to certify in writing that each worker has received and understood the PPE training. The standard also required that the written certification specify name of each employee trained plus the date and content of the training. In the revised ICR that OSHA published in the proposed rule, the Agency said § 1910.132(f)(4) imposes a new information collection requirement for personal fall protection systems and took a paperwork burden. Thereafter, as part of the Standards Improvement Project—Phase III final rule, OSHA deleted § 1910.132(f)(4) (76 FR 33590, 6/8/3011). Therefore, OSHA has removed the information collection requirement from the final ICR for Personal Protective Equipment (PPE) for General Industry.

XI. Dates

Effective Date. The final rule generally becomes effective and enforceable 60 days after publication of this document in the **Federal Register**, which is January 17, 2017. Information collections subject to OMB approval will take effect on the date OMB approves the Department's request to revise the information collection authority under PRA–95 or the date the rule otherwise becomes effective and the compliance date has arrived, whichever date is later. The Department will publish a document in the **Federal Register** to announce OMB's disposition of the Department's requests to revise the Paperwork Reduction Act authority for the information collections.

Compliance Dates. Most of the requirements in the final rule are existing provisions that OSHA is retaining and updating. OSHA believes that employers already are in compliance with those provisions and, therefore, it is not necessary to give additional time to comply with them.

However, for some of the new requirements in the final rule, OSHA is providing employers with additional time to come into compliance. The extended compliance dates give employers time to get familiar with the new requirements, evaluate changes they may need to make, purchase equipment necessary to comply with the final rule, and develop and present required training. In addition, the extended compliance dates allows employers to upgrade their fall protection systems as part of the normal ''business cycle'' or ''useful life'' of equipment (*i.e.,* cage, well, fixed ladder), which reduces compliance costs.

The following table specifies the amount of additional time OSHA is giving employers to certify anchorages, equip fixed ladders with fall protection, and train workers:

Final Subpart D Section and Requirement	Compliance Date
§1910.27(b)(1) – Certification of anchorages	November 20, 2017
§1910.28(b)(9)(i)(A) – Deadline by which employers must equip existing fixed ladders with a cage, well, ladder safety system, or personal fall arrest system	November 19, 2018
§1910.28(b)(9)(i)(B) – Deadline by which employers must begin equipping new fixed ladders with a ladder safety system or personal fall arrest system	November 19, 2018
§1910.28(b)(9)(i)(D) – Deadline by which all fixed ladders must be equipped with a ladder safety system or personal fall arrest system	November 18, 2036
§1910.30(a) and (b) – Deadline by which employers must train employees on fall and equipment hazards	May 17, 2017

For additional information about these compliance deadlines, see discussion of §§ 1910.27(b)(1), 1910.28(b)(9), and 1910.30 in Section IV.

List of Subjects in 29 CFR Part 1910

Falls, Fall arrest, Fall protection, Fall restraint, Guardrails, Incorporation by reference, Ladders, Occupational safety and health, Scaffolds, Stairs, Walking-working surfaces.

Authority and Signature

This document was prepared under the direction of David Michaels, Assistant Secretary of Labor for Occupational Safety and Health. This action is taken pursuant to sections 29 U.S.C. 653, 655, 657; Secretary of Labor's Order No. 1–2012 (77 FR 3912 (1/25/2012)); and 29 CFR part 1911.

Signed at Washington, DC, on October 4, 2016.

David Michaels,

Assistant Secretary of Labor for Occupational Safety and Health.

Final Regulatory Text

For the reasons set forth in the preamble, OSHA amends part 1910 of title 29 of the Code of Federal Regulations as follows:

PART 1910—OCCUPATIONAL SAFETY AND HEALTH STANDARDS

■ 1. The authority citation for part 1910 continues to read as follows:

Authority: 29 U.S.C. 653, 655, 657; Secretary of Labor's Order Numbers 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31159), 4–2010 (75 FR 55355), or 1–2012 (77 FR 3912), as applicable.

Sections 1910.6, 1910.7, 1910.8 and 1910.9 also issued under 29 CFR 1911. Section 1910.7(f) also issued under 31 U.S.C. 9701, 29 U.S.C. 9a, 5 U.S.C. 553; Public Law 106–113 (113 Stat. 1501A–222); Pub. L. 11–8 and 111–317; and OMB Circular A–25 (dated July 8, 1993) (58 FR 38142, July 15, 1993).

§ 1910.6 [Amended]

■ 2. Amend § 1910.6 by:

■ a. In paragraph (e)(9), removing ''1910.68(b)(12)'' and ''1910.179(c)(2);''; and

■ b. Removing and reserving paragraphs (h)(8) and (j)(1).

■ 3. Revise subpart D to read as follows:

Subpart D—Walking-Working Surfaces

Sec.

Authority: 29 U.S.C. 653, 655, and 657; Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), and 1–2012 (77 FR 3912), as applicable; and 29 CFR part 1911.

§ 1910.21 Scope and definitions.

(a) *Scope.* This subpart applies to all general industry workplaces. It covers all walking-working surfaces unless specifically excluded by an individual section of this subpart.

(b) *Definitions.* The following definitions apply in this subpart:

Alternating tread-type stair means a type of stairway consisting of a series of treads that usually are attached to a center support in an alternating manner such that an employee typically does not have both feet on the same level while using the stairway.

Anchorage means a secure point of attachment for equipment such as lifelines, lanyards, deceleration devices, and rope descent systems.

Authorized means an employee who the employer assigns to perform a specific type of duty, or allows in a specific location or area.

Cage means an enclosure mounted on the side rails of a fixed ladder or fastened to a structure behind the fixed ladder that is designed to surround the climbing space of the ladder. A cage also is called a ''cage guard'' or ''basket guard.''

Carrier means the track of a ladder safety system that consists of a flexible cable or rigid rail attached to the fixed ladder or immediately adjacent to it.

Combination ladder means a portable ladder that can be used as a stepladder, extension ladder, trestle ladder, or stairway ladder. The components of a combination ladder also may be used separately as a single ladder.

Dangerous equipment means equipment, such as vats, tanks, electrical equipment, machinery, equipment or machinery with protruding parts, or other similar units, that, because of their function or form, may harm an employee who falls into or onto the equipment.

Designated area means a distinct portion of a walking-working surface delineated by a warning line in which employees may perform work without additional fall protection.

Dockboard means a portable or fixed device that spans a gap or compensates for a difference in elevation between a loading platform and a transport vehicle. Dockboards include, but are not limited to, bridge plates, dock plates, and dock levelers.

Equivalent means alternative designs, equipment, materials, or methods, that the employer can demonstrate will provide an equal or greater degree of safety for employees compared to the designs, equipment, materials, or methods specified in this subpart.

Extension ladder means a non-self-supporting portable ladder that is adjustable in length.

Failure means a load refusal, breakage, or separation of component parts. A load refusal is the point at which the ultimate strength of a component or object is exceeded.

Fall hazard means any condition on a walking-working surface that exposes an employee to a risk of harm from a fall on the same level or to a lower level.

Fall protection means any equipment, device, or system that prevents an employee from falling from an elevation or mitigates the effect of such a fall.

Fixed ladder means a ladder with rails or individual rungs that is permanently attached to a structure, building, or equipment. Fixed ladders include individual-rung ladders, but not ship stairs, step bolts, or manhole steps.

Grab bar means an individual horizontal or vertical handhold installed to provide access above the height of the ladder.

Guardrail system means a barrier erected along an unprotected or exposed side, edge, or other area of a walking-working surface to prevent employees from falling to a lower level.

Handrail means a rail used to provide employees with a handhold for support.

Hoist area means any elevated access opening to a walking-working surface through which equipment or materials are loaded or received.

Hole means a gap or open space in a floor, roof, horizontal walking-working surface, or similar surface that is at least 2 inches (5 cm) in its least dimension.

Individual-rung ladder means a ladder that has rungs individually attached to a building or structure. An individual-rung ladder does not include manhole steps.

Ladder means a device with rungs, steps, or cleats used to gain access to a different elevation.

Ladder safety system means a system designed to eliminate or reduce the possibility of falling from a ladder. A ladder safety system usually consists of a carrier, safety sleeve, lanyard, connectors, and body harness. Cages and wells are not ladder safety systems.

Low-slope roof means a roof that has a slope less than or equal to a ratio of 4 in 12 (vertical to horizontal).

Lower level means a surface or area to which an employee could fall. Such surfaces or areas include, but are not limited to, ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, materials, water, equipment, and similar surfaces and structures, or portions thereof.

Manhole steps means steps that are individually attached to, or set into, the wall of a manhole structure.

Maximum intended load means the total load (weight and force) of all employees, equipment, vehicles, tools, materials, and other loads the employer reasonably anticipates to be applied to a walking-working surface at any one time.

Mobile means manually propelled or moveable.

Mobile ladder stand (ladder stand) means a mobile, fixed-height, self-supporting ladder that usually consists of wheels or casters on a rigid base and steps leading to a top step. A mobile ladder stand also may have handrails and is designed for use by one employee at a time.

Mobile ladder stand platform means a mobile, fixed-height, self-supporting unit having one or more standing platforms that are provided with means of access or egress.

Open riser means the gap or space between treads of stairways that do not have upright or inclined members (risers).

Opening means a gap or open space in a wall, partition, vertical walking-working surface, or similar surface that is at least 30 inches (76 cm) high and at least 18 inches (46 cm) wide, through which an employee can fall to a lower level.

Personal fall arrest system means a system used to arrest an employee in a fall from a walking-working surface. It consists of a body harness, anchorage, and connector. The means of connection may include a lanyard, deceleration device, lifeline, or a suitable combination of these.

Personal fall protection system means a system (including all components) an employer uses to provide protection from falling or to safely arrest an employee's fall if one occurs. Examples of personal fall protection systems include personal fall arrest systems, positioning systems, and travel restraint systems.

Platform means a walking-working surface that is elevated above the surrounding area.

Portable ladder means a ladder that can readily be moved or carried, and usually consists of side rails joined at intervals by steps, rungs, or cleats.

Positioning system (work-positioning system) means a system of equipment and connectors that, when used with a body harness or body belt, allows an employee to be supported on an elevated vertical surface, such as a wall or window sill, and work with both hands free. Positioning systems also are called ''positioning system devices'' and ''work-positioning equipment.''

Qualified describes a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.

Ramp means an inclined walking-working surface used to access another level.

Riser means the upright (vertical) or inclined member of a stair that is located at the back of a stair tread or platform and connects close to the front edge of the next higher tread, platform, or landing.

Rope descent system means a suspension system that allows an employee to descend in a controlled manner and, as needed, stop at any point during the descent. A rope descent system usually consists of a roof anchorage, support rope, a descent device, carabiner(s) or shackle(s), and a chair (seatboard). A rope descent system also is called controlled descent equipment or apparatus. Rope descent systems do not include industrial rope access systems.

Rung, step, or cleat means the cross-piece of a ladder on which an employee steps to climb up and down.

Runway means an elevated walking-working surface, such as a catwalk, a foot walk along shafting, or an elevated walkway between buildings.

Scaffold means any temporary elevated or suspended platform and its supporting structure, including anchorage points, used to support employees, equipment, materials, and other items. For purposes of this subpart, a scaffold does not include a crane-suspended or derrick-suspended personnel platform or a rope descent system.

Ship stair (ship ladder) means a stairway that is equipped with treads, stair rails, and open risers, and has a slope that is between 50 and 70 degrees from the horizontal.

Side-step ladder means a type of fixed ladder that requires an employee to step sideways from it in order to reach a walking-working surface, such as a landing.

Spiral stairs means a series of treads attached to a vertical pole in a winding fashion, usually within a cylindrical space.

Stair rail or stair rail system means a barrier erected along the exposed or open side of stairways to prevent employees from falling to a lower level.

Stairway (stairs) means risers and treads that connect one level with another, and includes any landings and platforms in between those levels. Stairways include standard, spiral, alternating tread-type, and ship stairs.

Standard stairs means a fixed or permanently installed stairway. Ship, spiral, and alternating tread-type stairs are not considered standard stairs.

Step bolt (pole step) means a bolt or rung attached at intervals along a structural member used for foot placement and as a handhold when climbing or standing.

Stepladder means a self-supporting, portable ladder that has a fixed height, flat steps, and a hinged back.

Stepstool means a self-supporting, portable ladder that has flat steps and side rails. For purposes of the final rule, stepstool includes only those ladders that have a fixed height, do not have a pail shelf, and do not exceed 32 inches (81 cm) in overall height to the top cap, although side rails may extend above the top cap. A stepstool is designed so an employee can climb and stand on all of the steps and the top cap.

Through ladder means a type of fixed ladder that allows the employee to step through the side rails at the top of the ladder to reach a walking-working surface, such as a landing.

Tieback means an attachment between an anchorage (*e.g.,* structural member) and a supporting device (*e.g.,* parapet clamp or cornice hook).

Toeboard means a low protective barrier that is designed to prevent materials, tools, and equipment from falling to a lower level, and protect employees from falling.

Travel restraint system means a combination of an anchorage, anchorage connector, lanyard (or other means of connection), and body support that an employer uses to eliminate the possibility of an employee going over the edge of a walking-working surface.

Tread means a horizontal member of a stair or stairway, but does not include landings or platforms.

Unprotected sides and edges mean any side or edge of a walking-working surface (except at entrances and other points of access) where there is no wall, guardrail system, or stair rail system to protect an employee from falling to a lower level.

Walking-working surface means any horizontal or vertical surface on or through which an employee walks, works, or gains access to a work area or workplace location.

Warning line means a barrier erected to warn employees that they are approaching an unprotected side or edge, and which designates an area in which work may take place without the use of other means of fall protection.

Well means a permanent, complete enclosure around a fixed ladder.

§ 1910.22 General requirements.

(a) *Surface conditions.* The employer must ensure:

(1) All places of employment, passageways, storerooms, service rooms, and walking-working surfaces are kept in a clean, orderly, and sanitary condition.

(2) The floor of each workroom is maintained in a clean and, to the extent feasible, in a dry condition. When wet processes are used, drainage must be maintained and, to the extent feasible, dry standing places, such as false floors, platforms, and mats must be provided.

(3) Walking-working surfaces are maintained free of hazards such as sharp or protruding objects, loose boards, corrosion, leaks, spills, snow, and ice.

(b) *Loads.* The employer must ensure that each walking-working surface can support the maximum intended load for that surface.

(c) *Access and egress.* The employer must provide, and ensure each employee uses, a safe means of access and egress to and from walking-working surfaces.

(d) *Inspection, maintenance, and repair.* The employer must ensure:

(1) Walking-working surfaces are inspected, regularly and as necessary, and maintained in a safe condition;

(2) Hazardous conditions on walking-working surfaces are corrected or repaired before an employee uses the walking-working surface again. If the correction or repair cannot be made immediately, the hazard must be guarded to prevent employees from using the walking-working surface until the hazard is corrected or repaired; and

(3) When any correction or repair involves the structural integrity of the walking-working surface, a qualified person performs or supervises the correction or repair.

§ 1910.23 Ladders.

(a) *Application.* The employer must ensure that each ladder used meets the requirements of this section. This section covers all ladders, except when the ladder is:

(1) Used in emergency operations such as firefighting, rescue, and tactical law enforcement operations, or training for these operations; or

(2) Designed into or is an integral part of machines or equipment.

(b) *General requirements for all ladders.* The employer must ensure:

(1) Ladder rungs, steps, and cleats are parallel, level, and uniformly spaced when the ladder is in position for use;

(2) Ladder rungs, steps, and cleats are spaced not less than 10 inches (25 cm) and not more than 14 inches (36 cm) apart, as measured between the centerlines of the rungs, cleats, and steps, except that:

(i) Ladder rungs and steps in elevator shafts must be spaced not less than 6 inches (15 cm) apart and not more than 16.5 inches (42 cm) apart, as measured along the ladder side rails; and

(ii) Fixed ladder rungs and steps on telecommunication towers must be spaced not more than 18 inches (46 cm) apart, measured between the centerlines of the rungs or steps;

(3) Steps on stepstools are spaced not less than 8 inches (20 cm) apart and not more than 12 inches (30 cm) apart, as measured between the centerlines of the steps;

(4) Ladder rungs, steps, and cleats have a minimum clear width of 11.5 inches (29 cm) on portable ladders and 16 inches (41 cm) (measured before installation of ladder safety systems) for fixed ladders, except that:

(i) The minimum clear width does not apply to ladders with narrow rungs that are not designed to be stepped on, such as those located on the tapered end of orchard ladders and similar ladders;

(ii) Rungs and steps of manhole entry ladders that are supported by the manhole opening must have a minimum clear width of 9 inches (23 cm);

(iii) Rungs and steps on rolling ladders used in telecommunication centers must have a minimum clear width of 8 inches (20 cm); and

(iv) Stepstools have a minimum clear width of 10.5 inches (26.7 cm);

(5) Wooden ladders are not coated with any material that may obscure structural defects;

(6) Metal ladders are made with corrosion-resistant material or protected against corrosion;

(7) Ladder surfaces are free of puncture and laceration hazards;

(8) Ladders are used only for the purposes for which they were designed;

(9) Ladders are inspected before initial use in each work shift, and more frequently as necessary, to identify any visible defects that could cause employee injury;

(10) Any ladder with structural or other defects is immediately tagged ''Dangerous: Do Not Use'' or with similar language in accordance with § 1910.145 and removed from service until repaired in accordance with § 1910.22(d), or replaced;

(11) Each employee faces the ladder when climbing up or down it;

(12) Each employee uses at least one hand to grasp the ladder when climbing up and down it; and

(13) No employee carries any object or load that could cause the employee to lose balance and fall while climbing up or down the ladder.

(c) *Portable ladders.* The employer must ensure:

(1) Rungs and steps of portable metal ladders are corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize the possibility of slipping;

(2) Each stepladder or combination ladder used in a stepladder mode is equipped with a metal spreader or locking device that securely holds the front and back sections in an open position while the ladder is in use;

(3) Ladders are not loaded beyond the maximum intended load;

Note to paragraph (c)(3): The maximum intended load, as defined in § 1910.21(b), includes the total load (weight and force) of the employee and all tools, equipment, and materials being carried.

(4) Ladders are used only on stable and level surfaces unless they are secured or stabilized to prevent accidental displacement;

(5) No portable single rail ladders are used;

(6) No ladder is moved, shifted, or extended while an employee is on it;

(7) Ladders placed in locations such as passageways, doorways, or driveways where they can be displaced by other activities or traffic:

(i) Are secured to prevent accidental displacement; or

(ii) Are guarded by a temporary barricade, such as a row of traffic cones or caution tape, to keep the activities or traffic away from the ladder;

(8) The cap (if equipped) and top step of a stepladder are not used as steps;

(9) Portable ladders used on slippery surfaces are secured and stabilized;

(10) The top of a non-self-supporting ladder is placed so that both side rails are supported, unless the ladder is equipped with a single support attachment;

(11) Portable ladders used to gain access to an upper landing surface have side rails that extend at least 3 feet (0.9 m) above the upper landing surface (see Figure D–1 of this section);

(12) Ladders and ladder sections are not tied or fastened together to provide

added length unless they are specifically designed for such use;

(13) Ladders are not placed on boxes, barrels, or other unstable bases to obtain additional height.

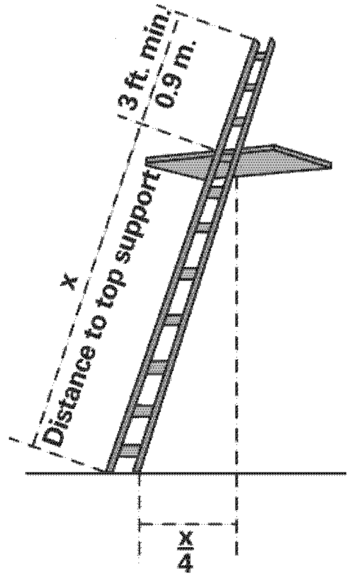


Figure D-1 -- Portable Ladder Set-up

(d) *Fixed ladders.* The employer must ensure:

(1) Fixed ladders are capable of supporting their maximum intended load;

(2) The minimum perpendicular distance from the centerline of the steps or rungs, or grab bars, or both, to the nearest permanent object in back of the ladder is 7 inches (18 cm), except for elevator pit ladders, which have a minimum perpendicular distance of 4.5 inches (11 cm);

(3) Grab bars do not protrude on the climbing side beyond the rungs of the ladder that they serve;

(4) The side rails of through or side-step ladders extend 42 inches (1.1 m) above the top of the access level or landing platform served by the ladder. For parapet ladders, the access level is:

(i) The roof, if the parapet is cut to permit passage through the parapet; or

(ii) The top of the parapet, if the parapet is continuous;

(5) For through ladders, the steps or rungs are omitted from the extensions, and the side rails are flared to provide not less than 24 inches (61cm) and not more than 30 inches (76 cm) of clearance. When a ladder safety system is provided, the maximum clearance between side rails of the extension must not exceed 36 inches (91 cm);

(6) For side-step ladders, the side rails, rungs, and steps must be continuous in the extension (see Figure D–2 of this section);

(7) Grab bars extend 42 inches (1.1 m) above the access level or landing platforms served by the ladder;

(8) The minimum size (cross-section) of grab bars is the same size as the rungs of the ladder.

(9) When a fixed ladder terminates at a hatch (see Figure D–3 of this section), the hatch cover:

(i) Opens with sufficient clearance to provide easy access to or from the ladder; and

(ii) Opens at least 70 degrees from horizontal if the hatch is counterbalanced;

(10) Individual-rung ladders are constructed to prevent the employee's feet from sliding off the ends of the rungs (see Figure D–4 of this section);

(11) Fixed ladders having a pitch greater than 90 degrees from the horizontal are not used;

(12) The step-across distance from the centerline of the rungs or steps is:

(i) For through ladders, not less than 7 inches (18 cm) and not more than 12 inches (30 cm) to the nearest edge of the structure, building, or equipment accessed from the ladders;

(ii) For side-step ladders, not less than 15 inches (38 cm) and not more than 20 inches (51 cm) to the access points of the platform edge;

(13) Fixed ladders that do not have cages or wells have:

(i) A clear width of at least 15 inches (38 cm) on each side of the ladder centerline to the nearest permanent object; and

(ii) A minimum perpendicular distance of 30 inches (76 cm) from the centerline of the steps or rungs to the nearest object on the climbing side. When unavoidable obstructions are encountered, the minimum clearance at the obstruction may be reduced to 24 inches (61 cm), provided deflector plates are installed (see Figure D–5 of this section).

Note to paragraph (d): Section 1910.28 establishes the employer's duty to provide fall protection for employees on fixed ladders, and § 1910.29 specifies the criteria for fall protection systems for fixed ladders.

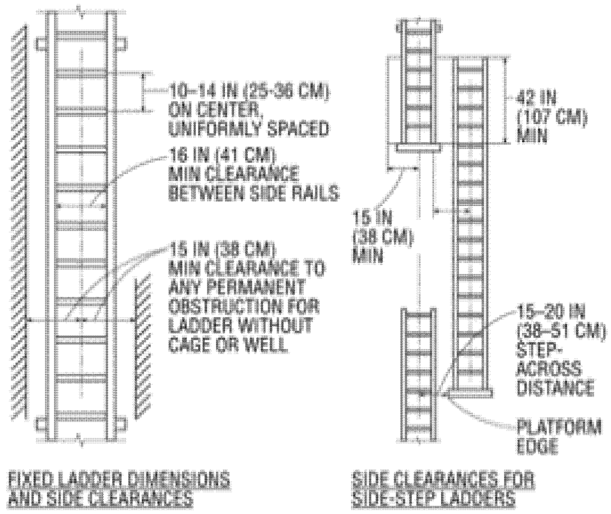


Figure D-2 -- Side-Step Fixed Ladder Sections

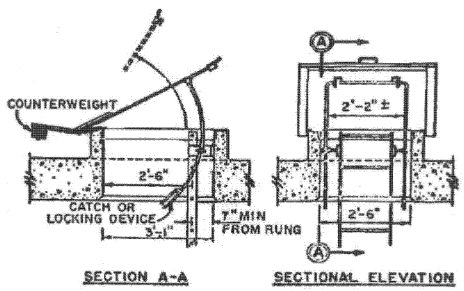


Figure D-3 – Example of Counterbalanced Hatch Cover at Roof

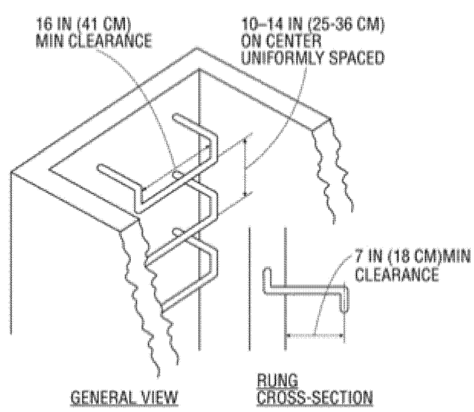


Figure D-4 -- Individual Rung Ladder

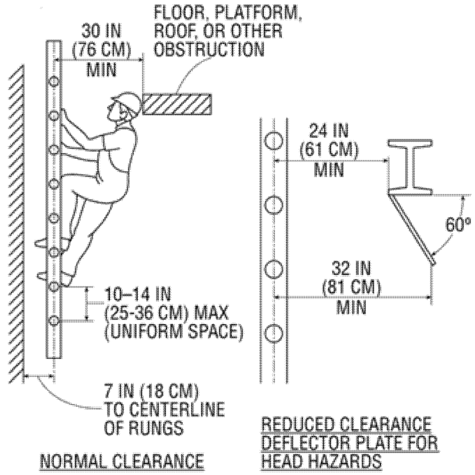


Figure D-5 -- Fixed Ladder Clearances

(e) *Mobile ladder stands and mobile ladder stand platforms*—(1) *General requirements.* The employer must ensure:

(i) Mobile ladder stands and platforms have a step width of at least 16 inches (41 cm);

(ii) The steps and platforms of mobile ladder stands and platforms are slip resistant. Slip-resistant surfaces must be either an integral part of the design and construction of the mobile ladder stand and platform, or provided as a secondary process or operation, such as dimpling, knurling, shotblasting, coating, spraying, or applying durable slip-resistant tapes;

(iii) Mobile ladder stands and platforms are capable of supporting at least four times their maximum intended load;

(iv) Wheels or casters under load are capable of supporting their proportional share of four times the maximum intended load, plus their proportional share of the unit's weight;

(v) Unless otherwise specified in this section, mobile ladder stands and platforms with a top step height of 4 feet (1.2 m) or above have handrails with a vertical height of 29.5 inches (75 cm) to 37 inches (94 cm), measured from the front edge of a step. Removable gates or non-rigid members, such as chains, may be used instead of handrails in special-use applications;

(vi) The maximum work-surface height of mobile ladder stands and platforms does not exceed four times the shortest base dimension, without additional support. For greater heights, outriggers, counterweights, or comparable means that stabilize the mobile ladder stands and platforms and prevent overturning must be used;

(vii) Mobile ladder stands and platforms that have wheels or casters are equipped with a system to impede horizontal movement when an employee is on the stand or platform; and

(viii) No mobile ladder stand or platform moves when an employee is on it.

(2) *Design requirements for mobile ladder stands.* The employer must ensure:

(i) Steps are uniformly spaced and arranged, with a rise of not more than 10 inches (25 cm) and a depth of not less than 7 inches (18 cm). The slope of the step stringer to which the steps are attached must not be more than 60 degrees, measured from the horizontal;

(ii) Mobile ladder stands with a top step height above 10 feet (3 m) have the top step protected on three sides by a handrail with a vertical height of at least 36 inches (91 cm); and top steps that are 20 inches (51 cm) or more, front to back, have a midrail and toeboard. Removable gates or non-rigid members, such as chains, may be used instead of handrails in special-use applications; and

(iii) The standing area of mobile ladder stands is within the base frame.

(3) *Design requirements for mobile ladder stand platforms.* The employer must ensure:

(i) Steps of mobile ladder stand platforms meet the requirements of paragraph (e)(2)(i) of this section. When the employer demonstrates that the requirement is not feasible, steeper slopes or vertical rung ladders may be used, provided the units are stabilized to prevent overturning;

(ii) Mobile ladder stand platforms with a platform height of 4 to 10 feet (1.2 m to 3 m) have, in the platform area, handrails with a vertical height of at least 36 inches (91 cm) and midrails; and

(iii) All ladder stand platforms with a platform height above 10 feet (3 m) have guardrails and toeboards on the exposed sides and ends of the platform.

(iv) Removable gates or non-rigid members, such as chains, may be used on mobile ladder stand platforms instead of handrails and guardrails in special-use applications.

§ 1910.24 Step bolts and manhole steps.

(a) *Step bolts.* The employer must ensure:

(1) Each step bolt installed on or after January 17, 2017 in an environment where corrosion may occur is constructed of, or coated with, material that protects against corrosion;

(2) Each step bolt is designed, constructed, and maintained to prevent the employee's foot from slipping off the end of the step bolt;

(3) Step bolts are uniformly spaced at a vertical distance of not less than 12 inches (30 cm) and not more than 18 inches (46 cm) apart, measured center to center (see Figure D–6 of this section). The spacing from the entry and exit surface to the first step bolt may differ from the spacing between the other step bolts;

(4) Each step bolt has a minimum clear width of 4.5 inches (11 cm);

(5) The minimum perpendicular distance between the centerline of each step bolt to the nearest permanent object in back of the step bolt is 7 inches (18 cm). When the employer demonstrates that an obstruction cannot be avoided, the distance must be at least 4.5 inches (11 cm);

(6) Each step bolt installed before January 17, 2017 is capable of supporting its maximum intended load;

(7) Each step bolt installed on or after January 17, 2017 is capable of supporting at least four times its maximum intended load;

(8) Each step bolt is inspected at the start of the workshift and maintained in accordance with § 1910.22; and

(9) Any step bolt that is bent more than 15 degrees from the perpendicular in any direction is removed and replaced with a step bolt that meets the requirements of this section before an employee uses it.

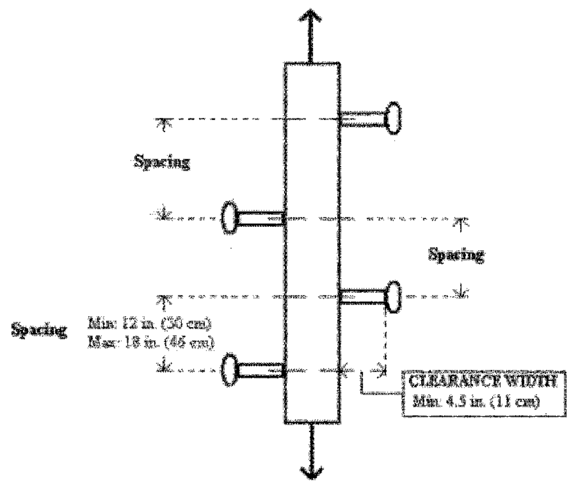


Figure D-6 -- Step Bolt Spacing

(b) *Manhole steps.* (1) The employer must ensure that each manhole step is capable of supporting its maximum intended load.

(2) The employer must ensure that each manhole step installed on or after January 17, 2017:

(i) Has a corrugated, knurled, dimpled, or other surface that minimizes the possibility of an employee slipping;

(ii) Is constructed of, or coated with, material that protects against corrosion if the manhole step is located in an environment where corrosion may occur;

(iii) Has a minimum clear step width of 10 inches (25 cm);

(iv) Is uniformly spaced at a vertical distance not more than 16 inches (41 cm) apart, measured center to center between steps. The spacing from the entry and exit surface to the first manhole step may differ from the spacing between the other steps.

(v) Has a minimum perpendicular distance between the centerline of the manhole step to the nearest permanent object in back of the step of at least 4.5 inches (11 cm); and

(vi) Is designed, constructed, and maintained to prevent the employee's foot from slipping or sliding off the end.

(3) The employer must ensure that each manhole step is inspected at the start of the work shift and maintained in accordance with § 1910.22.

§ 1910.25 Stairways.

(a) *Application.* This section covers all stairways (including standard, spiral, ship, and alternating tread-type stairs), except for stairs serving floating roof tanks, stairs on scaffolds, stairs designed into machines or equipment, and stairs on self-propelled motorized equipment.

(b) *General requirements.* The employer must ensure:

(1) Handrails, stair rail systems, and guardrail systems are provided in accordance with § 1910.28;

(2) Vertical clearance above any stair tread to any overhead obstruction is at least 6 feet, 8 inches (203 cm), as measured from the leading edge of the tread. Spiral stairs must meet the vertical clearance requirements in paragraph (d)(3) of this section.

(3) Stairs have uniform riser heights and tread depths between landings;

(4) Stairway landings and platforms are at least the width of the stair and at least 30 inches (76 cm) in depth, as measured in the direction of travel;

(5) When a door or a gate opens directly on a stairway, a platform is provided, and the swing of the door or gate does not reduce the platform's effective usable depth to:

(i) Less than 20 inches (51 cm) for platforms installed before January 17, 2017; and

(ii) Less than 22 inches (56 cm) for platforms installed on or after January 17, 2017 (see Figure D–7 of this section);

(6) Each stair can support at least five times the normal anticipated live load, but never less than a concentrated load of 1,000 pounds (454 kg) applied at any point;

(7) Standard stairs are used to provide access from one walking-working surface to another when operations necessitate regular and routine travel between levels, including access to operating platforms for equipment. Winding stairways may be used on tanks and similar round structures when the diameter of the tank or structure is at least 5 feet (1.5 m).

(8) Spiral, ship, or alternating tread-type stairs are used only when the employer can demonstrate that it is not feasible to provide standard stairs.

(9) When paragraph (b)(8) of this section allows the use of spiral, ship, or alternating tread-type stairs, they are installed, used, and maintained in accordance with manufacturer's instructions.

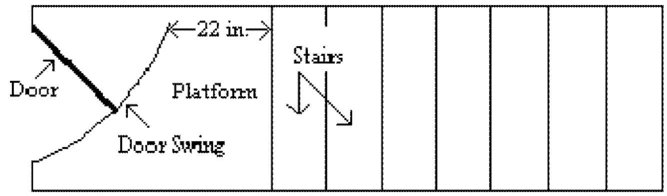


Figure D-7 -- Door or Gate Opening on Stairway

(c) *Standard stairs.* In addition to paragraph (b) of this section, the employer must ensure standard stairs:

(1) Are installed at angles between 30 to 50 degrees from the horizontal;

(2) Have a maximum riser height of 9.5 inches (24 cm);

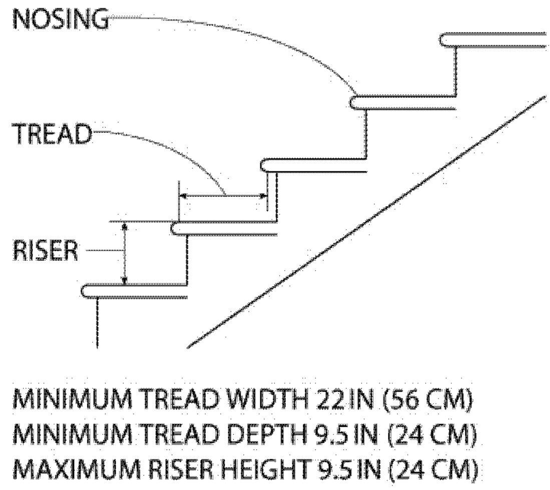
(3) Have a minimum tread depth of 9.5 inches (24 cm); and

(4) Have a minimum width of 22 inches (56 cm) between vertical barriers (see Figure D–8 of this section).

(5) *Exception to paragraphs (c)(2) and (3) of this section.* The requirements of paragraphs (c)(2) and (3) do not apply to standard stairs installed prior to January 17, 2017. OSHA will deem those stairs in compliance if they meet the dimension requirements specified in Table D–1 of this section or they use a combination that achieves the angle requirements of paragraph (c)(1) of this section.

Table D-1-- Stairway Rise and Tread Dimensions

Angle to horizontal	Rise (in inches)	Tread run (in inches)
30 deg. 35'	6 1/2	11
32 deg. 08'	6 3/4	10 3/4
33 deg. 41'	7	10 1/2
35 deg. 16'	7 1/4	10 1/4
36 deg. 52'	7 1/2	10
38 deg. 29'	7 3/4	9 3/4
40 deg. 08'	8	9 1/2
41 deg. 44'	8 1/4	9 1/4
43 deg. 22'	8 1/2	9
45 deg. 00'	8 3/4	8 3/4
46 deg. 38'	9	8 1/2
48 deg. 16'	9 1/4	8 1/4
49 deg. 54'	9 1/2	8



(d) *Spiral stairs.* In addition to paragraph (b) of this section, the employer must ensure spiral stairs:

(1) Have a minimum clear width of 26 inches (66 cm);

(2) Have a maximum riser height of 9.5 inches (24 cm);

(3) Have a minimum headroom above spiral stair treads of at least 6 feet, 6 inches (2 m), measured from the leading edge of the tread;

(4) Have a minimum tread depth of 7.5 inches (19 cm), measured at a point 12 inches (30 cm) from the narrower edge;

(5) Have a uniform tread size;

(e) *Ship stairs.* In addition to paragraph (b) of this section, the employer must ensure ship stairs (see Figure D–9 of this section):

(1) Are installed at a slope of 50 to 70 degrees from the horizontal;

(2) Have open risers with a vertical rise between tread surfaces of 6.5 to 12 inches (17 to 30 cm);

(3) Have minimum tread depth of 4 inches (10 cm); and

(4) Have a minimum tread width of 18 inches (46 cm).

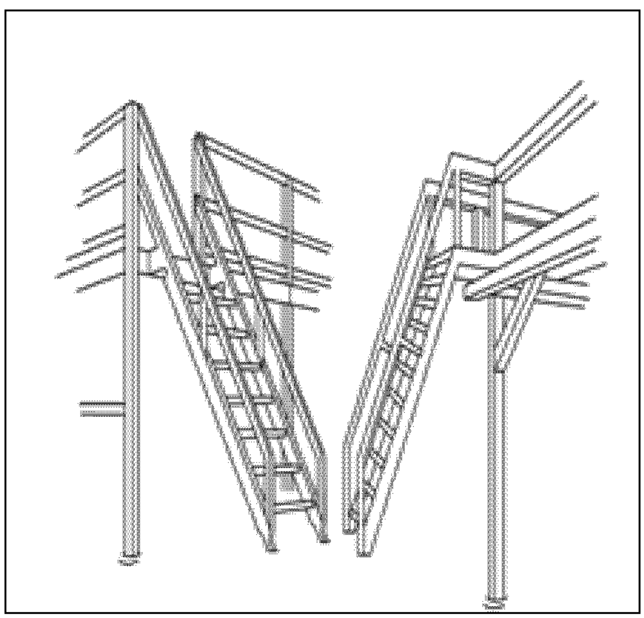


Figure D-9 – Ship Stairs

(f) *Alternating tread-type stairs.* In addition to paragraph (b) of this section, the employer must ensure alternating tread-type stairs:

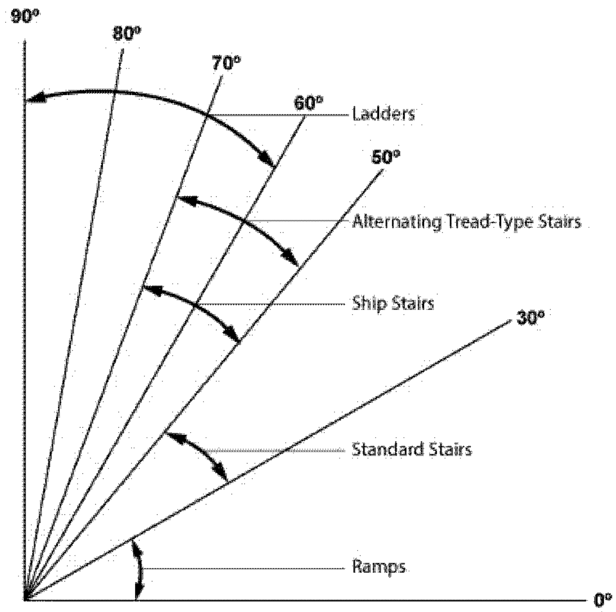
(1) Have a series of treads installed at a slope of 50 to 70 degrees from the horizontal;

(2) Have a distance between handrails of 17 to 24 inches (51 to 61 cm);

(3) Have a minimum tread depth of 8.5 inches (22 cm); and

(4) Have open risers if the tread depth is less than 9.5 inches (24 cm);

(5) Have a minimum tread width of 7 inches (18 cm), measured at the leading edge of the tread (*i.e.,* nosing).



Angle	Type
≤ 30°	Ramps
30° – 50°	Standard Stairs
50° – 70°	Ship Stairs
50° – 70°	Alternating Tread-Type Stairs
60° – 90°	Ladders

Figure D-10 – Angles for Stairs, Ramps, and Ladders

§ 1910.26 Dockboards.

The employer must ensure that each dockboard used meets the requirements of this section. The employer must ensure:

(a) Dockboards are capable of supporting the maximum intended load in accordance with § 1910.22(b);

(b)(1) Dockboards put into initial service on or after January 17, 2017 are designed, constructed, and maintained to prevent transfer vehicles from running off the dockboard edge;

(2) *Exception to paragraph (b)(1) of this section.* When the employer demonstrates there is no hazard of transfer vehicles running off the dockboard edge, the employer may use dockboards that do not have run-off protection.

(c) Portable dockboards are secured by anchoring them in place or using equipment or devices that prevent the dockboard from moving out of a safe position. When the employer demonstrates that securing the dockboard is not feasible, the employer must ensure there is sufficient contact between the dockboard and the surface to prevent the dockboard from moving out of a safe position;

(d) Measures, such as wheel chocks or sand shoes, are used to prevent the transport vehicle (*e.g.* a truck, semi-trailer, trailer, or rail car) on which a dockboard is placed, from moving while employees are on the dockboard; and

(e) Portable dockboards are equipped with handholds or other means to permit safe handling of dockboards.

§ 1910.27 Scaffolds and rope descent systems.

(a) *Scaffolds.* Scaffolds used in general industry must meet the requirements in 29 CFR part 1926, subpart L (Scaffolds).

(b) *Rope descent systems*—(1) *Anchorages.* (i) Before any rope descent system is used, the building owner must inform the employer, in writing that the building owner has identified, tested, certified, and maintained each anchorage so it is capable of supporting at least 5,000 pounds (268 kg), in any direction, for each employee attached. The information must be based on an annual inspection by a qualified person and certification of each anchorage by a qualified person, as necessary, and at least every 10 years.

(ii) The employer must ensure that no employee uses any anchorage before the employer has obtained written information from the building owner that each anchorage meets the requirements of paragraph (b)(1)(i) of this section. The employer must keep the information for the duration of the job.

(iii) The requirements in paragraphs (b)(1)(i) and (ii) of this section must be implemented no later than November 20, 2017.

(2) *Use of rope descent systems.* The employer must ensure:

(i) No rope descent system is used for heights greater than 300 feet (91 m) above grade unless the employer demonstrates that it is not feasible to access such heights by any other means or that those means pose a greater hazard than using a rope descent system;

(ii) The rope descent system is used in accordance with instructions, warnings, and design limitations set by the manufacturer or under the direction of a qualified person;

(iii) Each employee who uses the rope descent system is trained in accordance with § 1910.30;

(iv) The rope descent system is inspected at the start of each workshift that it is to be used. The employer must ensure damaged or defective equipment is removed from service immediately and replaced;

(v) The rope descent system has proper rigging, including anchorages and tiebacks, with particular emphasis on providing tiebacks when counterweights, cornice hooks, or similar non-permanent anchorages are used;

(vi) Each employee uses a separate, independent personal fall arrest system that meets the requirements of subpart I of this part;

(vii) All components of each rope descent system, except seat boards, are capable of sustaining a minimum rated load of 5,000 pounds (22.2 kN). Seat boards must be capable of supporting a live load of 300 pounds (136 kg);

(viii) Prompt rescue of each employee is provided in the event of a fall;

(ix) The ropes of each rope descent system are effectively padded or otherwise protected, where they can contact edges of the building, anchorage, obstructions, or other surfaces, to prevent them from being cut or weakened;

(x) Stabilization is provided at the specific work location when descents are greater than 130 feet (39.6 m);

(xi) No employee uses a rope descent system when hazardous weather conditions, such as storms or gusty or excessive wind, are present;

(xii) Equipment, such as tools, squeegees, or buckets, is secured by a tool lanyard or similar method to prevent it from falling; and

(xiii) The ropes of each rope descent system are protected from exposure to open flames, hot work, corrosive chemicals, and other destructive conditions.

§ 1910.28 Duty to have fall protection and falling object protection.

(a) *General.* (1) This section requires employers to provide protection for each employee exposed to fall and falling object hazards. Unless stated otherwise, the employer must ensure that all fall protection and falling object protection required by this section meet the criteria in § 1910.29, except that personal fall protection systems required by this section meet the criteria of § 1910.140.

(2) This section does not apply:

(i) To portable ladders;

(ii) When employers are inspecting, investigating, or assessing workplace conditions or work to be performed prior to the start of work or after all work has been completed. This exemption does not apply when fall protection systems or equipment meeting the requirements of § 1910.29 have been installed and are available for workers to use for pre-work and post-work inspections, investigations, or assessments;

(iii) To fall hazards presented by the exposed perimeters of entertainment stages and the exposed perimeters of rail-station platforms;

(iv) To powered platforms covered by § 1910.66(j);

(v) To aerial lifts covered by § 1910.67(c)(2)(v);

(vi) To telecommunications work covered by § 1910.268(n)(7) and (8); and

(vii) To electric power generation, transmission, and distribution work covered by § 1910.269(g)(2)(i).

(b) *Protection from fall hazards*—(1) *Unprotected sides and edges.* (i) Except as provided elsewhere in this section, the employer must ensure that each employee on a walking-working surface with an unprotected side or edge that is 4 feet (1.2 m) or more above a lower level is protected from falling by one or more of the following:

(A) Guardrail systems;

(B) Safety net systems; or

(C) Personal fall protection systems, such as personal fall arrest, travel restraint, or positioning systems.

(ii) When the employer can demonstrate that it is not feasible or creates a greater hazard to use guardrail, safety net, or personal fall protection systems on residential roofs, the employer must develop and implement a fall protection plan that meets the requirements of 29 CFR 1926.502(k) and training that meets the requirements of 29 CFR 1926.503(a) and (c).

Note to paragraph (b)(1)(ii) of this section: There is a presumption that it is feasible and will not create a greater hazard to use at least one of the above-listed fall protection systems specified in paragraph (b)(1)(i) of this section. Accordingly, the employer has the burden of establishing that it is not feasible or creates a greater hazard to provide the fall protection systems specified in paragraph (b)(1)(i) and that it is necessary to implement a fall protection plan that complies with § 1926.502(k) in the particular work operation, in lieu of implementing any of those systems.

(iii) When the employer can demonstrate that the use of fall protection systems is not feasible on the working side of a platform used at a loading rack, loading dock, or teeming platform, the work may be done without a fall protection system, provided:

(A) The work operation for which fall protection is infeasible is in process;

(B) Access to the platform is limited to authorized employees; and,

(C) The authorized employees are trained in accordance with § 1910.30.

(2) *Hoist areas.* The employer must ensure:

(i) Each employee in a hoist area is protected from falling 4 feet (1.2 m) or more to a lower level by:

(A) A guardrail system;

(B) A personal fall arrest system; or

(C) A travel restraint system.

(ii) When any portion of a guardrail system, gate, or chains is removed, and an employee must lean through or over the edge of the access opening to facilitate hoisting, the employee is protected from falling by a personal fall arrest system.

(iii) If grab handles are installed at hoist areas, they meet the requirements of § 1910.29(l).

(3) *Holes.* The employer must ensure:

(i) Each employee is protected from falling through any hole (including skylights) that is 4 feet (1.2 m) or more above a lower level by one or more of the following:

(A) Covers;

(B) Guardrail systems;

(C) Travel restraint systems; or

(D) Personal fall arrest systems.

(ii) Each employee is protected from tripping into or stepping into or through any hole that is less than 4 feet (1.2 m) above a lower level by covers or guardrail systems.

(iii) Each employee is protected from falling into a stairway floor hole by a fixed guardrail system on all exposed sides, except at the stairway entrance. However, for any stairway used less than once per day where traffic across the stairway floor hole prevents the use of a fixed guardrail system (*e.g.,* holes located in aisle spaces), the employer may protect employees from falling into the hole by using a hinged floor hole cover that meets the criteria in § 1910.29 and a removable guardrail system on all exposed sides, except at the entrance to the stairway.

(iv) Each employee is protected from falling into a ladderway floor hole or ladderway platform hole by a guardrail system and toeboards erected on all exposed sides, except at the entrance to the hole, where a self-closing gate or an offset must be used.

(v) Each employee is protected from falling through a hatchway and chute-floor hole by:

(A) A hinged floor-hole cover that meets the criteria in § 1910.29 and a fixed guardrail system that leaves only one exposed side. When the hole is not in use, the employer must ensure the cover is closed or a removable guardrail system is provided on the exposed sides;

(B) A removable guardrail system and toeboards on not more than two sides of the hole and a fixed guardrail system on all other exposed sides. The employer must ensure the removable guardrail system is kept in place when the hole is not in use; or

(C) A guardrail system or a travel restraint system when a work operation necessitates passing material through a hatchway or chute floor hole.

(4) *Dockboards.* (i) The employer must ensure that each employee on a dockboard is protected from falling 4 feet (1.2 m) or more to a lower level by a guardrail system or handrails.

(ii) A guardrail system or handrails are not required when:

(A) Dockboards are being used solely for materials-handling operations using motorized equipment;

(B) Employees engaged in these operations are not exposed to fall hazards greater than 10 feet (3 m); and

(C) Those employees have been trained in accordance with § 1910.30.

(5) *Runways and similar walkways.* (i) The employer must ensure each employee on a runway or similar walkway is protected from falling 4 feet (1.2 m) or more to a lower level by a guardrail system.

(ii) When the employer can demonstrate that it is not feasible to have guardrails on both sides of a runway used exclusively for a special purpose, the employer may omit the guardrail on one side of the runway, provided the employer ensures:

(A) The runway is at least 18 inches (46 cm) wide; and

(B) Each employee is provided with and uses a personal fall arrest system or travel restraint system.

(6) *Dangerous equipment.* The employer must ensure:

(i) Each employee less than 4 feet (1.2 m) above dangerous equipment is protected from falling into or onto the dangerous equipment by a guardrail system or a travel restraint system, unless the equipment is covered or guarded to eliminate the hazard.

(ii) Each employee 4 feet (1.2 m) or more above dangerous equipment must be protected from falling by:

(A) Guardrail systems;

(B) Safety net systems;

(C) Travel restraint systems; or

(D) Personal fall arrest systems.

(7) *Openings.* The employer must ensure that each employee on a walking-working surface near an opening, including one with a chute attached, where the inside bottom edge of the opening is less than 39 inches (99 cm) above that walking-working surface and the outside bottom edge of the opening is 4 feet (1.2 m) or more above a lower level is protected from falling by the use of:

(i) Guardrail systems;

(ii) Safety net systems;

(iii) Travel restraint systems; or,

(iv) Personal fall arrest systems.

(8) *Repair pits, service pits, and assembly pits less than 10 feet in depth.* The use of a fall protection system is not required for a repair pit, service pit, or assembly pit that is less than 10 feet (3 m) deep, provided the employer:

(i) Limits access within 6 feet (1.8 m) of the edge of the pit to authorized employees trained in accordance with § 1910.30;

(ii) Applies floor markings at least 6 feet (1.8 m) from the edge of the pit in colors that contrast with the surrounding area; or places a warning line at least 6 feet (1.8 m) from the edge of the pit as well as stanchions that are capable of resisting, without tipping over, a force of at least 16 pounds (71 N) applied horizontally against the stanchion at a height of 30 inches (76 cm); or places a combination of floor markings and warning lines at least 6 feet (1.8 m) from the edge of the pit. When two or more pits in a common area are not more than 15 feet (4.5m) apart, the employer may comply by placing contrasting floor markings at least 6 feet (1.8 m) from the pit edge around the entire area of the pits; and

(iii) Posts readily visible caution signs that meet the requirements of § 1910.145 and state ''Caution—Open Pit.''

(9) *Fixed ladders (that extend more than 24 feet (7.3 m) above a lower level).* (i) For fixed ladders that extend more than 24 feet (7.3 m) above a lower level, the employer must ensure:

(A) *Existing fixed ladders.* Each fixed ladder installed before November 19, 2018 is equipped with a personal fall arrest system, ladder safety system, cage, or well;

(B) *New fixed ladders.* Each fixed ladder installed on and after November 19, 2018, is equipped with a personal fall arrest system or a ladder safety system;

(C) *Replacement.* When a fixed ladder, cage, or well, or any portion of a section thereof, is replaced, a personal fall arrest system or ladder safety system is installed in at least that section of the fixed ladder, cage, or well where the replacement is located; and

(D) *Final deadline.* On and after November 18, 2036, all fixed ladders are equipped with a personal fall arrest system or a ladder safety system.

(ii) When a one-section fixed ladder is equipped with a personal fall protection or a ladder safety system or a fixed ladder is equipped with a personal fall arrest or ladder safety system on more than one section, the employer must ensure:

(A) The personal fall arrest system or ladder safety system provides protection throughout the entire vertical distance of the ladder, including all ladder sections; and

(B) The ladder has rest platforms provided at maximum intervals of 150 feet (45.7 m).

(iii) The employer must ensure ladder sections having a cage or well:

(A) Are offset from adjacent sections; and

(B) Have landing platforms provided at maximum intervals of 50 feet (15.2 m).

(iv) The employer may use a cage or well in combination with a personal fall arrest system or ladder safety system provided that the cage or well does not interfere with the operation of the system.

(10) *Outdoor advertising (billboards).* (i) The requirements in paragraph (b)(9) of this section, and other requirements in subparts D and I of this part, apply to fixed ladders used in outdoor advertising activities.

(ii) When an employee engaged in outdoor advertising climbs a fixed ladder before November 19, 2018 that is not equipped with a cage, well, personal fall arrest system, or a ladder safety system the employer must ensure the employee:

(A) Receives training and demonstrates the physical capability to perform the necessary climbs in accordance with § 1910.29(h);

(B) Wears a body harness equipped with an 18-inch (46 cm) rest lanyard;

(C) Keeps both hands free of tools or material when climbing on the ladder; and

(D) Is protected by a fall protection system upon reaching the work position.

(11) *Stairways.* The employer must ensure:

(i) Each employee exposed to an unprotected side or edge of a stairway landing that is 4 feet (1.2 m) or more above a lower level is protected by a guardrail or stair rail system;

(ii) Each flight of stairs having at least 3 treads and at least 4 risers is equipped with stair rail systems and handrails as follows:

Table D-2 -- Stairway Handrail Requirements

Stair width	Enclosed	One open side	Two open sides	With earth built up on both sides
Less than 44 inches (1.1 m).	At least one handrail	One stair rail system with handrail on open side.	One stair rail system each open side.	
44 inches (1.1 m) to 88 inches (2.2 m).	One handrail on each enclosed side	One stair rail system with handrail on open side and one handrail on enclosed side.	One stair rail system with handrail on each open side.	
Greater than 88 inches (2.2 m).	One handrail on each enclosed side and one intermediate handrail located in the middle of the stair	One stair rail system with handrail on open side, one handrail on enclosed side, and one intermediate handrail located in the middle of the stair.	One stair rail system with handrail on each open side and one intermediate handrail located in the middle of the stair.	
Exterior stairs less than 44 inches (1.1 m).				One handrail on at least one side.

Note to table: The width of the stair must be clear of all obstructions except handrails.

(iii) Each ship stairs and alternating tread type stairs is equipped with handrails on both sides.

(12) *Scaffolds and rope descent systems.* The employer must ensure:

(i) Each employee on a scaffold is protected from falling in accordance 29 CFR part 1926, subpart L; and

(ii) Each employee using a rope descent system 4 feet (1.2 m) or more above a lower level is protected from falling by a personal fall arrest system.

(13) *Work on low-slope roofs.* (i) When work is performed less than 6 feet (1.6 m) from the roof edge, the employer must ensure each employee is protected from falling by a guardrail system, safety net system, travel restraint system, or personal fall arrest system.

(ii) When work is performed at least 6 feet (1.6 m) but less than 15 feet (4.6 m) from the roof edge, the employer must ensure each employee is protected from falling by using a guardrail system, safety net system, travel restraint system, or personal fall arrest system. The employer may use a designated area when performing work that is both infrequent and temporary.

(iii) When work is performed 15 feet (4.6 m) or more from the roof edge, the employer must:

(A) Protect each employee from falling by a guardrail system, safety net system, travel restraint system, or personal fall arrest system or a designated area. The employer is not required to provide any fall protection, provided the work is both infrequent and temporary; and

(B) Implement and enforce a work rule prohibiting employees from going within 15 feet (4.6 m) of the roof edge without using fall protection in accordance with paragraphs (b)(13)(i) and (ii) of this section.

(14) *Slaughtering facility platforms.* (i) The employer must protect each employee on the unprotected working side of a slaughtering facility platform that is 4 feet (1.2 m) or more above a lower level from falling by using:

(A) Guardrail systems; or

(B) Travel restraint systems.

(ii) When the employer can demonstrate the use of a guardrail or travel restraint system is not feasible, the work may be done without those systems provided:

(A) The work operation for which fall protection is infeasible is in process;

(B) Access to the platform is limited to authorized employees; and

(C) The authorized employees are trained in accordance with § 1910.30.

(15) *Walking-working surfaces not otherwise addressed.* Except as provided elsewhere in this section or by other subparts of this part, the employer must

ensure each employee on a walking-working surface 4 feet (1.2 m) or more above a lower level is protected from falling by:

(i) Guardrail systems;

(ii) Safety net systems; or

(iii) Personal fall protection systems, such as personal fall arrest, travel restraint, or positioning systems.

(c) *Protection from falling objects.* When an employee is exposed to falling objects, the employer must ensure that each employee wears head protection that meets the requirements of subpart I of this part. In addition, the employer must protect employees from falling objects by implementing one or more of the following:

(1) Erecting toeboards, screens, or guardrail systems to prevent objects from falling to a lower level;

(2) Erecting canopy structures and keeping potential falling objects far enough from an edge, hole, or opening to prevent them from falling to a lower level; or

(3) Barricading the area into which objects could fall, prohibiting employees from entering the barricaded area, and keeping objects far enough from an edge or opening to prevent them from falling to a lower level.

§ 1910.29 Fall protection systems and falling object protection—criteria and practices.

(a) *General requirements.* The employer must:

(1) Ensure each fall protection system and falling object protection, other than personal fall protection systems, that this part requires meets the requirements in this section. The employer must ensure each personal fall protection system meets the requirements in subpart I of this part; and

(2) Provide and install all fall protection systems and falling object protection this subpart requires, and comply with the other requirements in this subpart before any employee begins work that necessitates fall or falling object protection.

(b) *Guardrail systems.* The employer must ensure guardrail systems meet the following requirements:

(1) The top edge height of top rails, or equivalent guardrail system members, are 42 inches (107 cm), plus or minus 3 inches (8 cm), above the walking-working surface. The top edge height may exceed 45 inches (114 cm), provided the guardrail system meets all other criteria of paragraph (b) of this section (see Figure D–11 of this section).

(2) Midrails, screens, mesh, intermediate vertical members, solid panels, or equivalent intermediate members are installed between the walking-working surface and the top edge of the guardrail system as follows when there is not a wall or parapet that is at least 21 inches (53 cm) high:

(i) Midrails are installed at a height midway between the top edge of the guardrail system and the walking-working surface;

(ii) Screens and mesh extend from the walking-working surface to the top rail and along the entire opening between top rail supports;

(iii) Intermediate vertical members (such as balusters) are installed no more than 19 inches (48 cm) apart; and

(iv) Other equivalent intermediate members (such as additional midrails and architectural panels) are installed so that the openings are not more than 19 inches (48 cm) wide.

(3) Guardrail systems are capable of withstanding, without failure, a force of at least 200 pounds (890 N) applied in a downward or outward direction within 2 inches (5 cm) of the top edge, at any point along the top rail.

(4) When the 200-pound (890–N) test load is applied in a downward direction, the top rail of the guardrail system must not deflect to a height of less than 39 inches (99 cm) above the walking-working surface.

(5) Midrails, screens, mesh, intermediate vertical members, solid panels, and other equivalent intermediate members are capable of withstanding, without failure, a force of at least 150 pounds (667 N) applied in any downward or outward direction at any point along the intermediate member.

(6) Guardrail systems are smooth-surfaced to protect employees from injury, such as punctures or lacerations, and to prevent catching or snagging of clothing.

(7) The ends of top rails and midrails do not overhang the terminal posts, except where the overhang does not pose a projection hazard for employees.

(8) Steel banding and plastic banding are not used for top rails or midrails.

(9) Top rails and midrails are at least 0.25-inches (0.6 cm) in diameter or in thickness.

(10) When guardrail systems are used at hoist areas, a removable guardrail section, consisting of a top rail and midrail, are placed across the access opening between guardrail sections when employees are not performing hoisting operations. The employer may use chains or gates instead of a removable guardrail section at hoist areas if the employer demonstrates the chains or gates provide a level of safety equivalent to guardrails.

(11) When guardrail systems are used around holes, they are installed on all unprotected sides or edges of the hole.

(12) For guardrail systems used around holes through which materials may be passed:

(i) When materials are being passed through the hole, not more than two sides of the guardrail system are removed; and

(ii) When materials are not being passed through the hole, the hole must be guarded by a guardrail system along all unprotected sides or edges or closed over with a cover.

(13) When guardrail systems are used around holes that serve as points of access (such as ladderways), the guardrail system opening:

(i) Has a self-closing gate that slides or swings away from the hole, and is equipped with a top rail and midrail or equivalent intermediate member that meets the requirements in paragraph (b) of this section; or

(ii) Is offset to prevent an employee from walking or falling into the hole;

(14) Guardrail systems on ramps and runways are installed along each unprotected side or edge.

(15) Manila or synthetic rope used for top rails or midrails are inspected as necessary to ensure that the rope continues to meet the strength requirements in paragraphs (b)(3) and (5) of this section.

Note to paragraph (b) of this section: The criteria and practices requirements for guardrail systems on scaffolds are contained in 29 CFR part 1926, subpart L.

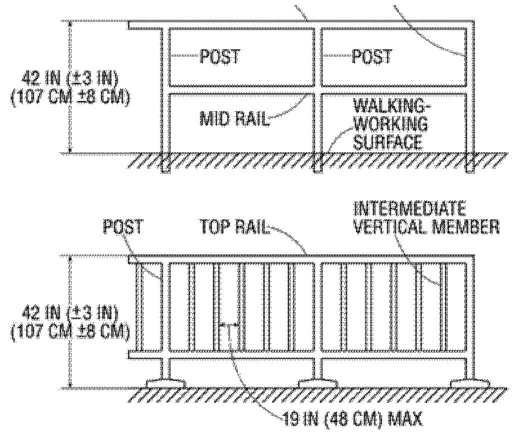


Figure D-11 – Guard Rail Systems

(c) *Safety net systems.* The employer must ensure each safety net system meets the requirements in 29 CFR part 1926, subpart M.

(d) *Designated areas.* (1) When the employer uses a designated area, the employer must ensure:

(i) Employees remain within the designated area while work operations are underway; and

(ii) The perimeter of the designated area is delineated with a warning line consisting of a rope, wire, tape, or chain that meets the requirements of paragraphs (d)(2) and (3) of this section.

(2) The employer must ensure each warning line:

(i) Has a minimum breaking strength of 200 pounds (0.89 kN);

(ii) Is installed so its lowest point, including sag, is not less than 34 inches (86 cm) and not more than 39 inches (99 cm) above the walking-working surface;

(iii) Is supported in such a manner that pulling on one section of the line will not result in slack being taken up in adjacent sections causing the line to fall below the limits specified in paragraph (d)(2)(ii) of this section;

(iv) Is clearly visible from a distance of 25 feet (7.6 m) away, and anywhere within the designated area;

(v) Is erected as close to the work area as the task permits; and

(vi) Is erected not less than 6 feet (1.8 m) from the roof edge for work that is both temporary and infrequent, or not less than 15 feet (4.6 m) for other work.

(3) When mobile mechanical equipment is used to perform work that is both temporary and infrequent in a designated area, the employer must ensure the warning line is erected not less than 6 feet (1.8 m) from the unprotected side or edge that is parallel to the direction in which the mechanical equipment is operated, and not less than 10 feet (3 m) from the unprotected side or edge that is perpendicular to the direction in which the mechanical equipment is operated.

(e) *Covers.* The employer must ensure each cover for a hole in a walking-working surface:

(1) Is capable of supporting without failure, at least twice the maximum intended load that may be imposed on the cover at any one time; and

(2) Is secured to prevent accidental displacement.

(f) *Handrails and stair rail systems.* The employer must ensure:

(1) *Height criteria.* (i) Handrails are not less than 30 inches (76 cm) and not more than 38 inches (97 cm), as measured from the leading edge of the stair tread to the top surface of the handrail (see Figure D–12 of this section).

(ii) The height of stair rail systems meets the following:

(A) The height of stair rail systems installed before January 17, 2017 is not less than 30 inches (76 cm) from the leading edge of the stair tread to the top surface of the top rail; and

(B) The height of stair rail systems installed on or after January 17, 2017 is not less than 42 inches (107 cm) from the leading edge of the stair tread to the top surface of the top rail.

(iii) The top rail of a stair rail system may serve as a handrail only when:

(A) The height of the stair rail system is not less than 36 inches (91 cm) and not more than 38 inches (97 cm) as measured at the leading edge of the stair tread to the top surface of the top rail (see Figure D–13 of this section); and

(B) The top rail of the stair rail system meets the other handrail requirements in paragraph (f) of this section.

(2) *Finger clearance.* The minimum clearance between handrails and any other object is 2.25 inches (5.7 cm).

(3) *Surfaces.* Handrails and stair rail systems are smooth-surfaced to protect employees from injury, such as punctures or lacerations, and to prevent catching or snagging of clothing.

(4) *Openings in stair rails.* No opening in a stair rail system exceeds 19 inches (48 cm) at its least dimension.

(5) *Handhold.* Handrails have the shape and dimension necessary so that employees can grasp the handrail firmly.

(6) *Projection hazards.* The ends of handrails and stair rail systems do not present any projection hazards.

(7) *Strength criteria.* Handrails and the top rails of stair rail systems are capable of withstanding, without failure, a force of at least 200 pounds (890 N) applied in any downward or outward direction within 2 inches (5 cm) of any point along the top edge of the rail.

BILLING CODE 4510–29–P

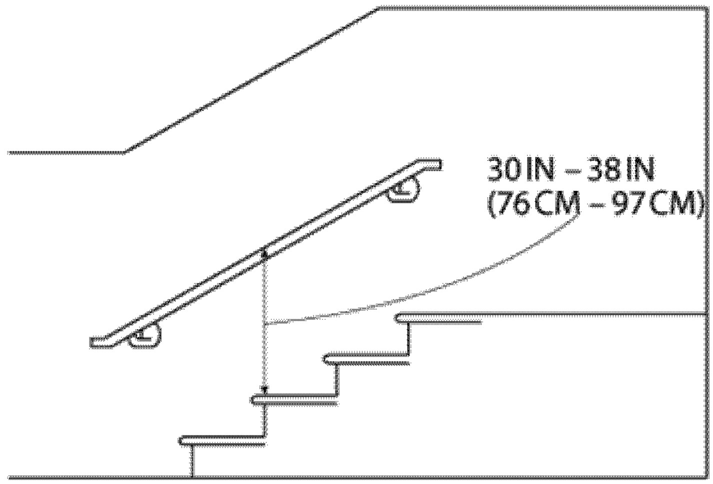


Figure D-12 – Handrail Measurement

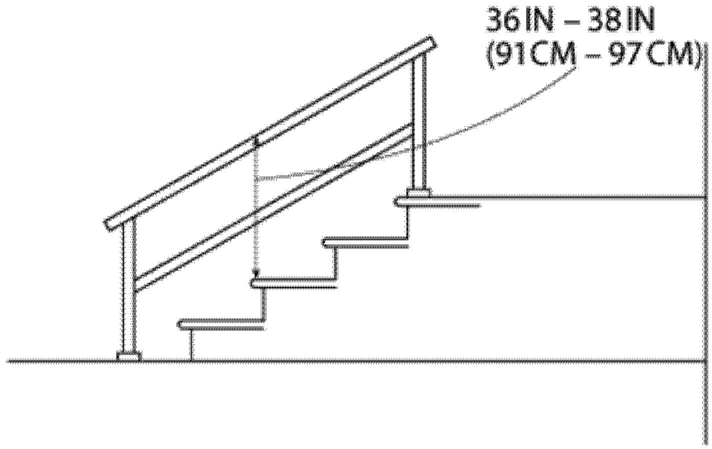


Figure D-13 – Combination Handrail and Stair Rail

BILLING CODE 4510–29–C

(g) *Cages, wells, and platforms used with fixed ladders.* The employer must ensure:

(1) Cages and wells installed on fixed ladders are designed, constructed, and maintained to permit easy access to, and egress from, the ladder that they enclose (see Figures D–14 and D–15 of this section);

(2) Cages and wells are continuous throughout the length of the fixed ladder, except for access, egress, and other transfer points;

(3) Cages and wells are designed, constructed, and maintained to contain employees in the event of a fall, and to direct them to a lower landing; and

(4) Platforms used with fixed ladders provide a horizontal surface of at least 24 inches by 30 inches (61 cm by 76 cm).

Note to paragraph (g): Section 1910.28 establishes the requirements that employers must follow on the use of cages and wells as a means of fall protection.

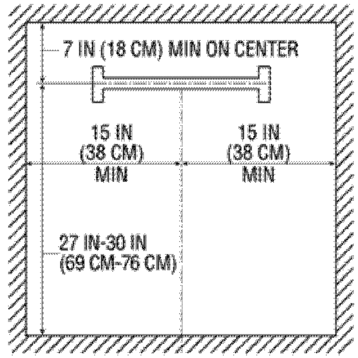


Figure D-14 -- Clearances for Fixed Ladders in Wells

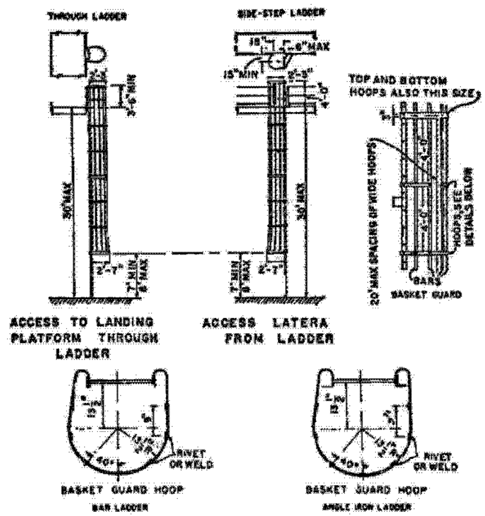


Figure D-15 -- Example of General Construction of Cages

(h) *Outdoor advertising.* This paragraph (h) applies only to employers engaged in outdoor advertising operations (see § 1910.28(b)(10)). Employers must ensure that each employee who climbs a fixed ladder without fall protection:

(1) Is physically capable, as demonstrated through observations of actual climbing activities or by a physical examination, to perform the duties that may be assigned, including climbing fixed ladders without fall protection;

(2) Has successfully completed a training or apprenticeship program that includes hands-on training on the safe climbing of ladders and is retrained as necessary to maintain the necessary skills;

(3) Has the skill to climb ladders safely, as demonstrated through formal classroom training or on-the-job training, and performance observation; and

(4) Performs climbing duties as a part of routine work activity.

(i) *Ladder safety systems.* The employer must ensure:

(1) Each ladder safety system allows the employee to climb up and down using both hands and does not require that the employee continuously hold, push, or pull any part of the system while climbing;

(2) The connection between the carrier or lifeline and the point of attachment to the body harness or belt does not exceed 9 inches (23 cm);

(3) Mountings for rigid carriers are attached at each end of the carrier, with intermediate mountings spaced, as necessary, along the entire length of the carrier so the system has the strength to stop employee falls;

(4) Mountings for flexible carriers are attached at each end of the carrier and cable guides for flexible carriers are installed at least 25 feet (7.6 m) apart but not more than 40 feet (12.2 m) apart along the entire length of the carrier;

(5) The design and installation of mountings and cable guides does not reduce the design strength of the ladder; and

(6) Ladder safety systems and their support systems are capable of withstanding, without failure, a drop test consisting of an 18-inch (41-cm) drop of a 500-pound (227-kg) weight.

(j) *Personal fall protection systems.* Body belts, harnesses, and other components used in personal fall arrest systems, work positioning systems, and travel restraint systems must meet the requirements of § 1910.140.

(k) *Protection from falling objects.* (1) The employers must ensure toeboards used for falling object protection:

(i) Are erected along the exposed edge of the overhead walking-working surface for a length that is sufficient to protect employees below.

(ii) Have a minimum vertical height of 3.5 inches (9 cm) as measured from the top edge of the toeboard to the level of the walking-working surface.

(iii) Do not have more than a 0.25-inch (0.5-cm) clearance or opening above the walking-working surface.

(iv) Are solid or do not have any opening that exceeds 1 inch (3 cm) at its greatest dimension.

(v) Have a minimum height of 2.5 inches (6 cm) when used around vehicle repair, service, or assembly pits. Toeboards may be omitted around vehicle repair, service, or assembly pits when the employer can demonstrate that a toeboard would prevent access to a vehicle that is over the pit.

(vi) Are capable of withstanding, without failure, a force of at least 50 pounds (222 N) applied in any downward or outward direction at any point along the toeboard.

(2) The employer must ensure:

(i) Where tools, equipment, or materials are piled higher than the top of the toeboard, paneling or screening is installed from the toeboard to the midrail of the guardrail system and for a length that is sufficient to protect employees below. If the items are piled higher than the midrail, the employer also must install paneling or screening to the top rail and for a length that is sufficient to protect employees below; and

(ii) All openings in guardrail systems are small enough to prevent objects from falling through the opening.

(3) The employer must ensure canopies used for falling object protection are strong enough to prevent collapse and to prevent penetration by falling objects.

(l) *Grab handles.* The employer must ensure each grab handle:

(1) Is not less than 12 inches (30 cm) long;

(2) Is mounted to provide at least 3 inches (8 cm) of clearance from the framing or opening; and

(3) Is capable of withstanding a maximum horizontal pull-out force equal to two times the maximum intended load or 200 pounds (890 N), whichever is greater.

§ 1910.30 Training requirements.

(a) *Fall hazards.* (1) Before any employee is exposed to a fall hazard, the employer must provide training for each employee who uses personal fall protection systems or who is required to be trained as specified elsewhere in this subpart. Employers must ensure employees are trained in the requirements of this paragraph on or before May 17, 2017.

(2) The employer must ensure that each employee is trained by a qualified person.

(3) The employer must train each employee in at least the following topics:

(i) The nature of the fall hazards in the work area and how to recognize them;

(ii) The procedures to be followed to minimize those hazards;

(iii) The correct procedures for installing, inspecting, operating, maintaining, and disassembling the personal fall protection systems that the employee uses; and

(iv) The correct use of personal fall protection systems and equipment specified in paragraph (a)(1) of this section, including, but not limited to, proper hook-up, anchoring, and tie-off techniques, and methods of equipment inspection and storage, as specified by the manufacturer.

(b) *Equipment hazards.* (1) The employer must train each employee on or before May 17, 2017 in the proper care, inspection, storage, and use of equipment covered by this subpart before an employee uses the equipment.

(2) The employer must train each employee who uses a dockboard to properly place and secure it to prevent unintentional movement.

(3) The employer must train each employee who uses a rope descent system in proper rigging and use of the equipment in accordance with § 1910.27.

(4) The employer must train each employee who uses a designated area in the proper set-up and use of the area.

(c) *Retraining.* The employer must retrain an employee when the employer has reason to believe the employee does not have the understanding and skill required by paragraphs (a) and (b) of this section. Situations requiring retraining include, but are not limited to, the following:

(1) When changes in the workplace render previous training obsolete or inadequate;

(2) When changes in the types of fall protection systems or equipment to be used render previous training obsolete or inadequate; or

(3) When inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee no longer has the requisite understanding or skill necessary to use equipment or perform the job safely.

(d) *Training must be understandable.* The employer must provide information and training to each employee in a manner that the employee understands.

Subpart F—[Amended]

■ 4. Revise the authority citation for subpart F to read as follows:

Authority: 29 U.S.C. 653, 655, and 657; Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 5–2007 (72 FR 31159), or 1–2012 (77 FR 3912), as applicable; and 29 CFR part 1911.

■ 5. In § 1910.66:

■ a. Revise paragraphs (b)(2)(i), (c)(3), (f)(5)(ii)(L) and (M), (f)(5)(iii)(B), and (j);

■ b. Remove and reserve appendix C; and

■ c. Revise appendix D, paragraph (c)(4).

The revisions read as follows:

§ 1910.66 Powered platforms for building maintenance.

* * * * *

(b) * * *

(2) * * *

(i) Permanent installations in existence and/or completed before July 23, 1990 shall comply with paragraphs (g), (h), (i), (j) and appendix C to subpart I of this part.

* * * * *

(c) * * *

(3) Building owners of all installations, new and existing, shall inform the employer in writing that the installation has been inspected, tested, and maintained in compliance with the requirements of paragraphs (g) and (h) of this section and that all anchorages meet the requirements of § 1910.140(c)(13).

* * * * *

(f) * * *

(5) * * *

(ii) * * *

(L) The platform shall be provided with a secondary wire rope suspension system if the platform contains overhead structures which restrict the emergency egress of employees. A horizontal lifeline or a direct connection anchorage shall be provided as part of a personal fall arrest system that meets the requirements of subpart I of this part for each employee on such a platform.

(M) A vertical lifeline shall be provided as part of a personal fall arrest system that meets the requirements of subpart I of this part for each employee on a working platform suspended by two or more wire ropes, if the failure of one wire rope or suspension attachment will cause the platform to upset. If a secondary wire rope suspension is used, vertical lifelines are not required for the personal fall arrest system, provided that each employee is attached to a horizontal lifeline anchored to the platform.

* * * * *

(iii) * * *

(B) Each single point suspended working platform shall be provided with a secondary wire rope suspension system which will prevent the working platform from falling should there be a failure of the primary means of support, or if the platform contains overhead structures which restrict the egress of the employees. A horizontal life line or a direct connection anchorage shall be provided as part of a personal fall arrest system that meets the requirements of subpart I of this part for each employee on the platform.

* * * * *

(j) *Personal fall protection.* Employees on working platforms shall be protected by a personal fall arrest system meeting the requirements of subpart I of this part and as otherwise provided by this standard.

* * * * *

Appendix C to § 1910.66 [Reserved]

Appendix D to § 1910.66—Existing Installations (Mandatory)

* * * * *

(c) * * *

(4) *Access to the roof car.* Safe access to the roof car and from the roof car to the working platform shall be provided. If the access to the roof car at any point of its travel is not over the roof area or where otherwise necessary for safety, then self-closing, self-locking gates shall be provided. Access to and from roof cars must comply with the requirements of subpart D of this part.

* * * * *

■ 6. In § 1910.67, revise paragraph (c)(2)(v) to read as follows:

§ 1910.67 Vehicle-mounted elevating and rotating work platforms.

* * * * *

(c) * * *

(2) * * *

(v) A personal fall arrest or travel restraint system that meets the requirements in subpart I of this part shall be worn and attached to the boom or basket when working from an aerial lift.

* * * * *

■ 7. In § 1910.68, revise paragraphs (b)(8)(ii) and (b)(12) to read as follows:

§ 1910.68 Manlifts.

* * * * *

(b) * * *

(8) * * *

(ii) *Construction.* The rails shall be standard guardrails with toeboards that meet the requirements in subpart D of this part.

* * * * *

(12) *Emergency exit ladder.* A fixed metal ladder accessible from both the ''up'' and ''down'' run of the manlift shall be provided for the entire travel of the manlift. Such ladders shall meet the requirements in subpart D of this part.

* * * * *

Subpart I—[Amended]

■ 8. Revise the authority citation for subpart I to read as follows:

Authority: 29 U.S.C. 653, 655, 657; Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31159), 4–2010 (75 FR 55355), or 1–2012 (77 FR 3912), as applicable; and 29 CFR part 1911.

■ 9. In § 1910.132, revise paragraph (g) to read as follows:

§ 1910.132 General requirements.

* * * * *

(g) Paragraphs (d) and (f) of this section apply only to §§ 1910.133, 1910.135, 1910.136, 1910.138, and 1910.140. Paragraphs (d) and (f) of this section do not apply to §§ 1910.134 and 1910.137.

* * * * *

§ 1910.139 [Added and Reserved]

■ 10. Add reserved § 1910.139.

■ 11. Add § 1910.140 to read as follows:

§ 1910.140 Personal fall protection systems.

(a) *Scope and application.* This section establishes performance, care, and use criteria for all personal fall protection systems. The employer must ensure that each personal fall protection system used to comply with this part must meet the requirements of this section.

(b) *Definitions.* The following definitions apply to this section:

Anchorage means a secure point of attachment for equipment such as lifelines, lanyards, or deceleration devices.

Belt terminal means an end attachment of a window cleaner's positioning system used for securing the belt or harness to a window cleaner's belt anchor.

Body belt means a strap with means both for securing about the waist and for attaching to other components such as a lanyard used with positioning systems, travel restraint systems, or ladder safety systems.

Body harness means straps that secure about the employee in a manner to distribute the fall arrest forces over at least the thighs, pelvis, waist, chest, and shoulders, with a means for attaching the harness to other components of a personal fall protection system.

Carabiner means a connector generally comprised of a trapezoidal or oval shaped body with a closed gate or similar arrangement that may be opened to attach another object and, when released, automatically closes to retain the object.

Competent person means a person who is capable of identifying existing and predictable hazards in any personal fall protection system or any component of it, as well as in their application and uses with related equipment, and who has authorization to take prompt, corrective action to eliminate the identified hazards.

Connector means a device used to couple (connect) parts of the fall protection system together.

D-ring means a connector used:

(i) In a harness as an integral attachment element or fall arrest attachment;

(ii) In a lanyard, energy absorber, lifeline, or anchorage connector as an integral connector; or

(iii) In a positioning or travel restraint system as an attachment element.

Deceleration device means any mechanism that serves to dissipate energy during a fall.

Deceleration distance means the vertical distance a falling employee travels from the point at which the deceleration device begins to operate, excluding lifeline elongation and free fall distance, until stopping. It is measured as the distance between the location of an employee's body harness attachment point at the moment of activation (at the onset of fall arrest forces) of the deceleration device during a fall, and the location of that attachment point after the employee comes to a full stop.

Equivalent means alternative designs, equipment, materials, or methods that the employer can demonstrate will provide an equal or greater degree of safety for employees compared to the designs, equipment, materials, or methods specified in the standard.

Free fall means the act of falling before the personal fall arrest system begins to apply force to arrest the fall.

Free fall distance means the vertical displacement of the fall arrest attachment point on the employee's body belt or body harness between onset of the fall and just before the system begins to apply force to arrest the fall. This distance excludes deceleration distance, lifeline and lanyard elongation, but includes any deceleration device slide distance or self-retracting lifeline/lanyard extension before the devices operate and fall arrest forces occur.

Lanyard means a flexible line of rope, wire rope, or strap that generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.

Lifeline means a component of a personal fall protection system consisting of a flexible line for connection to an anchorage at one end so as to hang vertically (vertical lifeline), or for connection to anchorages at both ends so as to stretch horizontally (horizontal lifeline), and serves as a means for connecting other components of the system to the anchorage.

Personal fall arrest system means a system used to arrest an employee in a fall from a walking-working surface. It consists of a body harness, anchorage, and connector. The means of connection may include a lanyard, deceleration device, lifeline, or a suitable combination of these.

Personal fall protection system means a system (including all components) an employer uses to provide protection from falling or to safely arrest an employee's fall if one occurs.

Examples of personal fall protection systems include personal fall arrest systems, positioning systems, and travel restraint systems.

Positioning system (work-positioning system) means a system of equipment and connectors that, when used with a body harness or body belt, allows an employee to be supported on an elevated vertical surface, such as a wall or window sill, and work with both hands free. Positioning systems also are called ''positioning system devices'' and ''work-positioning equipment.''

Qualified describes a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.

Rope grab means a deceleration device that travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/lever locking, or both.

Safety factor means the ratio of the design load and the ultimate strength of the material.

Self-retracting lifeline/lanyard means a deceleration device containing a drum-wound line that can be slowly extracted from, or retracted onto, the drum under slight tension during normal movement by the employee. At the onset of a fall, the device automatically locks the drum and arrests the fall.

Snaphook means a connector comprised of a hook-shaped body with a normally closed gate, or similar arrangement that may be manually opened to permit the hook to receive an object. When released, the snaphook automatically closes to retain the object. Opening a snaphook requires two separate actions. Snaphooks are generally one of two types:

(i) Automatic-locking type (permitted) with a self-closing and self-locking gate that remains closed and locked until intentionally unlocked and opened for connection or disconnection; and

(ii) Non-locking type (prohibited) with a self-closing gate that remains closed, but not locked, until intentionally opened for connection or disconnection.

Travel restraint (tether) line means a rope or wire rope used to transfer forces from a body support to an anchorage or anchorage connector in a travel restraint system.

Travel restraint system means a combination of an anchorage, anchorage connector, lanyard (or other means of connection), and body support that an employer uses to eliminate the possibility of an employee going over the edge of a walking-working surface.

Window cleaner's belt means a positioning belt that consists of a waist belt, an integral terminal runner or strap, and belt terminals.

Window cleaner's belt anchor (window anchor) means specifically designed fall-preventing attachment points permanently affixed to a window frame or to a building part immediately adjacent to the window frame, for direct attachment of the terminal portion of a window cleaner's belt.

Window cleaner's positioning system means a system which consists of a window cleaner's belt secured to window anchors.

Work-positioning system (see *Positioning system* in this paragraph (b)).

(c) *General requirements.* The employer must ensure that personal fall protection systems meet the following requirements. Additional requirements for personal fall arrest systems and positioning systems are contained in paragraphs (d) and (e) of this section, respectively.

(1) Connectors must be drop forged, pressed or formed steel, or made of equivalent materials.

(2) Connectors must have a corrosion-resistant finish, and all surfaces and edges must be smooth to prevent damage to interfacing parts of the system.

(3) When vertical lifelines are used, each employee must be attached to a separate lifeline.

(4) Lanyards and vertical lifelines must have a minimum breaking strength of 5,000 pounds (22.2 kN).

(5) Self-retracting lifelines and lanyards that automatically limit free fall distance to 2 feet (0.61 m) or less must have components capable of sustaining a minimum tensile load of 3,000 pounds (13.3 kN) applied to the device with the lifeline or lanyard in the fully extended position.

(6) A competent person or qualified person must inspect each knot in a lanyard or vertical lifeline to ensure that it meets the requirements of paragraphs (c)(4) and (5) of this section before any employee uses the lanyard or lifeline.

(7) D-rings, snaphooks, and carabiners must be capable of sustaining a minimum tensile load of 5,000 pounds (22.2 kN).

(8) D-rings, snaphooks, and carabiners must be proof tested to a minimum tensile load of 3,600 pounds (16 kN) without cracking, breaking, or incurring permanent deformation. The gate strength of snaphooks and carabiners, must be proof tested to 3,600 lbs. (16 kN) in all directions.

(9) Snaphooks and carabiners must be the automatic locking type that require at least two separate, consecutive movements to open.

(10) Snaphooks and carabiners must not be connected to any of the following unless they are designed for such connections:

(i) Directly to webbing, rope, or wire rope;

(ii) To each other;

(iii) To a D-ring to which another snaphook, carabiner, or connector is attached;

(iv) To a horizontal life line; or

(v) To any object that is incompatibly shaped or dimensioned in relation to the snaphook or carabiner such that unintentional disengagement could occur when the connected object depresses the snaphook or carabiner gate, allowing the components to separate.

(11) The employer must ensure that each horizontal lifeline:

(i) Is designed, installed, and used under the supervision of a qualified person; and

(ii) Is part of a complete personal fall arrest system that maintains a safety factor of at least two.

(12) Anchorages used to attach to personal fall protection equipment must be independent of any anchorage used to suspend employees or platforms on which employees work. Anchorages used to attach to personal fall protection equipment on mobile work platforms on powered industrial trucks must be attached to an overhead member of the platform, at a point located above and near the center of the platform.

(13) Anchorages, except window cleaners' belt anchors covered by paragraph (e) of this section, must be:

(i) Capable of supporting at least 5,000 pounds (22.2 kN) for each employee attached; or

(ii) Designed, installed, and used, under the supervision of qualified person, as part of a complete personal fall protection system that maintains a safety factor of at least two.

(14) Travel restraint lines must be capable of sustaining a tensile load of at least 5,000 pounds (22.2 kN).

(15) Lifelines must not be made of natural fiber rope. Polypropylene rope must contain an ultraviolet (UV) light inhibitor.

(16) Personal fall protection systems and their components must be used exclusively for employee fall protection and not for any other purpose, such as hoisting equipment or materials.

(17) A personal fall protection system or its components subjected to impact loading must be removed from service immediately and not used again until a competent person inspects the system or components and determines that it is not damaged and safe for use for employee personal fall protection.

(18) Personal fall protection systems must be inspected before initial use during each workshift for mildew, wear, damage, and other deterioration, and defective components must be removed from service.

(19) Ropes, belts, lanyards, and harnesses used for personal fall protection must be compatible with all connectors used.

(20) Ropes, belts, lanyards, lifelines, and harnesses used for personal fall protection must be protected from being cut, abraded, melted, or otherwise damaged.

(21) The employer must provide for prompt rescue of each employee in the event of a fall.

(22) Personal fall protection systems must be worn with the attachment point of the body harness located in the center of the employee's back near shoulder level. The attachment point may be located in the pre-sternal position if the free fall distance is limited to 2 feet (0.6 m) or less.

(d) *Personal fall arrest systems*—(1) *System performance criteria.* In addition to the general requirements in paragraph (c) of this section, the employer must ensure that personal fall arrest systems:

(i) Limit the maximum arresting force on the employee to 1,800 pounds (8 kN);

(ii) Bring the employee to a complete stop and limit the maximum deceleration distance the employee travels to 3.5 feet (1.1 m);

(iii) Have sufficient strength to withstand twice the potential impact energy of the employee free falling a distance of 6 feet (1.8 m), or the free fall distance permitted by the system; and

(iv) Sustain the employee within the system/strap configuration without making contact with the employee's neck and chin area.

(v) If the personal fall arrest system meets the criteria and protocols in appendix D of this subpart, and is being used by an employee having a combined body and tool weight of less than 310 pounds (140 kg), the system is considered to be in compliance with the provisions of paragraphs (d)(1)(i) through (iii) of this section. If the system is used by an employee having a combined body and tool weight of 310 pounds (140kg) or more and the employer has appropriately modified the criteria and protocols in appendix D, then the system will be deemed to be in compliance with the requirements of paragraphs (d)(1)(i) through (iii).

(2) *System use criteria.* The employer must ensure that:

(i) On any horizontal lifeline that may become a vertical lifeline, the device used to connect to the horizontal lifeline is capable of locking in both directions on the lifeline.

(ii) Personal fall arrest systems are rigged in such a manner that the employee cannot free fall more than 6 feet (1.8 m) or contact a lower level. A free fall may be more than 6 feet (1.8 m) provided the employer can demonstrate the manufacturer designed the system to allow a free fall of more than 6 feet and tested the system to ensure a maximum arresting force of 1,800 pounds (8 kN) is not exceeded.

(3) *Body belts.* Body belts are prohibited as part of a personal fall arrest system.

(e) *Positioning systems*—(1) *System performance requirements.* The employer must ensure that each positioning system meets the following requirements:

(i) *General.* All positioning systems, except window cleaners' positioning systems, are capable of withstanding, without failure, a drop test consisting of a 4-foot (1.2-m) drop of a 250-pound (113-kg) weight;

(ii) *Window cleaners' positioning systems.* All window cleaners' positioning systems must:

(A) Be capable of withstanding without failure a drop test consisting of a 6-foot (1.8-m) drop of a 250-pound (113-kg) weight; and

(B) Limit the initial arresting force on the falling employee to not more than 2,000 pounds (8.9 kN), with a duration not exceeding 2 milliseconds and any subsequent arresting forces to not more than 1,000 pounds (4.5 kN).

(iii) Positioning systems, including window cleaners' positioning systems, that meet the test methods and procedures in appendix D of this subpart are considered to be in compliance with paragraphs (e)(1)(i) and (ii).

(iv) *Lineman's body belt and pole strap systems.* Lineman's body belt and pole strap systems must meet the following tests:

(A) A dielectric test of 819.7 volts, AC, per centimeter (25,000 volts per foot) for 3 minutes without visible deterioration;

(B) A leakage test of 98.4 volts, AC, per centimeter (3,000 volts per foot) with a leakage current of no more than 1 mA; and

(C) A flammability test in accordance with Table I–7 of this section.

Table I-7 -- Flammability Test

Test Method	Criteria for Passing Test
1. Vertically suspend a 19.7-inch (500-mm) length of strapping supporting a 220.5-lb (100-kg) weight; 2. Use a butane or propane burner with a 3-inch (76-mm) flame; 3. Direct the flame to an edge of the strapping at a distance of 1 inch (25mm); 4. Remove the flame after 5 seconds; and 5. Wait for any flames on the positioning strap to stop burning.	Any flames on the positioning strap must self-extinguish. The positioning strap must continue to support the 220.5-lb (100-kg) mass.

(2) *System use criteria for window cleaners' positioning systems.* The employer must ensure that window cleaners' positioning systems meet and are used in accordance with the following:

(i) Window cleaners' belts are designed and constructed so that:

(A) Belt terminals will not pass through their fastenings on the belt or harness if a terminal comes loose from the window anchor; and

(B) The length of the runner from terminal tip to terminal tip is 8 feet (2.44 m) or less;

(ii) Window anchors to which belts are fastened are installed in the side frames or mullions of the window at a point not less than 42 inches (106.7 cm) and not more than 51 inches (129.5 cm) above the window sill;

(iii) Each window anchor is capable of supporting a minimum load of 6,000 pounds (26.5 kN);

(iv) Use of installed window anchors for any purpose other than attaching the window cleaner's belt is prohibited;

(v) A window anchor that has damaged or deteriorated fastenings or supports is removed, or the window anchor head is detached so the anchor cannot be used;

(vi) Rope that has wear or deterioration that affects its strength is not used;

(vii) Both terminals of the window cleaner's belt are attached to separate window anchors during any cleaning operation;

(viii) No employee works on a window sill or ledge on which there is snow, ice, or any other slippery condition, or one that is weakened or rotted;

(ix) No employee works on a window sill or ledge unless:

(A) The window sill or ledge is a minimum of 4 inches (10 cm) wide and slopes no more than 15 degrees below horizontal; or

(B) The 4-inch minimum width of the window sill or ledge is increased 0.4 inches (1 cm) for every degree the sill or ledge slopes beyond 15 degrees, up to a maximum of 30 degrees;

(x) The employee attaches at least one belt terminal to a window anchor before climbing through the window opening, and keeps at least one terminal attached until completely back inside the window opening;

(xi) Except as provided in paragraph (e)(2)(xii) of this section, the employee travels from one window to another by returning inside the window opening and repeating the belt terminal attachment procedure at each window in accordance with paragraph (e)(2)(x) of this section;

(xii) An employee using a window cleaner's positioning system may travel from one window to another while outside of the building, provided:

(A) At least one belt terminal is attached to a window anchor at all times;

(B) The distance between window anchors does not exceed 4 feet (1.2 m) horizontally. The distance between windows may be increased up to 6 feet (1.8 m) horizontally if the window sill or ledge is at least 1 foot (0.31 m) wide and the slope is less than 5 degrees;

(C) The sill or ledge between windows is continuous; and

(D) The width of the window sill or ledge in front of the mullions is at least 6 inches (15.2 cm) wide.

■ 12. Add appendices C and D to subpart I of part 1910 to read as follows:

Appendix C to Subpart I of Part 1910—Personal Fall Protection Systems Non-Mandatory Guidelines

The following information generally applies to all personal fall protection systems and is intended to assist employers and employees comply with the requirements of § 1910.140 for personal fall protection systems.

(a) Planning considerations. It is important for employers to plan prior to using personal fall protection systems. Probably the most overlooked component of planning is locating suitable anchorage points. Such planning should ideally be done before the structure or building is constructed so that anchorage points can be used later for window cleaning or other building maintenance.

(b) Selection and use considerations. (1) The kind of personal fall protection system selected should be appropriate for the employee's specific work situation. Free fall distances should always be kept to a minimum. Many systems are designed for particular work applications, such as climbing ladders and poles; maintaining and servicing equipment; and window cleaning. Consideration should be given to the environment in which the work will be performed. For example, the presence of acids, dirt, moisture, oil, grease, or other substances, and their potential effects on the system selected, should be evaluated. The employer should fully evaluate the work conditions and environment (including seasonal weather changes) before selecting the appropriate personal fall protection system. Hot or cold environments may also affect fall protection systems. Wire rope should not be used where electrical hazards are anticipated. As required by § 1910.140(c)(21), the employer must provide a means for promptly rescuing an employee should a fall occur.

(2) Where lanyards, connectors, and lifelines are subject to damage by work operations, such as welding, chemical cleaning, and sandblasting, the component should be protected, or other securing systems should be used. A program for cleaning and maintaining the system may be necessary.

(c) Testing considerations. Before purchasing a personal fall protection system, an employer should insist that the supplier provide information about its test performance (using recognized test methods) so the employer will know that the system meets the criteria in § 1910.140. Otherwise, the employer should test the equipment to ensure that it is in compliance. Appendix D to this subpart contains test methods which are recommended for evaluating the performance of any system. There are some circumstances in which an employer can evaluate a system based on data and calculations derived from the testing of similar systems. Enough information must be available for the employer to demonstrate that its system and the tested system(s) are similar in both function and design.

(d) Component compatibility considerations. Ideally, a personal fall protection system is designed, tested, and supplied as a complete system. However, it is common practice for lanyards, connectors, lifelines, deceleration devices, body belts, and body harnesses to be interchanged since some components wear out before others. Employers and employees should realize that not all components are interchangeable. For instance, a lanyard should not be connected between a body harness and a deceleration device of the self-retracting type (unless specifically allowed by the manufacturer) since this can result in additional free fall for which the system was not designed. In addition, positioning components, such as pole straps, ladder hooks and rebar hooks, should not be used in personal fall arrest systems unless they meet the appropriate strength and performance requirements of part 1910 (*e.g.,* §§ 1910.140, 1910.268 and 1910.269). Any substitution or change to a personal fall protection system should be fully evaluated or tested by a competent person to determine that it meets applicable OSHA standards before the modified system is put in use. Also, OSHA suggests that rope be used according to manufacturers' recommendations, especially if polypropylene rope is used.

(e) Employee training considerations. As required by §§ 1910.30 and 1910.132, before an employee uses a fall protection system, the employer must ensure that he or she is trained in the proper use of the system. This may include the following: The limits of the system; proper anchoring and tie-off techniques; estimating free fall distance, including determining elongation and deceleration distance; methods of use; and inspection and storage. Careless or improper use of fall protection equipment can result in serious injury or death. Employers and employees should become familiar with the material in this standard and appendix, as well as manufacturers' recommendations, before a system is used. It is important for employees to be aware that certain tie-offs (such as using knots and tying around sharp edges) can reduce the overall strength of a system. Employees also need to know the maximum permitted free fall distance. Training should stress the importance of inspections prior to use, the limitations of the equipment to be used, and unique conditions at the worksite that may be important.

(f) Instruction considerations. Employers should obtain comprehensive instructions from the supplier or a qualified person as to the system's proper use and application, including, where applicable:

(1) The force measured during the sample force test;

(2) The maximum elongation measured for lanyards during the force test;

(3) The deceleration distance measured for deceleration devices during the force test;

(4) Caution statements on critical use limitations;

(5) Limits of the system;

(6) Proper hook-up, anchoring and tie-off techniques, including the proper D-ring or other attachment point to use on the body harness;

(7) Proper climbing techniques;

(8) Methods of inspection, use, cleaning, and storage; and

(9) Specific lifelines that may be used.

(g) Inspection considerations. Personal fall protection systems must be inspected before initial use in each workshift. Any component with damage, such as a cut, tear, abrasion, mold, or evidence of undue stretching, an alteration or addition that might affect its effectiveness, damage due to deterioration, fire, acid, or other corrosive damage, distorted hooks or faulty hook springs, tongues that are unfitted to the shoulder of buckles, loose or damaged mountings, non-functioning parts, or wear, or internal deterioration must be removed from service immediately, and should be tagged or marked as unusable, or destroyed. Any personal fall protection system, including components, subjected to impact loading must be removed from service immediately and not used until a competent person inspects the system and determines that it is not damaged and is safe to use for personal fall protection.

(h) Rescue considerations. As required by § 1910.140(c)(21), when personal fall arrest systems are used, special consideration must be given to rescuing an employee promptly should a fall occur. The availability of rescue personnel, ladders, or other rescue equipment needs to be evaluated since there may be instances in which employees cannot self-rescue (*e.g.,* employee unconscious or seriously injured). In some situations, equipment allowing employees to rescue themselves after the fall has been arrested may be desirable, such as devices that have descent capability.

(i) Tie-off considerations. Employers and employees should at all times be aware that the strength of a personal fall arrest system is based on its being attached to an anchoring system that can support the system. Therefore, if a means of attachment is used that will reduce the strength of the system (such as an eye-bolt/snaphook anchorage), that component should be replaced by a stronger one that will also maintain the appropriate maximum deceleration characteristics. The following is a listing of some situations in which employers and employees should be especially cautious:

(1) Tie-off using a knot in the lanyard or lifeline (at any location). The strength of the line can be reduced by 50 percent or more if a knot is used. Therefore, a stronger lanyard or lifeline should be used to compensate for the knot, or the lanyard length should be reduced (or the tie-off location raised) to minimize free fall distance, or the lanyard or lifeline should be replaced by one which has an appropriately incorporated connector to eliminate the need for a knot.

(2) Tie-off around rough or sharp (*e.g.,* ''H'' or ''I'' beams) surfaces. Sharp or rough surfaces can damage rope lines and this reduces strength of the system drastically. Such tie-offs should be avoided whenever possible. An alternate means should be used such as a snaphook/D-ring connection, a tie-off apparatus (steel cable tie-off), an effective padding of the surfaces, or an abrasion-resistant strap around the supporting member. If these alternative means of tie-off are not available, the employer should try to minimize the potential free fall distance.

(3) Knots. Sliding hitch knots should not be used except in emergency situations. The one-and-one sliding hitch knot should never be used because it is unreliable in stopping a fall. The two-and-two, or three-and-three knots (preferable) may be used in emergency situations; however, care should be taken to limit free fall distances because of reduced lifeline/lanyard strength. OSHA requires that a competent or qualified person inspect each knot in a lanyard or vertical lifeline to ensure it meets the strength requirements in § 1910.140.

(j) Horizontal lifelines. Horizontal lifelines, depending on their geometry and angle of sag, may be subjected to greater loads than the impact load imposed by an attached component. When the angle of horizontal lifeline sag is less than 30 degrees, the impact force imparted to the lifeline by an attached lanyard is greatly amplified. For example, with a sag angle of 15 degrees the force amplification is about 2:1, and at 5 degrees sag it is about 6:1. Depending on the angle of sag, and the line's elasticity, the strength of the horizontal lifeline, and the anchorages to which it is attached should be increased a number of times over that of the lanyard. Extreme care should be taken in considering a horizontal lifeline for multiple tie-offs. If there are multiple tie-offs to a horizontal lifeline, and one employee falls, the movement of the falling employee and the horizontal lifeline during arrest of the fall may cause other employees to fall. Horizontal lifeline and anchorage strength should be increased for each additional employee to be tied-off. For these and other reasons, the systems using horizontal lifelines must be designed only by qualified persons. OSHA recommends testing installed lifelines and anchors prior to use. OSHA requires that horizontal lifelines are designed, installed and used under the supervision of a qualified person.

(k) Eye-bolts. It must be recognized that the strength of an eye-bolt is rated along the axis of the bolt, and that its strength is greatly reduced if the force is applied at right angles to this axis (in the direction of its shear strength). Care should also be exercised in selecting the proper diameter of the eye to avoid creating a roll-out hazard (accidental disengagement of the snaphook from the eye-bolt).

(l) Vertical lifeline considerations. As required by § 1910.140(c)(3), each employee must have a separate lifeline when the lifeline is vertical. If multiple tie-offs to a single lifeline are used, and one employee falls, the movement of the lifeline during the arrest of the fall may pull other employees' lanyards, causing them to fall as well.

(m) Snaphook and carabiner considerations. As required by § 1910.140(c)(10), the following connections must be avoided unless the locking snaphook or carabiner has been designed for them because they are conditions that can result in rollout:

(1) Direct connection to webbing, rope, or a horizontal lifeline;

(2) Two (or more) snaphooks or carabiners connected to one D-ring;

(3) Two snaphooks or carabiners connected to each other;

(4) Snaphooks or carabiners connected directly to webbing, rope, or wire rope; and

(5) Improper dimensions of the D-ring, rebar, or other connection point in relation to the snaphook or carabiner dimensions which would allow the gate to be depressed by a turning motion.

(n) Free fall considerations. Employers and employees should always be aware that a system's maximum arresting force is evaluated under normal use conditions established by the manufacturer. OSHA requires that personal fall arrest systems be rigged so an employee cannot free fall in excess of 6 feet (1.8 m). Even a few additional feet of free fall can significantly increase the arresting force on the employee, possibly to the point of causing injury and possibly exceeding the strength of the system. Because of this, the free fall distance should be kept to a minimum, and, as required by § 1910.140(d)(2), must never be greater than 6 feet (1.8 m). To assure this, the tie-off attachment point to the lifeline or anchor should be located at or above the connection point of the fall arrest equipment to the harness. (Otherwise, additional free fall distance is added to the length of the connecting means (*i.e.,* lanyard)). Tying off to the walking-working surface will often result in a free fall greater than 6 feet (1.8 m). For instance, if a 6-foot (1.8-m) lanyard is used, the total free fall distance will be the distance from the walking-working level to the harness connection plus the 6 feet (1.8 m) of lanyard.

(o) Elongation and deceleration distance considerations. During fall arrest, a lanyard will stretch or elongate, whereas activation of a deceleration device will result in a certain stopping distance. These distances should be available with the lanyard or device's instructions and must be added to the free fall distance to arrive at the total fall distance before an employee is fully stopped. The additional stopping distance may be significant if the lanyard or deceleration device is attached near or at the end of a long lifeline, which may itself add considerable distance due to its own elongation. As required by § 1910.140(d)(2), sufficient distance to allow for all of these factors must also be maintained between the employee and obstructions below, to prevent an injury due to impact before the system fully arrests the fall. In addition, a minimum of 12 feet (3.7 m) of lifeline should be allowed below the securing point of a rope-grab-type deceleration device, and the end terminated to prevent the device from sliding off the lifeline. Alternatively, the lifeline should extend to the ground or the next working level below. These measures are suggested to prevent the employee from inadvertently moving past the end of the lifeline and having the rope grab become disengaged from the lifeline.

(p) Obstruction considerations. In selecting a location for tie-off, employers and employees should consider obstructions in the potential fall path of the employee. Tie-offs that minimize the possibilities of exaggerated swinging should be considered.

Appendix D to Subpart I of Part 1910—Test Methods and Procedures for Personal Fall Protection Systems Non-Mandatory Guidelines

This appendix contains test methods for personal fall protection systems which may be used to determine if they meet the system performance criteria specified in paragraphs (d) and (e) of § 1910.140.

Test methods for personal fall arrest systems (paragraph (d) of § 1910.140).

(a) General. The following sets forth test procedures for personal fall arrest systems as defined in paragraph (d) of § 1910.140.

(b) General test conditions.

(1) Lifelines, lanyards and deceleration devices should be attached to an anchorage and connected to the body harness in the same manner as they would be when used to protect employees.

(2) The fixed anchorage should be rigid, and should not have a deflection greater than 0.04 inches (1 mm) when a force of 2,250 pounds (10 kN) is applied.

(3) The frequency response of the load measuring instrumentation should be 120 Hz.

(4) The test weight used in the strength and force tests should be a rigid, metal cylindrical or torso-shaped object with a girth of 38 inches plus or minus 4 inches (96 cm plus or minus 10 cm).

(5) The lanyard or lifeline used to create the free fall distance should be supplied with the system, or in its absence, the least elastic lanyard or lifeline available should be used with the system.

(6) The test weight for each test should be hoisted to the required level and should be quickly released without having any appreciable motion imparted to it.

(7) The system's performance should be evaluated, taking into account the range of environmental conditions for which it is designed to be used.

(8) Following the test, the system need not be capable of further operation.

(c) Strength test.

(1) During the testing of all systems, a test weight of 300 pounds plus or minus 3 pounds (136.4 kg plus or minus 1.4 kg) should be used. (See paragraph (b)(4) of this appendix.)

(2) The test consists of dropping the test weight once. A new unused system should be used for each test.

(3) For lanyard systems, the lanyard length should be 6 feet plus or minus 2 inches (1.83 m plus or minus 5 cm) as measured from the fixed anchorage to the attachment on the body harness.

(4) For rope-grab-type deceleration systems, the length of the lifeline above the centerline of the grabbing mechanism to the lifeline's anchorage point should not exceed 2 feet (0.61 m).

(5) For lanyard systems, for systems with deceleration devices which do not automatically limit free fall distance to 2 feet (0.61 m) or less, and for systems with deceleration devices which have a connection distance in excess of 1 foot (0.3 m) (measured between the centerline of the lifeline and the attachment point to the body harness), the test weight should be rigged to free fall a distance of 7.5 feet (2.3 m) from a point that is 1.5 feet (46 cm) above the anchorage point, to its hanging location (6 feet (1.83 m) below the anchorage). The test weight should fall without interference, obstruction, or hitting the floor or ground during the test. In some cases a non-elastic wire lanyard of sufficient length may need to be added to the system (for test purposes) to create the necessary free fall distance.

(6) For deceleration device systems with integral lifelines or lanyards that automatically limit free fall distance to 2 feet (0.61 m) or less, the test weight should be rigged to free fall a distance of 4 feet (1.22 m).

(7) Any weight that detaches from the harness should constitute failure for the strength test.

(d) Force test.

(1) General. The test consists of dropping the respective test weight specified in paragraph (d)(2)(i) or (d)(3)(i) of this appendix once. A new, unused system should be used for each test.

(2) For lanyard systems. (i) A test weight of 220 pounds plus or minus three pounds (100 kg plus or minus 1.6 kg) should be used. (See paragraph (b)(4) of this appendix.)

(ii) Lanyard length should be 6 feet plus or minus 2 inches (1.83 m plus or minus 5 cm) as measured from the fixed anchorage to the attachment on the body harness.

(iii) The test weight should fall free from the anchorage level to its hanging location (a total of 6 feet (1.83 m) free fall distance) without interference, obstruction, or hitting the floor or ground during the test.

(3) For all other systems. (i) A test weight of 220 pounds plus or minus 2 pounds (100 kg plus or minus 1.0 kg) should be used. (See paragraph (b)(4) of this appendix.)

(ii) The free fall distance to be used in the test should be the maximum fall distance physically permitted by the system during normal use conditions, up to a maximum free fall distance for the test weight of 6 feet (1.83 m), except as follows:

(A) For deceleration systems having a connection link or lanyard, the test weight should free fall a distance equal to the connection distance (measured between the centerline of the lifeline and the attachment point to the body harness).

(B) For deceleration device systems with integral lifelines or lanyards that automatically limit free fall distance to 2 feet (0.61 m) or less, the test weight should free fall a distance equal to that permitted by the system in normal use. (For example, to test a system with a self-retracting lifeline or lanyard, the test weight should be supported and the system allowed to retract the lifeline or lanyard as it would in normal use. The test weight would then be released and the force and deceleration distance measured).

(4) Failure. A system fails the force test when the recorded maximum arresting force exceeds 2,520 pounds (11.2 kN) when using a body harness.

(5) Distances. The maximum elongation and deceleration distance should be recorded during the force test.

(e) Deceleration device tests.

(1) General. The device should be evaluated or tested under the environmental conditions (such as rain, ice, grease, dirt, and type of lifeline) for which the device is designed.

(2) Rope-grab-type deceleration devices. (i) Devices should be moved on a lifeline 1,000 times over the same length of line a distance of not less than 1 foot (30.5 cm), and the mechanism should lock each time.

(ii) Unless the device is permanently marked to indicate the type of lifelines that must be used, several types (different diameters and different materials), of lifelines should be used to test the device.

(3) Other self-activating-type deceleration devices. The locking mechanisms of other self-activating-type deceleration devices designed for more than one arrest should lock each of 1,000 times as they would in normal service.

Test methods for positioning systems (paragraph (e) of § 1910.140).

(a) General. The following sets forth test procedures for positioning systems as defined in paragraph (e) of § 1910.140. The requirements in this appendix for personal fall arrest systems set forth procedures that may be used, along with the procedures listed below, to determine compliance with the requirements for positioning systems.

(b) Test conditions.

(1) The fixed anchorage should be rigid and should not have a deflection greater than 0.04 inches (1 mm) when a force of 2,250 pounds (10 kN) is applied.

(2) For window cleaners' belts, the complete belt should withstand a drop test consisting of a 250 pound (113 kg) weight falling free for a distance of 6 feet (1.83 m). The weight should be a rigid object with a girth of 38 inches plus or minus 4 inches (96 cm plus or minus 10 cm). The weight should be placed in the waistband with the belt buckle drawn firmly against the weight, as when the belt is worn by a window cleaner. One belt terminal should be attached to a rigid anchor and the other terminal should hang free. The terminals should be adjusted to their maximum span. The weight fastened in the freely suspended belt should then be lifted exactly 6 feet (1.83 m) above its ''at rest'' position and released so as to permit a free fall of 6 feet (1.83 m) vertically below the point of attachment of the terminal anchor. The belt system should be equipped with devices and instrumentation capable of measuring the duration and magnitude of the arrest forces. Failure of the test should consist of any breakage or slippage sufficient to permit the weight to fall free of the system. In addition, the initial and subsequent arresting forces should be measured and should not exceed 2,000 pounds (8.5 kN) for more than 2 milliseconds for the initial impact, or exceed 1,000 pounds (4.5 kN) for the remainder of the arrest time.

(3) All other positioning systems (except for restraint line systems) should withstand a drop test consisting of a 250 pound (113 kg) weight free falling a distance of 4 feet (1.2 m). The weight must be a rigid object with a girth of 38 inches plus or minus 4 inches (96 cm plus or minus 10 cm). The body belt or harness should be affixed to the test weight as it would be to an employee. The system should be connected to the rigid anchor in the manner that the system would be connected in normal use. The weight should be lifted exactly 4 feet (1.2 m) above its ''at rest'' position and released so as to permit a vertical free fall of 4 feet (1.2 m). Failure of the system should be indicated by any breakage or slippage sufficient to permit the weight to fall free to the ground.

Subpart N—[Amended]

■ 13. Revise the authority citation for subpart N to read as follows:

Authority: 29 U.S.C. 653, 655, 657; Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 3–2000 (65 FR 50017), 5–2002 (67 FR 65008), 5–2007 (72 FR 31159), 4–2010 (75 FR 55355), or 1–2012 (77 FR 3912), as applicable; and 29 CFR part 1911.

■ 14. In § 1910.178, revise paragraph (j) to read as follows:

§ 1910.178 Powered industrial trucks.

* * * * *

(j) *Dockboards (bridge plates).* See subpart D of this part.

* * * * *

■ 15. In § 1910.179, revise paragraphs (c)(2), (d)(3), and (d)(4)(iii) to read as follows:

§ 1910.179 Overhead and gantry cranes.

* * * * *

(c) * * *

(2) *Access to crane.* Access to the car and/or bridge walkway shall be by a conveniently placed fixed ladder, stairs, or platform requiring no step over any gap exceeding 12 inches (30 cm). Fixed ladders must comply with subpart D of this part.

* * * * *

(d) * * *

(3) *Toeboards and handrails for footwalks.* Toeboards and handrails must comply with subpart D of this part.

(4) * * *

(iii) Ladders shall be permanently and securely fastened in place and constructed in compliance with subpart D of this part.

* * * * *

Subpart R—[Amended]

■ 16. Revise the authority citation for subpart R to read as follows:

Authority: 29 U.S.C. 653, 655, 657; Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), 1–90 (55 FR 9033), 6–96 (62 FR 111), 5–2007 (72 FR 31159), 4–2010 (75 FR 55355), or 1–2012 (77 FR 3912), as applicable; and 29 CFR part 1911.

■ 17. In § 1910.261, revise paragraphs (c)(15)(ii), (e)(4), (g)(2)(ii), (g)(13)(i), (h)(1), (j)(4)(iii), (j)(5)(i), (k)(6), (k)(13)(i) and (k)(15) to read as follows:

§ 1910.261 Pulp, paper, and paperboard mills.

* * * * *

(c) * * *

(15) * * *

(ii) Where conveyors cross passageways or roadways, a horizontal platform shall be provided under the conveyor, extended out from the sides of the conveyor a distance equal to 1½ times the length of the wood handled. The platform shall extend the width of the road plus 2 feet (61 cm) on each side, and shall be kept free of wood and rubbish. The edges of the platform shall be provided with toeboards or other protection that meet the requirements of subpart D of this part, to prevent wood from falling.

* * * * *

(e) * * *

(4) *Runway to the jack ladder.* The runway from the pond or unloading dock to the table shall be protected with standard handrails and toeboards. Inclined portions shall have cleats or equivalent nonslip surfacing that

complies with subpart D of this part. Protective equipment shall be provided for persons working over water.

* * * * *

(g) * * *

(2) * * *

(ii) The worker shall be provided with eye protection, a supplied air respirator and a personal fall protection system that meets the requirements of subpart I of this part, during inspection, repairs or maintenance of acid towers. The line shall be extended to an attendant stationed outside the tower opening.

* * * * *

(13) * * *

(i) Blow-pit openings preferably shall be on the side of the pit instead of on the top. Openings shall be as small as possible when located on top, and shall be protected in accordance with subpart D of this part.

* * * * *

(h) * * *

(1) *Bleaching engines.* Bleaching engines, except the Bellmer type, shall be completely covered on the top, with the exception of one small opening large enough to allow filling, but too small to admit an employee. Platforms leading from one engine to another shall have standard guardrails that meet the requirements in subpart D of this part.

* * * * *

(j) * * *

(4) * * *

(iii) When beaters are fed from the floor above, the chute opening, if less than 42 inches (1.06 m) from the floor, shall be provided with a guardrail system that meets the requirements in subpart D of this part, or other equivalent enclosures. Openings for manual feeding shall be sufficient only for entry of stock, and shall be provided with at least two permanently secured crossrails or other fall protection system that meet the requirements in subpart D.

* * * * *

(5) * * *

(i) All pulpers having the top or any other opening of a vessel less than 42 inches (107 cm) from the floor or work platform shall have such openings guarded by guardrail systems that meet the requirements in subpart D of this part, or other equivalent enclosures. For manual changing, openings shall be sufficient only to permit the entry of stock, and shall be provided with at least two permanently secured crossrails, or other fall protection systems that meet the requirements in subpart D.

* * * * *

(k) * * *

(6) *Steps.* Steps of uniform rise and tread with nonslip surfaces that meet the requirements in subpart D of this part shall be provided at each press.

* * * * *

(13) * * *

(i) A guardrail that complies with subpart D of this part shall be provided at broke holes.

* * * * *

(15) *Steps.* Steps or ladders that comply with subpart D of this part and tread with nonslip surfaces shall be provided at each calendar stack. Handrails and hand grips complying with subpart D shall be provided at each calendar stack.

* * * * *

■ 18. In § 1910.262, revise paragraph (r) to read as follows:

§ 1910.262 Textiles.

* * * * *

(r) *Gray and white bins.* On new installations guardrails that comply with subpart D of this part shall be provided where workers are required to plait by hand from the top of the bin so as to protect the worker from falling to a lower level.

* * * * *

■ 19. In § 1910.265, revise paragraphs (c)(4)(v), (c)(5)(i), and (f)(6) to read as follows:

§ 1910.265 Sawmills.

* * * * *

(c) * * *

(4) * * *

(v) *Elevated platforms.* Where elevated platforms are used routinely on a daily basis, they shall be equipped with stairways or fixed ladders that comply with subpart D of this part.

* * * * *

(5) * * *

(i) *Construction.* Stairways shall be constructed in accordance with subpart D of this part.

* * * * *

(f) * * *

(6) *Ladders.* A fixed ladder complying with the requirements of subpart D of this part, or other adequate means, shall be provided to permit access to the roof. Where controls and machinery are mounted on the roof, a permanent stairway with standard handrail shall be installed in accordance with the requirements in subpart D.

* * * * *

■ 20. In § 1910.268:

■ a. Revise paragraphs (g)(1);

■ b. Remove paragraph (g)(2);

■ c. Redesignate (g)(3) as (g)(2); and

■ d. Revise paragraph (h).

The revisions read as follows:

§ 1910.268 Telecommunications.

* * * * *

(g) *Personal climbing equipment*—(1) *General.* A positioning system or a personal fall arrest system shall be provided and the employer shall ensure their use when work is performed at positions more than 4 feet (1.2 m) above the ground, on poles, and on towers, except as provided in paragraphs (n)(7) and (8) of this section. These systems shall meet the applicable requirements in subpart I of this part. The employer shall ensure that all climbing equipment is inspected before each day's use to determine that it is in safe working condition.

* * * * *

(h) *Ladders.* Ladders, step bolts, and manhole steps shall meet the applicable requirements in subpart D of this part.

* * * * *

■ 21. In § 1910.269, revise paragraphs (g)(2)(i), (g)(2)(iv)(B), and (g)(2)(iv)(C)(1) to read as follows:

§ 1910.269 Electric power generation, transmission, and distribution.

* * * * *

(g) * * *

(2) * * *

(i) Personal fall arrest systems shall meet the requirements of subpart I of this part.

* * * * *

(iv) * * *

(B) Personal fall arrest systems shall be used in accordance with subpart I of this part.

Note to paragraph (g)(2)(iv)(B): Fall protection equipment rigged to arrest falls is considered a fall arrest system and must meet the applicable requirements for the design and use of those systems. Fall protection equipment rigged for work positioning is considered work-positioning equipment and must meet the applicable requirements for the design and use of that equipment.

(C) * * *

(1) Each employee working from an aerial lift shall use a travel restraint system or a personal fall arrest system.

* * * * *

[FR Doc. 2016–24557 Filed 11–17–16; 8:45 am]

BILLING CODE 4510–29–P

FEDERAL REGISTER

Vol. 81 Friday,
No. 223 November 18, 2016

Part VIII

Department of the Interior

Bureau of Land Management

43 CFR Parts 3100, 3160 and 3170
Waste Prevention, Production Subject to Royalties, and Resource Conservation; Final Rule

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Parts 3100, 3160 and 3170

[17X.LLWO310000.L13100000.PP0000]

RIN 1004–AE14

Waste Prevention, Production Subject to Royalties, and Resource Conservation

AGENCY: Bureau of Land Management, Interior.

ACTION: Final rule.

SUMMARY: The Bureau of Land Management (BLM) is promulgating new regulations to reduce waste of natural gas from venting, flaring, and leaks during oil and natural gas production activities on onshore Federal and Indian (other than Osage Tribe) leases. The regulations also clarify when produced gas lost through venting, flaring, or leaks is subject to royalties, and when oil and gas production may be used royalty-free on-site. These regulations replace the existing provisions related to venting, flaring, and royalty-free use of gas contained in the 1979 Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL–4A), which are over 3 decades old.

DATES: The final rule is effective on January 17, 2017.

FOR FURTHER INFORMATION CONTACT: Timothy Spisak at the BLM Washington Office, 20 M Street SE., Room 2134LM, Washington, DC 20003, or by telephone at 202–912–7311. For questions relating to regulatory process issues, contact Faith Bremner at 202–912–7441.

Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service (FRS) at 1–800–877–8339 to contact these individuals during normal business hours. FRS is available 24 hours a day, 7 days a week to leave a message or question with these individuals. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION:

I. Table of Contents

II. Executive Summary

A. Background

This final regulation aims to reduce the waste of natural gas from mineral leases administered by the BLM. This gas is lost during oil and gas production activities through venting or flaring of the gas, and through equipment leaks. While oil and gas production technology has advanced dramatically in recent years, the BLM's rules to minimize waste of gas have not been updated in over 30 years. The Mineral Leasing Act of 1920 (MLA) requires the BLM to ensure that lessees ''use all reasonable precautions to prevent waste of oil or gas developed in the land,'' 30 U.S.C. 225, and that leases include ''a provision that such rules . . . for the prevention of undue waste as may be prescribed by [the] Secretary shall be observed,'' *id.* at § 187. The BLM believes there are economical, cost-effective, and reasonable measures that operators can take to minimize gas waste. These measures will enhance our nation's natural gas supplies, boost royalty receipts for American taxpayers, tribes, and States, reduce environmental damage from venting, flaring, and leaks of gas, and ensure the safe and responsible development of oil and gas resources.

The BLM's onshore oil and gas management program is a major contributor to our nation's oil and gas production. The BLM manages more than 245 million acres of land and 700 million acres of subsurface estate, making up nearly a third of the nation's mineral estate. Domestic production from 96,000 Federal onshore oil and gas wells accounts for 11 percent of the Nation's natural gas supply and 5 percent of its oil. In Fiscal Year (FY) 2015, operators produced 183.4 million barrels (bbl) of oil, 2.2 trillion cubic feet (Tcf) of natural gas, and 3.3 billion gallons of natural gas liquids (NGLs) from onshore Federal and Indian oil and gas leases. The production value of this oil and gas exceeded $20.9 billion and generated over $2.3 billion in royalties, which were shared with tribes, Indian allottee owners, and States.[1] Over the past decade, the United States has experienced a dramatic increase in oil and natural gas production due to technological advances, such as hydraulic fracturing combined with directional drilling. Yet the American public has not benefited from the full potential of this increased production, due to venting, flaring, and leaks of significant quantities of gas during the production process. Federal and Indian onshore lessees and operators reported to the Office of Natural Resources Revenue (ONRR) that they vented or flared 462 billion cubic feet (Bcf) of natural gas between 2009 and 2015—enough gas to serve about 6.2 million households for a year, assuming 2009 usage levels.[2]

Venting, flaring, and leaks waste a valuable resource that could be put to productive use, and deprive American taxpayers, tribes, and States of royalty revenues. In addition, the wasted gas may harm local communities and surrounding areas through visual and noise impacts from flaring, and contribute to regional and global air pollution problems of smog, particulate matter, and toxics (such as benzene, a carcinogen). Finally, vented or leaked gas contributes to climate change, because the primary constituent of natural gas is methane, an especially powerful greenhouse gas (GHG), with climate impacts roughly 25 times those of carbon dioxide (CO_2), if measured over a 100-year period, or 86 times those of CO_2, if measured over a 20-year period.[3] Thus, measures to conserve gas and avoid waste may significantly benefit local communities, public health, and the environment.

Congress has directed the BLM to oversee Federal and Indian oil and gas activities under multiple laws, including the MLA, the Mineral Leasing Act for Acquired Lands of 1947 (MLAAL), the Federal Oil and Gas Royalty Management Act (FOGRMA), the Federal Land Policy and Management Act of 1976 (FLPMA), the Indian Mineral Leasing Act of 1938 (IMLA), the Indian Mineral Development Act of 1982 (IMDA), and the Act of March 3, 1909.[4] In particular, the MLA requires the BLM to ensure that lessees ''use all reasonable precautions to prevent waste of oil or gas developed in the land.''[5] Leases issued by BLM must ensure that operations are conducted with ''reasonable diligence, skill, and care'' and that lessees comply with rules ''for the prevention of undue waste.''[6]

Advancing those mandates, this rule replaces the BLM's decades-old NTL–4A requirements related to venting and flaring, and to royalty-free use of oil and gas production; amends the BLM's oil and gas regulations at 43 CFR part 3160 to include requirements for a waste minimization plan; and adds new subparts 3178 and 3179 to 43 CFR part 3170 that address royalty-free use of lease production (subpart 3178) and waste prevention through reduction of venting, flaring and leaks (subpart 3179). This rule will apply to all Federal and Indian (other than Osage Tribe) onshore oil and gas leases as well as leases and business agreements entered into by tribes (including IMDA agreements), as consistent with those agreements and with principles of Federal Indian law.[7]

This rule implements recommendations from several oversight reviews, including reviews by the Office of the Inspector General of the Department of the Interior (OIG) and the Government Accountability Office (GAO). These reviews raised concerns about waste of gas from Federal and Indian production, found that the BLM's existing requirements regarding venting and flaring are insufficient and outdated, and expressed concerns about the ''lack of price flexibility in royalty

[1] Office of Natural Resources Revenue, Statistical Information, *http://statistics.onrr.gov/ReportTool.aspx* using Sales Year—FY 2015—Federal Onshore—All States Sales Value and Revenue for Oil, Natural Gas Liquids (NGL), and Gas products as of September 7, 2016.

[2] BLM analysis of ONRR Oil and Gas Operations Report Part B (OGOR–B) data provided for 2009–2015; *see* Energy Information Administration (EIA), *Trends in U.S. Residential Natural Gas Consumption, http://www.eia.gov/pub/oil_gas/natural_gas/feature_articles/2010/ngtrendsresidcon/ngtrendsresidcon.pdf* (reporting that in 2009, U.S. residential consumption was approximately 74 Mcf per household with natural gas service).

[3] See Intergovernmental Panel on Climate Change, Climate Change 2013: The Physical Science Basis, Chapter 8, *Anthropogenic and Natural Radiative Forcing,* at 714 (Table 8.7), *available at https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf.*

[4] Mineral Leasing Act, 30 U.S.C. 188–287; Mineral Leasing Act for Acquired Lands, 30 U.S.C. 351–360; Federal Oil and Gas Royalty Management Act, 30 U.S.C. 1701–1758; Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701–1785; Indian Mineral Leasing Act of 1938, 25 U.S.C. 396a–g; Indian Mineral Development Act of 1982, 25 U.S.C. 2101–2108; Act of March 3, 1909, 25 U.S.C. 396.

[5] 30 U.S.C. 225.

[6] 30 U.S.C. 187.

[7] Key statutes underpinning this proposed regulation contain exceptions for the Osage Tribe. Specifically, the Osage Tribe is excepted from the application of both the Indian Mineral Leasing Act and the Federal Oil and Gas Royalty Management Act, 25 U.S.C. 396f; 43 U.S.C. 1702(3), 1702(4). The leasing of Osage Reservation lands for oil and gas mining is subject to special Bureau of Indian Affairs regulations contained in 25 CFR part 226.

rates'' [8] and about royalty-free use of gas. The GAO also noted that ''around 40 percent of natural gas estimated to be vented and flared on onshore Federal leases could be economically captured with currently available control technologies.'' [9] The OIG and GAO reports recommended that the BLM update its regulations to require operators to augment their waste prevention efforts, afford the BLM greater flexibility in rate setting, and clarify BLM policies regarding royalty-free, on-site use of oil and gas.

The BLM has engaged in substantial stakeholder outreach in the course of developing this proposal. In 2014, the BLM conducted a series of forums to consult with tribal governments and to solicit stakeholder views to inform the development of this proposed rule, with public meetings (some of which were livestreamed) in Colorado, New Mexico, North Dakota, and Washington, DC.[10] The BLM continued to consult with stakeholders throughout the rule development process, including holding numerous meetings and calls with State and tribal representatives, individual companies, trade associations, and non-governmental organizations (NGOs). The BLM conducted additional outreach with States and tribes where there is extensive oil and gas production from BLM-administered leases. We issued a proposed rule on January 21, 2016, which was published on February 8, 2016, and accepted public comments through April 22, 2016, after extending the comment period. In addition, we held public meetings during the comment period in Farmington, New Mexico; Oklahoma City, Oklahoma; Denver, Colorado; and Dickinson, North Dakota. We also held separate meetings with tribes at each of these locations, and held further government-to-government consultation meetings at the request of several tribes. The BLM received approximately 330,000 public comments on the proposed rule, including approximately 1,000 unique comments.

The BLM is not the only regulator with the responsibility to oversee aspects of onshore oil and gas production, and throughout this rulemaking the BLM has focused on potential interactions of this rule with other Federal, State, or tribal regulatory requirements. For example, the U.S. Environmental Protection Agency (EPA) issued rules in 2012 and early 2016 to control emissions of methane and volatile organic compounds (VOCs) from new, modified and reconstructed oil and gas wells and production equipment, and many States and tribes regulate aspects of the oil and gas production process to address safety, waste, production accountability, and/or air quality concerns. Regulatory agencies often have overlapping authority and may adopt very similar measures to realize those complementary goals, such as improving air quality and reducing waste. For example, measures in this rule that aim to avoid the waste of methane gas through venting or leaks will also reduce methane pollution.

The BLM recognizes that overlapping regulatory regimes can create difficulties for operators, and has therefore very carefully considered and minimized potential overlaps with other Federal, State, or tribal regulations. The BLM aligned the requirements of this new rule with similar requirements adopted by the EPA and States, where practicable, and exempted equipment complying with relevant EPA requirements from overlapping requirements of this rule. In addition, this rule includes a provision that authorizes the BLM to grant variances from particular BLM requirements if a State or tribe demonstrates that a State, local, or tribal regulation imposes equally effective requirements.

It is critical to note, however, that neither EPA nor State and tribal requirements obviate the need for this rule. First, the BLM has an independent legal responsibility and a proprietary interest as a land and resource manager to oversee and minimize waste from oil and gas production activities conducted pursuant to Federal and Indian (other than Osage Tribe) leases, as well as to ensure that development activities on Federal and Indian leases are performed in a safe, responsible, and environmentally protective matter. The BLM's existing venting and flaring requirements are over 30 years old and predate significant technological developments. Updating and clarifying those requirements will make them more effective, more transparent, and easier to understand and administer; and will reduce operators' compliance burdens in some respects. The BLM must carry out its responsibility, delegated by Congress, to ensure that the public's resources are not wasted and are developed in a manner that provides for long-term productivity and sustainability.

Second, as a practical matter, neither EPA nor State and tribal regulations fully address the issue of waste of gas from BLM-administered leases. The EPA regulations are directed at air pollution reduction, not waste prevention; they cover only new, modified and reconstructed sources; and they do not address wasteful routine flaring of associated gas from oil wells, among other things. Similarly, no State or tribe has established a comprehensive set of requirements addressing all three avenues for waste—venting, flaring, and leaks—and only a few States have significant requirements in even one of these areas. The BLM therefore believes this rule is a necessary step in fulfilling its statutory mandate to minimize waste of the public's and tribes' natural gas resources.

B. Summary of Rule

This rule requires operators to take various actions to reduce waste of gas, establishes clear criteria for when flared gas will qualify as waste and therefore be subject to royalties, and clarifies which on-site uses of gas are exempt from royalties. The rule focuses on several key points or processes in the oil and gas production process where waste-prevention actions are most effective and least costly: Venting and flaring of associated gas from development oil wells (routine flaring occurs at oil wells that dispose of gas as a waste product), gas leaks from equipment at the well site or elsewhere on the lease, operation of high-bleed pneumatic controllers and certain pneumatic pumps, gas emissions from storage vessels, downhole well maintenance and liquids unloading, and well drilling and completions. The following discussion summarizes the rule's requirements applicable to each of these aspects of the production process, and also outlines the rule's provisions with respect to royalties, and the interaction between the rule and related EPA and State or tribal regulations.

1. Venting and Flaring

In 2014, operators vented about 30 Bcf and flared at least 81 Bcf of natural gas from BLM-administered leases, totaling 4.1 percent of the total production from those leases in that year, and sufficient gas to supply nearly 1.5 million households with gas for a year.[11] In

[8] GAO, Oil and Gas Royalties: The Federal System for Collecting Oil and Gas Revenues Needs Comprehensive Reassessment, GAO–08–691, September 2008, 6.

[9] GAO, Federal Oil and Gas Leases: Opportunities Exist to Capture Vented and Flared Natural Gas, Which Would Increase Royalty Payments and Reduce Greenhouse Gases, GAO–11–34, (Oct. 2010), 2.

[10] Further information can be found at the BLM oil and gas program's outreach-events page: *http://www.blm.gov/wo/st/en/prog/energy/public_events_on_oil.html.*

[11] RIA at 16; *see* Energy Information Administration (EIA), *Trends in U.S. Residential Natural Gas Consumption, http://www.eia.gov/pub/oil_gas/natural_gas/feature_articles/2010/ngtrendsresidcon/ngtrendsresidcon.pdf* (reporting

2015 operators flared at least 85 Bcf, a 114 percent increase from 2009 levels.[12] Roughly 83 Bcf of this flaring came from oil wells.[13] Analysis of data supplied by the ONRR suggests that most of the flaring was routine flaring of associated gas from development oil wells (as opposed to flaring during exploration, well testing, and emergencies). Over 88 percent of this flaring occurred in North Dakota, South Dakota, and New Mexico.

This rule prohibits venting of natural gas, except under certain specified conditions, such as in an emergency or when flaring is technically infeasible.[14] With respect to flaring, the rule requires operators to reduce wasteful flaring of gas by capturing for sale or using on the lease a percentage of their gas production. The required capture percentage increases over time, and is also adjusted to provide for a base level of ''allowable'' flaring that ramps down over time. This capture requirement builds on the proposed rule's flaring limits, and modifies that approach in response to comments, to make compliance more feasible and less costly, while working towards phasing out routine flaring of associated gas from oil wells by increasing capture. Specifically, beginning one year from the effective date of the final rule, operators must capture 85 percent of their adjusted total volume of gas produced each month. This percentage increases to 90 percent in 2020, 95 percent in 2023, and 98 percent in 2026. An operator's adjusted total volume of gas produced is calculated based on the quantity of high pressure gas produced from the operator's development oil wells that are in production, adjusted to exempt a specified volume of gas per well, which declines over time. Beginning one year from the effective date of the final rule, operators are allowed to exempt 5,400 Mcf gas per well per month, and this quantity declines to 3,600 beginning in 2019, 1,800 in 2020, 1,500 in 2021, 1,200 in 2022, 900 in 2024, and 750 from 2025 on.

The final rule gives operators the option to meet their capture targets on a lease-by-lease basis, or an average basis over all of their Federal or Indian production from development oil wells county-by-county or State-by-State. Giving operators the ability to average their rates of gas capture over geographic areas beyond individual leases enhances flexibility and makes the targets less costly to meet. Similarly, the more extended phasing in of the capture targets eases costs and compliance burdens, while allowing appropriate planning and investment by industry to meet more stringent targets in out years. At the same time, the BLM recognizes that it has a statutory responsibility to ensure that operators minimize waste of public resources. Accordingly, the BLM has structured the capture targets to ensure that operators will achieve overall reductions in wasteful flaring that are comparable to, and eventually slightly greater than, what the BLM estimated would have been achieved under the proposed rule.

The BLM estimates that, once fully implemented, the capture targets will reduce flaring by up to 49 percent relative to 2015 levels. Like the proposed rule, the final rule also retains the BLM's discretion to craft alternative requirements for certain operators that cannot meet the baseline flaring reduction obligations. Specifically, the final rule allows the BLM to adjust the capture target for an operator on an existing lease that demonstrates to the BLM that meeting the target would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. In assessing the operator's showing, the BLM will consider the costs of gas capture, and the costs and revenues of all oil and gas production on the lease.

As explained in the proposed rule, the initial flaring limitations were intended to motivate operators to increase their capture of gas associated with oil development, since a reduction in flaring is achieved most effectively by an increase in capture. Consequently, flaring limitations and capture requirements are two sides of the same coin. Increasing capture is the BLM's primary goal in imposing these waste prevention requirements, and we concluded that it would be a more direct means of achieving that goal to require capture rather than merely encourage it through the imposition of flaring limits. In modifying the rule in this way, we have determined that both approaches are expected to achieve comparable results, in terms of both increasing capture and reducing wasteful flaring.

In addition, this rule finalizes the proposal to require operators to submit a Waste Minimization Plan when they apply for a permit to drill a new development oil well. Preparation of a Waste Minimization Plan ensures that the operator carefully considers and plans for how it will capture the gas that will be produced, before the operator drills a well. While the provisions of a plan will not be enforceable against the operator, plan submission is mandatory, and the plan must include specific elements listed in the regulations. As in the proposed rule, failure to submit a complete and adequate plan could be grounds for denial of an application for permit to drill (APD).

2. Leaks

Based on our estimates, leaks are the second largest source of vented gas from Federal and Indian leases, accounting for about 4 Bcf of the natural gas lost in 2014.[15] Our analysis indicates that Leak Detection and Repair (LDAR) programs are a cost-effective means of reducing waste in oil and gas production, and multiple studies have found that once leaks are detected, the vast majority can be repaired with a positive return to the operator.[16]

Like the proposed rule, the final rule requires operators to use an instrument-based approach to leak detection. The final rule allows operators to use optical gas imaging equipment, portable analyzers deployed according to the protocol prescribed in EPA's Method 21,[17] or an alternative leak detection device approved by the BLM. In response to comments on the proposed rule, the final rule was revised to be consistent with the EPA's final requirements under 40 CFR part 60 subpart OOOOa, requiring operators to conduct semi-annual inspections at well sites and quarterly inspections at compressor stations. Operators may also request BLM approval of an alternative instrument-based leak detection program; the BLM may approve such a program if it finds that the program would reduce leaked volumes by at least as much as the BLM program. Operators must repair a leak within 30 days of discovery, absent good cause, and verify that the leak is fixed. Operators must also keep records documenting the dates and results of leak inspections, repairs, and follow-up inspections.

3. Reducing Venting From Equipment and Practices

Like the proposed rule, the final rule includes requirements to update old, inefficient equipment and to follow best practices to minimize waste through venting. These provisions address gas losses from pneumatic controllers and pumps, storage vessels, liquids

that in 2009, U.S. residential consumption was approximately 74 Mcf per household with natural gas service).

[12] BLM analysis of ONRR OGOR–B data provided for 2009–2015 and EPA GHG Inventory data for 2014.

[13] RIA at 49.

[14] See 43 CFR 3179.6.

[15] RIA at 3.

[16] RIA at 27.

[17] See 40 CFR part 60, appendix A–7.

unloading, and well drilling and completions.

a. Pneumatic Controllers and Pumps

We estimate that on BLM-administered leases in 2014, operators lost about 14.9 Bcf of natural gas from pneumatic controllers and about 2.3 Bcf from pneumatic pumps.[18] A recent study by the consulting firm ICF International (ICF) identified replacement of high-bleed pneumatic controllers (those with bleed rates higher than 6 standard cubic feet (scf)/hour) with low-bleed pneumatic controllers (those with bleed rates of 6 scf/hour or less) as one of the most inexpensive options for reducing methane losses, estimating that replacing these devices would actually save industry $2.65 per Mcf of avoided methane emissions.[19] Like the proposed rule, the final rule requires operators to replace high-bleed pneumatic controllers with low-bleed or no-bleed pneumatic controllers within one year of the effective date of the final rule. This requirement tracks existing requirements in Colorado and Wyoming (in part of the State), and it applies only to pneumatic controllers that are not covered by EPA regulations.

For pneumatic pumps, the final rule requires the operator to replace pneumatic diaphragm pumps that operate 90 or more days per year with zero-emissions pumps, or route the pump exhaust gas to processing equipment. If use of a pneumatic pump is required based on the function the pump must serve, and the operator determines that routing the exhaust gas to processing equipment would be technically infeasible or unduly costly, the operator must route the pneumatic diaphragm pump to a combustor or flare, if one is located on the site.

The BLM modified the requirements in the proposed rule for pneumatic pumps in response to comments and to better align with the EPA's final subpart OOOOa requirements. For example, the BLM eliminated the proposed requirements for chemical injection pumps and diaphragm injection pumps that operate relatively infrequently, as we believe that these pumps vent relatively small quantities of gas. Like the proposed rule, the final rule does not apply to pneumatic pumps that are subject to EPA regulations.

The final rule provides that an operator can receive an exemption from the requirements for pneumatic controllers or pumps if the operator demonstrates and the BLM concurs that replacing the pneumatic pump(s) would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. In making this determination, the BLM will consider the costs of capture, and the costs and revenues of all oil and gas production on the lease.

b. Storage Vessels

We estimate that 2.94 Bcf of natural gas was lost in 2014 from storage tank venting on Federal and Indian lands.[20] Of that volume, we estimate that 1.54 Bcf was lost from storage vessels used in natural gas production and 1.4 Bcf of gas was lost from storage vessels used in oil production.[21] Tank vapors can be controlled by installing a vapor recovery unit (VRU) or by routing them to a flare or combustor. New, modified and reconstructed vessels used in oil and gas production are already subject to EPA emissions limits, which require that individual storage vessels with VOC emissions equal to or greater than 6 tons per year (tpy) achieve at least a 95 percent reduction in VOC emissions from baseline levels. Colorado and part of Wyoming have similar, somewhat more stringent requirements for storage vessels.[22]

Like the proposed rule, this final rule includes requirements to reduce gas losses from existing storage vessels, which are not covered by the EPA standards. Using the same applicability threshold as EPA and Colorado (6 tpy of VOCs, which the BLM is using as a proxy for natural gas losses since the VOCs in this context are coming from the natural gas from storage vessels), the rule requires operators to route storage vessel vapor gas to a sales line, if the storage vessel has the potential to emit at least 6 tpy of VOCs. If an operator determines that compliance with this requirement is technically infeasible or unduly costly, the operator may instead route the tank vapor gas to a combustor or flare. Like the proposed rule, this final rule allows operators to request an exemption from these requirements if the operator demonstrates, and the BLM concurs, that complying with the requirements would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. In making this determination, the BLM will consider the costs of compliance, and the costs and revenues of all oil and gas production on the lease.

c. Well Maintenance and Liquids Unloading

We estimate that 3.26 Bcf of natural gas was lost in 2014 during liquids unloading operations on Federal and Indian lands.[23] There are a wide variety of methods for liquids unloading, and technological developments, such as automated well controls and plunger lift systems, now allow liquids to be unloaded with minimal loss of gas. The BLM expects prudent operators to use available technologies and practices to minimize gas losses, and we believe that the failure to use such technologies and practices during liquids unloading constitutes waste.

The final rule does not adopt the provision from the proposed rule that would have prohibited manual well purging from new wells, due to concerns about the technical feasibility of such a ban. Instead, the final rule requires an operator to: (1) Minimize gas vented to unload liquids, consistent with safe operations; (2) optimize the operation of the plunger lift or automated well control system, at wells equipped with such a system, to minimize gas losses from the system to the extent possible; (3) consider other methods for liquids unloading and determine that they are technically infeasible or unduly costly, prior to manually purging a well for the first time; and (4) comply with specified procedures and document venting events when unloading liquids by manual well purging.

d. Reduction of Waste From Drilling, Completion, and Related Operations

We estimate that in 2014, 1.12 Bcf of natural gas was lost during drilling, completion, and refracturing (sometimes referred to by the broader term ''workover'') operations on BLM-administered leases.[24] The EPA requires new hydraulically fractured and refractured oil or gas wells to capture or flare gas that otherwise would be released during drilling and completion operations. The BLM final rule also includes provisions to minimize the waste of gas during these operations by

[18] RIA at 4.

[19] ICF International, Economic Analysis of Methane Emission Reduction Opportunities in the U.S. in the Onshore Oil and Natural Gas Industries, 4–4 (Mar. 2014), *available at https://www.edf.org/sites/default/files/methane_cost_curve_report.pdf* (ICF 2014 Study) (base case assumed $4/Mcf price for recovered gas and a 10 percent discount rate/cost of capital).

[20] RIA at 17.

[21] RIA at 17.

[22] Colorado Air Quality Control Commission Regulations, Regulation 7, 5 CCR 1001–9, Sections XII.D–F; XVII.C; Wyoming, Nonattainment Area Regulations Ch. 8, Section 6(c) (June 2015), *available at http://soswy.state.wy.us/Rules/RULES/9868.pdf.*

[23] RIA at 3.

[24] RIA at 3.

requiring operators to capture, use, flare, or inject the gas. While we do not expect that these provisions will obligate operators to take any additional actions beyond what they must do to comply with the EPA requirements, we believe it is appropriate for the BLM to adopt its own provisions governing operator conduct, to fulfill its independent statutory obligation to minimize waste of oil and gas resources on BLM-administered leases.

4. Royalty Provisions Governing New Competitive Leases

The final rule revises 43 CFR 3103.3–1, which governs royalty rates applicable to onshore oil and gas leases, to make the rule text parallel to the BLM's statutory authority, which specifies that competitively-issued BLM-administered leases ''shall be conditioned upon the payment of a royalty at a rate of *not less than* 12.5 percent in amount or value of the production removed or sold from the lease.'' 30 U.S.C. 226(b)(1)(A). The final version of 43 CFR 3103.3–1 thus makes clear that for competitive leases issued after the effective date of this rule, the BLM has the flexibility to set rates at or above 12.5 percent. This change finalizes this provision as it was proposed, and responds to findings and recommendations in audits from the GAO. The final rule does not, however, set a new rate for competitively-issued leases.

Like the proposed rule, the final rule specifies the fixed, statutory rate of 12.5 percent for all noncompetitive leases issued after the effective date of the rule, as required by statute.[25] In addition, the final rule makes clear that the royalty rate on all existing leases remains the rate prescribed in the lease or in regulations applicable at the time of lease issuance.

5. Unavoidable Versus Avoidable Losses of Gas

Like the proposed rule, the final rule also updates the pre-existing royalty provisions in NTL–4A to more clearly and specifically define when a loss of gas is considered ''unavoidable'' and royalty-free, and when it is considered ''avoidable'' and subject to royalties. A loss of gas is deemed unavoidable when an operator has complied with all applicable requirements and taken prudent and reasonable steps to avoid waste, and the gas is lost from one of the operations or sources specified in this final regulation, subject to certain limitations. The specified operations and sources include emergencies; well drilling, completions, and tests; normal operations of pneumatic devices and storage vessels; liquids unloading; leaks; equipment or pipeline maintenance requiring depressurization; and residual gas after stripping of natural gas liquids. A loss of gas is also deemed unavoidable when gas is flared from a well that is not connected to a gas pipeline, provided the BLM has not otherwise determined that the loss of gas is avoidable. All other losses of gas, as well as any gas flared in violation of the capture requirement (regardless of whether the well is connected to a pipeline), are deemed avoidable and subject to royalties. By establishing clear-cut categories for unavoidable and avoidable losses, the final rule will dramatically reduce the large number of requests for approval to flare royalty-free that operators have had to file and the BLM has had to process each year.

6. Interaction With EPA and State Regulations

Like the proposed rule, this final rule seeks to minimize regulatory overlap. Thus, if EPA and/or States or tribes have adopted requirements that are at least as effective as and would potentially overlap with the provisions of this rule, the final rule provides a means for operators to comply with the EPA, State, local or tribal requirements in lieu of the BLM requirements. Specifically, in cases in which EPA rules limit venting from equipment or require leak inspections and repairs, those operators that are in compliance with those EPA requirements are deemed, under this rule, to be in compliance with the comparable BLM requirements. With respect to State, local, or tribal rules, the final rule allows a State or tribe to request a variance from a particular BLM regulation. If the variance is granted, the BLM has the authority to enforce the specific provisions of the State, local, or tribal rule for which the variance was granted, in lieu of the comparable provisions of the BLM rule. As clarified in the final rule, the BLM may grant a State or tribal variance request only if the BLM determines that the State, local, or tribal rule would perform at least as well as the BLM provision to which the variance would apply, in terms of reducing waste of oil and gas, reducing environmental impacts from venting and/or flaring of gas, and ensuring the safe and responsible production of oil and gas.

7. Other Provisions

Like the proposed rule, the final rule includes provisions that update and clarify pre-existing BLM requirements regarding when operators may use oil or gas from a lease for production activities without owing royalties on the oil or gas used. In addition, like the proposed rule, the final rule includes provisions specifying when operators must measure the volumes of gas vented or flared, and requiring operators to report to ONRR volumes of gas vented or flared.

8. Summary of Costs and Benefits

Overall, the BLM estimates that the benefits of this rule would outweigh its costs by a significant margin. Under certain assumptions, for example, the rule is expected to produce net benefits ranging from $46 million to $199 million per year (annualizing capital costs using a 7 percent discount rate) or from $50 million to $204 million per year (annualizing capital costs using a 3 percent discount rate).[26]

a. Costs

The BLM estimates that this rule will pose costs ranging from $114–$279 million per year (using a 7 percent discount rate to annualize capital costs) or $110–$275 million per year (using a 3 percent discount rate to annualize capital costs) over the next 10 years.[27] These costs include engineering compliance costs and the social cost of minor additions of carbon dioxide to the atmosphere, resulting from the on-site or downstream use of gas that is newly captured as a result of this rule.[28] The engineering compliance costs presented do not include potential cost savings from the recovery and sale of natural gas (those savings are shown in the summary of benefits).

In some areas, operators have already undertaken, or plan to undertake, voluntary actions to address gas losses. To the extent that operators are already in compliance with the requirements of this final rule, the above estimates overstate the likely impacts of the rule.

We expect that cost impacts on individual operators would be small, even for businesses with less than 500 employees. In the Regulatory Impact Analysis (RIA), we estimate that average costs for a representative small operator would increase by about $55,200, which would result in an average reduction in

[25] 30 U.S.C. 226(c)(1).

[26] BLM, Economic Impact and Regulatory Threshold Analysis for 43 CFR 3178 (Royalty Free Use of Production) and 43 CFR 3179 (Venting and Flaring Requirements) (2015) (hereinafter RIA) at 6.

[27] RIA at 4.

[28] Some gas that would have otherwise been vented would now be combusted on-site or presumably downstream to generate electricity. As described in the RIA, the estimated value of these carbon additions would not exceed $30,000 in any given year.

profit margin of 0.15percentage points.[29]

b. Benefits

We measure the benefits of the rule as the cost savings that the industry would receive from the recovery and sale of natural gas and the environmental benefits of reducing the amount of methane (a potent GHG) and other air pollutants released into the atmosphere. As with the estimated costs, we expect benefits on an annual basis. The BLM estimates that this rule would result in monetized benefits of $209–$403 million per year (using model averages of the social cost of methane with a 3 percent discount rate).[30] We estimate that the final rule would reduce methane emissions by 175,000–180,000 tpy, roughly a 35% reduction in methane emissions from the 2014 estimates, and which we estimate to be worth $189–$247 million per year (this social benefit is included in the monetized benefit above).[31]

Adoption of the final rule will also have numerous ancillary benefits. These include improved quality of life for nearby residents, who note that flares are noisy and unsightly at night; reduced release of VOCs, including benzene and other hazardous air pollutants; and reduced production of nitrogen oxides (NOx) and particulate matter, which can cause respiratory and heart problems.

c. Net Benefits

Overall, the BLM estimates that the benefits of this rule outweigh its costs by a significant margin. The BLM expects net benefits ranging from $46–$199 million per year (using a 7 percent discount rate to annualize capital costs) or $50–$204 million per year (using a 3 percent discount rate to annualize capital costs). Specifically, assuming a 7 percent discount rate to annualize capital costs, we estimate the following annual net benefits in selected years:

- $99–$115 million in 2018;
- $51–$93 million in 2022; and
- $120–$189 million in 2026.

Assuming a 3 percent discount rate to annualize capital costs, we estimate the annual net benefits would be:

- $103–$119 million in 2018;
- $55–$97 million in 2022; and
- $125–$193 million in 2026.[32]

d. Influence on Production

The final rule has a number of requirements that are expected to influence the production of natural gas, NGLs, and crude oil from onshore Federal and Indian oil and gas leases. We estimate the following incremental changes in production, noting the representative share of the total U.S. production in 2015 for context. We estimate additional natural gas production, ranging from 9–41 Bcf per year (representing 0.03–0.15 percent of the total U.S. production), and a reduction in crude oil production ranging from 0.0–3.2 million bbl per year (representing 0–0.07 percent of the total U.S. production). We also expect 0.8 Bcf of gas to be combusted on-site that would have otherwise been vented. Combined, the rule will reduce venting by about 35 and reduce flaring by 49%, depending on the year.[33]

Since the relative changes in production are expected to be small, we do not expect that the final rule will significantly impact the price, supply, or distribution of energy.

e. Royalties

We estimate that this final rule will produce additional royalties of $3–$10 million per year (discounted at 7 percent) or $3–$14 million per year (discounted at 3 percent).[34]

III. Background

The BLM's onshore oil and gas management program is a major contributor to the nation's oil and gas production. The BLM manages more than 245 million acres of land and 700 million acres of subsurface estate, comprising nearly a third of the nation's mineral estate. Domestic production from over 96,000 Federal onshore oil and gas wells accounts for 11 percent of the Nation's natural gas supply and 5 percent of its oil supply. In FY 2015, the ONRR reported that operators produced 183.4 million bbl of oil, 2.6 Tcf of natural gas, and 3.3 billion gallons of NGLs from onshore Federal and Indian oil and gas leases. The production value of this oil and gas exceeded $20.9 billion and generated over $2.3 billion in royalties.[35]

Over the past decade, the United States has experienced a dramatic increase in oil and natural gas production due to technological advances, such as hydraulic fracturing combined with directional drilling. This boost in production has brought many benefits in the form of expanded and more secure domestic supplies, lower prices, increased economic activity in certain regions of the country, and greater royalty revenues for Federal, State, and tribal governments.

At the same time, the American public has not benefited from the full potential of this increased production, as the increase in oil production has been accompanied by significant and growing quantities of wasted natural gas. Between 2009 and 2015, operators on BLM-administered leases wasted enough natural gas to serve over 6.2 million homes for 1 year, according to data reported to ONRR.[36]

A. Impacts of Waste and Loss of Gas

As explained in the proposed rule preamble section IV.B, natural gas is a limited and valuable public resource, which is critical to U.S. energy security and national security. Natural gas also provides significant economic benefits as an energy source for electricity generation and industrial and residential use, and as a feedstock for manufacturing. Royalty payments on natural gas sales provide Federal, State, and tribal governments with over $3 billion in revenues each year.

Venting, flaring, and leaks of natural gas from production on BLM-administered sites waste this limited natural resource and deprive the American public and tribes of the security and economic benefits that this resource, which belongs to the public and tribes, would otherwise provide. In addition to the economic and security losses, the waste of natural gas also imposes public health and environmental costs, in the form of air pollution, such as smog and regional haze; emissions of hazardous air pollutants, some of which are carcinogenic; and emissions of methane, a powerful contributor to global warming and a primary target for reduction under the President's Climate Action Plan.[37] Absent stronger provisions to reduce natural gas waste on Federal lands, the avoidable loss of gas will continue to threaten climate

[29] RIA at 129. These estimates rely on 2014 company data, and use a 7 percent discount rate.

[30] RIA at 5.

[31] RIA at 110. We also estimate that the final rule would have an incidental benefit of reducing VOC emissions by 250,000–267,000 tpy (this benefit is not monetized in our calculations).

[32] RIA at 111.

[33] RIA at 5.

[34] RIA at 143.

[35] Office of Natural Resources Revenue, Statistical Information, *http://statistics.onrr.gov/ReportTool.aspx* using Sales Year–FY 2015–Federal Onshore–All States Sales Value and Revenue for Oil, NGL, and Gas products as of September 21, 2016.

[36] Office of Natural Resources Revenue, Statistical Information, *http://statistics.onrr.gov/ReportTool.aspx* using Sales Year–FY 2015–Federal Onshore—All States Sales Value and Revenue for Oil, NGL, and Gas products as of September 7, 2016.

[37] The President's Climate Action Plan (June 2013) (*https://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf*).

stability and undermine respiratory and cardiovascular health.

B. Purpose of the Rule

1. Overview

The purpose of this rule is to reduce waste of natural gas owned by the American public and tribes, which occurs during the oil and gas production process. While the BLM already regulates venting and flaring of natural gas during oil and gas production on Federal and Indian (other than Osage Tribe) leases, the current requirements are over 30 years old and do not reflect modern technologies, practices, and understanding of the harms caused by venting, flaring, and leaks of gas. Oversight reviews have also suggested that the current requirements are insufficiently clear in their directives, which complicates implementation for BLM staff and creates uncertainty for oil and gas operators. Today's rule updates the existing provisions to direct operators to take reasonable and common-sense measures to prohibit routine venting, minimize the quantities of natural gas routinely flared, reduce natural gas losses through leaks, and deploy up-to-date technology to reduce routine losses from production equipment.

2. Issues Addressed by Rule

a. Large Quantities of Natural Gas Are Wasted on Federal and Indian Leases

As explained in the proposed rule preamble section IV.H.1, while there is some uncertainty regarding the total volume of natural gas lost during production on public and tribal lands, the volume is unacceptably high.

There is no single definitive source for the total volume of natural gas losses from oil and gas production on Federal Lands. BLM efforts to estimate the total volume are informed by the Oil and Gas Operations Report Part B (OGOR–B) filed with the ONRR, the EPA Greenhouse Gas Inventory,[38] data from the EPA Greenhouse Gas Reporting Program,[39] and numerous studies discussed in the preamble to the proposed rule and provided by commenters. Each data set, however, has limitations. The ONRR data rely on self-reporting, and there is substantial variation in the types of losses that different operators report (and certain types of losses, such as most leaks, are not reported at all). The EPA data are based on emissions factors that are representative rather than actual.[40] Even though data in these programs have recently been updated, they are still incomplete, and recent studies suggest actual emissions may be somewhat, or even substantially, higher than the emissions factors suggest.[41] Thus, we believe that the estimates of losses used to support today's rule, while substantial, are conservative. For purposes of this final rule, ONRR provided the BLM with data evidencing 7 years of vented and flared volumes reported on the OGOR-Bs. The data analyzed included gas flared and vented from both oil and gas wells from 2009 through 2015. During this period, operators reported that they vented or flared a total of 462 Bcf of natural gas, or about 2.7 percent of the 16.8 Tcf of natural gas that was produced from BLM-administered leases from 2009 through 2015.[42] This is enough natural gas to supply over 6.2 million households—or every household in the States of Colorado, Montana, New Mexico, North Dakota, South Dakota, Utah, and Wyoming—for 1 year.[43]

These data are reported by operators on BLM-administered leases, but the production is actually derived from lands with various ownership patterns. Of the vented and flared gas reported to ONRR, 15 percent came from wells extracting only Federal minerals; 8.8 percent came from wells extracting only Indian minerals, and 76.2 percent from wells extracting minerals with mixed ownership (some combination of Federal, Indian, fee (private) and State minerals).

Finally, the BLM notes that available data suggest the problem of natural gas loss on BLM-administered leases is growing. The total amounts of annual reported flaring from Federal and Indian leases increased by over 1000 percent from 2009 through 2015.[44] During this period, reported volumes of flared oil-well gas increased by 318 percent, while reported volumes of flared gas-well gas decreased by 86 percent.[45] The reduction in flaring at gas wells coincides with the adoption of EPA 40 CFR part 60 subpart OOOO (''subpart OOOO'') air pollution requirements, which limit emissions from gas wells hydraulically fractured after August 23, 2011.[46]

Another indicator of the increase of flaring on Federal and Indian lands is the increased number of applications to vent or flare royalty-free that the BLM has received from operators. In 2005, the BLM received just 50 applications to vent or flare gas. In 2011, the BLM received 622 applications, and this doubled again within 3 years to 1,248 applications in 2014. BLM field offices indicate that most of the additional applications were for flaring of associated gas from oil wells in New Mexico, Montana, the Dakotas, and, to a lesser extent, Wyoming.

b. Recent Studies of Venting and Leaks

The proposed rule preamble section IV.H.2 discussed recent efforts to improve our understanding of the quantities of natural gas lost through venting and leaks during the production process, and it highlighted a number of recent studies. These include both ''bottom up'' studies, which attempt to improve the accuracy and understanding of current estimates by conducting site-specific intensive measurements of losses during the production process, and ''top down'' studies, which use aircraft and tracers to quantify atmospheric methane levels and attribute them to oil and gas production activities. Several of these recent studies by government, industry, and environmental organizations suggest that emission levels are higher than those estimated using the DOI and EPA data, and in particular, some studies highlighted emissions levels two to three times higher than those based on EPA data. They also provided information on the distribution of gas leaks, which are heavily concentrated at ''super-emitter'' facilities, and highlighted the challenges in predicting which sites will experience super-emitter conditions. Commenters on the proposed rule pointed to additional studies, some issued after the proposal, that further demonstrate significant gas loss, the potential to reduce such waste through various technologies and practices, and the need for widespread leak detection and repair.

[38] U.S. EPA, (*U.S. Greenhouse Gas Inventory Report: 1990–2014*), *available at https://www.epa.gov/sites/production/files/2016-04/documents/us-ghg-inventory-2016-main-text.pdf* (''2016 GHG Inventory'').

[39] U.S. EPA, *Greenhouse Gas Reporting Program; Petroleum and Natural Gas Systems. Available at https://www.epa.gov/ghgreporting/ghgrp-petroleum-and-natural-gas-systems.*

[40] EPA, *2016 GHG Inventory Report: 1990–2014.* Available at *https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf.*

[41] Envt'l Def. Fund, *New EPA Stats Confirm: Oil & Gas Methane Emissions Far Exceed Prior Estimates* (Apr. 15, 2016), *https://www.edf.org/media/new-epa-stats-confirm-oilgas-methane-emissions-far-exceed-prior-estimates.*

[42] BLM analysis of ONRR OGOR–B data provided for 2009–2015.

[43] Using U.S. Energy Information Administration Natural Gas Consumption by End Use for 2015 found at *http://www.eia.gov/dnav/ng/ng_cons_sum_a_EPG0_vrs_mmcf_a.htm.*

[44] BLM analysis of ONRR OGOR–B data provided for 2009–2015.

[45] BLM query of AFMSS database for the number of Flaring Sundry Notices filed on Federal and Indian lands between 2009 and 2015 on November 4, 2011.

[46] 79 FR 49490 (Aug.16, 2012).

Commenters pointed to both bottom up and top down studies that suggest BLM's estimate of natural gas waste is conservative. For example, EPA's 2016 GHG Inventory was released in April 2016 (after BLM issued its proposed rule), and provides estimates of methane loss from the oil and gas sector that are significantly greater than previous estimates.[47] EPA updated its method for estimating emissions using the latest peer-reviewed science published over the last several years. The data also revealed that emissions had grown by more than 10 percent between 2010 and 2014.

Commenters also referenced a 2013 top-down study led by the National Oceanic and Atmospheric Administration (NOAA) that estimated emissions from an oil and natural gas production field in Uintah County, Utah, using atmospheric measurements in a mass balance approach. The measurements, published in Geophysical Research Letters, suggested an emission rate between 6.2 and 11.7 percent of production, allowing for uncertainties in gas composition and gas production.[48] This is significantly higher than estimates from bottom up inventories, such as the 1.4 percent of production assumed in the 2012 EPA Greenhouse Gas Inventory, and further suggests that natural gas waste is likely underestimated in commonly cited inventories.

In meetings pursuant to E.O. 12866, stakeholders referenced a new study published in *Nature* on October 5, 2016, entitled ''Upward revision of global fossil fuel methane emissions based on isotope database.'' [49] The research was conducted by scientists from NOAA and the Cooperative Institute for Research in Environmental Sciences at the University of Colorado, Boulder. The study relied on the largest isotopic methane source signature database ever assembled to estimate total global methane emissions and identify the sources of emissions. It finds that methane emissions from fossil fuel production are 20% to 60% greater than previous estimates, and that they represent 20% to 25% of global methane emissions. The study also highlights that methane emissions by microbial sources (*e.g.,* cows, agriculture, landfills, and wetlands) are responsible for 58% to 67% of total methane emissions each year, and that these sources drove most of the global increase in methane emissions observed between 2007 and 2013. Thus, the study affirms the potential for methane mitigation from fossil fuel production, while indicating that significant further reductions may be available from expanding mitigation efforts to other sectors as well.

There have also been recent and ongoing studies of so-called ''super-emitters,'' which account for a disproportionate quantity of the losses. One of these is a study by Zavala et al., published on July 7, 2015, in *Environmental Science and Technology.* The study used data collected from gas wells in the Barnett Shale region in Texas to identify unusually high emitters—that is, emissions outliers—by focusing on a site's absolute methane emissions divided by production rate. The study referred to this metric as the proportional loss rate, and demonstrated that sites with ''high proportional loss rates have excess emissions resulting from abnormal or otherwise avoidable operating conditions such as improperly functioning equipment.'' The study then concluded that these sources' ''reduction potential''—that is, their ability to reduce their losses—is likely greater than that suggested by emission-factor based estimates. The study also found that the losses and abnormal operating conditions that characterize these super-emitters are not specific to a given set or type of sources, but can and do occur at different sources over time.[50]

In 2015, a team of scientists at Colorado State University published studies based on direct measurements of emissions from 114 gathering facilities at sixteen different processing plants. The study found that 30 percent of facilities were responsible for approximately 80 percent of the venting. Substantial venting occurred at liquid storage tanks at approximately 20 percent of the facilities where emission rates were four times the average rate. Moreover, the high emitting facilities were generally capable of immediate emission reductions through operating adjustments, such as adjusting the operating pressure of the separation equipment.[51]

In 2012, the City of Fort Worth, Texas, sponsored a study of 375 oil and gas production facilities. It found that thief hatches were the largest source, and pneumatic controllers were the most frequent source, of fugitive emissions at well pads and compressor stations. These leaks were often due to operator error or inadequate maintenance.[52]

Commenters also pointed to the largely random nature of significant leaks. A recent study, authored by Lyon et al., used optical gas imaging to survey 8,220 oil and gas well pads through aerial surveys. The study found only a small correlation between the probability of detection of a leak and site characteristics, such as well count, well age, gas production, oil production, and water production. The stochastic and diverse nature of the sites with leaks, along with the level of waste observed, provides further support for broadly applicable leak detection and repair programs.[53]

Both the Zavala and Lyon studies observed that leak rates are not strongly correlated with well production rates—that is, higher and lower producing wells can both have significant levels of natural gas waste. Specifically, the Zavala study found small producing sites (10–100 Mcf/day) were twice as likely as those sites an order of magnitude larger (100–1,000 Mcf/day) to be among the 5% of sites with the

[47] EPA, *U.S. Greenhouse Gas Inventory Report: 1990–2014* at 3–69, Table 3–46 (2016), *available at https://www.epa.gov/sites/production/files/2016-04/documents/us-ghg-inventory-2016-main-text.pdf* (''2016 GHG Inventory''); EPA,*U.S. Greenhouse Gas Inventory Report: 1990–2013* at 3–70, Table 3-44 (2016), *available at https://www.epa.gov/sites/production/files/2016-03/documents/us-ghg-inventory-2015-main-text.pdf* (''2015 GHG Inventory''). *See also* Envt'l Def. Fund, *New EPA Stats Confirm: Oil & Gas Methane Emissions Far Exceed Prior Estimates* (Apr. 15, 2016), *https://www.edf.org/media/new-epa-stats-confirm-oilgas-methane-emissions-far-exceed-prior-estimates;* A.R. Brandt et al., *Methane Leaks from North American Natural Gas Systems,* 343 Science 733 (2014), *available at http://www.novim.org/images/pdf/ScienceMethane.02.14.14.pdf;* Gina McCarthy, *Remarks on Climate Action at CERA in Houston, Texas* (Feb. 24, 2016), *available at https://yosemite.epa.gov/opa/admpress.nsf/8d49f7ad4bbcf4ef852573590040b7f6/5c432a7068e191e985257f630054fea8!OpenDocument.*

[48] Anna Karion et al., Methane Emissions Estimate from Airborne Measurements Over a Western United States Natural Gas Field, 40, *Geophysical Research Letters* 4393, 4393 (2013) (*http://onlinelibrary.wiley.com/doi/10.1002/grl.50811/full*).

[49] Schwietzke, Stefan et al. ''Upward Revision of Global Fossil Fuel Methane Emissions Based on Isotope Database.'' *Nature,* 88 Vol. 538. (Oct. 5, 2016) (*http://www.nature.com/nature/journal/v538/n7623/full/nature19797.html*); U.S. Department of Commerce, National Oceanic and Atmospheric Administration. *Study Finds Fossil Fuel Methane Emissions Greater Than Previously Expected* (2016) (*http://www.noaa.gov/media-release/study-finds-fossil-fuel-methane-emissions-greater-than-previously-estimated*).

[50] Zavala-Araiza, et al., (2015) ''Toward a Function Definition of Methane Super-Emitters: Application to Natural Gas Production Sites,'' Environ. Sci. Technol., 49, at 8167–8174 (''Zavala-Araiza (2015)''), available at *http://pubs.acs.org/doi/abs/10.1021/acs.est.5b00133.*

[51] Mitchell, A.L., et al, (2015) ''Measurements of Methane Emissions from Natural Gas Gathering Facilities and Processing Plants,'' *Environ. Sci. Technol,* 2015, 49 (5), pp 3219–3227, *available at http://pubs.acs.org/doi/abs/10.1021/es5052809.*

[52] Eastern Research Group and Sage Environmental Consulting, City of Fort Worth Natural Gas Air Quality Study (Final Report) 3–99 (2011), *available at http://fortworthtexas.gov/uploadedFiles/Gas_Wells/AirQualityStudy_final.pdf.*

[53] David R. Lyon et. al, Aerial Surveys of Elevated Hydrocarbon Emissions from Oil and Gas Production Sites, 1 Envtl. Sci. Tech. (2016)

highest emissions. The Lyon study found that well pad characteristics, such as oil production levels, could only collectively explain about 14% of the variation in observed emissions. While a statistically significant correlation between size and leaks is observed, both studies note that it is a weak linear correlation and that leak occurrence is largely stochastic. The Lyon study found that over 15 percent of the high-emitting sites detected in its survey were low production sites, producing 15 barrel of oil equivalent (BOE) per day or less.[54]

Another recent study by the Colorado Air Pollution Control Division surveyed oil and gas wells over two years using optical gas imaging. The research revealed a significant number of leaks, but also highlighted that it is possible to achieve immediate reduction or minimization of waste from production facilities with timely identification and repair of leaks. The survey spanned from July 2013 through June of 2015 and covered over 4,400 facilities. The optical gas imaging technology identified gas lost through leaks or vents at more than 25 percent of the facilities, with the majority of these leaks or vents occurring at storage tanks.[55]

c. Existing BLM Regulations Need To Be Updated

As discussed in detail in the proposed rule preamble at section IV.E, venting, flaring, and royalty-free uses of oil and natural gas on BLM-administered leases are currently governed by NTL–4A. This ''Notice to Lessees'' was issued by the U.S. Geological Survey on December 27, 1979, before the BLM assumed oversight responsibility for onshore oil and gas development and production. NTL–4A places limitations on venting or flaring of gas-well or oil-well gas, unless approved in writing by BLM. NTL–4A also specifies the circumstances under which an operator owes royalties on oil or gas that is lost from a lease.

In the past 37 years since NTL–4A was issued, oil and gas production technologies and practices have advanced considerably, particularly with the development of modern hydraulic fracturing techniques and directional drilling. Technologies for capturing and using gas on-site, detecting leaks, powering equipment, controlling vapors from storage vessels, removing liquids from gas wells, and many other aspects of the production process have also advanced. Not surprisingly, NTL–4A neither reflects today's best practices and advanced technologies, nor is particularly effective in minimizing waste of public minerals, as the previously described data and studies show. In addition, as discussed in the preamble to the proposed rule, ambiguities have arisen regarding how NTL–4A is interpreted and implemented by various BLM offices and industry entities. There is a compelling need to update these requirements to make them clearer, more effective, and reflective of modern technologies and practices.

d. Concerns Identified Through Oversight

External oversight reviews strongly support the BLM's conclusion that the current NTL–4A requirements need to be updated, and many of the changes made in this rule implement recommendations from relevant oversight reviews. As discussed in the proposed rule, key oversight reviews that influenced the development of this rule include: (1) A December 2007 Royalty Policy Committee (RPC) report, *Mineral Revenue Collection from Federal and Indian Lands and the Outer Continental Shelf,* which recommended that the BLM update its rules and identified many specific actions to improve production accountability; (2) a March 2010 report by the OIG, *BLM and MMS Beneficial Use Deductions,* which recommended that the BLM clarify its requirements for royalty-free use of natural gas; and (3) an October 2010 GAO report, *Federal Oil and Gas Leases—Opportunities Exist to Capture Vented and Flared Gas, Which Would Increase Royalty Payments and Reduce Greenhouse Gases,* which recommended that the BLM update its regulations to take advantage of opportunities to capture economically recoverable natural gas using available technologies.

In July 2016, the GAO issued another report relevant to this rule. The 2016 report entitled, ''*OIL AND GAS—Interior Could Do More to Account for and Manage Natural Gas Emissions,*'' reviewed the DOI's provisions to account for and manage natural gas emissions. The GAO found that DOI agencies, including the BLM and ONRR, have historically focused on determining the volume of natural gas production and accounting for the percent of that volume that is royalty-bearing, but have not focused enough on providing operators clear guidance on how to determine, account for, and report the volumes of natural gas that are *not* royalty bearing. The GAO suggested that lack of specific guidance in these areas has resulted in substantial variation in how operators obtain and report the data, and may result in inaccuracy in the DOI's data on natural gas emissions. The GAO recommended that the BLM provide operators with specific instructions regarding how to estimate natural gas emissions, which the GAO suggests would improve emissions data and better ensure that, when appropriate, royalties are collected on these lost quantities of natural gas. The GAO also addressed recommendations to the ONRR that are closely related to provisions of this rule. For example, the GAO recommended that the ONRR provide additional guidance on how to report royalty-free and royalty-bearing flaring, and how to report unreported or underreported emissions from sources such as tanks. Some of the changes made in today's rule will help clarify the regulatory requirements that relate to some of these reporting concerns.

3. Relationship to Other Federal, State, and Industry Activities

Understanding that other Federal, State and tribal rules also apply to aspects of onshore oil and gas production, the BLM has aimed to ensure that this rule will complement other regulatory requirements. As noted earlier, for example, the EPA issued rules in 2012 and May of 2016 to control emissions of methane and VOCs from new, modified and reconstructed oil and gas wells and production equipment, and many States and tribes also regulate aspects of the production process to address safety, waste, production accountability, and/or air quality concerns.

In updating the BLM regulations, the BLM carefully considered and accounted for these potentially overlapping regimes. Thus, to the maximum extent possible, today's rule aligns its requirements with similar requirements adopted by the EPA or the States, exempts equipment and processes covered by EPA requirements, and authorizes the BLM to grant variances from particular rule provisions if a petitioner State or tribe can show that a State, local, or tribal requirement is at least as effective as the corresponding provision of this rule. The BLM is also committed to working with the EPA to ensure that any future EPA regulations align to the extent possible with the BLM requirements. To

[54] David R. Lyon et. al, *Aerial Surveys of Elevated Hydrocarbon Emissions from Oil and Gas Production Sites,* 1 Envtl. Sci. Tech. (2016) available at *http://pubs.acs.org/doi/abs/10.1021/acs.est.6b00705.* See supporting information ''Site-level parameter data for well pads in the surveyed areas and basins'' file columns M and N in the ''Surveyed Well Pads'' worksheet.

[55] Colorado Department of Public Health and Environment Air Pollution Control Division Colorado Optical Gas Imaging Infrared Camera Pilot Project: Final Assessment July 11, 2016 Author: Tim Taylor

the extent that additional State or tribal regulations are adopted in the future, the State and tribal variance provisions in section 3179.401 provide a mechanism for the BLM to approve compliance with those regulations in lieu of the BLM regulations, where the State or tribal regulations meet the criteria for a variance.

As noted earlier, even though EPA, State, and tribal requirements address some gas waste, there is still a clear need for this rule. For one thing, the BLM has independent legal and proprietary responsibilities to prevent waste in the production of Federal and tribal minerals, as well as to ensure the safe, responsible, and environmentally protective use of BLM-managed lands and resources. This rule will update the BLM's decades-old venting and flaring requirements, and represents an important element of BLM's larger effort to ensure that its oil and gas regulations are effective, transparent, and easy to understand and administer, and that the provisions of those regulations adequately account for significant recent technological advances in the industry.

The BLM also notes that this regulation covers a range of sources and activities that are not adequately addressed by existing BLM, State, or tribal regulations. Further, EPA regulations cover only new, modified, and reconstructed sources, not the many existing and unmodified sources on BLM-administered leases. EPA regulations also do not address flaring or activities such as liquids unloading. Finally, State and tribal regulations are effective only within the jurisdiction of the relevant State or tribe, and State and tribal regulations do not consistently address all the sources of waste BLM seeks to prevent via this rule. Indeed, no State or tribe has requirements covering all the sources of waste addressed by this rule.

In the proposed rule preamble section IV.I.2., the BLM also discussed the commendable efforts that some oil and gas operators have made to reduce waste of gas through venting, flaring, and leaks. While steps in the right direction, these voluntary efforts are insufficient by themselves, given the large and growing volumes of waste. Moreover, for the one specific activity area for which industry has identified a reduction in gas losses over the past few years—well completions at hydraulically fractured gas wells—the decreases appear to be largely driven by the adoption of the EPA subpart OOOO requirements for green completions at those wells.

The following sections provide a brief overview of EPA and State regulations that are particularly relevant to this rulemaking.

a. EPA Regulations

The EPA regulates air pollution from oil and gas production, and since measures to reduce emissions tend to limit releases of natural gas, the EPA's air pollution regulations to reduce emissions from the oil and gas sector have the co-benefit of reducing waste of natural gas and increasing gas capture. BLM very carefully coordinated the waste prevention requirements under today's rule with EPA requirements applicable to some of the same sources, to minimize compliance burdens for operators and to avoid unnecessary duplication.

As explained in section IV.I.3 of the proposed rule preamble, the EPA adopted new source performance standards (NSPS) in 2012 (subpart OOOO) that require new, modified, or reconstructed sources to limit the release of VOCs by requiring that operators use "green completions" at hydraulically fractured natural gas wells.[56] The EPA's NSPS also imposed requirements at gas processing plants and boosting stations.[57]

On September 18, 2015, EPA proposed NSPS standards that would update the 2012 standards to limit methane in addition to VOCs, as described in the BLM proposed rule, to be codified in proposed 40 CFR part 60 subpart OOOOa.[58] This rule also proposed to limit methane and VOC emissions from additional sources not covered under the 2012 subpart OOOO rule. EPA finalized 40 CFR part 60 subpart OOOOa on May 12, 2016, after receiving over 900,000 public comments and holding three public hearings, and the rule went into effect in August 2016. As with the subpart OOOO standards, subpart OOOOa applies only to new, modified, or reconstructed sources, and not to existing equipment and operations. The final OOOOa rule regulates greenhouse gases through limits on methane emissions that owners and operators can meet using readily available and cost-effective technologies.[59] It also requires leak detection and repair at new, modified, and reconstructed sources, and it covers additional new, modified, and reconstructed equipment and activity in the oil and gas production sector not addressed in the subpart OOOO standards, such as hydraulically fractured oil well completions, pneumatic pumps, and fugitive emissions from well sites and compressor stations. The final 40 CFR subpart OOOOa rule includes several changes from the EPA's proposed rule that are particularly noteworthy with respect to the BLM's rulemaking, including: (1) It establishes a fixed semi-annual schedule for monitoring leaks from well sites; (2) it does not adopt a proposed exemption from the LDAR requirements for low-production wells; and (3) it does not adopt proposed requirements to limit emissions from pneumatic piston pumps.

On May 12, 2016, EPA also announced the availability of Control Technique Guidelines (CTGs) to help States reduce VOC emissions from *existing* sources in certain ozone nonattainment areas. Although reducing methane emissions is not the purpose of CTGs, control of VOC emissions also results in co-control of methane emissions. These CTGs identify many of the same types of measures required by the OOOOa standards, but the guidelines are not legally binding. Rather, the CTGs are a set of recommendations that State and local air pollution control agencies must consider when evaluating what they will identify as Reasonably Available Control Technology (RACT) for existing sources covered under State ozone nonattainment plans to implement Clean Air Act requirements, known as State Implementation Plans (SIPs). States are only required to include RACT measures in their SIPs for ozone nonattainment areas whose air quality levels violate the Clean Air Act air quality standard for ozone and are classified as moderate nonattainment or higher.[60] In October of 2015, EPA revised the health-based ambient air quality standard for ozone pollution to 70 parts per billion. The changes to SIPs required to address that pollution would be due to EPA within two years after the ozone classifications are published in the **Federal Register**, which is projected to be no later than Jan. 21, 2021.[61] It appears that few, if any, areas with significant Federal or Indian oil and gas production are likely to be classified as moderate nonattainment or above for the most recent ozone standard. Moreover, even if some areas with

[56] 79 FR 49490, August 16, 2012.

[57] Subpart OOOO imposed emission standards for pneumatic controllers, centrifugal compressors and storage vessels, and required work practices for reciprocating compressors and equipment leaks at gas processing plants. Subpart OOOO also imposed a sulfur dioxide emission standard for sweetening units at gas processing plants.

[58] 80 FR 56593, Sept. 18, 2015.

[59] 81 FR 35823, June 3, 2016.

[60] *I.e.,* nonattainment areas designated "moderate" or above.

[61] These are the attainment dates for areas designated as moderate nonattainment or above.

significant Federal or Indian oil and gas production are identified as having ozone pollution problems, the changes to SIPs required to address that pollution would not likely be due to EPA for a number of years.

The EPA has also taken the first steps to gather information to promulgate regulations that would require subsequent State regulation of existing sources under Clean Air Act (CAA) section 111(d). When the EPA establishes NSPS for new sources in a particular source category, as it did for the oil and gas sector in its OOOOa regulations promulgated in May 2016, the EPA is also required, under CAA section 111(d)(1), to prescribe regulations for States to submit plans establishing emissions performance standards for existing sources in that source category. Acting under this CAA mandate, in March of 2016 the EPA announced its intention to regulate existing oil and gas sources for methane and VOC emissions.[62] To begin this process, the EPA issued a draft information collection request (ICR) on May 12, 2016, and a second draft ICR on September 23, 2016.[63] Once the ICR is approved by the Office of Management and Budget, the ICR is expected to gather a broad range of information on the oil and gas industry regarding emission control efficacy, costs, and timing requirements.[64] The EPA then expects to use this information in developing regulations to guide State plans to reduce emissions from existing sources. This rulemaking would then be followed by State development and adoption of State plans containing enforceable performance standards for sources, State plan approvals by EPA, and subsequent implementation by industry to meet compliance deadlines established in the State plans. Given the length of this process and the uncertainty regarding the final outcomes, and in light of the BLM's independent statutory mandate to prevent waste from Federal and Indian oil and gas leases based on information currently available, the BLM has determined that it is necessary and prudent to update and finalize this regulation at this time.

b. State Regulations

In developing this rule, the BLM consulted with State regulators and reviewed analogous State requirements related to waste of oil and gas resources. Specifically, the BLM reviewed requirements from Alaska, California, Colorado, Montana, North Dakota, Ohio, Pennsylvania, Utah, and Wyoming. Most of these State requirements were discussed in the preamble to the proposed rule, which also explained that these State requirements, and the outcomes they produce, vary widely.[65] As noted in the preamble to the proposed rule, of the States with extensive oil and gas operations on BLM-administered leases, only one has comprehensive requirements to reduce flaring, and only one has comprehensive statewide requirements to control losses from venting and leaks.[66] Furthermore, State regulations do not apply to BLM-administered leases on Indian lands, and States do not have a statutory mandate or trust responsibility to reduce the waste of Federal and Indian oil and gas. Finally, because State laws and regulations are subject to change, BLM reliance on State standards risks additional waste of public resources and adverse environmental impacts to Federal and Indian lands should the State standards change to allow for additional waste and environmental impacts. There is therefore a need for uniform, modern waste reduction standards for oil and gas operations on public and Indian lands across the country. Nonetheless, the BLM did look to some of the most effective State approaches as models. In particular, we have drawn on approaches that Colorado, Wyoming and North Dakota adopted to address rising rates of flaring, waste of minerals, and pollution impacts in those states.

The BLM also notes that at least two States have recently expressed an intent to further reduce methane emissions through regulatory action. On February 1, 2016, California's Air Resources Board proposed new rules to reduce emissions of methane through venting and leaks during oil and gas production, processing, and storage.[67] These proposed rules would require the use of vapor collection systems and the control of vapors with 95 percent efficiency. The rules would limit the use of combustion; however, if a combustion control device must be used, the rules would require the use of a low-emissions incinerator. In January 2016, the Pennsylvania Department of Environmental Protection also announced that it would pursue an enhanced strategy for reducing methane emissions.[68] Importantly, though, neither of these proposed regimes nor any existing State regimes cover the full suite of oil and gas activities addressed by this rule.

C. Legal Authority

Pursuant to a delegation of Secretarial authority, the BLM is authorized to regulate oil and gas activities on Federal and Indian lands under a variety of statutes, including the MLA, the MLAAL, FOGRMA, FLPMA, the IMLA, the IMDA, and the Act of March 3, 1909.[69] These statutes authorize the Secretary of the Interior to promulgate such rules and regulations as may be necessary to carry out the statutes' various purposes.[70]

The MLA rests on the fundamental principle that the public should benefit from mineral production on public lands.[71] A primary instrument for public benefit is the requirement that a lessee return a portion of the proceeds from production to the public through the payment of royalties to Federal, State, and/or tribal governments. For competitively issued leases, the MLA requires the payment of a royalty ''at a rate *not less than* 12.5 percent in amount or value of the production removed or sold from the lease''; for non-competitive leases, the MLA sets the royalty ''at a rate of 12.5 percent in amount or value of the production

[62] McCarthy, Gina. ''EPA Taking Steps to Cut Methane Emissions from Existing Oil and Gas Sources''. March 10, 2016. Available at *https://blog.epa.gov/blog/2016/03/epa-taking-steps-to-cut-methane-emissions-from-existing-oil-and-gas-sources.*

[63] 81 FR 35763 and 81 FR 66692.

[64] On September 23, 2016, EPA issued a second draft ICR, and public comments are due October 31, 2016. Once all of the public comments are reviewed and incorporated, and the ICR is approved by the Office of Management and Budget, the EPA will issue a final ICR, using its authority under CAA Section 114. Industry will have at least 30 days to complete the operator survey and 120 days to respond to the facility survey. *https://www.gpo.gov/fdsys/pkg/FR-2016-09-29/pdf/2016-23463.pdf.*

[65] 81 FR at 6633–34.

[66] 81 FR at 6636.

[67] State of California Air Resources Board Staff Report: Statement of Reasons, available at: *http://www.arb.ca.gov/cc/oil-gas/Oil%20and%20Gas%20ISOR.pdf.*

[68] Pennsylvania Department of Environmental Protection, A Pennsylvania Framework of Actions for Methane Reductions from the Oil and Gas Sector, available at: *http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Methane/DEP%20Methane%20Strategy%201-19-2016%20PDF.pdf.*

[69] Mineral Leasing Act, 30 U.S.C. 188–287; Mineral Leasing Act for Acquired Lands, 30 U.S.C. 351–360; Federal Oil and Gas Royalty Management Act, 30 U.S.C. 1701–1758; Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701–1785; Indian Mineral Leasing Act of 1938, 25 U.S.C. 396a–g; Indian Mineral Development Act of 1982, 25 U.S.C. 2101–2108; Act of March 3, 1909, 25 U.S.C. 396.

[70] 30 U.S.C. 189 (MLA); 30 U.S.C. 359 (MLAAL); 30 U.S.C. 1751(a) (FOGRMA); 43 U.S.C. 1740 (FLPMA); 25 U.S.C. 396d (IMLA); 25 U.S.C. 2107 (IMDA); 25 U.S.C. 396.

[71] *See, e.g., California Co.* v. *Udall,* 296 F.2d 384, 388 (D.C. Cir. 1961) (noting that the MLA was ''intended to promote wise development of . . . natural resources and to obtain for the public a reasonable financial return on assets that 'belong' to the public'').

removed or sold from the lease.'' [72] The BLM is responsible for specifying royalty rates and determining the quantity of produced oil and gas that is subject to royalties under the terms and conditions of a Federal lease.

Another important means of ensuring that the public benefits from mineral production on public lands is minimizing and deterring the waste of oil and gas produced from the Federal mineral estate. To this end, the MLA requires oil and gas lessees to ''use all reasonable precautions to prevent waste of oil or gas developed in the land, . . .'' [73] The MLA requires lessees to exercise ''reasonable diligence, skill, and care'' in their operations and also requires oil and gas lessees to observe ''such rules . . . for the prevention of undue waste as may be prescribed by [the] Secretary.'' [74] Lessees are not only responsible for taking measures to prevent waste, but also responsible for making royalty payments on wasted oil and gas when waste does occur. In FOGRMA, Congress expressly made lessees ''liable for royalty payments on oil or gas lost or wasted from a lease site when such loss or waste is due to negligence on the part of the operator of the lease, or due to the failure to comply with any rule or regulation, order or citation issued under [FOGRMA] or any mineral leasing law.'' [75]

In addition to ensuring that the public benefits from oil and gas production from public lands, the BLM is also tasked with regulating the physical impacts of oil and gas development on public lands. The MLA directs the Secretary to ''regulate all surface-disturbing activities conducted pursuant to any lease'' and to ''determine reclamation and other actions as required in the interest of conservation of surface resources.'' [76] The MLA requires oil and gas leases to include provisions ''for the protection of the interests of the United States . . . and for the safeguarding of the public welfare,'' which includes lease terms for the prevention of environmental harm.[77] The Secretary may suspend lease operations ''in the interest of conservation of natural resources,'' a phrase that encompasses not just conservation of mineral deposits, but also preventing environmental harm.[78] The Secretary also may refuse to lease lands in order to protect the public's interest in other natural resources and the environment.[79] BLM's regulations governing oil and gas operations on the public lands have always required operators to avoid damaging other natural resources or environmental quality.[80]

The MLA additionally requires oil and gas leases to contain ''a provision that such rules for the safety and welfare of the miners . . . as may be prescribed by the Secretary shall be observed . . . .'' [81] This rule helps to ensure safety of workers engaged in the production of oil and gas on Federal and Indian lands by requiring, except in special circumstances, the combustion of natural gas loosed from wells and equipment during production.

FLPMA further authorizes BLM to ''regulate'' the ''use, occupancy, and development'' of the public lands via ''published rules.'' [82] FLPMA also mandates that the Secretary, ''[i]n managing the public lands . . . shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.'' [83] And FLPMA authorizes BLM to ''promulgate rules and regulations to carry out the purposes of this Act and of other laws applicable to the public lands.'' [84] FLPMA expressly declares that the BLM should balance the need for domestic sources of minerals against the need to ''protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archeological values; . . . [and] provide for outdoor recreation and human occupancy and use.'' [85]

FLPMA requires the BLM to manage public lands under principles of multiple use and sustained yield.[86] The statutory definition of ''multiple use'' explicitly includes the consideration of environmental resources. Multiple use is a ''combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources . . . .'' [87] Multiple use also requires resources to be managed in a ''harmonious and coordinated'' manner ''without permanent impairment to the productivity of the land and the quality of the environment.'' [88] Significantly, FLPMA admonishes the Secretary to consider ''the relative values of the resources and not necessarily . . . the combination of uses that will give the greatest economic return or the greatest unit output.'' [89]

Finally, the promulgation of this rule helps to meet the Secretary's statutory trust responsibilities with respect to the development of Indian oil and gas interests. The Secretary's management and regulation of Indian mineral interests carries with it the duty to act as a trustee for benefit of the Indian mineral owners.[90] The Congress has directed the Secretary to ''aggressively carry out [her] trust responsibility in the administration of Indian oil and gas.'' [91] In furtherance of her trust obligations, the Secretary has delegated regulatory authority for administering operations on Indian oil and gas leases to the BLM,[92] which has developed specialized expertise through regulating the production of oil and gas from public lands administered by the Department. In choosing from among reasonable regulatory alternatives for Indian mineral development, the BLM is obligated to adopt the alternative that is in the best interest of the tribe and individual Indian mineral owners.[93] What is in the best interest of the tribe and individual Indian mineral owners is determined by a consideration of all relevant factors, including economic considerations as well as potential environmental and social effects.[94] The BLM believes that this rule is in the best interest of Indian mineral owners because it will prevent unnecessary and excessive losses (''waste'') of natural gas from Indian lands. In so doing, this rule will help ensure that the extraction of natural gas from Indian lands results in the payment of royalties to Indian mineral owners, rather than the waste of

[72] 30 U.S.C. 226(b)(1)(A) (emphasis added); 30 U.S.C. 226(c)(1); *see also* 30 U.S.C. 352 (applying that requirement to leases on acquired land). The same royalty provision is included in the lease instruments for leases of Indian tribal and allotted lands under applicable regulations, although that rate is set at no less than 16⅔%, absent approval of the Secretary. 25 CFR 211.41, 212.41.

[73] 30 U.S.C. 225.

[74] 30 U.S.C. 187.

[75] 30 U.S.C. 1756.

[76] 30 U.S.C. 226(g).

[77] *See Natural Resources Defense Council, Inc.* v. *Berklund,* 458 F. Supp. 925, 936 n.17 (D. DC 1978).

[78] 30 U.S.C. 209; *Copper Valley Machine Works* v. *Andrus,* 653 F.2d 595, 601 & nn.7–8 (D.C. Cir. 1981); *Hoyl* v. *Babbitt,* 129 F.3d 1377, 1380 (10th Cir. 1997); *Getty Oil Co.* v. *Clark,* 614 F. Supp. 904, 916 (D. Wyo. 1985).

[79] *Udall* v. *Tallman,* 380 U.S. 1, 4 (1965); *Duesing* v. *Udall,* 350 F.2d 748, 751–52 (1965).

[80] *See* 43 CFR 3162.5–1 to .5–2 (1983–2014).

[81] 30 U.S.C. 187.

[82] 43 U.S.C. 1732(b).

[83] 43 U.S.C. 1732(b).

[84] 43 U.S.C. 1740.

[85] 43 U.S.C. 1701(a)(8).

[86] 43 U.S.C. 1702(c), 1732(a).

[87] 43 U.S.C. 1702(c).

[88] 43 U.S.C. 1702(c).

[89] 43 U.S.C. 1702(c).

[90] *See Woods Petroleum Corp.* v. *Department of Interior,* 47 F.3d 1032, 1038 (10th Cir. 1995) (*en banc*).

[91] 30 U.S.C. 1701(a)(4).

[92] 235 DM 1.1.K.

[93] *See Jicarilla Apache Tribe* v. *Supron Energy Corp.,* 728 F.2d 1555, 1567 (10th Cir. 1984) (Seymour, J., concurring in part and dissenting in part), adopted as majority opinion as modified *en banc,* 782 F.2d 855 (10th Cir. 1986).

[94] *See* 25 CFR 211.3.

the owners' mineral resources.[95] Additionally, the BLM believes tribal members and individual Indian mineral owners who live near Indian oil and gas development will realize environmental benefits as a result of this rule's reductions in flaring and air pollution from Indian oil and gas development. During public comment hearings, the BLM heard from a number of tribal members who raised concerns about the impacts of vented and leaked gas on their health, highlighting in particular increases in ozone pollution and air toxics. Tribal members also detailed the impacts of living near numerous large flares, noting the resulting noise and light pollution. The BLM believes that this rule will help to reduce some of these impacts on tribal members.

In short, the BLM has the authority to manage public and tribal oil and gas resources to reduce waste and ensure environmentally responsible development. In response to the notice of proposed rulemaking, the BLM received many comments asserting a range of different arguments regarding the BLM's exercise of its legal authority in promulgating this rule. The most salient of these arguments are addressed later in this preamble, but the BLM did not make any changes to this rule based on comments about the BLM's authority.

D. Stakeholder Outreach

In 2014 and again in in 2016, the BLM conducted a series of forums to consult with tribal governments [96] and solicit stakeholder views to inform the BLM's development of the proposed and final rules. In 2014, the BLM held public meetings in Denver, Colorado (March 19, 2014), Albuquerque, New Mexico (May 7, 2014), Dickinson, North Dakota (May 9, 2014), and Washington, DC (May 14, 2014).[97] On each of those days, the BLM held a tribal outreach session in the morning and a public outreach session in the afternoon. In advance of the tribal outreach sessions, the BLM sent letters to over 200 tribal leaders that have previously expressed interest in oil and gas related matters. These letters explained generally the proposed rulemaking, invited the tribal leaders to attend the outreach sessions, provided contact persons for further information, and provided an email address for submitting comments. At the 2014 Denver, Colorado, and Washington, DC sessions, the tribal and public meetings were live streamed to allow for the greatest possible participation by interested parties. The tribal outreach sessions also served as initial consultation with Indian tribes to comply with Executive Order 13175, Consultation and Coordination with Indian Tribal Governments.

As part of our pre-proposal outreach efforts, the BLM accepted informal comments generated as a result of the public/tribal outreach sessions through May 30, 2014. A total of 29 unique comments were received: 12 from the oil and gas industry and trade associations, 6 from NGOs representing 37 organizations, 2 from government officials or elected representatives, and 9 from private citizens. Two hundred and sixty comments from private citizens were part of an email campaign.

After the proposed rule was published on February 8, 2016, we conducted a second series of paired outreach meetings, with a tribal meeting each morning and a public meeting each afternoon. We held these meetings at four locations: Farmington, New Mexico (February 16, 2016), Oklahoma City, Oklahoma (February 18, 2016), Denver, Colorado (March 1, 2016), and Dickinson, North Dakota (March 3, 2016). Again, in advance of the tribal outreach sessions, the BLM sent letters to over 200 tribal leaders that have previously expressed interest in oil and gas related matters. These letters explained generally the proposed rule, invited the tribal leaders to attend the outreach sessions, provided contact persons for further information, and provided an email address for submitting comments. The public outreach sessions included a telephone conference call-in number to allow members of the public who could not attend in person to listen live to the proceedings.

In addition, the BLM conducted outreach to States with extensive oil and gas production on BLM-administered leases. Prior to the proposal, the BLM reviewed State regulations and guidance, and contacted State regulatory bodies that oversee aspects of oil and gas production to discuss their requirements and practices. After issuing the proposal, the BLM conducted seven online meeting sessions with State regulators from Alaska, Colorado, New Mexico, North Dakota, Utah (two meetings), and Wyoming.

In response to the proposed rule and these outreach meetings, the BLM received approximately 330,000 total comment submissions from Federal, State, and local governments and agencies, tribal organizations, industry representatives, non-governmental organizations, individuals, and other stakeholders. Of the approximately 330,000 comment submissions, approximately 1,000 were unique comments, with the remaining comments coming from mass-mailing campaigns from several organizations. The BLM closely reviewed and analyzed the comments we received, and made revisions to the proposed rule based on the information, data, analysis, insights, and viewpoints provided in the comments. The final rule reflects the very extensive input that the BLM gathered from these public meetings, discussions with States and tribes, and the public comment process.

IV. Summary of Final Rule

Like the proposed rule, the final rule focuses on key areas in the oil and gas production process where waste-prevention actions are most effective and least costly. Specifically, we are adopting requirements to reduce waste from the following: Venting or flaring of associated gas from producing oil wells; gas leaks from equipment and facilities located at the well site, as well as from compressors located on the lease; operation of high-bleed pneumatic controllers and certain pneumatic pumps; gas emissions from storage vessels; well maintenance and liquids unloading; and well drilling and completions. Based on the available data regarding methane emissions and the numbers and types of sources of gas losses from Federal and Indian leases, we believe that these aspects of the production process offer the best opportunities for reducing waste.

Like the proposed rule, the final rule requires operators to flare gas rather than vent it, except in specified circumstances, such as emergencies, the routine operation of certain equipment, and when flaring is technically infeasible. The final rule then requires operators to avoid wasteful flaring of gas by capturing for sale or using on-site specified percentages of their adjusted total gas production. Beginning one year from the effective date of the final rule, operators must capture 85 percent of their adjusted total gas production each month, and this gradually increases to 98 percent by 2026. An operator's adjusted total gas production is based on the quantity of high pressure gas produced from the operator's development wells that are in

[95] The remainder of this preamble refers to this analysis as the BLM's determination that, as a result of its trust obligations, it has an obligation or mandate to reduce waste from Indian lands, just as it does to reduce waste from BLM-administered Federal Lands.

[96] In developing this rule, the BLM consulted with tribal stakeholders in compliance with 25 U.S.C. 2107, 512 DM 4, and 512 DM 5.

[97] See the BLM oil and gas program's outreach-events page: *http://www.blm.gov/wo/st/en/prog/energy/public_events_on_oil*.

production, adjusted to exempt a specified volume of gas per well. The exempted or ''flaring allowable'' volume declines over time. Beginning one year from the effective date of the final rule, operators are allowed to exempt 5,400 Mcf gas per well per month, and this quantity gradually declines to 750 Mcf by 2025.

With respect to leaks, the final rule largely follows the proposed rule, except that the required frequency of inspection is set at two times a year, and does not vary according to the number of leaks found. Operators must use optical gas imaging equipment or portable analyzers deployed according to Method 21, and leaks must be repaired and retested within specified time frames. The final rule clarifies the approval process for alternative leak detection devices and for operators' individual alternative leak inspection programs.

Like the proposed rule, the final rule includes requirements to update old and inefficient equipment, and to follow best practices to minimize waste through venting. Thus, operators must replace high-bleed pneumatic controllers and certain pneumatic pumps with less wasteful controllers and pumps, and capture or flare any high volumes of gas that would otherwise be vented from tanks. In addition, the final rule requires operators to capture, flare, use, or reinject gas produced during well drilling and well completions, and it limits the quantities of gas that may be vented royalty-free during well testing.

The final rule continues to address whether and when lost oil or gas is royalty-bearing, based on whether the loss is deemed unavoidable (royalty-free) or avoidable (royalty-bearing). Relative to the proposed rule, and after our evaluation of public comments, the final rule somewhat expands the list of circumstances in which a loss of oil or gas is deemed unavoidable (thereby expanding the circumstances under which the loss of gas is considered royalty-free), and retains the proposed approach that all oil or gas that is not specifically defined as unavoidably lost is deemed to be avoidably lost and subject to royalties. Unavoidable losses include oil or gas lost in emergencies, losses from normal equipment operation when the operator is in compliance with all requirements to update equipment, and gas that is flared from wells not connected to a gas pipeline (unless the operator has not met applicable gas capture requirements). Because the BLM believes that it is reasonable to expect operators to reduce waste in order to comply with the final rule's capture percentage requirements, any quantities of flared gas that cause the operator to violate the applicable capture requirements are deemed avoidable losses and subject to royalties.

In addition, the BLM is finalizing the proposed change to the royalty provisions, to align the provisions with the BLM's statutory authority and allow the BLM to set royalties for competitive leases at or above 12.5 percent. At this time, however, the BLM is not setting the royalty rate above 12.5 percent in this regulation.

Like the proposed rule, the final rule aligns the requirements of this rule to the extent practicable with EPA and State requirements. It also avoids potential regulatory overlap by exempting certain equipment covered by relevant EPA rules, and deeming the operator's compliance with relevant EPA requirements to satisfy the BLM requirements as well.

The final rule also allows a State or tribe to request a variance from particular BLM requirements. If the variance is granted, the BLM has authority to enforce the specific provision(s) of the State, local, or tribal rule for which the variance was granted, instead of the comparable provision(s) of the BLM rule. As clarified in the final rule, the BLM may grant a State or tribal variance request if the BLM determines that the State, local, or tribal rule would perform at least as well as the affected BLM regulatory provision in reducing waste of oil and gas, reducing environmental impacts from venting and or flaring of gas, and ensuring the safe and responsible production of oil and gas.

V. Major Changes From Proposed Rule

Based on information that has become available since the proposed rule, and the extensive material BLM received through public comments, the BLM has made changes and adjustments to the proposed regulatory text. This section of the preamble summarizes the most significant of those changes and addresses some of the key public comments.

This section only addresses a few substantive areas in which the BLM made significant changes from the proposed rule. Section VI discusses significant comments received on other aspects of the rule. The final text of all of the rule provisions, and changes made in light of all public comments, are discussed in Section VII, Section by Section. Finally, additional public comments are addressed in the separate Response to Comments document, which is available to the public on the BLM Web site and is part of the rule-making record.

A. Venting Prohibition and Capture Targets

As discussed in section III.B.2.a of this preamble, routine venting and flaring of gas from oil or gas wells waste significant volumes of natural gas. In 2014, for example, operators vented about 30 Bcf and flared at least 81 Bcf from BLM-administered leases—4.1 percent of the total production from those leases in that year, and sufficient gas to supply nearly 1.5 million households with gas for a year.[98] The final rule aims to reduce this waste using a two-pronged approach: A prohibition on venting, and capture targets to reduce flaring.

1. Venting Prohibition

a. Requirements of Final Rule

First, final rule § 3179.6 prohibits venting from oil and gas wells, except under certain enumerated conditions. The circumstances in which venting is permissible include: When flaring is technically infeasible, such as when the gas is not readily combustible or the volumes are small; when the gas is vented during normal operation of an on-site, gas-activated pneumatic pump or controller; when the gas is vented from a storage vessel, provided that § 3179.203 does not require flaring of the gas; when the gas is vented during downhole well maintenance or liquids unloading, provided those operations are conducted in accordance with § 3179.204 of the final rule; and when gas is vented through a leak, provided that the operator is complying with the rule's LDAR provisions in §§ 3179.301–3179.305. Venting is also permissible during ''emergencies,'' which final rule § 3179.105 defines as situations in which the loss of gas is ''uncontrollable,'' and venting or flaring is ''necessary to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment.'' In addition, venting is allowed if necessary to allow facility or pipeline non-routine maintenance to be performed. Any venting of gas from oil or gas wells that does not fit within one of the circumstances listed in § 3179.6 is a violation of this rule and could result in enforcement actions. In addition, gas vented in violation of this rule will be deemed ''avoidable'' under final rule § 3179.4, and thus subject to royalties under final rule § 3179.5.

[98] BLM analysis of ONRR OGOR–B data provided for 2009–2015 and EPA GHG Inventory data for 2014.

b. Changes From Proposed Rule and Significant Comments

The final venting prohibition largely tracks proposed section § 3179.6, although the BLM modified a few provisions and added additional express exemptions in response to comments received. First, proposed § 3179.6(a)(3), which exempted gas vented from storage vessels subject to conditions specified in § 3179.203, has been renumbered § 3179.6(b)(4) and reworded for clarity. Second, proposed § 3179.6(a)(4), which exempted gas vented during normal operations of natural gas-activated pneumatic controllers and pumps, has been renumbered § 3179.6(b)(3). Third, the BLM added a provision, final rule § 3179.6(b)(5), to clarify that gas may be vented during downhole well maintenance or liquids unloading activities, provided those activities are performed in compliance with § 3179.204. This change responds to comments noting that while this rule requires operators to use best practices to minimize venting from liquids unloading operations, these operations will still release some quantity of gas, and it is not practical to capture and flare that gas regardless of whether the operator uses plunger lifts, manual purging, or another method to unload liquids. Fourth, in response to comments noting that there are additional losses through venting not listed in the proposed provision, the BLM added § 3179.6(b)(6) to the final rule, to clarify that an operator is not required to flare gas that is lost due to leaks, provided the operator is in full compliance with the leak detection and repair requirements in final rule §§ 3179.301–305. Fifth, the BLM added § 3179.6(b)(7) to the final rule, to respond to commenters' concern that some gas is released when pressurized equipment must be depressurized for maintenance, and their assertion that it is difficult and costly to route such infrequent, low-volume emissions to capture or a flare. This exemption from the venting prohibition is limited to venting associated with non-routine maintenance activities. In justifying their request for an exemption for venting associated with maintenance activities, commenters emphasized that these activities release only small quantities of gas in total because they occur infrequently and each incidence involves a relatively small volume of gas. The BLM is aware, however, that activities such as pigging a gathering line may release a not insignificant volume of gas, and, under some circumstances, operators conduct pigging routinely, such as monthly, weekly, or even several times a day. Under those circumstances, the BLM expects that a prudent operator would configure its operations or deploy capture or flaring equipment so as to avoid routine venting, and the final rule requires operators to avoid such routine venting. Finally, the BLM added § 3179.6(b)(8) to the final rule in response to commenters' observations that it may be necessary to vent gas when applicable laws, regulations, or permit terms prohibit flaring in particular areas or at particular times, such as flaring prohibitions that may be imposed in permafrost areas or during an extreme fire hazard.

2. Capture Targets

a. Requirements of Final Rule

The second prong of the final rule's approach to routine venting and flaring is laid out in final rule §§ 3179.7 and 3179.8, which together target routine flaring of associated gas from ''development'' oil wells.[99] These final rule provisions are based on proposed rule §§ 3179.6(b) and 3179.7, respectively, but the provisions have been renumbered and revised in the final rule in response to numerous comments received during the public comment period. This discussion first describes the approach taken in the final rule, and then, in part b., details how this modified approach responds to comments received.

First, in response to comments, the final rule shifts from numerical limits on per-well flaring volumes (the approach taken in proposed rule § 3179.6(b)) to a more flexible approach modeled in part on existing North Dakota rules. The new approach sets targets for the percent of associated gas from development oil wells that must be captured in a given month, either on a per lease/unit/communitized area basis or averaged over a county or state. The capture targets do not, however, apply to the full volume of gas that an operator flares. Instead, like the proposed rule, the final rule allows operators to flare a specified volume of gas that declines over time. In the final rule, however, this allowed flaring has been recast as a ''flaring allowable'' volume that operators can subtract from their total flaring volume *prior* to calculating their capture percentage. Overall, then, the final rule's approach to flaring has three parts: Capture targets, which increase over time; averaging provisions that allow operators to choose whether to comply with the capture targets one lease/unit/communitized area at a time, or instead on an area-wide average basis; and finally, a flaring allowable volume that declines over time, which operators can subtract from their total flaring prior to assessing their compliance with the capture targets.

The mechanics of implementing this approach are as follows. First, final rule § 3179.7 establishes required capture targets that incrementally increase over the first nine years of rule implementation. The schedule for the capture targets is provided in § 3179.7(b)(1)–(4) and reproduced in Table 1:

TABLE 1

Date range	Required monthly capture target (percent of associated gas captured per month)
1/17/2018 through 12/31/2019	85
1/1/2020 through 12/31/2022 ...	90
1/1/2023 through 12/31/2025 ...	95
Beginning 1/1/2026	98

Section 3179.7(c)(3) of the final rule then provides that, in order to demonstrate compliance with the relevant monthly capture target, operators must choose the ''relevant area'' over which they intend to assess their capture percentage(s). An operator may choose whether to comply with the capture targets on each of the operator's leases, units, or communitized areas (the ''lease-by-lease approach,'' see final rule § 3179.7(c)(3)(i)), or instead to comply on a county-wide or state-wide basis (the ''averaging approach,'' see final rule § 3179.7(c)(3)(ii)). An operator that chooses the lease-by-lease approach must demonstrate that *each* lease, unit, or communitized area is *individually* in compliance with the relevant capture target each month. An operator that chooses the averaging approach must notify the BLM by Sundry Notice of its choice by January 1 of the relevant year, and may then demonstrate monthly compliance with the relevant capture target on an area-wide average basis.

The second step to demonstrating compliance with the capture targets, detailed in final rule § 3179.7(c), is for an operator to determine its total volume of gas produced from development oil wells in the relevant

[99] As defined in final rule § 3179.3, a ''development'' oil or gas well is a well ''drilled to produce oil or gas, respectively, from an established field in which commercial quantities of hydrocarbons have been discovered and are being produced.'' The BLM retains the authority to determine whether the well in question is a development oil or gas well. *Id.*

area, subtract the flaring allowable volume, and then divide the result of that calculation into the total volume of gas that the operator sold or used, to determine the operator's actual capture percentage. The operator must then compare its actual capture percentage to the required gas capture percentage for the applicable period, to determine whether the operator meets or exceeds the required capture target for the given month.

More specifically, the volume of gas that the operator sold or used is the volume of gas that the operator sold over the month from all of the operator's development oil wells in the relevant area plus the volume of gas that the operator used on lease, unit, or communitized area across the relevant area. The volume of gas flared is the volume that the operator flared from high pressure flares over the month in the relevant area. The flaring allowable concept derives from the flaring limits introduced in proposed rule § 3179.6(b), and it represents the volume of flared gas that is exempt from the capture target. Flaring allowable equals the total number of development oil wells ''in production'' [100] in the relevant area multiplied by the relevant flaring allowable quantity, which is specified in final rule § 3179.7(c)(2)(i) through (iv) and reproduced in Table 2. The final rule allows an operator to choose whether to calculate each of these volumes—the volumes of gas sold, used, or flared, and the flaring allowable volume—for each BLM-administered lease, unit, or communitized area (under the lease-by-lease approach), or instead to calculate them on an area-wide average basis for all BLM-administered leases, units, and communitized areas in the county or State (under the averaging approach).

TABLE 2

Date range	Monthly flaring allowable per well (Mcf)
1/17/2018 through 12/31/2018	5,400
1/1/2019 through 12/31/2019 ...	3,600
1/1/2020 through 12/31/2020 ...	1,800
1/1/2021 through 12/31/2021 ...	1,500
1/1/2022 through 12/31/2023 ...	1,200
1/1/2024 through 12/31/2024 ...	900
Beginning 1/1/2025	750

[100] As defined in § 3179.7(c)(4), a well is considered ''in production'' after ''a completion, a completion report, or a notice of first production, whichever occurs first, and only during a month in which it produces gas (that is sold or flared) for 10 or more days.''

If the operator's actual capture percentage for a given lease, unit, or communitized area (lease-by-lease approach), or for the county or State (averaging approach), falls short of the required capture target for the given month, then the operator may face enforcement action, and must pay royalties on the excess flared gas, which is considered avoidably lost. The excess flared gas is the volume of gas by which the operator missed its required capture target, and it is calculated as follows:

Excess flared gas = (Required capture target * (total volume of produced gas − flaring allowable)) − (volume of gas sold or used).

Royalties on the excess flared gas would be prorated across an operator's leases, units or communized areas that reported high-pressure flaring during the month.

Alternatively, an operator may request that the BLM establish an alternative capture target under final rule § 3179.8, if three conditions are met: (1) The operator has chosen to comply with the capture target using the lease-by-lease basis rather than the averaging approach; (2) the potentially noncompliant lease was issued before the effective date of this final rule; and (3) the operator demonstrates via Sundry Notice, and the BLM agrees, that the applicable capture percentage under final rule § 3179.7 ''would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.''

b. Changes From Proposed Rule and Significant Comments

Proposed rule § 3179.6(b) would have imposed a monthly limit on flaring, beginning on the effective date of the final rule, with the specific limit decreasing over the first three years of the final rule. Specifically, the proposed rule would have established a flaring limit of 7,200 Mcf/month per development oil well in production on the lease, unit, or communitized area, for the first year the rule was in effect (proposed rule § 3179.6(b)(1)); 3,600 Mcf/month per development oil well in production on the lease, unit, or communitized area for the second year the rule was in effect (proposed rule § 3179.6(b)(2)); and 1,800 Mcf/month per development oil well in production on the lease, unit, or communitized area for every month beginning in year three and thereafter (proposed rule § 3179.6(b)(3)).

The proposed rule included a broad request for comments on a range of issues relating to this section, including: The feasibility and costs of imposing a long-term limit on routine flaring of associated gas from development oil wells; whether the specific long-term flaring limit should be lower or higher than 1,800 Mcf/month/well, to further reduce flaring or reduce compliance costs, respectively; operators' likely operational response(s) to the imposition of a flaring limit; the feasibility and costs of the proposed three-year timeline for decreasing the flaring limit from 7,200 to 1,800 Mcf/month/well; and the effectiveness of the proposed method and conditions in § 3179.7 for allowing operators to obtain an alternative flaring limit.

The BLM developed the capture target approach in final rule § 3179.7, and the alternative capture target provisions in final rule § 3179.8, after careful consideration of the many comments received on the flaring limit approach set forth in proposed rule §§ 3179.6(b) and 3179.7. In particular, the BLM gave careful consideration to operators' assertions that the numerical values of the proposed flaring limits, the proposed schedule for meeting those limits, and the prescriptive nature of the limits would make it prohibitively expensive—and, in some areas of the country, technically impossible—for operators to comply with the terms of the proposed rule. After reviewing the flaring data provided by these commenters, obtaining additional updated and more detailed data from ONRR, and reanalyzing these provisions, the BLM determined that the final rule should phase in its approach to routine flaring over a longer period of time, and provide operators with more flexibility to take better account of variable conditions on different leases, units, and communitized areas in different parts of the country.

The BLM remains committed to requiring operators to significantly reduce routine flaring of associated gas from development oil wells on BLM-administered leases, thereby increasing gas capture. We have structured final rule §§ 3179.7 and 3179.8 to achieve a comparable volume of flaring reductions as proposed rule §§ 3179.6(b) and 3179.7, although over a somewhat longer timeframe, and then to achieve additional reductions in later years.

The final rule's capture targets and the proposed rules flaring limits operate in a similar manner, with the latter approach a refinement of the former to enhance opportunities for compliance. For example, the long-term flaring limit of 1,800 Mcf/month/well in proposed rule § 3179.6(b)(3) is *exactly* equivalent to a capture target of 100 percent, with a flaring allowable volume of 1,800 Mcf/month/well, applied on a lease-by-lease basis. The final rule phases in a 98 percent (rather than 100 percent) capture target over nine years, and converts the proposed volumetric flaring limits from the proposed rule into declining allowances against the capture target. The differences between proposed rule § 3179.6(b) and final rule § 3179.7(b) are therefore more a matter of form than function, with the final rule designed to achieve flaring reductions comparable to the reductions that the BLM expected from the proposed rule, but to allow operators more compliance flexibility.

That said, the proposed and final approaches to reducing routine flaring do differ in certain key respects, as a result of public comments. The five most significant differences are as follows.

First, the final rule uses specified capture targets, rather than requiring that operators capture 100 percent of their associated gas above fixed volumetric limits as initially proposed, in response to comments indicating that, in some states (notably North Dakota and New Mexico), gas volumes are so high and the availability of capture infrastructure so variable that it is extremely difficult to identify a fixed volumetric limit on flaring that would both be achievable and also provide meaningful reductions in all States. Commenters asserted that given the high gas-to-oil ratios (GOR) in the Bakken basin, there are certain areas where an operator could exceed the proposed flaring limit of 1,800 Mcf/month/well in a period of hours. Commenters argued that even after averaging over a month and across a lease, as the proposed rule would have allowed, the 1,800 Mcf/month/well limit would significantly impact future development in the Bakken and Permian basins. Operators in these areas suggested that allowing averaging of flaring volumes across multiple leases, units, or communitized areas—or even across counties or across a State—would enable operators to use high capture rates in areas with low GOR and/or significant gas capture capability to offset lower capture rates in other areas, and thereby avoid having to curtail production.

Based on these concerns, the BLM restructured the fixed flaring limits as capture targets both to better take account of geographically varying volumes of associated gas and to allow operators some greater flexibility to absorb the impacts of intermittent interruptions or reductions in capture capacity. Final rule § 3179.7, therefore, requires capture of a specified percentage of gas above the flaring allowable volume; this specified capture target incrementally increases from 85 percent in year two (*e.g.,* one year after the effective date of the final rule) to 98 percent in year nine. As noted, this flexible capture target approach is modeled in large part on North Dakota's regulations, which also impose an escalating capture target, as described in the preamble to the proposed rule.[101]

Second, the BLM extended the compliance dates in response to commenters' concern that coming into compliance with a long-term flaring limit of 1,800 Mcf/month/well would take longer than the three years that the BLM had proposed. The final rule postpones the effective date of any capture requirements for one full year after the effective date of the rule. Thereafter, the final rule incrementally increases the required capture targets over a nine year period and incrementally decreases the flaring allowable volumes over an eight year period. Final rule § 3179.7(b) extends the time an operator has to meet the flaring allowable volume of 1,800 Mcf/month/well until calendar year 2021, about four years after the effective date of the final rule (and about two additional years after the 1,800 Mcf/month/well fixed flaring limit would have taken effect under § 3179.6(b)(3) of the proposed rule).

Third, and conversely, the BLM has reduced the long-term flaring allowable volumes that apply once the final rule is fully phased in, in response to other commenters' concerns that the proposed approach allowed significant quantities of wasteful flaring to continue unabated from 2020 on and did not provide sufficient incentives for industry to continue to decrease flaring over time. Natural gas is a valuable resource that should be put to productive use, and the MLA requires that we minimize the waste of public resources, consistent with existing lease obligations. In addition, if the only changes the BLM made to the final rule were to allow averaging over a broad geographic area and to impose capture targets that never ramp up to 100%, the final rule would achieve far less of a reduction in wasteful flaring than the proposed rule. While providing operators more flexibility to reduce flaring at lower costs by shifting from the proposed rule's fixed flaring limits to the final rule's capture targets and allowable flaring volumes, the BLM strived to ensure that the final rule still achieves meaningful flaring reductions, comparable to the reductions that the BLM expected from the proposed rule. The key change necessary to meet that goal was the shift from a fixed long-term flaring limit of 1,800 Mcf/month/well (proposed rule § 3179.6(b)(3)) over three years to a flaring allowable volume that decreases over time to 750 Mcf/month/well in year 2025 (final rule § 3179.7(c)(2)(iv)).

Fourth, the final rule allows greater flexibility in how operators may comply with the capture targets. Commenters indicated that leases, units, and communitized areas vary greatly in both the volumes of associated gas produced from oil wells and the availability of gas capture infrastructure, and asserted that complying with a single flaring limit that applies uniformly to every lease, unit, and communitized area would be prohibitively expensive or even, in some areas of the country, technically impossible. Commenters contended that as a result, they would be forced to submit numerous Sundry Notices under proposed rule § 3179.7 to request alternative flaring limits. Commenters asserted that North Dakota's approach, which allows operators to comply with capture targets on a statewide average basis, would reduce the need to request alternative limits and thus achieve comparable overall flaring reductions at significantly lower cost. The BLM agrees, and has in response to these comments structured the final rule to provide operators with greater discretion in how they choose to comply. Specifically, final rule § 3179.7(c)(3) allows an operator to choose whether to comply with the capture targets on a county- or state-wide average basis, or instead to comply on each lease, unit, or communitized area. This flexibility, too, is modeled on North Dakota's regulations, which allow for compliance on a well-, field-, county- or state-wide basis, as described in the preamble to the proposed rule.[102]

Fifth and finally, the final rule makes certain changes to the alternative flaring provisions (proposed rule § 3179.7, renumbered as final rule § 3179.8) in part to address some commenters' concerns that the proposed renewable 2-year exemption (proposed rule § 3179.7(d)) would allow too many operators to evade the flaring limits and should therefore be eliminated. The changes also account for the change in the final rule from flaring limits to capture targets, and for the BLM's decision to allow operators to choose to demonstrate compliance with the capture targets on an area-wide average basis. Specifically, the BLM deleted the proposed 2-year exemption provision and restyled proposed rule § 3179.7 as an alternative capture target rather than

[101] 81 FR at 6634.

[102] 81 FR at 6634.

an alternative flaring limit. The change to a capture target approach and the decision to allow operators to choose to comply by averaging their flaring over an entire county or State significantly reduce the risk that a single remote lease, unit, or communitized area with high levels of flaring and little or no access to capture infrastructure will make it impossible for an operator to comply. Under the averaging approach, such leases, units, or communitized areas need not receive a blanket exemption from the capture target. Rather, an operator concerned about the ability of a lease, unit, or communitized area to comply with the capture target can either (a) reduce its flaring at other sites in the relevant area to compensate for the high levels of flaring at that remote lease, or (b) apply for an alternative capture target for that lease under final rule § 3179.8 (if the predicate conditions are met). Because fewer leases are likely to raise such concerns under the final rule's capture target approach than under the proposed rule, the BLM anticipates receiving fewer requests for alternative capture targets and having an increased capacity to process such requests on a case-by-case basis.

To set the capture targets and flaring allowable volumes in the final rule, the BLM conducted a detailed analysis of 2015 data submitted to ONRR of sales, on lease use and flaring volumes month-by-month for operators within a state. These data go substantially beyond what was available to BLM in preparing the proposed rule, and while the results show that the proposed rule would have reduced flaring less than we initially estimated, we have higher confidence in the updated estimates. Using the new data to reanalyze the likely flaring reductions from the proposed rule, the BLM estimates that the proposed rule would have reduced the quantity of flared gas in 2020 by 42 percent relative to 2015 levels.

Using the same data and assumptions, the BLM estimates that the final rule's approach, which allows operators to average over their statewide production and establishes a capture target of 98% over time, will reduce the quantity of flared gas in 2020 by roughly 26 percent relative to 2015 levels. With the additional time and flexibility provided in the final rule, operators will be able to plan for and build out the additional infrastructure necessary to capture and transport greater volumes of gas in later years. Thus, the final rule further steps down the allowable flaring volumes after 2020, and likewise steps up the required capture percentages, to achieve almost a 50% reduction in flaring by 2025, 8 years after the rule comes into effect.

Thus, the BLM expects that the final rule's schedule and targets for reducing flaring will achieve a total volume of flaring reductions somewhat greater than the proposed rule, and at lower cost, though over a longer timeframe. Moreover, the final rule establishes a structure in § 3179.7 for reducing routine flaring that could be adapted to achieve more ambitious flaring reductions, if and when the BLM deems those reductions to be technologically feasible and cost effective. The BLM has only specified capture targets and flaring allowable volumes out to 2026. As additional data on flaring become available, and capture technologies improve, the BLM could choose to increase the capture targets further over time, and/or decrease the flaring allowable volumes, through future rulemakings in order to continue to reduce routine flaring of associated gas from BLM-administered leases, units, and communitized areas, consistent with the United States' March 2016 endorsement of the World Bank's Zero Routine Flaring by 2030 Initiative.[103]

B. Leak Detection and Repair

1. Requirements of Final Rule

As discussed in detail in the RIA, we estimate using data from the EPA GHG Inventory that about 4.01 Bcf of natural gas was lost in 2014 as a result of leaks or other fugitive emissions from various components, including valves, fittings, pumps, storage vessels and compressors on well site operations on BLM-administered leases.[104] This quantity of gas would supply nearly 55,000 homes each year.[105]

LDAR programs are a cost-effective means of reducing waste of gas in the oil and gas production process, as indicated by the studies and State programs discussed in the proposed rule, as well as additional information provided since the proposal, which is discussed in the background section III. Provisions in §§ 3179.301 through 3179.305 of the final rule require operators to carry out leak inspections and repairs at their well sites and associated equipment, meeting specified standards for leak detection methodology and frequency, and for the timing of repairs. Within one year of the effective date of the rule (or within 60 days of beginning production, for new sites), operators must use an instrument-based approach to conduct semi-annual inspections at well sites and quarterly inspections at compressor stations. Operators may also request BLM approval of an alternative instrument-based leak detection program, which the BLM may approve if it finds that the program would reduce leaked volumes by at least as much as the BLM program. Operators must repair a leak within 30 days of discovery, absent good cause, and verify that the leak is fixed. Operators must also keep records documenting the dates and results of leak inspections, repairs, and follow-up inspections, and submit annual reports with this information.

Section 3179.301 provides that the leak detection requirements in the final rule apply to sites[106] and associated equipment that is used to produce, process, compress, treat, store, or measure natural gas from or allocated to a Federal or Indian lease (or from a unit or communitized area that includes such a lease), where such sites are upstream of or contain the approved royalty point of measurements. These requirements also apply to each site located on a Federal or Indian lease, and all associated equipment operated by the operator, which is used to store, measure, or dispose of produced water. An operator is not required to inspect sites that contain only a wellhead or wellheads and no other equipment, nor is the operator required to inspect the ''leak components''[107] that are not accessible

In response to multiple requests from industry and NGO commenters, the final rule provides greater specificity on what constitutes a ''leak'', which includes releases not associated with the normal operation of the component (*e.g.,* releases from equipment designed to vent that exceed the quantities and frequencies expected during normal operation of the equipment). Similarly,

[103] ''Zero Routine Flaring by 2030'' is a voluntary initiative introduced by the World Bank in 2015 and endorsed by multiple governments, oil companies, and development institutions. The initiative focuses on the phase-out of routine, high-pressure flaring of the type addressed by the BLM's capture targets in § 3179.7 of the final rule, not flaring for safety and other non-routine reasons. For more information and a list of endorsers, see *http://www.worldbank.org/en/programs/zero-routine-flaring-by-2030.*

[104] RIA at 17.

[105] Based on an estimate of 74 Mcf of gas used per household per year. See footnote 2.

[106] A ''site'' is defined as a discrete area containing a wellhead, wellhead equipment, or other equipment used to produce, process, compress, treat, store, or measure natural gas or store, measure, or dispose of produced water, which is suitable for inspection in a single visit.

[107] Under the definitions in the final rule, ''leak component'' means any component that has the potential to leak gas and can be tested in the manner described in sections 3179.301 through 3179.305 of this subpart, including, but not limited to, valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems, thief hatches or other openings on a storage vessel, compressors, instruments, and meters.

releases due to operator error or equipment malfunctions, or from control equipment that does not meet the level of control required by this or other regulations, are also considered leaks. These types of leaks include releases from: A thief hatch left open; a vapor recovery unit that is not operating properly; a tank or combustor that is inadequately sized to handle the throughput of gas; or an intermittent controller that actuates continuously.

Section 3179.301(j) and (k) integrate the final rule with EPA NSPS requirements for operators to conduct a fugitive emissions inspection and repair program. Section 3179.301(j) provides that for new, modified or reconstructed equipment, an operator will be deemed to be in compliance with the BLM LDAR requirements if the operator is in compliance with the EPA subpart OOOOa requirements applicable to the equipment. Paragraph (k) further allows an operator to choose to comply with the EPA fugitive emissions monitoring requirements in subpart OOOOa and apply those requirements to all sites and equipment on a lease not already deemed in compliance with the BLM LDAR provisions, in lieu of complying with the BLM LDAR provisions. This provision allows an operator with new, modified or reconstructed facilities (which must comply with subpart OOOOa) as well as existing facilities (which are not subject to subpart OOOOa) to apply a single leak detection regime to all of their facilities, rather than complying with subpart OOOOa for some facilities and the BLM requirements for others.

The final BLM LDAR provisions also apply to a few specific types of equipment that EPA addresses under requirements that are separate from EPA's subpart OOOOa fugitive emissions program—specifically, certain covers and closed vent systems, and thief hatches or other openings on controlled storage vessels, which are covered under 40 CFR 60.5411a or 60.5395a, rather than under the fugitive emissions requirements in subpart OOOOa. The final rule provides that if an operator chooses to comply with the EPA subpart OOOOa fugitive emissions requirements in lieu of the BLM LDAR requirements for all equipment on a lease, the operator must apply the EPA fugitive emissions requirements to sources covered under 40 CFR 60.5411a or 60.5395a as well.[108] Absent this requirement, these equipment covers, closed vent systems, and openings on controlled storage vessels would not be subject to the BLM's LDAR requirements or the EPA's subpart OOOOa fugitive emission inspection requirements if the operator chose to comply with the EPA requirements in lieu of the BLM requirements.

The final rule requires operators to use an instrument-based approach to leak detection. This is consistent with the proposed rule, and with EPA, Colorado, and Wyoming leak detection requirements. Under final rule § 3179.302, operators must use an optical gas imaging device (also commonly referred to as an infrared camera), or a portable analyzer device capable of detecting leaks and used according to the specifications of Method 21, a protocol prescribed by EPA for effectively using these devices.[109] Use of a portable analyzer device must also be assisted by audio, visual, and olfactory (AVO) inspection, as these devices have much more narrowly-focused leak detection capabilities compared to optical gas imaging, which can be used to scan across broad arrays of equipment. The final rule includes specifications for acceptable optical gas imaging equipment, requires all instruments to be used according to the manufacturer's specifications, and requires the operator of any leak detection instrument to be adequately trained in its proper use.

Final section 3179.302 also allows any person to request and the BLM to approve the use of an alternative monitoring device, accompanied by a monitoring protocol, and, in response to comments, this section also details the information that must be included in a request. The BLM may approve an alternative leak detection device and inspection protocol, if the BLM finds that the alternative would achieve equal or greater reduction of gas lost through leaks, compared with optical gas imaging used as required. The BLM may approve the device for use for all or most applications, or may approve use on a pilot project or demonstration basis. Finally, the BLM will provide public notice of a request for approval of an alternative monitoring device and will post on the BLM Web site a list of each approved monitoring device and protocol, along with any limitations on its use. The BLM intends that the decision to approve the use of an alternative monitoring device would be made only at the national level, by the Director, Deputy Director, or an Assistant Director, as, once approved, the alternative monitoring device could be used anywhere in the country.

Section 3179.303 specifies the required frequency for inspections, which is fully aligned with the requirements of Subpart OOOOa. Operators must inspect each well site at least semi-annually, with consecutive inspections spaced at least four months apart. Operators must inspect each compressor station at least quarterly, with consecutive inspections spaced at least 60 days apart.

In addition to alternative monitoring devices, the final rule allows for BLM approval of alternative monitoring programs. Specifically, like the proposed rule, the final rule allows an operator to request the BLM to approve an alternative instrument-based leak detection program in place of the program specified in the regulations. The BLM may approve the alternative program if it finds that the alternative program would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in the regulations. Because approval of inadequate alternative programs could unintentionally but significantly undermine the effectiveness of the LDAR requirements, the BLM intends that the decision to approve an alternative program would be made only by the relevant BLM State Director, or, with respect to requests that cover operations in more than one State, at the national level by the BLM Director, Deputy Director, or an Assistant Director. In addition, the BLM will post approved alternative programs online both to provide public transparency and to allow other operators to see examples of alternative programs that the BLM believes will be effective.

Section 3179.304 requires operators to repair the leaks that they find. Operators must repair a leak as soon as practicable, and within 30 days of discovery, unless there is good cause to delay the repair. When an operator repairs a leak, the operator must verify that the repair was effective within 30 days of the date of the repair using optical gas imaging, a portable analyzer using Method 21, or a soap-bubble test.

Section 3179.305 requires operators to keep records related to leak detection inspections and repairs, make them available to the BLM upon request, and submit an annual summary report on the previous year's inspection activities.

2. Changes From Proposed Rule

The final rule provisions on leak detection and repair largely track the proposal, however, we adjusted the frequency of inspections, based upon public comments along with a desire to

[108] *See* Section VII, Section by Section, for discussion of treatment of sources exempt from the EPA fugitive emissions program specified in section 43 CFR 60.5397a.

[109] See 40 CFR part 60, appendix A–7.

align these requirements with EPA's final rule, and made other minor adjustments. The BLM had proposed an approach in which the initial required frequency of inspection was semi-annual, but then the frequency varied for each site according to the number of leaks found. An operator that found more than three leaks in each of two inspections would have been required to increase its inspection frequency to quarterly, while an operator that found fewer than three leaks in each of two inspections would have been allowed to drop its inspection frequency to annually. A broad swathe of commenters opposed this approach in the proposed rule (as well as in the EPA's proposed OOOOa). The final rule replaces this approach with a fixed semi-annual rate of inspections for all sites other than compressor stations, and a quarterly inspection rate for compressor stations, consistent with the final OOOOa as well.

Another change from proposed to final rule concerns the effective date of the leak detection requirements. The proposed rule would have imposed the leak detection requirements as of the effective date of the rule, with the first inspection required within six months of that date. In response to comments, the final rule extends the time for initial compliance to give operators one year from the effective date of the rule to make their first inspection.

The BLM made several other changes that adopt commenters' suggestions. We added a provision allowing approval of an alternative, potentially less effective, leak detection program for an operator that demonstrates that compliance with the LDAR requirements would impose such costs as to cause the operator to cease production and abandon significant recoverable oil or gas reserves. We also added a requirement that operators provide an annual summary report on the results of their leak inspections. Consistent with the final subpart OOOOa, the final rule also includes a new exemption from LDAR requirements for sites that contain only a wellhead(s), and no other equipment.

In addition, the BLM made various smaller changes to enhance the clarity of the final rule. The final rule has refined and clarified the specific sites and equipment subject to the leak inspection requirements. The final rule applies to all equipment handling Federal or Indian gas, upstream of and including the site where the royalty measurement point is located—whether the equipment is on or off the lease and regardless of the ownership of the equipment. The final rule also specifies that with respect to equipment associated with the storage, measurement, or disposal of produced water, the leak detection requirements apply only to such equipment operated by the operator and located on the Federal or Indian lease.

The final rule retains and refines the proposed rule's provision allowing an operator to satisfy the leak detection requirements by complying with the EPA leak detection requirements under 40 CFR part 60, subpart OOOOa. First, the final rule provides that for new, modified and reconstructed equipment, an operator that is in compliance with the EPA fugitive emissions requirements will be deemed to be in compliance with the BLM LDAR requirements, without any requirement to file a Sundry Notice and demonstrate compliance, as the BLM had proposed. Second, it clarifies that that an operator who chooses to comply with the EPA fugitive emissions monitoring requirements in subpart OOOOa in lieu of the BLM LDAR requirements must apply the EPA requirements to all sites and equipment on a lease not already deemed in compliance with the BLM LDAR provisions.

The final rule includes this change because leaks from some types of new, modified and reconstructed equipment, such as covers and closed vent systems, and thief hatches on controlled storage vessels, are not covered by the fugitive emissions requirements under subpart OOOOa, but instead are addressed through specific provisions for storage vessel affected facilities and any associated covers and closed vent systems in subpart OOOOa—namely 40 CFR 60.5395a and 60.5411a. These provisions establish comprehensive control programs for storage vessel affected facilities, including separate and distinct inspection regimes. This final rule ensures that if an operator elects to comply with the EPA fugitive emissions requirements in lieu of the BLM leak detection requirements for equipment on a given lease, the operator must apply the EPA fugitive emissions requirements to all equipment covered by the BLM leak detection requirements, including equipment such as covers, closed vent systems, and thief hatches. Absent this provision, operators could potentially avoid any leak detection program with respect to existing sources in these categories.

The final rule also modifies the requirement in the proposed rule that operators who choose to comply with the EPA requirements in lieu of the BLM requirements must file a Sundry Notice demonstrating compliance with the EPA rule. The final rule provides that the operator need only notify the BLM through a Sundry Notice that it is complying with the EPA rule in lieu of the BLM requirements for equipment on a lease. While the BLM needs to know for oversight purposes if an operator has elected not to comply with the BLM requirements, we agree with commenters that requiring a "demonstration" of compliance with the EPA requirements is unnecessary.

As noted earlier, the final rule also contains a more detailed definition of a "leak" than the proposed rule, as well as more detailed specifications of approved leak detection instruments and methods. In addition, the final rule separates approval of an alternative monitoring device and protocol from approval of an operator's alternative leak detection program, and it adds specificity on what is required for each of these. The final rule also adds a required minimum interval between inspections, which was not specified in the proposal, but is consistent with final subpart OOOOa. Other minor changes that align the rule with final subpart OOOOa include: A 30- rather than 15-day period for repair and follow-up inspections; additional detail on what constitutes good cause for delay of repair; and a new, two-year outer limit on the timeline for completing repairs delayed for good cause. In addition, while the proposal had required operators to verify the effectiveness of repair using the same method used to identify the leak, in response to comments, the final rule allows operators to use any approved monitoring instrument or the soap bubble test to verify the effectiveness of repair.

3. Significant Comments

Commenters provided many detailed comments on numerous aspects of the leak detection program. This section highlights the most significant comments; additional comments are addressed in Section V. and the Response to Comments document. Comments addressed here include: Coverage of the program (*i.e.,* which types of operations and equipment should be included in the program); program structure (how inspection frequency is to be determined, and the required frequency of inspection); the instruments and methods to be used for leak detection; opportunities for use of new instruments and methods; requirements for repairs; and potential exemptions from the requirements.

a. Coverage

Comments: Many commenters addressed the coverage of the program. Some commenters supported applying the program broadly to catch as many leaks as possible, while others urged the BLM to use risk-based or other approaches to target the program more narrowly to exclude certain types of sites and equipment and/or to focus on the most likely sources of significant leaks and improve the program's cost-effectiveness.

Some commenters urged the BLM to exclude sites where the commenters asserted that there is less likelihood of leaks and/or smaller leaks. For example, they suggested excluding oil or gas low production wells (also commonly called ''marginal'' or ''stripper'' wells) that produce less than 15 barrels of oil equivalent per day; oil well sites that produce crude oil with either an API gravity less than 18° or a GOR less than 300 scf/bbl; and sites that have just wellheads without co-located production equipment.

Some commenters alleged that wells producing less than 15 BOE per day do not have the potential to emit at the same rate as larger producing facilities or enough production to have significant waste from leaks. Hence, they argued, the costs of LDAR for a marginal well far outweigh any benefits in terms of recovery of lost gas. One commenter stated that sites with marginal wells have less equipment on-site, fewer components that could leak, and thus a smaller likelihood of leaks. Commenters also noted that the EPA proposed to exclude low production wells from its fugitive emissions program, and argued that the BLM should do the same. Some asserted that these wells are only marginally profitable to begin with, and the costs of LDAR could make these wells uneconomical, leading to premature shut-in and a loss of mineral resources. Commenters also recommended that, at minimum, these low production wells should be subject to more relaxed LDAR requirements, such as one-time or annual instrument-based inspections, possibly in combination with AVO inspections, rather than semi-annual instrument-based inspections.

Commenters also asserted that the requirement to inspect for leaks should be limited to certain specified facilities or components because those facilities or components are more likely to leak, and to have higher leak rates. Various commenters recommended that the rule focus on valves, open-ended lines, pumps, or components with potential to operate at or above sales line pressure. Other commenters suggested limiting the LDAR requirements to facilities with components that tend to vibrate or are in thermal operation, and specifically those with controlled storage vessels, compressors, and/or vapor recovery units. Commenters also asserted that the 2013 Carbon Limits Study and the 2014 CAPP study show that compressor stations leak more than well sites, and that components tend to have greater average emissions when subjected to frequent thermal cycling, vibrations or cryogenic service.

In addition, commenters urged the BLM to exclude from the LDAR requirements storage vessels that would not be required to have emission controls under the proposed BLM and final EPA rules (*i.e.,* tanks with the potential to emit less than 6 tpy of VOCs), and equipment designed to vent, such as pneumatic pumps and pneumatic controllers, as well as other types of equipment and sites discussed in Section V.

On the other hand, other commenters strongly opposed narrowing the applicability of the LDAR program, and in particular, excluding low production wells from that program. These commenters cited recent peer-reviewed studies concluding that the occurrence of leaks is fairly random; the probability of a production site being among the highest emitting sites does not increase uniformly with production volumes; and relatedly, both high- and low-producing sites can be associated with high-emitting events. These commenters provided estimates of calculated methane emissions from low production and non-low production wells nationwide based on data reported to EPA and the EPA GHG Inventory, finding that 83 percent of the total methane emissions from oil and gas wells was attributable to low production wells, while only 17 percent was attributable to other wells. The commenters also provided calculations based on an EPA estimate of the cost of semi-annual inspections. These calculations showed, the commenters argued, that even for low production wells, the cost of LDAR compliance would on average be only a small fraction of the annual revenue per well. These commenters further argued that the majority of all existing wells, including those on public lands, meet the definition of ''marginal,'' and that excluding such wells from the LDAR requirements would allow large amounts of gas waste to continue unabated.

Response: The final rule covers largely the same types of sites and equipment as the proposed rule, with a few small exceptions. As discussed above, natural gas leaks during the oil and gas production process are wasteful and can cause significant environmental harm. The BLM is adopting a broadly applicable LDAR requirement to reduce leaks as much as reasonably possible.

The BLM carefully considered numerous and varied approaches that might improve the program's cost-effectiveness by narrowing the coverage of the LDAR program while maintaining its benefits. In evaluating suggestions to exclude certain types of sites from the LDAR requirements, the BLM looked for evidence indicating that the frequency of leaks, size of leaks, and overall amounts of gas lost through leaks relate to the type of site being inspected. In requesting comments on this topic, the BLM had urged commenters to present data or other information to support their assertions, and specifically requested ''information regarding the relationship between well production and levels of leaked methane from a site.'' [110]

With respect to suggestions that the BLM exclude low production wells from the LDAR requirements, we note that roughly 85 percent of wells on Federal and Indian leases are classified as low production wells (*i.e.,* produce 15 barrels of oil equivalent per day or less). Thus, unless these wells are, in fact, unlikely to leak significant volumes of gas, a decision to exclude these wells from the LDAR program would have a significant negative effect on the waste reduction benefits of this rule.

The information submitted by commenters on low production wells does not support their exclusion from the LDAR requirements. As discussed above, some commenters suggested, without providing supporting data, that sites with low production would be expected to lose smaller quantities of gas overall from leaks. However, others disagreed, pointing to the Zavala-Araiza study. As discussed in section III, this study showed that the probability of a production site being among the highest emitting sites does not increase uniformly with production volume, and it found significant opportunities to reduce losses by finding and fixing leaks at lower production wells. These commenters noted that the Lyon et al. study also demonstrates that both high- and low-production sites can be associated with high-emitting events with roughly 15 percent of the identified high-emissions sites in that study being associated with low production wells. Commenters urging an exclusion for low production wells did not provide data refuting these findings. Without additional data on this issue, the BLM simply cannot conclude that low-production sites pose

[110] Proposed Rule at __.

low leak risks and therefore merit exclusion from semi-annual LDAR.

As commenters noted, the EPA had proposed to exclude wells with less than 15 barrels a day oil-equivalent production from the OOOOa fugitive emissions requirements. In the final OOOOa rule, however, the EPA reached the same conclusion as the BLM and dropped the proposed exemption. EPA found that the record for the final rule did not support excluding these wells from the fugitive emissions requirements. In the preamble to the final rule, EPA stated: ''We did not receive data showing that low production well sites have lower GHG (principally as methane) or VOC emissions other [sic] than non-low production well sites. In fact, the data that were provided indicated that the potential emissions from these well sites could be as significant as the emissions from non-low production well sites because the type of equipment and the well pressures are more than likely the same.'' [111] Thus, including low production wells under the BLM requirements also maintains consistency between the BLM and EPA rules.

In addition, the BLM does not anticipate a significant number of individual well shut-ins or any lease-wide shut-ins as a result of the LDAR requirements, even with respect to low production wells. As discussed in the RIA, third-party providers offer LDAR services at a relatively modest cost, and operators may recoup some of the costs of the program through the saved gas. Also, operators have the option to design and request approval of an alternative LDAR program that is less costly for their particular circumstances, provided they can demonstrate that their alternative program is equally effective. Finally, an operator may request approval of an alternative leak detection program that is *not* as effective as the BLM's requirements, if the operator demonstrates that compliance with the BLM's LDAR requirements or an equally effective alternative would be so costly as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under a lease.

With respect to oil well sites that produce crude oil with either an API gravity less than 18° or a gas-to-oil ratio (GOR) less than 300 scf/bbl, as with low production wells, the BLM does not have data to be able to conclude that these oil well sites are likely to be responsible for a sufficiently small quantity of gas lost through leaks that they should be excluded from the LDAR requirements or subject to less stringent requirements.

The BLM does, however, agree with commenters that the risk of leaks is substantially lower at sites with only a wellhead, compared to sites with one or more pieces of production equipment, such as a tank, compressor, dehydrator, or vapor recovery unit. Industry commenters asserted that there is a greater likelihood of leaks from moving or vibrating equipment, or from equipment in thermal operation, because a valve may stick open, vibrations may cause a connection to loosen, or heat may cause a seal to degrade. While the BLM does not have data about the likelihood and/or size of leaks in these circumstances, the BLM's experience in the field supports the general point. In addition, studies have identified many leaks from the identified equipment, including tanks, compressors, and dehydrators.[112] At a wellhead without co-located production equipment, there are significantly fewer components capable of leaking. Exempting these sites from the LDAR requirements will provide some cost savings for operators, and based on the information available, the BLM believes that realizing those savings will have only a minimal impact on the overall benefits of the LDAR program. Moreover, excluding wellhead-only sites is directionally consistent with some of the other suggestions for narrowing program applicability, such as focusing on sites with tanks or compressors. In the final OOOOa rule, the EPA reached the same conclusion and exempted wellhead-only sites from its fugitive emissions requirements.

Other than the exclusion for sites with only a wellhead, the BLM is not limiting the LDAR requirement to covering only certain specified types of equipment or equipment components. BLM does not believe that it has sufficient information to appropriately distinguish between types of production equipment or equipment components on the basis of the likely quantity of gas lost through leaks. In addition, once an operator is at a site conducting a leak detection inspection, inspecting all of the on-site equipment should add little time and cost, particularly when the operator is using optical gas imaging. The BLM believes that trying to identify and exclude specific types of equipment from inspection adds complexity to the inspection system and introduces the likelihood of errors that would allow leaks to escape detection. It is simpler and more effective for operators simply to inspect all of the equipment located at a site. If, however, an operator has data that show it is possible to conduct an equally effective LDAR monitoring program while excluding certain types of equipment, or sites that only have that type of equipment, the operator may submit a proposed alternative monitoring protocol to BLM for review and potential approval.

Some commenters pointed out that pneumatic controllers are designed to vent and argued that these releases should not be considered leaks. The BLM agrees, and has excluded normal operation of this equipment from the final rule's leak definition. The BLM notes, however, that pneumatic controllers can and do malfunction, such as getting stuck in an open position, which can lead to unnecessary losses of gas. Additionally, as other commenters stated, these malfunctions can be identified through leak inspections. The BLM, therefore, believes it would be inappropriate to exclude this equipment from the rule's LDAR requirements.

Commenters make similar arguments with respect to uncontrolled storage vessels (*i.e.,* tanks that are not required to capture or flare their releases), which are allowed to release up to 6 tons per year of VOCs. Commenters argued that venting from an uncontrolled tank is necessary for proper relief of overpressure. Again, the BLM believes that the commenters' concerns should be addressed through the definition of a ''leak,'' which now excludes releases due to normal operation of a storage vessel or pressure relief valve, rather than by removing uncontrolled storage vessels from coverage under the LDAR program.

As an initial point, uncontrolled tanks are not open to the atmosphere—rather, they are typically vapor tight, slightly pressurized, and equipped with a thief hatch to allow measurement of production and a pressure relief valve to allow gas release of overpressure. This standard industry practice, which preserves the product and prevents unlimited release of vapors, was recently reinforced in the BLM's oil measurement rule, 43 CFR subpart 3174. The oil measurement rule requires oil storage tanks, hatches, connections, and other access points to be vapor tight, and it sets specifications for pressure relief valves. Using leak inspections to ensure that thief hatches are closed, seals are sound, and pressure relief valves are operating properly will reduce waste of gas.

[111] 81 FR at 35856.

[112] *See, e.g.,* Warneke, C., Geiger, et al.: Volatile organic compound emissions from the oil and natural gas industry in the Uintah Basin, Utah: oil and gas well pad emissions compared to ambient air composition, Atmos. Chem. Phys., 14, 10977–10988, doi:10.5194/acp-14-10977-2014, 2014.

Moreover, as discussed in section III., recent studies indicate that tanks are a very significant source of lost gas. As noted earlier, the Lyon et al. study, a helicopter survey of over 8,000 oil and gas wells, reported that over 90 percent of the detected emission incidences were from tanks. Similarly, the Colorado State University studies found substantial venting at tanks, and the City of Fort Worth study found that thief hatches are the largest source of fugitive emissions. The BLM believes that including both controlled and uncontrolled storage tanks in the LDAR program will allow operators to identify leaks and malfunctions that allow significant quantities of gas to be lost.

b. Definition of a Leak

Comments: Many commenters noted that the proposed rule did not define a ''leak,'' and they asserted that this would cause confusion, variations in interpretations, and inequitable implementation of these provisions, as well as potentially requiring repairs for very small releases. Some commenters also urged the BLM to define a leak to distinguish it from normal, intended operation (*e.g.,* pneumatic device actuation, crank case ventilation, etc.).

Many commenters suggested that BLM identify the quality or quantity of a release that would trigger repair requirements under the leak detection program. Commenters generally supported defining a leak as any visible hydrocarbon emission detected by use of an optical gas imaging instrument, or the formation of visible bubbles when equipment is tested with soap solution. With respect to portable analyzers, commenters generally supported setting a numeric threshold, but differed on the number. Some commenters urged the BLM to use 10,000 ppm of hydrocarbon as the threshold for a ''leak,'' while others recommended using 500 ppm, stating that this is protective and consistent with the Colorado requirements.

Response: The BLM agrees that the rule should define what constitutes a ''leak'' and has included a definition in the final rule. As noted earlier, the definition excludes losses due to normal operation of equipment intended to vent, provided the releases do not exceed the quantities and frequencies expected during normal operations. The definition further clarifies that ''leaks'' include releases due to operator errors or equipment malfunctions.

The purpose of a leak detection program is to find and fix losses of gas that are not part of normal operations. A prudent operator should conduct reasonable levels of monitoring, staff training, and preventative maintenance to minimize the occurrence and duration of such losses. We are adopting a definition of ''leak'' sufficiently broad in coverage to give operators the incentive to avoid wasteful losses, whether they occur due to aging equipment or due to operator error, including errors in appropriately sizing equipment to handle the quantities of production. As found in multiple recent surveys, all of these types of unnecessary losses occur and they are frequently identified using leak detection methods.

The BLM has also slightly modified the definition of ''leak component,'' and clarified that the inspection requirement applies to leak components at a covered site. Industry commenters had requested that the BLM limit the inspection requirement to specific components on a site. For the reasons previously discussed, the BLM believes it is reasonable to require operators to inspect all pieces of equipment that have the potential to leak gas and that can be tested for leaks. Moreover, as discussed in the proposed rule, repairing leaks generally pays for itself over a reasonably short time-frame through gas savings. To provide additional clarity, the BLM has added to the definition of ''leak component'' examples of specific types of components that are covered, including but not limited to: Valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems, thief hatches or other openings on a storage vessel, compressors, instruments, and meters.

With respect to leak thresholds, and consistent with the proposed rule, EPA and State provisions, and commenters' suggestions, the BLM is defining ''leak'' as including ''a visible hydrocarbon emission'' detected using optical gas imaging, or a release of gas forming visible bubbles with soap solution. Including soap solution allows operators to deploy an additional detection methodology that is inexpensive and effective in confirming that leak repairs have worked. The BLM agrees with commenters that portable analyzers can detect extremely small releases, so the rule needs to specify a threshold for the size of leak that requires repair. The final rule identifies 500 ppm as the appropriate threshold. This threshold is consistent with both the Colorado and EPA fugitive emissions programs, and aligning the BLM and other Federal, State and tribal programs is important to enhance clarity and consistency and reduce confusion and costs. Additionally, the BLM does not believe that this threshold is too burdensome for operators because once a leak is identified, repairs are generally cost-effective. On average, many repairs pay for themselves in terms of gas savings, and even if some smaller leaks may cost more to repair than they return in gas savings, we generally expect that the benefits to the public exceed the costs of repair.[113]

c. Inspection Frequency

Comments: Numerous commenters opposed the BLM's proposed approach to the frequency of inspections, under which the frequency would initially be semi-annual, but then could increase or decrease depending on the number of leaks found. Commenters stated that this approach: Is not consistent with Colorado and Wyoming leak detection programs; is confusing, overly complicated, and burdensome; inappropriately relies on past performance, which is not indicative of future performance due to the random nature of leaks; creates an incentive for operators not to find leaks; and incorrectly assumes that loss through leaks is homogenously distributed, rather than heterogeneously distributed, which means that just one leak can be responsible for the majority of the waste.

While commenters generally supported fixed frequency inspections, different commenters supported different frequencies. Some called for quarterly inspections, while others preferred annual. Still others suggested an approach like Colorado's, which requires different frequencies, from monthly to once, depending on the estimated uncontrolled VOC emissions from the highest emitting storage tank at a site.

Commenters supporting a requirement for quarterly inspections asserted that: The costs are reasonable (and lower than calculated by the BLM); Colorado, Wyoming, and other states already require quarterly inspections for many sites; and optical gas imaging is most effective when performed frequently, which can make up for its tendency to miss smaller leaks compared to other leak detection methods. Commenters who recommended annual inspections asserted that: The costs of LDAR programs outweigh the benefits (and are higher than calculated by the BLM); operators find far fewer leaks after the initial inspection, so repeated inspections produce diminishing

[113] Carbon Limits AS report entitled, *Improving utilization of associated gas in US tight oil fields* by Anders Pederstad, April 2015 found on the internet at: *http://www.catf.us/resources/publications/files/Flaring_Report.pdf.*

returns; and even requiring annual inspections will likely cause operators to prematurely shut-in some wells. Commenters also objected to inspection frequencies that differ from EPA and State requirements.

Response: Upon review of the comments, the BLM agrees that requiring leak inspections at a fixed frequency will make the program easier to implement, less burdensome for operators, and more effective. The BLM has concluded that requiring semi-annual inspections is a reasonable approach that balances the leak-detection advantages of more frequent inspections against the associated costs. Further discussion of the cost-effectiveness of this approach is provided in the RIA.

Requiring semi-annual inspections also aligns the BLM and EPA requirements. The BLM notes that it is not possible to align the BLM program's inspection frequency with both EPA requirements and all State requirements because the EPA and States have different inspection frequencies, and frequencies differ even among the States and among different EPA leak detection programs for different sources. The BLM expects that States with comprehensive and effective LDAR requirements that differ from the requirements of this rule are likely to obtain variances under section 3179.401, which would eliminate conflict concerns. Also, as a legal matter, operators on a Federal or Indian lease, unit, or communitized area will be subject to EPA fugitive emissions requirements for their new, modified and reconstructed facilities and BLM LDAR requirements for their existing facilities. By aligning the timing of the BLM and EPA requirements, and separately allowing operators to comply with EPA requirements in lieu of BLM requirements, the rule provides operators with options for implementing a single leak inspection program across all of their facilities on a lease, unit, or communitized area.

d. Instruments/Methods for Leak Detection

Comments: Commenters generally supported allowing the use of optical gas imaging for leak detection, but differed on whether also to allow portable analyzers, or portable analyzers deployed according to Method 21, as an alternative instrument for leak detection. In addition, most commenters opposed the BLM's proposal to allow operators with less than 500 wells within the jurisdiction of a BLM field office to use portable analyzers in lieu of optical gas imaging. Some argued that Method 21 should be an option for all operators, while others argued that the BLM should only allow the use of optical gas imaging, stating that portable analyzers are less effective. Some commenters urged the BLM also to allow use of AVO inspections as the method of leak detection.

Response: Upon reviewing the comments, the BLM has concluded that portable analyzers, if used appropriately and supplemented by AVO inspection, can be as effective as optical gas imaging for leak detection. Thus, the BLM has revised the proposed approach to allow operators to use optical gas imaging, or to use portable analyzers according to Method 21 and supplemented by AVO inspection. The BLM believes that concerns about the accuracy of portable analyzers are ameliorated by requiring the use of Method 21, Determination of Volatile Organic Compounds Leaks, which is a procedure established by the EPA for detecting VOC leaks from process equipment using a portable detecting instrument.[114] Method 21 contains requirements for equipment specifications, performance, calibration, and use to ensure that the analyzers are used properly and will identify leaks that are occurring. The BLM agrees with commenters that allowing the use of portable analyzers according to Method 21 will reduce costs by aligning with existing EPA, State, and local requirements. The BLM did not receive information supporting some commenters' contention that AVO inspections can be as effective as a technology-based program, and thus the final rule does not allow operators to inspect for leaks only using AVO.

e. Approval of Alternative Leak Detection Instruments/Methods and Alternative Leak Detection Programs

Comments: Many commenters strongly supported the provisions allowing the BLM to approve additional technologies and methods for leak detection when they are found to be effective, and they urged the BLM to establish clear criteria for rapid approval of alternative monitoring devices and new technology. Some commenters included alternative monitoring programs in their comments on this topic. Commenters noted ongoing research and development investment in new monitoring technologies and methods, such as the DOE's ARPA–E MONITOR program and the Environmental Defense Fund's Methane Detectors Challenge,[115] and they stated that several new technologies for continuous or periodic monitoring may become commercially available within the next 2 years.

Many commenters urged the BLM to detail the information that must be included in an application for approval of alternative technologies, as well as the process and criteria that the BLM would use to respond to an application. Various commenters emphasized that the process should be rapid, efficient, transparent, predictable, consistent, and rigorous. In addition, commenters suggested that any person should be able to submit an application, and that any operator should be able to use an approved technology.

Response: The BLM agrees on the need for a clear, consistent, and rigorous process and criteria for approval of alternative leak instruments and methods, and we have modified the regulations accordingly. The final rule provides that any person may request approval of an alternative monitoring device and protocol for using that device by submitting a Sundry Notice to the BLM that contains information that the BLM would need to evaluate the effectiveness of the alternative device compared to the base program.

Once a device is approved for general use, any operator may use it without the need for additional notification or approval. Because an approved device could potentially be used by an operator on any Federal or Indian lease, unit, or communitized area, the BLM intends that the request will be evaluated by the BLM Director, Deputy Director, or Associate Director. The BLM may approve the device if the BLM finds that the device would achieve equal or greater reduction of gas lost through leaks compared to optical gas imaging used in a leak detection program that meets the rule requirements. The BLM believes that this is an appropriate criterion for approval because it ensures that the program will achieve its leak reduction goals regardless of the type of leak detection device used. The BLM understands that different types of devices may achieve equivalent results. For example, a device that monitors continuously, but is less sensitive than optical gas imaging, might achieve results equivalent to optical gas imaging due to the gas savings from early detection. The information submitted must be sufficient to support such a

[114] U.S. EPA, *Leak Detection and Repair, A Best Practices Guide* (Oct. 2007) (*https://www.epa.gov/sites/production/files/2014-02/documents/ldarguide.pdf*). 40 CFR part 60, Appendix A–7.

[115] American Petroleum Institute (API). Comments on the ''Waste Prevention, Production Subject to Royalties, and Resource Conservation'' Proposed Rule. Submitted April 22, 2016. Docket ID BLM–2016–0001–9073: Available at *regulations.gov.*

finding, however. Finally, the rule states that the BLM will post online each approved alternative monitoring device and protocol, along with any limitations on its use.

The BLM also clarified the distinction between alternative leak detection devices or methods and alternative leak detection programs, which are both included in the proposed and final rules. Separate from the provisions for approval of an alternative device, the final rule allows an operator to request BLM approval of an alternative leak detection program that uses optical gas imaging, a portable analyzer or another approved device according to approved specifications. As with an alternative device, the final rule spells out the information that an operator would need to submit to request approval of an alternative program. The BLM intends that the request would be reviewed and potentially approved by the BLM State Director (or Director, if the request covers operations in more than one State). The BLM could approve an alternative leak detection program if the BLM finds that the alternative program would achieve equal or greater reduction of gas lost through leaks compared to the leak detection program required under the rule. The rule does not allow other operators to use an alternative leak detection program requested by and approved for a specific operator, as the results may not be transferable. The BLM expects each operator to make a detailed showing, specific to their particular circumstances, that an alternative program would be equally or more effective. For example, an operator might propose a program that included more frequent inspections for some sites and less frequent for others, compared to the final rule requirements, or an operator may be able to deploy an alternative leak detection device or system, approved by the BLM, on a continuous basis and achieve results that would allow for less frequent inspections using optical gas imaging.

f. Timing

Comments: Several commenters recommended that the BLM extend the phase-in period for the proposed LDAR program. They stated that operators or contractors will need time to ramp up LDAR efforts, including acquiring the necessary equipment and hiring and training inspectors. Commenters variously recommended phase-in periods of one year or three years.

Response: The BLM agrees and has modified the final rule to allow for a one year phase-in period. Thus, the first round of leak detection inspections must be completed by January 17, 2018. The BLM notes that equipment manufacturers, service providers, and operators are already taking action to produce and procure leak detection equipment and establish programs in response to EPA's OOOOa requirements published on June 3, 2016. Under those requirements, all operators with new, modified or reconstructed facilities will already be conducting leak detection inspections as of June 3, 2017. Expanding such programs to cover additional well sites should take less time than the initial development and deployment. The BLM also believes that one year from the effective date of the rule will provide ample time to manufacture the needed equipment, given the number of additional sources that will be covered by this rule.

g. Repair Requirements

Comments: Commenters raised several primary concerns. First, many commenters opposed the BLM's proposal to require that an operator verify a repair using the same method used to detect the leak. They noted that it may be more efficient to allow the operator to test a repair using, for example, a soap bubble test than to bring the leak surveyor back to the site to check the repair.

Second, some commenters urged the BLM to allow 30 rather than 15 days for leak repair. Commenters stated that some leaks require more time to repair due to safety issues, availability of personnel or replacement parts, hostile weather conditions, or other logistical issues related to sites being remote, dispersed, unmanned, and un-electrified. One commenter argued that if an operator contracts with a consultant to perform the monitoring, the consultant will not be able to make the repair at the time the leak is detected, thus requiring more time to complete the repairs.

Third, commenters requested more clarification on what would constitute ''good cause'' for delay of repair, noting that where the operator must blowdown (depressurize) the equipment before making the repair, this could release more gas than would be released by the leak prior to the next scheduled equipment blowdown.

Response: The BLM modified the final rule to address each of these concerns, as well as align the rule with the final subpart OOOOa. The BLM agrees that optical gas imaging, portable analyzers using Method 21, and the soap bubble test are all effective means to identify whether a leak has been repaired, and providing operators the flexibility to select a verification method should minimize costs.

The BLM also has modified the final rule to provide operators up to 30 days to make a repair, although the rule still requires operators to repair leaks as soon as practicable. We recognize that some State LDAR programs require repairs to be made sooner—within 5 to 15 days of finding a leak. The requirement to repair leaks as soon as practicable means that many leaks will be repaired upon discovery or within a shorter timeframe than 30 days, as many leaks can be repaired on the spot or as soon as a maintenance technician can get out to the site. However, according to industry commenters, allowing up to 30 days will meaningfully reduce the time and costs involved in filing Sundry Notices for leaks that could not be fixed in 15 days but could be fixed in 30.

The final rule also provides additional detail regarding what constitutes ''good cause'' for delay of repair beyond 30 days. Good cause for delay exists if repair within 30 days is technically infeasible; would require a pipeline blowdown, a compressor station shutdown, or a well shut-in; or would be unsafe to conduct during operation of the unit. In addition, the operator must complete the repair at the earliest opportunity, and in no case may the repair be delayed beyond two years. Technical infeasibility includes a need to order parts, in which case the operator must complete the repair as soon as the parts are available. Where the cause for delay is the need to blowdown or shut-down equipment, the operator must complete the repair during the next equipment blowdown or shutdown that occurs after the leak is found.

h. Interaction With EPA Fugitive Emission Requirements and State LDAR Requirements

Comments: Many commenters argued that the proposed BLM LDAR program overlaps and in some ways conflicts with the EPA fugitive emissions requirements under OOOOa and various State LDAR requirements. These commenters urged the BLM to drop the LDAR program altogether or, at minimum, align the BLM requirements with the EPA and State requirements and/or allow operators to comply with EPA or State requirements in lieu of the BLM requirements.

Response: While the BLM cannot abdicate its statutory responsibility to ensure safe, responsible, and nonwasteful production of public oil and gas resources, the BLM has worked closely with the EPA and consulted with States to align the regulations as much as possible, consistent with the agencies' separate statutory authorities. In final form, the EPA and BLM programs use the same criteria to identify what constitutes a leak that must be repaired, and they require operators to use the same types of leak detection equipment, inspect the same types of sources at the same frequencies, and repair leaks within the same timeframes. In addition, the final rule provides that operators complying with EPA requirements for new, modified and reconstructed equipment are deemed in compliance with the BLM requirements for such equipment, eliminating the possibility of overlap where both regulations apply. Also, the final rule gives operators the option to comply only with the EPA requirements at existing facilities as well.

The BLM notes that there are a few small differences between the BLM and EPA programs, but these should not increase compliance burdens for operators. First, while the programs both cover largely the same sources, the programs differ somewhat in their coverage. The BLM LDAR provisions apply to all covers, closed vent systems, and storage vessels, while the EPA fugitive emissions requirements only apply to covers and closed vent systems not subject to § 60.5411a, and thief hatches or other openings on a controlled storage vessel not subject to § 60.5395a. Subpart OOOOa has a separate, detailed set of requirements in § 60.5411a for sources covered by that section, and another set of requirements in § 60.5395a for storage vessel affected facilities, and section 60.5416a prescribes a separate and different leak inspection regime for these sources.

For waste reduction purposes, the BLM did not believe it was necessary to adopt separate requirements for storage vessels, covers and closed vent systems. Instead, the BLM elected to require controls for storage vessels with high levels of gas loss and to include storage vessels, covers, and closed vent systems under the LDAR program. Thus, the final rule provides that operators that choose to comply with the EPA fugitive emissions program in lieu of the BLM leak detection program for both new and existing equipment on a lease must apply the EPA fugitive emissions requirements to all equipment covered by the BLM requirements, including storage vessels, covers and closed vent systems, to ensure that these types of equipment are covered by at least one of the agencies' leak detection requirements.

Second, a few elements of the BLM LDAR requirements are less prescriptive than the EPA requirements, but again, the BLM does not believe that these differences would impose any additional burdens on operators. The BLM regulations do not require operators to develop a monitoring plan or specify their walking path for inspections, nor do they include requirements for scheduling inspection of components that are difficult-to-monitor or unsafe-to-monitor. The BLM record-keeping requirements are also less specific than the EPA requirements. The BLM regulations do not provide specific direction to operators on the proper calibration and use of leak detection instruments, instead simply requiring operators to operate the instruments according to the manufacturer's specifications. Also, the BLM requirements define ''leak component'' slightly more broadly than the EPA definition of ''fugitive emissions component.'' For existing equipment that is not also subject to the EPA requirements, the final rule provides operators the choice of complying with the EPA or the BLM requirements, allowing operators to comply with a single set of requirements for all of their sources if they so choose, or to comply with the somewhat less prescriptive BLM requirements with respect to their existing sources.

With respect to State leak detection requirements, the BLM notes that because requirements differ both among the individual States and between the EPA and the individual State rules, it is not possible to align the BLM requirements with all of the other potentially applicable requirements. In addition, the BLM does not believe it is appropriate to exempt operators from the BLM requirements if they are subject to any State requirement relating to leak detection, as some commenters suggested. That approach would not ensure achievement of an equivalent reduction in gas losses. Instead, the final rule has a variance provision that allows State or local requirements to substitute for any of the BLM requirements under these rules, upon a showing that the State or local requirement at issue would perform at least equally well in terms of reducing the waste of oil and gas, reducing environmental impacts from venting and or flaring of gas, and ensuring the safe and responsible production of oil and gas.

C. Liquids Unloading at New Wells

1. Requirements of Final Rule and Changes From Proposed Rule

The requirements to reduce venting from liquids unloading activities at natural gas wells are generally discussed in Section VII. Section by Section. This section highlights one significant change to those provisions from the proposed rule. In the final rule, liquids unloading activities at new wells are subject to the same best practices and reporting requirements as those at existing wells. The BLM had proposed to prohibit liquids unloading through manual well purging at new wells drilled after the effective date of the rule, but we are not carrying this proposal forward into the final rule.

2. Significant Comments

Comments: Many commenters opposed the proposed well purging prohibition for wells drilled after the effective date of the rule. These commenters stated that even with optimized liquids unloading management and a highly sophisticated automated system, some purging would still be necessary. One commenter asserted that there are a large number of different technologies, tools, and practices for liquids unloading that are matched to an individual well's characteristics at each stage of its lifecycle (*e.g.,* wellbore design, tubular design and condition, use of packers, and the frequency of unloading needed to maintain or increase production), and that no single technique will be adequate or appropriate across the full lifecycle of a well. Others argued that it is inappropriate to have different standards apply to similar wells depending on the date on which they are drilled.

Several commenters apparently assumed that the prohibition on well purging would effectively require operators to install a plunger lift system during initial well construction, and these commenters provided multiple reasons that would not be appropriate. First, they asserted that new wells are not likely to require liquids unloading until later in the life of the well. Second, they argued that the characteristics of the well at the time that deliquification is needed impact the technical feasibility and cost of using methods other than purging for liquids unloading, and that operators are not likely to know during initial construction which option is optimal. Third, commenters contended that installing plunger lift systems at initial construction would also ''lock in'' technology choices that may preclude the use of more appropriate or improved technology when deliquification is needed. Lastly, commenters asserted that even if equipment was installed on new wells to accommodate plunger lifts, by the time liquids unloading is required, the equipment may need to be fixed or replaced.

Other comments supported BLM's proposal to prohibit purging during liquids unloading activities at new wells. They stated that operators could effectively design wells and deploy mitigation technologies in a way that would eliminate emissions, and that these technologies are cost effective. Citing datasets showing that a small minority of wells are responsible for a large amount of venting during liquids unloading events, these commenters also argued that the BLM should address this issue by applying the purging prohibition to these high-emitting existing wells as well.[116]

Response: Upon reviewing the information provided by the commenters, the BLM has determined that it is not appropriate to prohibit manual well purging at new wells. It is often less expensive to design in performance specifications (such as no purging) than to retrofit an existing source. However, in this case, the BLM agrees with commenters that there is no single technology or set of technologies that could appropriately be deployed at all new gas wells to avoid manual purging later in the well's life. The BLM did not intend the proposed purging prohibition to force all new wells to install plunger lift systems, and we do not believe that would be a cost-effective way to minimize venting from liquids unloading activities.

D. Variances Related to State and Tribal Regulations

1. Requirements of Final Rule

Like the proposed rule, the final rule provides a variance procedure to allow an equally or more effective State, local government, or tribal requirement to substitute for the comparable BLM requirement under this subpart. The BLM may grant a variance request submitted by a State or tribe if the BLM State Director finds that the State, local government, or tribal rule or regulation would perform at least as well as the relevant provision of the BLM rule in terms of reducing waste of oil and gas, reducing environmental impacts from venting and/or flaring of gas, and ensuring the safe and responsible production of oil and gas.

The rule identifies what a State or tribe would need to include in a request for a variance. The request must identify the provision or provisions of the BLM requirements from which the State or tribe is requesting a variance, and must identify the State, local, or tribal provisions that would substitute for the BLM provision or provisions. The variance request must also explain why the variance is needed, and demonstrate how the State, local or tribal rules would perform at least as well as the BLM provisions they would replace.

2. Changes From Proposed Rule

The variance provisions in the final rule largely track the proposed rule, with a few additions and clarifications. The criterion for approval of a variance request in the proposed rule was a determination that the State or tribal regulation ''meets or exceeds the requirements of the provision(s) from which the State or tribe is requesting the variance.'' The final rule requires instead a finding that the State or tribal rule ''would perform at least equally well in terms of reducing waste of oil and gas, reducing environmental impacts from venting and/or flaring of gas, and ensuring the safe and responsible production of oil and gas, compared to the particular provision(s) from which the State or tribe is requesting the variance.'' The final rule changes the phrase ''any individual provision of this subpart'' to ''any provision(s) of this subpart,'' to make clear that a variance request can apply to a specific provision or a group of provisions.

The final rule also: Allows local government requirements, in addition to State and tribal requirements, to support a variance request and substitute for BLM requirements; adds a requirement that the State or tribe must notify the BLM of any substantive changes to the State, local government, or tribal rules to be applied under the variance; and clarifies that a variance allows State, local government, or tribal rules to apply in place of the BLM requirements, but does not eliminate Federal enforcement of waste prevention requirements on Federal or Indian leases, units, or communitized areas. Rather, under a variance, the BLM has the authority to enforce the rules identified by the State, locality, or tribe as if the requirements were BLM regulations. The final rule further clarifies that State, local, and tribal enforcement of their own regulations would not be affected by the BLM's approval of a variance.

3. Significant Comments

a. Criteria for Variance Approval and Scope of Variance

Comments: Several commenters expressed concerns with the proposed criteria for BLM approval of a variance request. Many commenters stated that a patchwork of State, Federal, and tribal regulations could cause compliance difficulties and confusion for both the regulators and the regulated entities. These commenters requested that the variance approval criterion be less restrictive, and opposed the proposed language stating that the State or tribal regulation must ''meet or exceed'' the requirements of this rule. Stating that many of the State and tribal regulations that limit venting and flaring are qualitative, not quantitative, commenters asserted that determining what ''meets or exceeds'' the BLM's requirements would be arbitrary. Instead, some commenters suggested that the BLM change the language to ''is consistent with the intent of,'' stating that this would allow State regulations that meet the intent of the proposed rule, and are adequate and complete in achieving similar goals, to meet the variance criterion.

Other commenters suggested changes to make the variance application and approval process more restrictive, or opposed allowing variances altogether. One commenter supported the proposed criteria for approval but suggested strengthening this requirement by specifying how the BLM would evaluate the relative effectiveness of the State program, for example by requiring additional data or modeling to support a variance request. Commenters also requested that variance requests be made publicly available, and that there be an opportunity for the public to comment on the requests.

Several commenters suggested that variances should be allowed for all provisions and for entire State programs, stating that this approach would eliminate an involved process requiring variance requests for specific provisions. Others raised concerns about allowing a programmatic variance, and urged the BLM to limit variances to specific provisions of the rule or allow for a variance only when the State and BLM requirements are duplicative. They noted that in many cases State regulations do not address all of the areas covered by the BLM rule—*i.e.,* venting, flaring, and leaks—and State and tribal regulations may also not cover the same specific sources of these losses as the BLM rule.

Response: The BLM agrees that it could be helpful to add further detail to the proposed criteria for approving a variance. In addition, the BLM agrees that it could be helpful to clarify whether several provisions could be considered together and be found, in combination, to meet the criteria for

[116] *See* EDF, *Comments on Proposed Regulation Order Article 3: Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities: Part II of Comments* 8 (May 22, 2015), *available at http://www.arb.ca.gov/cc/oil-gas/meetings/EDF_5–22–15.pdf.*

approving a variance. The BLM has revised the variance provisions to address both of these issues.

First, the goal of the variance provision is to allow State, local, or tribal regulations to substitute for the BLM requirements where they will produce benefits at least equivalent to the expected benefits of the BLM regulations. The final rule spells out this criterion by identifying three key benefits of the BLM rules: (1) Reducing waste of oil and gas; (2) reducing environmental impacts from venting and/or flaring of gas; and (3) ensuring the safe and responsible production of oil and gas. To replace provisions of the BLM rule with a State or tribal requirement, the State or tribe must demonstrate that their rules would perform at least as well in achieving these benefits.

The final rule would allow States and tribes to request variances for specific sets of provisions, as well as individual provisions. For example, a State that had a leak detection program similar to the BLM program, but with a different required inspection frequency, might request a variance for the frequency provisions or for the whole leak detection program. The State would need to demonstrate that even if the State or local program would identify a different set of leaks compared to the BLM program, overall the State or local program would be at least as effective as the BLM program in reducing an equivalent quantity of gas losses—which would, in turn, reduce waste, reduce the environmental impacts of venting, and enhance safe and responsible production.

The final rule provisions are not, however, structured to support a broad approval of a variance for an entire State, local, or tribal oil and gas production oversight program, and the BLM agrees with the commenters who raised concerns about such an approach. The BLM recognizes that all States and many tribes regulate various aspects of oil and gas production, but different States and tribes focus on different aspects of the production process and aim for different goals. For example, one State may primarily regulate flaring, while another aims primarily to reduce methane emissions from tanks. The focus on at least equivalent performance requires a specific look at the results achieved from a particular provision or set of provisions, and it would not allow approval of, for example, a stringent flaring regime to substitute for leak prevention requirements.

The final rule does not require that variance requests be made publicly available or that there be an opportunity for the public to comment on the requests. In the past, the BLM has not made individual variance requests publicly available or provided an opportunity for public comment.

b. Enforcement Under an Approved Variance

Comments: Commenters requested clarification on who would be responsible for enforcement if a variance were approved. Commenters stated variously that: The State or tribe should enforce the applicable State, local or tribal requirements; States and the BLM should establish memoranda of understanding for enforcement; or the BLM should retain authority to enforce any State, local, or tribal provision for which a variance is granted (noting that States or tribes might lack resources to operate effective enforcement programs).

Response: The final rule clarifies that the variance provisions allow operators to comply with State, local, or tribal requirements in lieu of BLM provisions where a variance has been approved, but the BLM is still responsible for enforcing those requirements insofar as they would replace the BLM requirements. As a practical matter, the BLM and States, localities, or tribes will likely enter into memoranda of understanding to coordinate enforcement activities and efficiently deploy enforcement resources, avoiding overlap or redundancy. Ultimately, however, the BLM remains responsible for ensuring that operators comply with Federal requirements, or in this case, State, local, or tribal requirements that the BLM deems to be an acceptable substitute for the Federal requirements.

This is in contrast to situations in which a Federal agency is authorized by law to formally delegate administration and enforcement of a regulatory program to a State agency. Here, the BLM is not delegating its regulatory or enforcement authority to the State, locality, or tribe. Rather, the BLM is recognizing that, in the absence of a variance, an operator would be required to comply with overlapping requirements. Where States, localities, or tribes have regulations in place that are different from, but at least as effective as, the BLM requirements, applying two sets of requirements is burdensome for operators and would not generate additional benefits. The variance process avoids the potential duplication and inefficiencies that could otherwise occur in this situation, while still holding the BLM responsible for ensuring that operators meet the requirements and produce the benefits for the public that would have been provided under the BLM regulations.

VI. Additional Significant Comments and Responses

This section summarizes and responds to some additional comments on the proposed rule, that, while significant, did not lead to major changes in the final rule, and that are more cross-cutting in nature than the provision-specific comments addressed in the Section VI. Section-by-Section. These include comments on: The interaction between the BLM rule and EPA regulations; the BLM's authority to require flaring of vented gas; when gas should be considered ''avoidably lost''; application of these requirements to units and communitized areas; delays in permitting for natural gas pipeline rights of way; and the interplay between this rule and the BLM's land use planning activities.

A. Interaction With EPA Regulations

Comment: Many commenters raised concerns about how the proposed BLM regulations would interact with EPA regulations on oil and gas production. Some commenters urged the BLM not to finalize some or all of the provisions of this rule, arguing that its provisions regulate air pollution, and that task should be left to EPA. Some of these commenters further suggested that if the BLM does regulate waste from oil and gas production, the BLM should exempt sources covered by the EPA regulations, and align its requirements with the EPA requirements where they overlap, to avoid duplication and inconsistencies. Some commenters highlighted specific provisions that could potentially overlap with EPA's requirements, and expressed concern about differences or conflicts between the two agencies' regulatory regimes.

Response: We discuss the necessity for BLM regulations to reduce waste from oil and gas production in section III.B.3.a of this preamble, and the BLM's legal authority for the rule in section III.C. The BLM agrees with commenters, however, that in those areas covered by both this rule and EPA requirements, the two sets of regulations should align to the maximum extent possible. We have addressed comments raising potential inconsistencies between the proposed BLM text in specific provisions and corresponding EPA text in sections VI.A of this preamble, and in the Section by Section discussion in section VII, where those specific provisions are discussed. The remainder of this section addresses comments on the generalized potential for duplication and overlap.

We do not believe that the final BLM and EPA rules impose conflicting requirements on operators, and we further believe that we have addressed issues of regulatory overlap. First, much of this rule regulates activities or areas that are not regulated by EPA. This includes the rule's provisions on routine flaring during the oil and gas production process, well maintenance and liquids unloading, well drilling, well testing, emergencies, royalties due on lost gas, royalty rates, measurement and reporting of lost gas, and operators' royalty-free use of gas. Second, where both EPA and the BLM regulate an activity, the rules largely apply to different sources. In particular, the BLM requirements on venting from pneumatic controllers, pneumatic pumps, and storage vessels all explicitly apply to existing sources that are *not* subject to EPA's subpart OOOOa, but would be subject to that rule if they were new, modified, or reconstructed sources. In addition, even where the BLM and EPA requirements address the same type of activity, but apply to different sources (existing (BLM) versus new, modified, or reconstructed (EPA)), the agencies have worked together to align the text and substance of the requirements as closely as practicable.

Third, in those few instances in which both agencies regulate an activity and could potentially cover the same source—specifically well completions and leak detection—the BLM final rule provides that an operator can comply with just one set of requirements. Specifically, the rule aligns the BLM's requirements with the corresponding EPA requirements to a substantial degree, and also provides that an operator will be deemed to be in compliance with the BLM rules if the operator complies with the applicable requirements of subpart OOOOa.

Comment: Commenters noted that in addition to the existing EPA regulations of new, modified, and reconstructed air pollution sources at oil and gas facilities, EPA announced in March 2016 its intention to regulate *existing* oil and gas sources under CAA section 111(d), and EPA is currently developing an information collection request (ICR) as the first step in that process. Commenters argued that this EPA action negates any argument that the BLM rule is necessary to address emissions from the existing sources that subpart OOOO and subpart OOOOa do not cover.

Response: The ICR and EPA's intention to conduct a rulemaking under CAA section 111(d) are discussed in detail in section III.B.3.a of this preamble. In summary, establishing emission reduction requirements for existing sources under the CAA would entail the following steps:

- EPA issues a final ICR;
- Industry submits the required information;
- EPA develops and proposes a rule under CAA section 111(d);
- EPA reviews public comment on that proposal and finalizes the CAA section 111(d) rule;
- Because rules under section 111(d) do not have independent effect but are implemented by States, States then develop and submit to EPA State plans to implement the 111(d) rule (a process that generally requires State rulemaking and may require State legislation);
- EPA approves the State Plan (or prescribes a Federal implementation plan where the State fails to submit a satisfactory plan); and
- Industry implements the requirements in time to meet compliance deadlines established in the State plans.

Clearly, it will be many years before existing sources in this sector are subject to binding requirements under CAA section 111(d), and it is not yet evident what shape those requirements will take. Given the substantial uncertainty surrounding the timing and content of any EPA regulation of existing oil and gas sources, the BLM has both the authority and the obligation to act now to rein in the ongoing waste of large quantities of public and Indian natural gas.

B. Authority To Require Flaring of Gas

Citing several specific provisions of the proposed rule that would require operators to flare rather than vent gas that is not captured for sale or use, including the venting prohibition and provisions on storage tanks, several industry commenters asserted that the BLM lacks the authority to require flaring instead of venting of Federal and tribal gas. These commenters argued that the BLM's sole authority is to prevent waste, and a provision that requires flaring rather than venting does not aim at waste prevention because shifting from venting to flaring does not conserve the gas. The sole purpose of such provisions, these commenters asserted, is to regulate air pollution and GHG emissions. Commenters further asserted that regulation of air pollution and GHG emissions is the exclusive province of the EPA, and by extension, the BLM may not regulate in this arena.

For several reasons, the provisions of the rule that require flaring instead of venting are within the BLM's statutory authority. First, as noted above, the MLA grants the BLM the authority to promulgate rules for the prevention of undue waste or for safety purposes.[117] As explained further in the Section by Section analysis in Preamble Section VII, each provision of this rule that requires flaring rather than venting is a waste prevention and/or a safety measure. For instance, the requirement to flare and not vent high-pressure associated gas constitutes waste prevention because any flaring at a given well will likely cause the operator to capture more gas at its other wells in order to stay within the capture percentage under § 3179.7. These provisions therefore fall comfortably within the BLM's waste prevention and safety authority under the MLA, irrespective of the BLM's environmental mandate.

Second, as discussed above, the MLA and FLPMA grant BLM the authority to regulate oil and gas development on the public lands, including to protect the public's interest in other natural resources and the quality of the environment.[118] In its traditional role as manager of the public lands and steward of publically owned resources, BLM must regulate the development of federally owned oil and gas deposits pursuant to principles of multiple use and sustained yield.[119] Under those principles, BLM may consider air quality and GHG emissions when deciding how to regulate mineral-development operations. FLPMA expressly declares that BLM should balance the need for domestic sources of minerals against the need to protect the quality of ''air and atmospheric'' resources.[120] Furthermore, as part of its resource management plans, the BLM has recently exercised its authority under FLPMA to include emission mitigation standards for oil and gas operations.[121]

---

[117] The BLM has acted on the latter authority since DATE: longstanding rules promulgated under the MLA require the operator to ''perform operations and maintain equipment in a safe and workmanlike manner'' and ''take all precautions necessary to provide adequate protection for the health and safety of life and the protection of property.'' 43 CFR 3162.5–3.

[118] *See* 30 U.S.C. 187, 189; 43 U.S.C. 1732(b), 1740.

[119] 43 U.S.C. 1732(a).

[120] 43 U.S.C. 1701(a)(8), (a)(12).

[121] *See, e.g.,* BLM Tres Rios Field Office, *Resource Management Plan and Record of Decision* at II–63 (Feb. 27, 2015), *available at http://www.blm.gov/style/medialib/blm/co/field_offices/san_juan_public_lands/land_use_planning/approved_lrmp.Par.66402.File.dat/Part%20II%20-%20RMP%20Chapter%202.pdf* (setting forth specific standards to mitigate oil and gas emissions that will apply to all approved site-specific projects, including NOx limits for engines, use of ''green completions technology,'' storage tank controls designed to achieve 95% emission reduction, and use of low or no-bleed pneumatics).

Third, the rule's provisions requiring flaring rather than venting further the BLM's trust responsibilities with respect to Indian oil and gas development because they will prevent the waste of gas and will reduce the environmental impacts to Indian lands from oil and gas development. The BLM believes that these provisions, like all the provisions in this rule, are in the best interest of Indian mineral owners and that the extension of these provisions to oil and gas production from Indian lands is therefore justified.

Finally, while the CAA indeed delegates responsibility for implementing its air pollution and GHG emissions control program to EPA, nothing in the Act bars the BLM from considering air pollution and GHG emissions when deciding how to regulate the development of federally owned oil and gas deposits. The EPA and the Department of the Interior have distinct statutory authorities and missions that may, in some cases, result in overlapping policy goals. This rule does not infringe on EPA's prerogative to regulate air quality through source-specific performance standards and cooperation with State partners. Nor does EPA's authority infringe on or otherwise restrict the BLM's mandate to prevent waste from and manage the environmental impacts of activities on public lands and using public resources. The CAA does not displace other Federal agencies' Congressionally-granted authority to address environmental and climate change concerns.[122] Congress may grant agencies overlapping spheres of authority, and such agencies merely have a responsibility to coordinate with each other.[123] The BLM has worked closely with EPA to ensure that this rule and EPA's subpart OOOO and subpart OOOOa regulations harmonize to the maximum extent practicable.

C. ''*Avoidably Lost*'' *Oil or Gas*

As noted above, the MLA requires royalties on oil and gas to be paid as a ''percent in amount or value of the production removed or sold from the lease.'' [124] As interpreted in a judicial decision addressing waste prevention regulations issued by the Department in the 1970's,[125] production ''removed or sold from the lease'' does not include oil or gas that is ''unavoidably lost'' during production. ''Avoidably lost'' oil or gas, on the other hand, constitutes waste and is subject to royalties. As explained in the preamble to the proposed rule, NTL–4A distinguished between ''avoidably lost'' and ''unavoidably lost'' oil and gas, though it defined those terms in a general way that was subject to inconsistent application.[126] In § 3179.4, this rule clarifies the distinction between ''avoidable'' and ''unavoidable'' losses by limiting ''unavoidable'' losses to specific circumstances in which the operator has not been negligent and has complied fully with applicable laws, lease terms, and regulations. Industry commenters objected to this approach on the ground that whether a loss of oil or gas is ''avoidable,'' and therefore royalty-bearing under the MLA, requires a case-by-case evaluation of a lessee's reasonableness in light of the economic circumstances. That is, they argued that a loss of oil or gas should be deemed ''unavoidable'' if taking measures to avoid the loss would have been ''uneconomic'' from the operator's perspective.

For several reasons, the BLM did not change the final rule based on these comments. As an initial matter, there is no statutory or jurisprudential basis for the commenters' position that the BLM must conduct an inquiry into a lessee's economic circumstances before determining a loss of oil or gas to be ''avoidable.'' Although the BLM's practice under NTL–4A has generally been to engage in case-by-case economic assessments before making avoidable/unavoidable loss determinations, the BLM has not always done so [127] and is not legally required to do so. Furthermore, in the absence of clear statutory language or legislative history delineating what should be considered ''avoidably lost'' oil or gas under the MLA, the BLM's past practice does not prohibit it from revising its interpretation of that term. Finally, FOGRMA provides BLM with an independent statutory authorization to impose royalties on oil or gas lost as a result of an operator's negligence or failure to comply with any rule or regulation issued under the mineral leasing laws, without further economic analysis. Specifically, section 308 of FOGRMA, provides that ''[a]ny lessee is liable for royalty payments on oil or gas lost or wasted from a lease site when such loss or waste is due to negligence on the part of the operator of the lease, or due to the failure to comply with any rule or regulation, order or citation issued under this Act or any mineral leasing law.[128]

Some commenters argued that the BLM's existing interpretation of what constitutes an ''avoidable loss'' has become a ''fundamental term'' of the BLM's existing oil and gas lease contracts upon which lessees relied in entering into the contracts and making subsequent business decisions. Citing *Mobil Oil Exploration & Producing Southeast, Inc.* v. *United States,* 530 U.S. 604 (2000), commenters argued that the proposed rule would substantially impair the value of their lease contracts and therefore subject the BLM to contract damages or takings claims.

On the contrary, in promulgating this final rule the BLM is acting within its authority under the MLA and thus within the terms of existing leases. First, the MLA requires lessees to ''use all reasonable precautions to prevent waste of oil or gas,'' [129] and provides the Secretary with the continuing authority to ''prescribe necessary and proper rules and regulations'' in order to carry out the purposes of the MLA.[130] The MLA further requires that each lease contain a provision ''that such rules . . . for the prevention of undue waste as prescribed by [the] Secretary shall be observed.'' [131] The BLM's standard form lease makes clear that the rights granted to the lessee are ''subject to . . . the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, *and to regulations and formal orders hereafter promulgated* when not inconsistent with the lease rights granted or specific provisions of [the] lease.'' [132] Both the

[122] *See, e.g.,* 42 U.S.C. 7610 (''Except as provided in subsection (b) of this section, this chapter shall not be construed as superseding or limiting the authorities and responsibilities, under any other provision of law, of the Administrator or any other Federal officer, department, or agency.'').

[123] *See, e.g., Massachusetts* v. *EPA,* 549 U.S. 497, 531–32 (2007) (finding overlap but no conflict between EPA's authority to regulate greenhouse gases from new motor vehicles under the CAA section 202(a) and the authority of the National Highway Transportation Safety Administration (NHTSA) under the Energy Policy and Conservation Act (EPCA) to promote energy efficiency by setting mileage standards); *see also Green Mt. Chrysler Plymouth Dodge Jeep* v. *Crombie,* 508 F. Supp. 2d 295, 350 (D. Vt. 2007) (concluding that ''the preemption doctrines do not apply to the interplay between'' EPA's responsibilities under the Clean Air Act and NHTSA's duties under the EPCA, and noting that ''[s]hould a conflict between [the two agencies' processes] become apparent, the federal agencies involved—EPA and NHTSA— are capable of and even encouraged to cooperate in a joint accommodation or resolution'').

[124] 30 U.S.C. 226(b)(1)(A), 226(c)(1) (emphasis added).

[125] *See Marathon Oil Co.* v. *Andrus,* 452 F. Supp. 548, 552–53 (D. Wyo. 1978).

[126] 81 FR at 6665.

[127] *Compare Ladd Petroleum Corp.,* 107 IBLA 5, 7 (1989) (requiring opportunity for operator to show that gas capture would be ''uneconomic'' before flaring is deemed avoidable), *with Lomax Exploration Co.,* 105 IBLA 1, 7 (1988) (flaring without prior approval constitutes per se avoidable loss under NTL–4A).

[128] 30 U.S.C. 1756.

[129] 30 U.S.C. 225.

[130] 30 U.S.C. 189.

[131] 30 U.S.C. 187.

[132] BLM Form 3100–11 (emphasis added).

plain meaning of this language and the BLM's longstanding interpretation of it extend to ''incorporat[ing] future regulations, even though inconsistent with those in effect at the time of lease execution, and even though to do so creates additional obligations or burdens for the lessee.'' [133] The BLM's legal and contractual authority to update its regulations governing oil and gas leases should thus foreclose successful breach of contract claims based on this rule.

The *Mobil Oil* decision cited by commenters is not pertinent. In that case, a permitting delay mandated by a subsequently enacted statute constituted a breach of the lease because the terms of the lease did not subject it to the burdens of such later-enacted statutes.[134] Today's rule constitutes a ''hereafter promulgated'' regulation to which Federal oil and gas leases are expressly subject. The application of this rule to existing lessees, therefore, does not breach their contract rights because their existing leases incorporate the rule by reference.

That said, the BLM is cognizant that some of the requirements of this rule may pose more substantial burdens for existing lessees than for future lessees, because future lessees can take account of the requirements of the rule in making their leasing decisions. Accordingly, certain sections of the rule, including sections 3179.8 and 3179.201, are structured to reduce the burden on existing lessees. For further discussion of these provisions, see Section VII, Section by Section.

D. Application to Units and Communitized Areas

Some commenters objected to the application of this rule to operations on State and private tracts that are committed to a Federally-approved unit or communitized area. These commenters admit that the BLM has the authority under FOGRMA to regulate oil and gas activities on such tracts for the purposes of royalty accountability, but fail to recognize the various royalty-accountability purposes of this rule, including identifying and imposing royalties on wasteful losses of oil and gas, clarifying the circumstances under which production may be used royalty free, and setting measurement standards for venting and flaring (some of which is royalty bearing). More to the point, though, these commenters did not explain why the BLM's waste prevention authority under the MLA does not extend to the waste of Federal oil and gas that occurs on non-Federal tracts in a Federally-approved unit or communitized area. Commenters cited the BLM's decision not to apply Onshore Oil and Gas Order No. 1 (''Order 1'') to operations on non-Federal lands in units and communitized areas [135] as evidence that the BLM lacks authority to apply this rule to such lands. However, the cited passage from the preamble to Order 1 did not address the scope of the BLM's regulatory authority with respect to non-Federal tracts in Federally-approved units and communitized areas; rather, the passage addressed what was ''appropriate'' in light of the jurisdictional limitations contained in 43 CFR. § 3161.1.

Commenters also asserted that because the regulation of State and private minerals is under the jurisdiction of the States, the BLM lacks the authority to apply its waste prevention regulations to units and communitized areas in a manner that would affect the production of State and private minerals unitized or communitized with Federal minerals. While the BLM agrees that the regulation of State and private minerals is under the jurisdiction of the States, the BLM does not agree that States' jurisdiction over State and private minerals precludes the BLM from promulgating a waste prevention regulation that has incidental impacts on State and private minerals unitized or communitized with Federal or Indian minerals. The purpose of this rule is to ensure that operators take reasonable precautions to prevent the waste of Federal and Indian oil and gas, a matter that BLM has the authority to regulate pursuant to its statutory and trust responsibilities described in Section III.C.

The fact that States and private parties have chosen to enter into unitization or communitization agreements whereby State or private oil or gas is commingled with Federal or Indian oil or gas, and produced concurrently with Federal or Indian oil or gas, does not deprive the BLM of its authority to impose reasonable waste prevention requirements on operators producing Federal or Indian oil or gas.

E. ROW Permitting

Under section 28 of the MLA, the BLM is responsible for granting most of the ROWs for oil and natural gas gathering, distribution, and transportation pipelines and related facilities on public lands. Specifically, the BLM has ROW approval authority for ROWs that cross lands administered by the BLM, or lands administered by two or more Federal agencies,[136] except lands in the National Park System or lands held in trust for Indians or Indian tribes.[137]

Several commenters expressed concern that they have experienced significant delays in obtaining ROW approvals for gathering lines, and that these delays impede producers' ability to capture and sell gas. These commenters stated that the BLM should streamline the ROW approval process. They asserted that accelerating the permitting process for pipeline ROWs would allow energy producers to more easily capture and market gas that might otherwise be flared due to a lack of infrastructure. Some commenters further asserted that the BLM could quickly and easily reduce flaring by processing ROWs in a timely manner, and that streamlining ROW permitting would provide a more cost-effective solution to the problem of gas waste than imposing the requirements in the proposed rule.

Commenters suggested several ways in which the BLM could increase permitting speed for gas gathering lines on Federal land. One commenter stated, for example, that the BLM should expand the use of categorical exclusions under the National Environmental Policy Act (NEPA) when permitting gas gathering lines, and another suggested using a ROW ''corridor'' approval approach, so that small adjustments in a project footprint would not delay the full approval process.

The BLM's experience is that while processing time for ROW applications can sometimes be an issue, particularly in a handful of offices where staff retention has been difficult over the past few years, processing time is not the primary cause of the large volume of current flaring. For example, BLM data indicate that many applications to flare gas come from wells that are already connected to pipeline infrastructure, or for which operators are not seeking ROWs to build new pipelines. For instance, in Dickinson, North Dakota, large volumes of gas are being flared from over 1,700 Federal and Indian oil wells,[138] yet the local BLM field office

[133] *Coastal Oil & Gas Corp., et al.,* 108 IBLA 62, 66 (1989).

[134] *Mobil Oil Exploration & Producing Southeast* v. *United States,* 530 U.S. 604, 613–20 (2000).

[135] 72 FR 10308, 10313 (March 7, 2007).

[136] 43 CFR 2881.11.

[137] Mineral Leasing Act section 28(b)(1) (definition of ''Federal lands'' excluding lands in the National Park system or lands held in trust for Indians or Indian tribes).

[138] Based on internal BLM analysis of North Dakota activity from AFMSS queried on April 16, 2015.

currently has just four ROW applications pending.

While the BLM data indicate that the current speed of the BLM's ROW processing is not a significant factor in the rate of flaring at most wells, the BLM recognizes the importance of timely ROW approvals and continues to make improvements aimed at increasing the efficiency of the ROW permitting process. A variety of factors, some in the BLM's control but some beyond the BLM's control, can impact the timely approval of ROWs and other actions that may be needed to construct a pipeline or gas processing facility. For example, fee land owners may delay or block a pipeline project that crosses both public and private lands, even when the Federal portion of the ROW is permitted. The time period for permitting ROWs may also be extended if, for example: The ROW grant is pending consultation or concurrence from another agency, *e.g.,* pursuant to the Endangered Species Act or Section 106 of the National Historic Preservation Act; the ROW application is incomplete; the corresponding APD has not yet been processed; or a high volume of applications is submitted in a short period of time.

Last year, the BLM instituted key program changes to more quickly process pending oil- and gas-related ROW applications, and we have seen progress as a result of these efforts. These steps included using strike teams to add additional permit-processing resources at high-volume offices, working with the Office of Personnel Management to identify pay strategies to address staff shortages in key offices, and increasing formal training for critical staff. Additionally, particular field offices are actively pursuing other actions to decrease permitting times, including: (1) Coordinating aspects of the pipeline ROW and corresponding APD reviews, so that they occur concurrently rather than consecutively; (2) working with project proponents to minimize surface disturbance to help expedite environmental reviews; (3) fully and consistently utilizing applicable Categorical Exclusions to NEPA to streamline reviews; (4) encouraging project proponents to develop oil and gas Master Development Plans and Master Leasing Plans as well as right-of-way Master Agreements, which are negotiated with a single applicant for processing and monitoring multiple applications covering facilities within a specific geographic area; (5) encouraging unitization to help streamline permitting by avoiding the need for multiple ROWs (or potentially for any ROW at all, if the gas can be gathered and transmitted without crossing Federal or Indian land); and (6) working closely with proponents to determine which projects are priorities.

F. Planning

Finally, many stakeholders requested that the BLM address waste reduction through requirements under the MLA relating to the BLM's land use planning and environmental review processes. Commenters stated that the BLM should use its authority to reduce waste by proactively using all available planning, analysis and permitting tools including Applications for a Permit to Drill (APDs); lease stipulation decisions in resource management plans (RMP); master leasing plans (MLPs); waste minimization plans (WMPs); and unitization agreements. Commenters also stated that the proposed rule fails to exercise the BLM's full authority at the planning and leasing stages, and further, that land-use planning should be used to support well-planned fossil fuel development that would, for example, limit the leasing of lands where infrastructure constraints are expected to be significant, so as to minimize the need for venting or flaring of associated gas.

Commenters asserted that if the BLM conducted more robust NEPA reviews prior to oil and gas development, the reviews would identify additional waste reduction opportunities. Commenters further requested that the rules governing development of RMPs be modified to support the intended purpose of the rule to capture gas and prevent venting or flaring. These commenters also asserted that detailed, site-specific MLPs can support methane capture and waste minimization once an RMP is in place.

Commenters disagreed with the BLM's decision not to propose changes to the BLM land use planning regulations as part of this rulemaking. They suggested that the BLM's failure to link the proposed rule to the BLM's foundational planning and management framework misses opportunities to foster orderly and efficient development of oil and gas that would prevent methane pollution and waste. Some commenters suggested that although changes to the BLM's land use planning rules are not required to enhance the use of planning mechanisms available to the BLM when developing RMPs and MLPs, referencing these tools in the final rule would emphasize their importance.

While the BLM is not making changes to the BLM land use planning regulations or NEPA review processes as part of this rulemaking, as stated in the preamble to the proposed rule, the BLM agrees that the land use planning and NEPA processes are critical to achieving our simultaneous goals of responsible oil and gas development, land stewardship and resource conservation, and protection of air quality on (and reduction of air emissions from) Federal lands.

The BLM already has land use planning and NEPA tools and processes in place that can be used to help achieve the specific goals of this rulemaking—to reduce the wasteful and environmentally harmful loss of gas through venting, flaring, and leaks. The BLM conducts NEPA analyses for both regional planning decisions and project level decisions. These analyses take a hard look at the direct effects, indirect effects, and cumulative effects of the proposed federal action on various resources during the land use planning or project approval process, such as the effects on wildlife, air quality, or recreation opportunities. The BLM's NEPA analyses also quantify GHG emissions associated with the proposed planning decision alternatives under consideration. In particular, the land use planning and NEPA processes for new RMPs and MLPs provide important opportunities to consider the effects of oil and gas development over a larger area and to optimize planned development to minimize impacts from venting and flaring, among other activities. The planning process gives the BLM the opportunity to consider how a specific land management plan could address the timing and location of development of oil and gas and related infrastructure, such as pipelines, and the projected consequences of such decisions in terms of the quantities of vented and flared gas and the impacts associated with those emissions.

Thus, the BLM already has the NEPA processes and tools in place to evaluate the effects of the gas that would be flared, vented, and leaked from proposed oil and gas production, including impacts to wildlife and air quality, as well as GHG emissions, which contribute to climate change. The NEPA analyses can also identify ways to minimize such effects, such as evaluating alternative options for siting and timing of development that would maximize the opportunities for gas capture in lieu of flaring.

In addition, the BLM is in the process of completing a comprehensive update to its land use planning regulations, which should further enhance the opportunities to address gas waste in new oil and gas production approvals. The BLM proposed its new planning regulations in February 2016. The proposed changes would boost public participation and facilitate earlier stakeholder engagement in the planning process. For example, the new planning regulations would provide for a planning assessment at the initiation of an RMP, which would involve stakeholders and other agencies in identifying key issues and obtaining better data early in the process. These new regulations would also enhance the existing opportunities for stakeholders to highlight options to reduce waste from proposed oil and gas production in BLM land use planning.

G. Exemptions Through Sundry Notices

Some commenters expressed concerns that because the rule provides for operators to request various exemptions through submission of Sundry Notices to the BLM, these provisions could impose a paperwork burden on operators and the requests could be difficult for the BLM staff to process in a timely manner. The BLM believes that the number of requests for exemptions will be fairly limited, as the BLM's analysis does not indicate that the costs of these provisions will be substantial for the vast majority of operators. Nevertheless, the BLM recognizes that these are valid concerns, and is committed to minimizing unnecessary paperwork burdens on operators and continuing to streamline its own operations.

Thus, the BLM is providing here some additional information regarding how we expect operators to submit requests and how we may process them, and we will provide additional guidance as we move forward to implement the final rule. Concerns have been raised in this regard with respect to requests for exemption from multiple requirements of the rule for a lease. Specifically, operators have asked whether they could submit a single request for an exemption from multiple provisions of the rule, and how the BLM would evaluate it. The final rule requires an operator to make a demonstration that each requirement for which the operator is requesting an exemption would itself cause the operator to cease production and abandon significant recoverable reserves on the lease. An operator could not simply add up the costs of compliance with multiple requirements of the rule to show that the cumulative costs of the requirements would cause the operator to cease production and abandon significant recoverable reserves under the lease, and thereby obtain an exemption from all of those requirements. In making the showing for a specific requirement, however, the operator could take into account as part of the baseline costs any requirements of the rule for which an exemption is not being requested. In addition, to the extent that there is common data supporting multiple exemption requests, such as the data on production and revenues from a given lease, the BLM intends that an operator would be able to provide that data once on a single submission containing a separate showing for each of the specific requests, rather than providing multiple separate submissions.

VII. Section by Section

This section discusses the final rule provisions, substantial changes from the proposed rule, and some of the most significant comments received. Public comments not addressed in this section or elsewhere in this preamble are addressed in the separate Response to Comments document, which is available on the BLM Web site and is part of the rule-making record.

Part 3100

Section 3103.3–1 Royalty on Production

The final rule's amendments to existing 43 CFR 3103.3–1 focus on existing § 3103.3–1(a)(1), and do five things: (1) Remove two provisions of the existing regulations that are no longer necessary (§ 3103.3–1(a)(1)(i) and (ii)); (2) add a new § 3103–1(a)(2); (3) specify that the royalty rate on all leases existing at the time the rule becomes effective will remain at the rate ''prescribed in the lease or in applicable regulations at the time of lease issuance''; (4) specify the statutory rate of 12.5 percent for all noncompetitive leases issued after the effective date of the final rule; and (5) conform the regulatory regime for competitive leases issued after the effective date of the rule to the regime envisioned by the MLA, which specifies that the royalty rate for all new competitively issued leases be set ''at a rate of not less than 12.5 percent.''[139] All of these changes were in the proposed rule.

The final rule also renumbers existing § 3103–1(a)(2) and (a)(3) as § 3103–1(a)(3) and (a)(4) and makes minor changes to existing § 3103–1(a)(3)) (final § 3103–1(a)(4)) for clarity.

Additionally, the final rule reprints existing §§ 3103–1(b) and (c), for clarity. Finally, the BLM made a minor revision to § 3103.3–1(d) from the proposed rule. To improve the clarity of this provision, final § 3103–1(d) adds the language ''from the gas stream'' in two places that address any helium component that is not conveyed with the mineral estate in a Federal oil and gas lease.

Several commenters stated that a new royalty rate above the current rate of 12.5 percent would create uncertainty in the leasing process, and would disadvantage Federal leases compared with State and private leases and disincentivize investments on Federal lands. One commenter objected to the proposed rule's use of the term ''base rate,'' because the BLM did not provide a definition of that term. The commenter also noted that the proposed rule does not describe the process by which the rate will be determined, to whom it will apply, or how and when it will be reevaluated and reset. One commenter noted that under the BLM's recent regulatory revision of Onshore Oil and Gas Order Number 3, the BLM proposes to authorize commingling allocations and approvals (CAAs) for properties with identical fixed royalty rates. The commenter suggested that a variable royalty rate would have the unintended consequence that most CAAs would not be approved.

Other commenters supported the BLM's proposal to ensure that the royalty rate of 12.5 percent represents a floor and not a ceiling. The commenters contended that this would allow the American public to receive a fair market return on their resources. Some commenters suggested that the royalty rate be raised to 18.75 percent to be in line with the royalty rate assessed on Federal offshore leases. Commenters also noted that the current rate is far below several state rates. One commenter suggested that the increase in royalty rate should be informed by the social and environmental costs of oil and gas production, including the social cost of methane emissions. Another commenter stated that if the BLM were to increase the royalty rate, it should be a constant rate, rather than a sliding scale, as this would reduce administrative and reporting burdens. Some commenters requested that the BLM set the royalty rate at least 60–90 days prior to any lease sale and publish notice in the **Federal Register** and the BLM Web site for public comment.

The BLM did not revise the rule in response to these comments. As stated in the proposed rule preamble, the BLM is not currently proposing to raise the base royalty rate for new competitively issued leases above 12.5 percent; rather, we are conforming the regulatory provisions governing royalty rates for new competitive leases to the

[139] Note that the rule renumbers current 43 CFR 3103.3–1(a)(2) and (3) but does not otherwise change the content of those provisions. Further, the rule does not alter 43 CFR 3103.3–1(b), (c), or (d). Those provisions are reprinted in this rule solely to clarify the numbering of the revised § 3103.3–1, and for ease of reference.

corresponding rate provisions in the MLA. The BLM would engage in additional process before raising the rate.

Section 3160.0–5 Definitions

This amendment to § 3160.0–5 deletes the definition of ''avoidably lost'' that by its terms applies to part 3160. A definition of ''avoidably lost'' is no longer needed for part 3160, and this definition is superseded by the provisions in new subpart 3179, particularly § 3179.4, governing when the loss of oil or gas is deemed avoidable or unavoidable. The BLM did not receive comments on removing this definition and is finalizing this deletion as proposed.

Section 3162.3–1 Drilling Applications and Plans

This section describes the requirements for drilling applications and plans, including the information that an operator must provide with an APD. The BLM is amending this section to add paragraph 3162.3–1(j), which requires that when submitting an APD for an oil well, an operator must also submit a waste minimization plan. Submission of the plan is required for approval of the APD, but the plan will not itself become part of the APD, and the terms of the plan will not be enforceable against the operator.

The purpose of the waste minimization plan is for the operator to set forth a strategy for how the operator will comply with the requirements of subpart 3179 regarding the control of waste from venting and flaring. The waste minimization plan must include information regarding: The anticipated completion date(s) of the proposed well(s); a description of anticipated production from the well(s); certification that the operator has provided one or more midstream processing companies with information about the operator's production plans, including the anticipated completion dates and gas production rates of the proposed well or wells; and identification of a gas pipeline to which the operator plans to connect.

Based on comments received requesting that the information required in the plans be streamlined, the final rule provides that certain kinds of information are only required if an operator cannot identify a gas pipeline with sufficient capacity to accommodate the anticipated production of the proposed well(s). This conditionally-required information includes: A gas pipeline system location map showing the proposed well(s); the name and location of the gas processing plant(s) closest to the proposed well(s); all existing gas trunklines within 20 miles of the well, and proposed routes for connection to a trunkline; the total volume of produced gas, and percentage of total produced gas, that the operator is currently venting or flaring from wells in the same field and any wells within a 20-mile radius of that field; and a detailed evaluation, including estimates of costs and returns, of potential on-site capture approaches.

Some commenters requested that waste minimization plans required by other states, such as North Dakota and New Mexico, should be allowed to satisfy the requirements set forth in this section. The BLM recognizes that some States have similar waste minimization plan requirements under State law. To the extent that an operator is already preparing, under State requirements, a waste minimization plan that meets all or most of the requirements for a waste minimization plan under section 3162.3–1, the BLM requirements should impose little additional burden on the operator. The operator would be able to submit the same plan to the BLM, supplemented as necessary to meet each of the requirements of section 3162.3–1.

Other commenters stated that the preparation and review of the waste minimization plans would be a burden both on applicants and the BLM, because in the commenters' view, the proposed rule significantly underestimated the number of plans that would be required and the time required to prepare them. The commenters asserted that the BLM can be slow in approving APDs, and argued that the review of the additional waste minimization plans could slow the process further. Other commenters suggested that the requirement to prepare a waste minimization plan be limited only to wells that anticipate flaring a high volume of associated gas after completion. The BLM disagrees with these comments and believes that requiring operators to prepare a waste minimization plan for all wells is a reasonable, low cost, and effective way to encourage operators to consider and plan for capturing gas before the development of every new well. As stated previously, however, the final rule streamlines some of the elements required in the plan. Further, the BLM presently plans to review the effectiveness of the plan requirement within 3 years after the final rule's effective date, to assess the costs to operators of preparing the plans, the costs to the BLM of reviewing the plans, and the effectiveness of the plans in driving flaring reductions at new wells.

Commenters also expressed concern that the waste minimization plan requirement could trigger the need for additional analysis under NEPA for non-federal/non-Indian wells within a unit or communitized area. Under existing regulations, wells that are not located on federal or Indian surface and do not pierce federal or Indian minerals are not required to obtain BLM's approval of an APD, even if those wells are within a unit or communitized area from which federal or Indian minerals are produced. Commenters were concerned that the requirement for a waste minimization plan would somehow require those wells to file APDs or subject them to NEPA.

The BLM believes these concerns are unfounded. Operators would be required to submit waste minimization plans only for wells that already require an APD under part 3160—*i.e.,* for wells that are located on federal or Indian surface or pierce federal or Indian minerals. Operators may need to incorporate information in their waste minimization plans regarding wells on a unit or communitized area that do not require APDs (*see, e.g.,* § 3162.3–1(j)(2)(ii), requiring anticipated production information for all wells on a multi-well pad). Also, to the extent that gas from a nonfederal mineral estate is mixed with federal or Indian gas, the waste minimization plan may effectively minimize waste of both federal or Indian and non-federal or non-Indian gas. However, nothing under this provision requires operators to file an APD for any well, much less extends the APD requirements under part 3160 to wells that are not located on federal or Indian surface and do not pierce federal or Indian minerals. Moreover, waste minimization plans are not enforceable, and BLM will only review and approve them in the course of acting on an APD. While the BLM will analyze potential indirect impacts of execution of the waste minimization plan as part of its NEPA analyses for APDs submitted after the rule takes effect, there is no independent federal action here that would trigger NEPA for a waste minimization plan separate from an APD. Other commenters stated that the BLM should strengthen the requirements of the waste minimization plans and make them enforceable. The BLM declined to do so. The BLM believes that waste minimization plans, like the environmental analyses performed under the National Environmental Policy Act, can drive significantly better outcomes by ensuring that the operator and midstream companies have more information at an earlier stage, to allow for better planning and coordination. To achieve that result, however, the plans must be quite detailed and contain all relevant information. The BLM believes that the plan's unenforceability helps achieve that outcome: Because the terms of the plans cannot be enforced against the operator, the BLM avoids creating an incentive for operators to develop very general plans with few specific details. Additionally, the BLM is concerned that circumstances could change between when the plan is developed and when well production begins, making strict adherence to the plan difficult. In such a circumstance, the existence of the plan would still be useful, because operators would have information at their fingertips that would enable them respond nimbly to the changed circumstance, but operators would not be held to the specific terms of the now outdated plan.

Commenters also requested that the BLM make the waste minimization plans publicly available. The BLM already publicly posts APDs for a period prior to approval, and we plan to post the waste minimization plans accompanying the APDs in the same manner, subject to any protections for confidential business information.

Subpart 3178—Royalty-Free Use of Lease Production

Section 3178.1 Purpose

This section states that the purpose of the subpart is to address circumstances in which oil and gas produced from Federal and Indian leases may be used royalty-free. This subpart supersedes those parts of NTL–4A pertaining to oil or gas used for ''beneficial purposes.''

The BLM received a comment on this section requesting that the BLM clarify whether the rule will replace all of NTL–4A, or just those parts ''pertaining to use of oil or gas for beneficial purposes.'' The BLM notes that Subpart 3178 replaces the portion of NTL–4A pertaining to the use of oil or gas for beneficial purposes and Subpart 3179 replaces the portion of NTL–4A pertaining to venting and flaring of produced gas, unavoidably and avoidably lost gas, and waste prevention. Together, the combined revisions to Subparts 3178 and 3179 supersede NTL–4A in its entirety. The BLM disagrees that the regulatory text requires clarification beyond what is stated here, and did not revise this section in response to this comment.

Section 3178.2 Scope of This Subpart

This section specifies which leases, agreements, wells, and equipment are covered by this subpart. The section also states that the term ''lease'' in this subpart includes IMDA agreements, unless specifically excluded in the agreement or unless the relevant provisions of this subpart are inconsistent with the agreement. In the final rule, in response to comments, the BLM edited proposed paragraph (a)(5) to clarify the list of items to which this subpart applies. Paragraph (a)(5) in the final rule provides that this subpart applies to wells and production equipment, and also, under specified circumstances, compressors. Additionally, the final rule omits proposed paragraph (a)(6) relating to coverage of gas lines, as the BLM has determined that gas lines do not ''use'' production for purposes of this subpart.

One commenter suggested replacing ''other facilities'' with ''production equipment,'' and suggested distinguishing compressors that promote production at the wellhead from those that promote pipeline flow. The BLM agrees that these suggested changes improve the clarity of the rule, and we have revised the text accordingly. The text now refers to ''production equipment'' and limits coverage to compressors that both are located on a lease, unit or communitized area and compress production from the same lease, unit or communitized area.

Commenters also suggested distinguishing among flow lines, gathering lines and transmission lines, and requested revisions to highlight the limits of the BLM's authority over gas lines. We believe that these comments are no longer applicable with the elimination of proposed paragraph (a)(6).

Section 3178.3 Production on Which Royalty Is Not Due

This section sets forth the general rule that royalty is not due on oil or gas that is produced from a lease or communitized area and used for operations and production purposes (including placing oil or gas in marketable condition) on the same lease or communitized area without being removed from the lease or communitized area. This section also treats oil and gas produced from unit PAs—that is, the productive areas on a unit—and used for operating and production purposes on the unit, for the same PA, in the same way. Units often include different PAs composed of multiple leases with varied ownership. This section therefore limits royalty-free use of gas from a particular PA to uses that are made on the same unit, to support production from the same unit PA. The reason for this limitation is to prevent excessive use of royalty-free gas by prohibiting a unit operator from using royalty-free production from one PA to power operations on, or treat production from, another PA on the same unit, to the benefit of different owners and to the detriment of the public interest.

As discussed below, § 3178.5 qualifies the general provisions of § 3178.3 by listing specific operations for which prior written BLM approval will be required for royalty-free use.

The BLM received a few relatively technical comments on § 3178.3, which are addressed in the Response to Comments document. The BLM did not make any changes to this section from the proposed rule.

Section 3178.4 Uses of Oil or Gas on a Lease, Unit, or Communitized Area That Do Not Require Prior Written BLM Approval for Royalty-Free Treatment of Volumes Used

This section identifies uses of produced oil or gas that will not require prior written BLM approval for royalty-free treatment. The uses listed in this section involve routine production and related operations. In addition, paragraph (b) clarifies that even when a use is authorized, the royalty-free volume is limited to the amount of fuel reasonably necessary to perform the operation on the lease using appropriately sized equipment. This ensures that royalty-free on-site use remains subject to the requirement to avoid waste of the resource.

While the royalty-free uses described here are generally similar to the uses identified as ''beneficial purposes'' in NTL–4A, this rulemaking further clarifies which uses warrant royalty-free treatment.

In addition, this section clarifies that hot oil treatment is an accepted on-lease use of produced crude oil that does not require prior approval to be royalty-free. In this treatment, oil is not consumed as fuel. Rather, after the oil is pumped back into the well to stimulate production, it is produced again. Although the use of produced crude oil for hot oil treatments on the producing lease, unit, or communitized area has historically been understood by the BLM and by operators as a royalty-free use, it is not specifically addressed in NTL–4A but is now included in this final rule.

As mentioned above, the BLM received comments requesting that other uses of oil or gas be identified as royalty-free, including fuel for power generation, pilot and assist gas, fuel for heating, fuel for ancillary equipment, fuel to treat gas to remove impurities, fuel to run completion and work over equipment, and gas used for gas lift. The BLM agrees that these uses are routine, and therefore should not require prior approval to be royalty-free.

Regarding using oil as a circulating medium in drilling operations, or injecting gas produced from a lease, unit PA, or communitized area into the same lease, unit, PA, or communitized area to increase the recovery of oil or gas, the BLM had proposed to include these uses in the list in § 3178.5 of uses requiring prior approval. As operators are already required to report the use of oil as a circulating medium in drilling operations under Onshore Order Number 1, and the use of gas for injection under applicable regulations in parts 3100, 3160 and 3180 of this title, however, the BLM has decided not to require prior approval for these uses. In addition to the injection of gas for the purpose of increasing the recovery of oil or gas, the BLM has added the injection of gas ''for the purpose of conserving gas'' as a royalty-free use that does not require prior written BLM approval under the final rule. Often, gas injection is used to enhance resource recovery by maintaining or slowing the reservoir pressure decline which leads to higher oil recovery. The BLM also understands that, in some circumstances, excess gas that cannot be captured and sold or used on lease may be injected in order to conserve the gas. This practice occurs in Canada's Bakken field. While not all reservoirs are conducive to gas injection, the BLM believes it important to provide that as an option to conserve any gas that can't be sold immediately.

Finally, this rule does not address some uses that are already defined as royalty-free under ONRR provisions, such as the royalty-free use of residue gas to fuel gas plant operations, as provided in 30 CFR 1202.151(b).

Overall, in response to comments received, the BLM made the following changes in the final rule:

- Modified paragraph (a)(1) to more broadly address the use of fuel to generate power, including the use of fuel to operate ''combined heat and power,'' which is a particularly efficient means of generating power from gas;
- Combined and modified proposed paragraphs (a)(2) and (a)(3) to include artificial lift equipment and completion and workover equipment;
- Renumbered the remaining paragraphs accordingly;
- Added use of gas as a pilot fuel or as assist gas for a flare, combustor, thermal oxidizer, or other control device, as paragraph (a)(5);
- Added treatment of gas to paragraph (a)(6); and
- Added two uses that will not require prior written BLM approval for royalty-free treatment, which were identified in § 3178.5 in the proposed rule as requiring prior approval: (1) Using oil as a circulating medium in drilling operations (paragraph (a)(8)), and (2) injecting gas produced from a lease, unit PA, or communitized area into the same lease, unit PA, or communitized area to for the purposes of conserving gas or increasing the recovery of oil or gas (paragraph (a)(9).
- Added injection of gas that is cycled in a contained gas-lift system, as paragraph (a)(10).

Section 3178.5 Uses of Oil or Gas on a Lease, Unit, or Communitized Area That Require Prior Written BLM Approval for Royalty-Free Treatment of Volumes Used

This section identifies uses of oil or gas that will require prior written BLM approval to be deemed royalty-free. The aim of this section is three-fold: (1) To ensure that the BLM retains discretion to grant royalty-free use where the BLM deems the use to be consistent with the MLA's royalty requirement for oil or gas that is produced and then removed from the lease and sold; (2) to increase uniformity in the administration of the royalty provisions by specifying circumstances that warrant particular BLM attention; and (3) to ensure the BLM's awareness of unusual uses that risk the loss or waste of oil and gas.

For all of the identified uses, operators will be required to submit a Sundry Notice requesting BLM approval to conduct royalty-free activities.

The potentially royalty-free uses identified in this section are as follows:

- *Using oil or gas that was removed from the pipeline at a location downstream of the approved facility measurement point (FMP).* The BLM anticipates that these situations will be quite rare because the tap that operators use to extract and measure gas is generally upstream of the FMP.
- *Using produced gas for operations on the lease, unit PA, or communitized area, after it is returned from off-site treatment or processing to address a particular physical characteristic of the gas.* Physical characteristics that might preclude initial use of gas in lease operations and necessitate off-lease treatment or processing include an unusually high concentration of hydrogen sulfide, or the presence of inert gases or liquid fractions that limit the gas's utility as a fuel. The operator will bear the burden of establishing the necessity of off-lease treatment.
- *Any other types of use for operations and production purposes which are not identified in § 3178.4.* This provision clarifies that the BLM retains discretion to consider approving royalty-free use under circumstances that are not now anticipated.

In response to comments described below, the BLM made the following three changes to the proposed rule requirements: (1) Removed proposed paragraphs (a)(1) and (a)(2) from this section and moved them to § 3178.4 (royalty-free without prior approval); (2) Added language to paragraph (2) (paragraph (4) in the proposed rule) to clarify that the provision applies to the physical characteristics of the gas ''that require the gas to be treated or processed prior to use''; and (3) Removed proposed paragraph (c) and added language to paragraph (b)(1) that indicates that royalties must be paid on volumes when the BLM disapproves a request for royalty-free treatment under this section, and that any approvals for royalty-free treatment will be effective from the date the request was filed. Each change is discussed below along with a summary of the comments that lead to the change.

Several commenters indicated that some of the activities in proposed § 3178.5 should not require prior approval. The BLM agrees and, in response to this and other comments on § 3178.4, moved some provisions to § 3178.4, as described previously.

Additionally, some commenters stated that operators should not be required to seek prior approval for the following two royalty-free uses: Gas removed from a pipeline at a location downstream of the FMP and gas initially removed from a lease, unit participating area, or communitized area for treatment or processing where the gas is returned to the lease, unit, or communitized area for lease operation. The BLM disagrees with these comments and retained these paragraphs in paragraphs (a)(1) and (a)(2) of this section. Gas that is removed from a lease, unit participating area, or communitized area would normally be royalty-bearing. Inclusion of these uses in this section allows the BLM the discretion to approve royalty-free uses under the unique circumstances in which gas is removed and returned to the same lease, unit participating area, or communitized area.

Several commenters also stated that the BLM did not adequately explain why operators must ever receive agency approval for royalty-free use of production. Commenters stated that the BLM must specify the standard or criteria used to evaluate requests for approval. The BLM has determined that royalty-free uses requiring prior approval are uses that do not typically occur, that are not likely to apply to a large number of operators, and that have a higher risk of loss of gas depending on the individual circumstances surrounding the use. These factors warrant individual approval by the BLM on a case-by-case basis, and are not situations in which development of standard approval criteria is appropriate.

Some commenters argued that the BLM should remove the limitation, included in the proposed rule, that gas removed from the lease may only be used on the lease royalty-free if it was removed for treatment or processing ''to address a particular characteristic of the gas.'' The commenters stated that the operator should not have the burden of establishing the necessity of off-lease treatment. In response to this comment, the BLM revised paragraph (a)(2) (paragraph (a)(4) in the proposed rule) to clarify that the provision applies to particular physical characteristics of the gas ''that require the gas to be treated or processed prior to use.''

Some commenters suggested that an identified use should be royalty-free until the BLM denies it, rather than having to wait for the BLM to approve it. In addition, one commenter suggested that if the BLM does not, within 30 days, respond to a Sundry Notice requesting approval, the Notice should be deemed approved. Another commenter requested that approvals should go into effect when the request is filed. In response to these comments, the BLM revised § 3178.5(b)(1) to indicate that approvals will be effective from the date the request was filed. However, if the BLM disapproves a request, the operator must pay royalties on all volumes used, including those used while the request was pending.

Several commenters stated that exceptions for royalty-free use should not be considered, that the rule allows too much royalty-free venting and flaring, or that the rule does not sufficiently restrict royalty-free use that results in emissions to the environment. As stated in the proposed rule preamble, however, royalty-free on-site use is limited to reasonable uses that are not wasteful. The BLM does not intend to grant prior approval of royalty-free uses under § 3178.5 unless it determines, in light of available technology, that the requested use is reasonable and not wasteful. As a result, the BLM did not revise this section in response to these comments.

Section 3178.6 Uses of Oil or Gas Moved Off the Lease, Unit, or Communitized Area That Do Not Require Prior Written Approval for Royalty-Free Treatment of Volumes Used

This section identifies two circumstances in which royalty-free use of oil or gas that has been moved off the lease, unit, or communitized area would be permitted without prior BLM approval. The first situation is where an individual lease, unit, or communitized area includes non-contiguous areas, and oil or gas is piped directly from one area of the lease, unit, or communitized area to another area where it is used, and no oil or gas is added to or removed from the pipeline, even though the oil or gas crosses lands that are not part of the lease, unit, or communitized area. Under this section, the BLM will consider such production as not having been ''removed from the lease.'' This will provide the lessee or operator the same opportunity for royalty-free use as if the lease, unit, or communitized area were one contiguous parcel.

The second situation is where a well is directionally drilled, and the wellhead is not located on the producing lease, unit, or communitized area, but produced oil or gas is used on the same well pad for operations and production purposes for that well. In such situations, the rule allows for royalty-free use at the well pad, without prior approval. Use at off-lease well heads is an established royalty-free use.[140]

Commenters asserted that the language in proposed paragraph (a) that described reasons why oil or gas would be moved off the lease, unit, or communitized area was ambiguous. In response to this comment, the BLM simplified the language in this paragraph to clarify the original intent discussed above. Paragraph (a) of the final rule now states: ''The oil or gas is transported from one area of the lease, unit, or communitized area to another area of the same lease, unit, or communitized area where it is used, and no oil or gas is added to or removed from the pipeline while crossing lands that are not part of the lease, unit, or communitized area; . . . .''

Section 3178.7 Uses of Oil or Gas Moved Off the Lease, Unit, or Communitized Area That Require Prior Written Approval for Royalty-Free Treatment of Volumes Used

This section addresses the royalty treatment of oil or gas used in operations conducted off the lease, unit, or communitized area. When production is removed from the lease, unit, or communitized area, it becomes royalty-bearing unless otherwise provided. This principle is reflected in paragraph (a) of this section, which provides that with only limited exceptions, royalty is owed on all oil or gas used in operations conducted off the lease, unit, or communitized area.

Existing NTL–4A does not include a provision that specifically addresses approving off-lease royalty-free use. Such approval is required, however, under ONRR regulations, which provide, ''All gas (except gas unavoidably lost or used on, or for the benefit of, the lease, including that gas used off-lease for the benefit of the lease when such off-lease use is permitted by the BOEMRE or BLM, as appropriate) produced from a Federal lease to which this subpart applies is subject to royalty.''[141] New § 3178.6 will add clarity and consistency in implementation of that ONRR regulation.

Paragraph (b) of this section identifies circumstances in which, despite the general rule articulated in paragraph (a), the BLM will consider approving off-lease royalty-free use (referred to here as ''off-lease royalty-free uses''). These include situations in which the operation is conducted using equipment or at a facility that is located off the lease, unit, or communitized area (under an approved permit or plan of operations, or at the agency's request) because of engineering, economic, resource protection, or physical accessibility considerations. For example, a compressor that otherwise would have been located on a lease may be sited off the lease because the topography of the lease is not conducive to equipment siting. To be approved for off-lease royalty-free use, the operation would also have to be conducted upstream of the approved FMP. This paragraph reflects the BLM's policy to encourage operators to reduce the amount of surface disturbance associated with oil and gas exploration and development projects. In some cases, centralizing production facilities at a location off the lease may serve that objective.

Paragraph (c) requires the operator to obtain BLM approval for off-lease royalty-free use via a Sundry Notice containing the information required under proposed § 3178.9 of this subpart. In response to a comment described below, in the final rule the BLM added the following provision to paragraph (c)

[140] *Plains Exploration & Production Co.,* 178 IBLA 327, 341 n.16 (2010).

[141] 30 CFR 1202.150(b).

of this section: ''If the BLM disapproves a request for royalty-free treatment for volumes used under this section, the operator must pay royalties on the volumes. If the BLM approves a request for royalty-free treatment for volumes used under this section, such approval will be deemed effective from the date the request was filed.''

Paragraph (d) of this section clarifies that approval of off-lease measurement or commingling under other regulatory provisions does not constitute approval of off-lease royalty-free use. An operator or lessee must expressly request, and submit its justification for, approval of off-lease royalty-free use. The BLM anticipates that generally such approval would be appropriate only in some of the situations in which the BLM has approved measurement at a location off the lease, unit, or communitized area, or has approved commingling production off the lease, unit, or communitized area and allocating production back to the producing properties.

Paragraph (e) of this section addresses circumstances in which equipment located on a lease, unit, or communitized area also treats production from other properties that are not unitized or communitized with the property on which the equipment is located. An operator is allowed to report as royalty-free only that portion of the oil or gas used that is properly allocable to the share of production contributed by the lease, unit or communitized area on which the equipment is located, unless otherwise authorized by the BLM.

A commenter proposed that an identified use should be royalty-free until the BLM denies an application for prior approval, rather than requiring an operator to wait for the BLM to approve the use. As stated above, in response to these comments, the BLM revised § 3178.7(c) to indicate that approvals will be effective from the date the request was filed. However, if the BLM disapproves a request, the operator must pay royalties on all volumes used, including those volumes used during pendency of the request.

Commenters also suggested that the proposed language in paragraph (e) was inconsistent with the BLM's goal of encouraging operators to reduce the amount of surface disturbance because this provision would discourage production from multiple leases. The BLM disagrees. This section indicates that only the portion of the oil or gas used as fuel that is properly allocable to the lease, unit, or communitized area on which the equipment is located (on-lease) is royalty-free; however, the proportion of the oil or gas used from off-lease production may be approved by the BLM for off-lease royalty-free use. The BLM recognizes both the operating efficiency and resource conservation advantages of locating production equipment from multiple wells on a common site. The BLM did not revise this paragraph in response to these comments.

Another commenter suggested that the BLM should approve all requests unless it can demonstrate that particular circumstances related to lease operations justify disallowing royalty-free use. The BLM disagrees with this comment and did not modify the rule in response to this comment. The MLA exempts from royalties production that is used on the lease for lease operations. This rule allows for royalty-free off-lease uses in some cases, including those specified in § 3178.6 as not requiring prior approval. The circumstances described in § 3178.7 give the BLM the flexibility to approve additional off-lease royalty-free uses where the BLM believes those uses are reasonable and not wasteful.

Section 3178.8 Measurement or Estimation of Volumes of Oil or Gas That Are Used Royalty-Free

This section specifies that an operator must measure or estimate the volume of royalty-free gas used in operations upstream of the FMP. In general, the operator is free to choose whether to measure or estimate, with the exception that the operator must in all cases measure the following volumes: (1) Royalty-free gas removed downstream of the FMP and used pursuant to sections 3178.4 through 3178.7; and (2) royalty-free oil used pursuant to sections 3178.4 through 3178.7. When royalty-free oil or gas is removed downstream of the FMP and used pursuant to sections 3178.4 through 3178.7, the operator must apply for a new FMP under section 3173.12 to measure the gas that is removed for use.

If oil is used on the lease, unit or communitized area, it is most likely to be removed from a storage tank on the lease, unit or communitized area. Thus, paragraph (c) also requires the operator to document the removal of the oil from the tank or pipeline.

Paragraph (e) requires that operators use best available information to estimate gas volumes, where estimation is allowed. For both oil and gas, the operator must report the volumes measured or estimated, as applicable, under ONRR reporting requirements. As revisions to Onshore Oil and Gas Orders No. 4 and 5 have now been finalized as 43 CFR subparts 3174 and 3175, respectively, the final rule text now references § 3173.12, as well as § 3178.4 through § 3178.7 to clarify that royalty-free use must adhere to the provisions in those sections. The BLM received few, highly technical comments on this section, which are addressed in the Response to Comments document.

Section 3178.9 Requesting Approval of Royalty-Free Treatment When Approval Is Required

This section describes how to request BLM approval of royalty-free use when prior-approval is required under § 3178.5 or § 3178.7. The operator must submit a Sundry Notice containing specified information, which is necessary for the BLM to determine if approval is appropriate. The information includes a description of the operation to be conducted, the measurement or estimation method, the volume expected to be used, the basis for an estimate (if applicable), and the proposed use of the oil or gas. This section was finalized as proposed, with minor wording changes to improve clarity. The BLM received few, highly technical comments on this section, which are addressed in the Response to Comments document.

Section 3178.10 Facility and Equipment Ownership

This section clarifies that although the operator is not required to own or lease the equipment that uses oil or gas royalty-free, the operator is responsible for all authorizations, production measurements, production reporting, and other applicable requirements. The BLM did not receive significant comments on this section and did not revise this section from the proposed rule.

Subpart 3179—Waste Prevention and Resource Conservation

Section 3179.1 Purpose

As in the proposed rule, this section states that the purpose of subpart 3179 is to implement statutes relating to prevention of waste from Federal and Indian (other than Osage Tribe) leases, conservation of surface resources, and management of the public lands for multiple use and sustained yield. The section also provides that subpart 3179 supersedes those parts of NTL–4A that pertain to venting and flaring of produced gas, unavoidably and avoidably lost gas, and waste prevention.

One commenter stated that BLM should clarify whether subpart 3179 replaces NTL–4A and that NTL–4A is no longer applicable, or if subpart 3179 only supersedes part of NTL–4A. As stated previously, subpart 3178 replaces the portion of NTL–4A pertaining to the use of oil or gas for beneficial purposes, and subpart 3179 replaces the portion of NTL–4A pertaining to flaring and venting of produced gas, unavoidably and avoidably lost gas, and waste prevention. Together, the combined revisions to subparts 3178 and 3179 supersede NTL–4A in its entirety.

Section 3179.2 Scope

This section specifies which leases, agreements, tracts, facilities, and gas lines are covered by this subpart. The section also states that the term ''lease'' in this subpart includes IMDA agreements, unless specifically excluded in the agreement or unless the relevant provisions of this subpart are inconsistent with the agreement. The BLM did not revise this section from the proposed rule.

Some commenters stated that the scope of the rule is too broad. Some commenters suggested limiting its scope to leases with more than 51 percent Federal interest, while others suggested that the BLM clarify that this subpart does not apply to exploration, wildcat, or delineation wells. The BLM disagrees that the scope of the rule is too broad, and did not revise this section based on these comments. As discussed earlier in this Preamble, the BLM has both the authority to ensure that operators take reasonable precautions to prevent the waste of Federal and Indian oil and gas. The fact that this final rule may impact some leases with minority Federal or Indian interest does not deprive the BLM of its authority to impose reasonable waste prevention requirements on operators producing Federal or Indian oil or gas.

Finally, the BLM notes that the rule generally applies to all oil and gas wells, including exploratory, wildcat, and delineation wells. Provisions of the rule that apply more narrowly explicitly indicate the narrower scope; for example, the gas capture requirements in section 3179.7 apply only to ''development oil wells.''

Section 3179.3 Definitions and Acronyms

This section contains definitions for terms that are used in subpart 3179: ''accessible component''; ''automatic ignition system''; ''capture'' and ''capture infrastructure''; ''compressor station''; ''continuous bleed''; ''development oil well'' or ''development gas well''; ''gas-to-oil ratio''; ''gas well''; ''high pressure flare''; ''leak''; ''leak component''; ''liquid hydrocarbon''; ''liquids unloading''; ''lost oil'' or ''lost gas''; ''pneumatic controller''; ''storage vessel''; and ''volatile organic compounds.'' Some defined terms have a meaning particular to this rule. Other defined terms may be familiar to many readers, but are defined in the regulatory text to enhance the clarity of the rule.

In response to comments, the final rule adds several definitions that were not included in the proposed rule, including ''automatic ignition system''; ''continuous bleed''; ''high pressure flare''; ''leak'' and ''leak component'' (which replaced the term ''component'' from the proposed rule); and ''pneumatic controller.'' The final rule also adds a definition of ''compressor station'' that is consistent with the definition in subpart OOOOa, as the final rule leak detection provisions and the subpart OOOOa leak detection provisions both refer to compressor stations. In addition, the definition of ''storage vessel'' has been expanded to clarify the types of vessels covered by section 3179.203. The definitions of ''development oil well'' and ''development gas well'' include minor wording changes for clarity.

Some commenters expressed concerns that the proposed definition of a storage vessel in § 3179.3 does not match the definition provided in subparts OOOO and OOOOa. Commenters asserted that the definition proposed by the BLM applies the 6 tpy VOC threshold for applicability to a whole tank battery, as well as to a single tank, making the proposed rule significantly more stringent than the EPA OOOOa rule, which only applies if an individual storage vessel exceeds the threshold. Commenters also noted that the EPA definition of storage vessel excludes portable tanks temporarily located at the well site, and they recommended that the BLM take the same approach as the EPA by aligning the BLM's definition with the EPA definition. Other commenters supported the BLM's proposed definition of storage vessel, as it could apply the requirements for storage vessels to a collection of low-emitting single tanks that would not otherwise meet the threshold.

Based on input from commenters, the BLM has revised its definition of storage vessel to be largely consistent with the EPA subpart OOOO and subpart OOOOa definitions. The BLM removed the reference to a ''battery of tanks'' and added provisions excluding temporary tanks from the definition of a storage vessel. The BLM believes that this is a reasonable approach. The 6 tpy threshold identifies a quantity of lost gas that is reasonably cost-effective to address at an individual tank, without regard to the type of vessel or fluid stored. Avoiding the same quantity of lost gas from a battery of tanks would effectively lower the tank size threshold for coverage and would be considerably less cost-effective, as the same type of equipment would have to be installed on multiple tanks with smaller releases.

The BLM has also excluded from the definition of storage vessel tanks storing hydraulic fracturing fluid prior to implementation of an approved permanent disposal plan under Onshore Oil and Gas Order No. 7. This revision ensures that the final rule will not overlap with BLM rules governing hydraulic fracturing activities.

Commenters also suggested that the BLM adopt definitions for ''pneumatic controllers'' and ''continuous bleed'' that are consistent with the definitions in subpart OOOOa. The BLM agrees that aligning the definitions in the BLM and EPA rules to the extent possible will reduce the potential for confusion. Accordingly, § 3179.3 includes definitions for ''pneumatic controllers'' and ''continuous bleed'' that are consistent with the definitions of these terms in subpart OOOOa.

In order to provide clarity, BLM has included definitions of ''automatic ignitor system'' and ''high pressure flare'' in the final rule. The final rule defines an ''automatic ignition system'' as an automatic ignitor and, where needed to ensure continuous combustion, a continuous pilot flame. A ''high pressure flare'' is defined as an open-air flare stack or flare pit designed for the combustion of natural gas leaving a pressurized production vessel (such as a separator or heater-treater) that is not a storage vessel.

Section 3179.4 Determining When the Loss of Oil or Gas Is Avoidable or Unavoidable

This section describes the circumstances under which lost oil or gas is classified as ''unavoidably lost.'' ''Avoidably lost'' oil or gas is then defined as oil or gas that is not unavoidably lost. The descriptions in the rule enhance clarity and consistency by listing specific circumstances under which oil and gas may be ''unavoidably lost'' when the operator has not been negligent, has not violated laws, regulations, lease terms or orders, and has taken prudent and reasonable steps to avoid waste.

The rule also defines as ''unavoidably lost'' any produced gas that is vented or flared from a well that is not connected to gas capture infrastructure, if the BLM has not determined that the loss of gas through such venting or flaring is otherwise avoidable.

Finally, this section defines ''avoidably lost'' oil or gas as lost oil or gas that does not meet this section's definition of ''unavoidably lost.'' Also included in the ''avoidably lost'' category is any ''excess flared gas,'' which § 3179.7 defines as the quantity of flared gas by which the operator fell short of the applicable capture requirement specified in that section.

In response to comments received, the final rule added two new items to the list of operations and sources that are considered unavoidably lost: (1) Gas lost during facility and pipeline maintenance, such as when an operator must blow-down and depressurize equipment to perform maintenance and repairs, which includes ''pigging'' of lines to remove liquids, and (2) flaring of gas from which at least 50 percent of natural gas liquids have been removed and captured for market, if the operator has notified the BLM through a Sundry Notice that the operator is conducting such capture.

The final rule also makes the following four clarifications to items that were included on the proposed list of operations and sources that are considered unavoidably lost, and that remain on that list in the final rule: (1) Normal operating losses from a natural gas-activated pneumatic controller or pump are considered unavoidable, provided the controller or pump complies with §§ 3179.201 and 3179.202; (2) normal operating losses from storage vessels and other low pressure production vessels are considered unavoidable provided the vessels are in compliance with §§ 3179.203 and 3174.5; (3) losses from well venting in the course of downhole well maintenance and/or liquids unloading are considered unavoidable provided those operations are conducted in compliance with § 3179.204; and (4) leaks are considered unavoidable, provided the operator has complied with the leak detection and repair requirements of §§ 3179.301 through 3179.305.

The BLM also modified the proposed treatment of gas that is lost from a well that is not connected to a pipeline to align this provision with the revised approach in the final rule that addresses flaring through capture targets instead of flaring limits. The BLM had proposed that gas flared in excess of the applicable flaring limit would be considered avoidable. The final rule deems avoidable any gas that is ''excess'' relative to the capture target. The term ''excess flared gas'' is defined in § 3179.7.

The principle underlying both the proposed and final regulatory text with respect to excess flared gas is that a prudent and reasonable operator will not routinely flare an unlimited quantity of natural gas from a development oil well. In this rulemaking, the BLM is modernizing and clarifying the criteria for determining when incidental and necessary disposal of gas accompanying oil production crosses the line into unreasonable waste of public gas resources, and the final rule expresses these criteria in the form of a gas capture target. When an operator is not meeting the applicable gas capture target, specified in § 3179.7 the BLM deems the excess flared gas volume—that is, the volume that caused the operator to fall short of the capture target—to be waste, avoidable, and subject to royalties.

Several commenters disagreed with BLM's proposed definitions of ''waste'' and ''avoidably lost.'' Many commenters felt that the BLM should maintain the definitions used in NTL–4A, including applying an economic test to determine what degree of capture is economical for the operator. These comments are addressed in section V.C of this preamble.

Some commenters stated that the BLM should consider gas lost during force majeure events as unavoidably lost. The BLM does not agree that all losses during force majeure events should be considered unavoidable. Such events may be out of the control of operators, but they are often expected and operators can therefore plan for them. The final rule does include as justifications for unavoidable loss some specific events that are generally considered force majeure events, such as emergencies. However, the gas capture requirements in the final rule are structured to provide operators substantial flexibility to meet the capture targets without providing a blanket exemption for all events that the operator does not directly control. For example, scheduled maintenance of downstream pipeline or processing plants is neither unexpected nor unusual, and the BLM believes an operator should be able to plan ahead to address those events—for example, by identifying alternative capture approaches or planning to temporarily reduce production or shut in the well to address these circumstances.

Moreover, as described in Preamble Section V.A, Venting Prohibition and Capture Targets, the final rule allows operators to meet the capture target on average over a month at all of the wells on a lease, unit, or communitized area, or alternatively, on average over a month at all of the operator's wells in a county or state. A prudent and reasonable operator will be able to take advantage of this flexibility to ensure that it has captured enough gas over the month, somewhere in the averaging area, to provide itself a sufficient buffer in meeting the gas capture targets to accommodate force majeure events that may not be within its control, but are common and predictable.

Relatedly, some commenters requested that gas lost because of ROW delays should be considered unavoidably lost. This preamble addresses the issue of ROW delays in Section VI.E. For the reasons discussed there, the BLM declines to make this change, which goes to the central premise of the gas capture requirement. The BLM has determined that it is not reasonable for operators to develop oil wells and plan to use flaring as the primary and routine disposal method for the associated gas. Rather, these rules require oil well operators, over time, to plan to capture an increasing percentage of their associated gas. In the near-term, the BLM believes that the gas capture targets, combined with the quantities of allowable flaring and the ability to average, are sufficiently generous to allow operators to manage short-term delays in planned gas pipeline infrastructure with little difficulty, using production deferment and on-site capture at some wells where necessary. Over the longer term, a reasonable operator can continue to use those tools as well as working with the midstream companies to ensure that there is adequate pipeline capacity available to support transport of associated gas prior to building out large well developments.

Many commenters requested that the BLM grandfather all existing determinations of royalty-free flaring. Again, this change would undercut a key goal of this rulemaking: Gradually, over time, to require operators to reduce routine flaring of associated gas from development oil wells. With the generous phase-in schedule for the gas capture targets and the quantities of allowable flaring, this rule requires only modest near-term reductions in flaring from existing wells. The BLM believes that it is entirely reasonable to expect operators to work, over time, to reduce flaring from their existing wells, as well as from new developments. Moreover, for this rule to have any meaningful effect on flaring, it must cover both existing and new development. Allowing all current determinations of royalty-free flaring to persist in perpetuity is unnecessary and would substantially undercut the effectiveness of this rule.

Section 3179.5 When Lost Production Is Subject to Royalty

This section provides that royalties are due on all avoidably lost oil or gas, but not on unavoidably lost oil or gas. We received no significant comments on this section, and the final rule is very similar to the proposed rule with minor wording changes to improve clarity.

Section 3179.6 Venting and Flaring From Gas Wells and Venting Prohibition

This section expressly prohibits all venting and flaring from gas wells, except where the gas is unavoidably lost pursuant to section 3179.4(a). In addition, this section requires operators to flare rather than vent all gas that is not captured, except under certain limited circumstances. Operators will be allowed to vent gas in the following situations: (1) When flaring is technically infeasible—for example if the volumes of gas are too small to operate a flare (such as so-called bradenhead gas), or if the gas is not readily combustible; (2) under emergency conditions, when the loss of gas is uncontrollable or venting is necessary for safety; (3) when the gas is vented through normal operation of a natural gas-activated pneumatic controller or pump; (4) when the gas is vented from a storage vessel, provided that § 3179.203 does not require the combustion or flaring of the gas; (5) when the gas is vented during downhole well maintenance or liquids unloading activities performed in compliance with § 3179.204; (6) when the gas is vented through a leak where the operator is in compliance with § 3179.301–305; (7) when venting the gas is necessary to allow non-routine facility and pipeline maintenance to be performed, such as when an operator must, upon occasion, blow-down and depressurize equipment to perform maintenance or repairs; and (8) when release of gas is unavoidable and flaring is prohibited by Federal, State, local or Tribal law, regulation, or enforceable permit term.

The BLM made the following changes to the proposed rule requirements: (1) Changed the title of this section; (2) added a new section (a) that expressly prohibits venting or flaring gas from gas wells, except where the gas is unavoidably lost pursuant to section 3179.4(a); (3) renumbered paragraphs (a)(1) and (2) paragraphs (b)(1) and (2); (4) moved discussion of venting from a storage vessel from proposed paragraph (a)(3) to paragraph (b)(4) and added language clarifying that such venting is permitted when § 3179.203 does not require combustion or flaring of the gas; (5) renumbered proposed paragraph (a)(4) as paragraph (b)(3) and qualified that venting from a natural gas-activated pneumatic controller or pump is permitted during normal operation and when the pump is in compliance with § 3179.201 and § 3179.202; (6) Added paragraphs (b)(5) through (b)(8) that describe additional cases when venting of gas is permitted (situations 4–8 in the previous paragraph); (7) Removed all of proposed paragraph (b) describing venting or flaring volume limits, because flaring limits are now addressed in a new § 3179.7; and (8) Added a new paragraph (c), which requires that all flares or combustion devices be equipped with an automatic ignition system.

Section 3179.6(a) carries forward NTL–4A's express prohibition on venting and flaring from gas wells. Section IV.A of NTL–4A prohibits the venting or flaring of gas well gas, except for unavoidable losses and short-term venting and flaring during emergencies, well purging and evaluation tests, initial production tests, and wells tests (circumstances now defined as unavoidable in section 3179.4(a)). Similar restrictions on venting and flaring from gas wells were implied in the proposed rule; the BLM has chosen to state this explicitly in the final rule in order to avoid confusion.

Key comments received on this section are discussed in Section III.B.1.b of this preamble. Additional substantial comments received on the venting prohibition provisions are discussed below.

The BLM received comments asserting that the BLM lacked the statutory authority to require operators to flare rather than vent gas that is not captured. Commenters argued that such a requirement does not fall within the BLM's waste-prevention authority under the MLA because shifting from venting to flaring does not prevent waste as the gas is lost in either case. These commenters then argued that the only possible justification for the requirement to flare rather than vent is control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA's domain.

The BLM disagrees with these comments for several reasons. First, the requirement in this section to flare rather than vent does result in waste prevention, because it is paired with provisions that limit total flaring—namely, the gas capture requirements in § 3179.7. Under § 3179.7(c), the denominator in the gas capture percentage calculation is ''the total volume of gas captured over the month plus the total volume of gas flared over the month from high-pressure flares from all of the operator's development oil or gas wells in the relevant area, minus'' a declining ''flaring allowable'' volume.. By requiring that operators shift from venting to flaring, the BLM is effectively increasing operators' flared volume in a given month, which in turn increases the total volume of gas that the operators must capture in that month.

Second, directing associated gas to a flare rather than allowing operators to vent it improves waste accounting because under final rule § 3179.9, operators must measure volumes above 50 Mcf per day that are flared from a high pressure flare stack or manifold. By shifting operators from venting to flaring, § 3179.6 will likely increase the number of operators that must measure their flared gas volumes under § 3179.9. This will, in turn, improve operators' (and the BLM's) waste accounting. Better waste accounting is itself a waste prevention measure, because it gives the BLM and operators a better sense of how much gas is being wasted—and thus how much could be made available for productive use and/or sold to offset the costs of waste prevention equipment.

Third, this requirement constitutes waste prevention when applied to operator flaring during activities regulated under §§ 3179.102, 3179.103, and 3179.104. Under §§ 3179.102 and .103, flaring during well completion and initial production testing that exceeds 20 MMcf/well is treated as avoidably lost gas subject to royalties under § 3179.4(a)(1)(C). The BLM believes that in many instances, the venting prohibition in § 3179.6 may result in operators reaching the 20 MMcf/well royalty flaring threshold sooner, thereby providing an additional financial incentive for operators to reduce waste. Under § 3179.104, all flaring during subsequent well tests that exceeds 24 hours is treated as avoidably lost gas subject to royalties under § 3179.4(a)(1)(D).

Fourth, as discussed above, the requirement to flare rather than vent associated gas is justified as a safety measure under the MLA. It is generally safer to combust methane gas than allow it to vent uncombusted into the surrounding air due to concerns over methane's explosiveness and the risks to workers of hypoxia and exposure to various associated pollutants.[142] Fifth, and as also discussed above, even if the venting prohibition were purely an air quality control measure, the BLM does have the authority to regulate air quality

[142] NIOSH–OSHA Hazard Alert entitled, ''Health and Safety Risks for Workers Involved in Manual Tank Gauging and Sampling at Oil and Gas Extraction Sites,'' February 2016, *www.osha.gov*.

and GHG impacts on and from the public lands, pursuant to FLPMA and the MLA, as discussed in Section III.C of this Preamble.

Several commenters stated that operators should be required to capture *all* natural gas from all wells, with no exceptions, or that if flaring is allowed, combustion devices should be required to have a design destruction efficiency of at least 98%, that enclosed flares should be required, and that flares should be required to be equipped with a continuous pilot light and an auto-ignition system. As discussed in Section III.B.2 of this preamble, the BLM does not believe that it is feasible to eliminate all venting and flaring, but we have revised both the flaring requirements and the circumstances when venting is permitted in response to comments. The BLM also is not adding a requirement for flares to have a design destruction efficiency of 98%. Many existing flares have a design combustion efficiency of 95%, rather than 98%.

The BLM has added a requirement in the final rule that flares must be equipped with an automatic ignition system, which will provide the flare system with an effective method of ignition in the case of interruption. The term ''automatic ignition system'' implies the concept of maintaining an ignition source without specifying a particular type of device, and the BLM believes that operators will utilize devices that are appropriate for the circumstance. The BLM does not believe that requiring a specific device, such as a continuous pilot, would necessarily result in reduced waste relative to a more general requirement for an automatic ignition system.

Some commenters requested that the BLM allow venting when flaring is not economically feasible. The BLM believes that this change is unnecessary, would add substantial ambiguity to the rule, and could significantly weaken the requirement to flare rather than vent. Flaring rather than venting gas that is not being captured is widespread industry practice, due in large part to safety concerns. While there are situations where the quantities of gas are too small or difficult to allow for flaring, the rule explicitly allows venting in lieu of flaring in those situations. It is not clear to the BLM what other circumstances would render flaring ''economically infeasible,'' or what specific concerns the commenter is trying to address.

A commenter seeking to minimize exceptions to the venting prohibition asked the BLM to define the term ''technically infeasible.'' Given the wide variety of situations that are likely to occur on a lease that inform an operator's determination of technical feasibility, the BLM does not believe that it is appropriate to add further specificity to this term. If there is a dispute about the term in a specific case, the BLM has the final say in determining whether flaring is, in fact, technically infeasible.

Section 3179.7 Gas Capture Requirement

Final rule § 3179.7 houses a modified version of the flaring requirements that were in proposed rule s 3179.6. As discussed in Section III.B.2.a, the final rule alters how the proposed rule constrained the quantities of gas lost through flaring, but achieves similar flaring reductions by requiring operators to meet specified monthly capture targets (subject to shrinking flaring allowances), rather than setting per well numeric flaring limits.

Final rule § 3179.7 establishes capture targets that increase over the first nine years of rule implementation. Paragraphs (a) and (b) describe the capture percentage requirements. The schedule for the capture targets is provided in § 3179.7(b)(1)–(4) and is reproduced in Section III.B.2.a of this preamble. Paragraph (c) defines ''capture percentage,'' ''total volume of gas captured,'' ''adjusted total volume of gas produced,'' and ''relevant area.'' Under § 3179.7(c)(3), an operator may choose whether to comply with the capture targets on each of the operator's leases, units or communitized areas, or on a county-wide or state-wide basis. Section 3179.7(c)(4) defines when an oil or gas well is considered ''in production'' and therefore subject to the capture targets in this section. Section 3179.7(d) establishes an equation for determining the quantity of ''excess flared gas''—that is, the volume of flared gas that causes an operator to fall short of the applicable capture target in a given month, and that is therefore subject to royalties. Section 3179.7(e) requires operators to prorate the excess flared gas to each lease, unit, or communitized area that reported high-pressure flaring, for purposes of calculating royalties.

As discussed in Section III.B.2 of this preamble, the BLM developed the capture target approach in final rule § 3179.7 after careful consideration of the many comments received on the flaring limit approach taken in proposed rule § 3179.6(b). The key comments received on § 3179.7 and BLM's response to these comments are also discussed in Section III.B of this preamble. Additional substantive comments received on the proposed flaring provisions are discussed below.

Several commenters asserted that the ability to avoid flaring depends on the capacity of gathering lines, and that operators must prove production for a new oil play and initiate larger scale development before gathering and/or processing companies are willing to invest in infrastructure. These comments informed the revisions to the flaring revisions made in the final rule. The BLM also recognizes that currently the optimal mechanism to capture gas is through connecting to a pipeline, which may take time to achieve in some areas due to lagging infrastructure and capacity constraints. As a result, the final rule provides additional time and flexibility for industry to plan and better coordinate development of production wells with development of pipelines to transport the production. As discussed in section III.B.2, the final rule provides an option for operators to comply with the capture targets on a lease-by-lease, county-wide, or state-wide basis, and also phases in the capture targets over a longer period of time. These changes will allow sufficient time and flexibility to enable industry to better align oil development with gas infrastructure over time.

On the other hand, given the BLM's statutory obligation to reduce waste of gas, the clear technical capability of operators to capture gas, the economic value of the gas, and the environmental impacts of not capturing it, the BLM has determined that it is not reasonable to allow operators to dispose of large quantities of associated gas from development oil wells using routine flaring. The final rule therefore structures the capture targets in a way that the BLM estimates will achieve slightly greater flaring reductions than the proposed rule, albeit over a longer timeframe.

Many commenters asserted that on-site capture technologies are not technically feasible and/or economically viable. In the proposed rule, we discussed research indicating that LNG stripping, CNG, and gas-to-power are commercially mature technologies that are portable, scalable, and have been utilized economically at well sites.[143] Moreover, MJ Bradley released a re-analysis of the economic analysis in the proposal, which suggests that for over 500 of the leases in the BLM data set, the CNG trucking option would have total net benefits that exceed total lessee

[143] 81 FR 6641. See also Carbon Limits. ''*Improving Utilization of Associated Gas in US Tight Oil Fields*''. *2015. Available athttp://www.catf.us/resources/publications/files/Flaring_Report.pdf* y.

costs by approximately $56.5 million over a 10 year period.[144] The BLM agrees with the commenter's assertion that these remote-site capture technologies may not be viable at all well sites. However, they are viable and currently used at some sites. The final rule's option allowing operators to average compliance across all of their wells in a county or State accommodates this heterogeneity in site/technology compatibility: Operators can deploy on-site capture technologies where it is most cost-effective, and use the increased capture rates at those sites to offset continued flaring at other sites. The BLM also notes that leasing on-site capture equipment during the earlier periods of well production, when associated gas levels and corresponding potential revenues are highest, can enhance the cost-effectiveness of the technologies. Leasing allows operators to avoid upfront capital costs associated with purchasing equipment, making it easier to use such equipment only for periods in the well's life when it is most economic to do so. This strategy also allows operators to match equipment size to expected associated gas production volumes at different stages of well production. Finally, on-site capture technology capital costs may continue to decline as the market further matures and achieves greater economies of scale.

Several commenters expressed concern about delays in approvals of ROWs for gas pipelines, and asserted that such delays will prevent operators from complying with the capture targets. These comments are addressed in Section VI.E of this preamble.

Section 3179.8 Alternative Capture Requirement

Section 3179.8 (§ 3179.7 in the proposed rule) describes an alternative process that is available to an operator that cannot meet the capture targets described in final rule § 3179.7. Under § 3179.8, an operator that cannot meet the capture targets may request that the BLM establish an alternative capture target if three conditions are met: (1) The operator has chosen to comply with the capture target using the lease-by-lease, unit-by-unit, or communitized area-by-communitized areas basis rather than the averaging approach; (2) the potentially noncompliant lease was issued before the effective date of this final rule; and (3) the operator demonstrates via Sundry Notice, and the BLM agrees, that the applicable capture percentage under final rule § 3179.7 ''would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.''

As discussed in Section V.B.2.b of this preamble, § 3179.8 was revised in the final rule to reflect the shift to gas capture targets in final rule § 3179.7. Section 3179.8(a) was also revised to reflect the three conditions discussed above. Section 3179.8 (b) describes the information an operator must submit in the Sundry Notice. The final version of this paragraph makes minor modifications relative to the proposed version, including: Adding the phrase, ''to the extent that the operator is able to obtain this information,'' to the requirements to include pipeline capacity and the operator's projections of the cost associated with installation and operation of gas capture infrastructure; adding cost projections for alternative methods of transportation that do not require pipelines; specifying that the cost projections required in final § 3179.8(b)(5)(i) must be based on the next 15 years or the life of the lease, unit, or communitized area, whichever is less; and dropping the requirement to provide the depths and names of producing formations. Section 3179.8(c) remains similar to the proposed rule (§ 3179.7(c)), with flaring limits changed to capture percentages. The final rule also does not contain the renewable 2-year exemption in proposed § 3179.7(d).

The key comments received on this section and BLM's response to these comments are discussed in Section III.B.2.b of this preamble. Additional substantive comments received on the proposed flaring provisions are discussed below.

Some commenters asserted that the proposed alternative capture and related Sundry Notice requirements were overly burdensome and required submission of confidential information. These commenters contended that oil and gas price and production volume forecasts and pipeline and gas capture costs are considered confidential business information. Commenters also claimed that operators do not have access to information on pipeline capacity.

The BLM does not agree that the Sundry Notice requirements for a request for an alternative capture requirement are unduly burdensome, although the BLM has streamlined the proposed requirements in the final rule where it was possible to do so without losing information that would be necessary to evaluate a request. Commenters did not explain how the BLM would be able to determine whether a request met the criteria for approval absent the required information. Also, operators routinely provide information to the BLM that they consider confidential; if they indicate on the Sundry Notice that the information is considered confidential, the BLM will handle the information in accordance with applicable regulations in 43 CFR part 2. In response to statements that commenters may not have access to information on pipe capacity, the BLM revised the final rule to state that data on pipeline capacity and the operator's projections of the cost associated with installation and operation of gas capture infrastructure is required to the extent that the operator is able to obtain such information.

Some commenters requested that the BLM clarify what ''significant'' means with regard to recoverable oil reserves in § 3179.8(c), while another recommended that the criteria should be based on an economic test that would grant an alternative limit if the return on investment would be too low for a prudent operator to proceed with compliance. Another commenter stated that new wells should also be allowed to apply for alternative limits. Other commenters asserted that the BLM should eliminate or substantially narrow the approval of alternative limits, with one commenter stating that the BLM should determine approval of alternative limits based on a cost-benefit analysis that includes the consideration of environmental benefits.

The BLM did not revise the rule based on these comments, but we are providing here additional clarification on the BLM's interpretation of this standard. The BLM believes that requiring the operator to demonstrate that the applicable capture percentage under § 3179.7 would ''impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves'' is an appropriate threshold for granting alternative capture requirements. The BLM recognizes that the term ''significant'' is a qualitative rather than quantitative metric. The BLM considered development of a quantitative metric, but determined that setting a quantitative threshold, such as number of days of production lost, might be arbitrary and ineffective. Moreover, the BLM has a history of reviewing and effectively evaluating requests based on similar qualitative criteria. While we do not expect there to be a significant change in the review of these requests from prior practice, as discussed in the preamble to the proposed rule, we do expect that spelling out the requirements and

[144] M.J. Bradley and Associates. ''*Re-analysis of Proposed BLM Flaring Reduction Rule; Projected Costs and Benefits*''. September 9, 2016. Pages 13–14.

qualitative criteria more clearly in today's rule will ensure a more consistent review and approval process.

The BLM notes that the phrase ''cease production and abandon significant recoverable oil reserves'' is not intended to require an operator to demonstrate that the lease could never be developed under any future circumstances. Yet nor would it be sufficient for an operator to show that compliance with the capture targets would cause the operator to shut in the wells on a lease for a limited period of time. Rather, the operator must make a showing that the cost of complying with the capture requirements would cause the operator to shut in the wells on the lease under current market conditions and for the reasonably foreseeable future, taking into account uncertainty regarding the long-term recoverable potential of the lease and reservoir. In other words, the showing should illuminate whether compliance would cause the operator to be deprived of the value of the lease, not simply cause a reduction in profit. For example, depending on the specific economic circumstances of the lease, it may be sufficient for an operator to show that it would have to shut in the wells on a lease for a time period on the order of a year or two. The BLM notes, however, that it is not uncommon for operators to shut in and restart production due to market conditions, and a showing under this exemption should demonstrate a more significant impact that is clearly distinguishable from such normal fluctuations.

With respect to the request to allow an alternative capture target to apply to new wells, the BLM notes that the alternative is limited to existing leases, not existing wells. Thus, the alternative capture target is potentially available with respect to an existing lease with new wells. Moreover, the BLM believes that with the extended phase-in of the capture targets and the state- and county-wide averaging option, operators have ample flexibility to take the capture targets into account as they develop new production wells. Indeed, this rule encourages such planning by requiring operators to submit waste minimization plans with their APDs. Further, the BLM does not believe that the opportunity to request an alternative capture target should be extended to new leases. Operators have broad flexibility to plan to meet the capture targets at the time that they bid on new leases.

Some commenters requested that the Sundry Notices be processed in a timely manner, and that the BLM provide a schedule for applying for and being granted an alternative capture percentage. One commenter suggested that the BLM should align the phase-in of the rule with the time it would take to for the BLM to approve the requests for alternate capture targets. Given that the final rule phases in the capture targets over a longer period of time, the BLM expects that operators will have sufficient time to prepare their Sundry Notice requests for alternative capture targets if needed. Additionally, the BLM does not anticipate receiving a large number of Sundry Notice requests for alternative capture targets, and therefore anticipates that it will have adequate time to review them in a timely manner.

Section 3179.9 Measuring and Reporting Volumes of Gas Vented and Flared

This section (which was § 3179.8 in the proposed rule) requires operators to estimate (using estimation protocols) or measure (using a metering device) all flared and vented gas, whether royalty-bearing or royalty-free. This section further provides that specific requirements apply when the operator is flaring 50 Mcf or more of gas per day from a high pressure flare stack or manifold, based on estimated volumes from the previous 12 months, or based on estimated volumes over the life of the flare, whichever is shorter. Beginning one year from the effective date of the rule, when this volume threshold is met, the operator must measure the volume of the flared gas, or must calculate the volume of the flared gas based on the results of a regularly performed GOR test, so as to allow the BLM to independently verify the volume, rate, and heating value of the flared gas. This section also requires operators to report all volumes vented or flared under applicable ONRR reporting requirements.

This section allows operators that are flaring gas across multiple leases, unit PAs, communitized areas, or non-Federal or non-Indian leases to measure or calculate the flared volumes at a single point. To mitigate environmental impacts, commingling to a single flare may be approved even though the relevant royalty interests may differ. The BLM recognizes that the additional costs of requiring individual flaring measurement and meter facilities for each lease, unit PA, or communitized area are not necessarily justified by the incremental royalty accountability afforded by the separate meters and flares. However, to ensure proper production accountability, the method of allocating the flared volumes to each lease, unit PA, or communitized area must be approved by the BLM where the flared volumes exceed the 50 Mcf/day threshold.

The BLM made the following changes from the proposed rule: The final rule clarifies that (1) this section applies to gas vented and flared from wells, facilities, and equipment on a lease, unit PA, or communitized area, rather than just referencing gas vented and flared from wells; (2) the 50 Mcf/day threshold triggering the requirement to measure is determined by averaging the estimated volumes from a high pressure flare stack or manifold over the previous 12 months, or the life of the flare, whichever is shorter; (3) when the 50 Mcf/day threshold is met, operators have the choice of measuring or calculating the volume of the gas, rather than being required to measure only; (4) the requirement to measure or calculate volumes applies beginning one year from the effective date of the rule; and (5) under new paragraph § 3179.9(c), operators may measure or calculate commingled gas at a single measurement point at the flare, but they must use an allocation method approved by the BLM to allocate the quantities of flared gas across the leases, unit PAs, or communitized areas that can contribute production to a flare that is above the 50 Mcf/day threshold.

The BLM received a range of comments on § 3179.9 (§ 3179.8 in the proposed rule). Some commenters recommended that the BLM disallow estimation of flared or vented gas and requested that gas be measured in all cases or that the threshold for measurement be lowered from 50 Mcf/day. Commenters asserted that requiring measurement and monitoring rather than allowing operators to estimate flared gas volumes will provide the co-benefits of assisting the BLM with compliance assurance, allowing accurate determination of when royalties are due, and further reducing methane emissions.

Other commenters argued that the threshold for measurement should be raised or that the measurement requirement should be eliminated from the rule altogether. One commenter contended that metering simply adds costs and logistical difficulties without providing environmental benefit or reducing waste. Several commenters asserted that metering technology is not available that can accurately or reliably estimate flare gas volumes over the extreme range of pressures and rates typically encountered on producing wells, and that the measurement equipment and methods in Onshore Order 5 and its successor regulations are not applicable to flares. Arguing that there is no current technology that can reliably measure low pressure, low volume, fluctuating gas flow, several commenters recommended that the BLM remove the requirement to measure gas at low-volume flow rates and allow the operator to continue to use the estimation requirements and GOR methodology in NTL–4A. Another commenter asserted that operators would need to install meters on any site where vented and flared gas could potentially exceed the threshold. Several commenters requested clarification on the period over which the flaring must exceed the 50 Mcf/day threshold, with one suggesting that the threshold be based on an average value over a production month.

Like the proposed rule, the final rule maintains the 50 Mcf/day threshold for triggering more specific standards for determining the volume of flared gas, however, the BLM has modified the standards that apply when a flare stack or manifold exceeds that threshold to allow either metering or a rigorous GOR-based approach. The final rule also clarifies that exceedance of the 50 Mcf/day threshold will be determined based on the average quantity of flaring per day over the life of the flare or over the previous 12 months of flaring activity, whichever is shorter. The BLM agrees that the rule should specify the measurement period for exceeding the threshold, and believes that limiting the averaging period of 12 months (or the life of well) provides a good indication of ongoing, current levels of flaring that are high enough to warrant measurement.

Although the BLM received comments arguing for both higher and lower thresholds, the BLM ultimately concluded that a change in the threshold is not warranted. The 50 Mcf/day threshold represents a level of activity of high-pressure flares that can be measured or calculated with a reasonable degree of accuracy. In addition, particularly when measured or calculated on average over a period of time at a single flare stack or manifold, 50 Mcf/day is a sufficiently high level of flaring that it could reasonably be expected to lead to royalty obligations on flared volumes considered ''avoidably lost'' under the final rule. When an operator exceeds this threshold, the operator needs to be able to account accurately for the amount of flaring that occurs and validate its compliance with the capture target, particularly as the ''flaring allowable'' level decreases and the capture target increases in future years.

The BLM has modified the standards that apply to flares that exceed the 50 Mcf/day threshold, however, to allow for either metering or a GOR-based calculation of flare volumes in circumstances where a GOR-based approach would allow the BLM to independently verify the volume, rate, and heating value of the flared gas. As noted above, many commenters argued that metering technology is not available to measure gas volumes at many flares, and they asserted that using GOR-based methods provides sufficient information to accurately calculate flared gas volumes. Other commenters argued that all flared gas volumes should be directly metered.

The BLM believes that technology exists to measure flared volumes, especially on higher-volume flares, and that meters would not be prohibitively expensive to install. For example, the gas measurement requirements in recently adopted subpart 3175 contain standards applicable to metering gas at very-low volume FMPs. These are the BLM's least stringent measurement requirements for gas measurement, and they allow operators to use alternative methods for measuring highly fluctuating gas flows, provided only that the measurements meet the performance goals of section 3175.31. While the specific standards in subpart 3175 are geared to orifice plate measurement, the performance goals for very-low volume FMPs only require that the measurement be verifiable and they do not require the operator to achieve any set level of uncertainty or maintain measurement free of statistically-significant bias. Therefore, the BLM may approve alternate devices for purposes of subpart 3175, such as thermal mass meters, ultrasonic meters, or other technology that industry develops that can provide verifiable measurement, which could also be applicable to measuring flared volumes under this provision. In addition, provisions in newly adopted subparts 3170 and 3175 establish a production measurement team, which will approve technologies for gas metering. Technologies approved by the production measurement team could also be used to comply with the requirements of this section.

Nevertheless, the BLM is sensitive to the performance limitations of many commonly used meters, and the BLM believes that a properly designed GOR-based approach can also produce adequately accurate results. A GOR-based method for calculating volumes of flared gas would use a known GOR and measured volumes of oil production and sold gas. The GOR itself is determined based on a test that directly measures in a controlled manner all of the oil and gas produced by the well over a given period of time. Calculating the volumes of flared gas based on GOR can be quite accurate, if the GOR value used is accurate and the well conditions are relatively stable. Since the GOR will vary as well conditions change, the accuracy of the GOR value for a well can be enhanced by more frequent GOR testing, either on a set frequency and/or in response to changes in the well's production. The BLM expects that to meet the standards of § 3179.9, GOR tests would need to be performed at least monthly for most wells.

Commenters also contended that the rule does not clearly specify the type of gas that must be estimated or measured, and they recommended that the rule not apply to ''unavoidably lost'' gas volumes. The BLM does not agree that measurement should be required only when the volume of avoidably flared gas exceeds the threshold. As a first step to reducing waste through flaring, it is important for both the operator and the BLM to have an accurate understanding of the total quantity of gas that is being flared. While the BLM agrees that estimation techniques can provide a ballpark volume estimate, the BLM believes that direct measurement methods authorized under subpart 3175 more consistently and accurately identify the actual volume of the losses. Furthermore, the BLM notes that if an operator is flaring high pressure gas at a rate of more than 50 Mcf/day, it becomes more likely that the operator is failing to meet capture requirements. If an operator fails to meet capture requirements, then at least a portion of the flared gas is deemed avoidably lost, and therefore royalty bearing.

Several commenters noted that the rule does not provide methods for estimating vented or flared volumes. One commenter asserted that the BLM must require operators to use estimation techniques that provide accurate and reliable estimates of releases, while others recommended that methods currently allowed under NTL–4A should continue to be allowed for estimating associated gas and royalty-free volumes.

The BLM does not believe that it is necessary to specify estimation methods, as the BLM expects the industry to continue to use well-understood and generally accepted engineering practices for estimating quantities of flared gas below the 50 Mcf/day threshold.

Commenters also requested that the BLM make public the data on volumes of gas reported by operators as flared or vented. The BLM agrees that this is important information for the public, and the BLM plans to make this information available, subject to any protections for confidential business information.

Section 3179.10 Determinations Regarding Royalty-Free Flaring

This section (which was § 3179.9 in the proposed rule) provides for a transition period for operators that are operating under existing approvals for royalty-free flaring, as of the effective date of the rule. Further, this section clarifies that nothing in this subpart alters the royalty-bearing status of flaring that occurred prior to January 17, 2017, nor the BLM's authority to determine that status and collect appropriate back-royalties.

Commenters asserted that the rule represents a change in what is considered ''avoidable loss'' and therefore cannot be applied to existing leases. Commenters also requested that the BLM permanently grandfather existing approvals for royalty-free flaring and only apply the rule requirements to wells drilled after the effective date of the rule, arguing that 90 days is too little time to design and construct gas capture infrastructure.

As discussed in Preamble Section III.C, the BLM's legal and contractual authority to update its regulations governing existing oil and gas leases is well established. The BLM has the authority to revise its interpretation of what constitutes ''avoidably lost'' oil and gas and may impose this interpretation on existing leases. The BLM revised the rule, however, to extend the grace period for preexisting approvals to flare royalty free from the 90 days specified in the proposed rule to one year after the final rule becomes effective. After one year, those operators with preexisting royalty-free flaring approvals will become subject to all the provisions of the final rule.

Section 3179.11 Other Waste Prevention Measures

This section clarifies that nothing in this subpart alters the BLM's existing authority under applicable laws, regulations, permits, orders, leases, and unitization or communitization agreements to limit the volume of production from a lease, or to delay action on an APD to minimize the loss of associated gas. Specifically, if production from a new well would force an existing producing well already connected to the pipeline to go offline, then notwithstanding the requirements in 3179.7 and 3179.8, the BLM may limit the volume of production from the new well while gas pressures from the well stabilize. In addition, this section clarifies that, consistent with existing authority, the BLM may delay action on an APD or approve it with conditions related to gas capture and production levels, and can suspend the lease under 43 CFR 3103.4–4 if the lease associated with the APD is not yet producing.

In the final rule, the BLM revised both paragraphs § 3179.11(a) and (b) to add additional specificity regarding the sources of the BLM's existing authority. Specifically, the BLM added to both paragraphs (a) and (b) language to the effect that the BLM may exercise its existing authority ''under applicable laws and regulations, as well as its authority under the terms of applicable permits, orders, leases, and unitization or communitization agreements.''

The BLM received a number of comments on this section. While some commenters expressed support for BLM's authority on this matter, other commenters expressed concern that the BLM could delay approval of APDs due to infrastructure limitations that are out of the control of the operator (*e.g.,* third-party pipeline capacity). One commenter suggested that the proposed requirements would result in curtailment of new production, potentially causing reservoir damage during initial production operations. Another commenter asked the BLM to (1) clarify that this portion of the rule applies to Federal minerals only and (2) explain implementation of the rule for special cases, such as long reach horizontal wells that produce from Federal and non-Federal leases within the same wellbore.

The BLM did not revise this section based on comments received. As stated in the regulatory text, the BLM is exercising existing authority and this section does not expand upon that authority. The intent of this section is to address operators' concerns that gas from their existing wells could be forced offline by new Federal gas production, and to clarify that the BLM already has the authority to remedy such circumstances when appropriate to minimize waste of oil and gas on BLM-administered leases. If implementation of this section could result in the incidental curtailment of non-Federal production, the BLM will coordinate on a case-by-case basis with the relevant State regulatory authorities pursuant to Section 3179.12. As noted in Preamble Section VI.D, the fact that a regulatory provision aimed at Federal and Indian production may have incidental impacts on State or private production does not impinge on the BLM's authority to ensure that operators take reasonable steps to minimize waste of Federal and Indian minerals.

Section 3179.12 Coordination With State Regulatory Authority

This section addresses certain ''mixed ownership'' situations, in which a single well may produce oil and gas from both Federal and/or Indian mineral interests and non-Federal, non-Indian mineral interests. This section provides that to the extent any BLM action to enforce a prohibition, limitation, or order under this subpart might adversely affect production of oil or gas from non-Federal and non-Indian mineral interests, the BLM will coordinate on a case-by-case basis with the State regulatory authority with jurisdiction over that non-Federal and non-Indian production. This is consistent with current practice, in which the BLM and State regulators coordinate closely in regulating and enforcing requirements that apply to operators producing from Federal or Indian interests and from non-Federal, non-Indian mineral interests. The BLM did not revise this section from the proposed rule.

Some commenters asserted that that the propose rule did not indicate what constitutes coordination, and separately, that state-Federal coordination would not reduce duplicative requirements for operators. This provision is aimed at coordinating enforcement of BLM requirements, not intended to address issues related to overlapping state and Federal requirements. The BLM anticipates that its level of coordination will vary by state, and may involve entering into (or revising existing) memoranda of understanding with the relevant State parties.

Section 3179.101 Well Drilling

This section requires that gas reaching the surface as a normal part of drilling operations be used or disposed of in one of four specified ways: (1) Captured and sold; (2) directed to a flare pit or flare stack; (3) used in the operations on the lease, unit, or communitized area; or (4) injected. The final rule specifies that gas may not be vented except under the circumstances specified in § 3179.6(b) or when it is technically infeasible to use or dispose of the gas in one of the ways specified above.

This section also states that gas lost as a result of a loss of well control will be classified as avoidably lost if the BLM determines that the loss of well control was due to operator negligence, in which case it will be subject to royalties.

Several commenters asserted that the proposed requirement that all gas that reaches the surface during drilling be captured and sold, flared, used on-site, or injected is not always technically feasible because such gas can be low pressure, low volume, and intermittent. Commenters also stated that achieving a no-venting standard is not feasible particularly when gas reaches the surface through unplanned gas kicks. Commenters asserted that in these situations, venting the gas can sometimes be the only safe solution.

In response to these comments, in addition to the exceptions described in § 3179.6(b), the final rule states that operators also do not have to use or dispose of gas that reaches the surface in one of the ways specified in § 3179.101(a) if it is technically infeasible to do so. The BLM believes that a technical infeasibility option is necessary to address the situations described by commenters, which we expect to occur rarely, where the operator cannot use or dispose of the gas as specified in § 3179.101(a).

The BLM also received comments asserting that it lacks the authority to require that gas reaching the surface during drilling operations be flared if not captured, used on the lease, or injected. Commenters argued that such a requirement does not fall within the BLM's MLA authority because it is not waste prevention, as the gas is lost whether it is vented or flared. These commenters then argued that the only possible justification for the requirement was control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA's domain.

The BLM disagrees with these comments. Flaring during drilling does not count toward an operator's capture target, so the requirement to flare rather than vent this gas does not achieve waste reduction in that way. Nevertheless, the requirement falls squarely within the BLM's authority because, as discussed in connection with § 3179.6, a requirement to flare rather than vent associated gas is a safety measure under the MLA. It is generally safer to combust methane gas than to allow it to vent uncombusted into the surrounding air due to concerns over methane's explosiveness and the risk of hypoxia and exposure to various associated pollutants. In addition, also as discussed in connection with § 3179.6, the BLM has the authority to regulate air quality and GHG impacts on and from public lands pursuant to FLPMA and the MLA.

Section 3179.102 Well Completion and Related Operations

This section addresses gas that reaches the surface during well completion, post-completion, and fluid recovery operations, after a well has been hydraulically fractured or refractured. It requires the gas to be used or disposed of in one of four specified ways: (1) Captured and sold; (2) directed to a flare pit or stack, subject to a volumetric limitation in section 3179.103; (3) used in the lease operations; or (4) injected. The final rule specifies that gas may not be vented except under the narrow circumstances specified in proposed § 3179.6(b) or when it is technically infeasible to use or dispose of the gas in one of the four ways specified above. It also provides that an operator will be deemed to be in compliance with the gas capture and disposition requirements of § 3179.102(a) if the operator is in compliance with the requirements for control of gas from well completions established under subpart OOOO or subpart OOOOa, or if the well is not a ''well affected facility'' under either of these subparts.

The final rule also allows an exemption from the requirements of § 3179.102(a) if the operator submits a Sundry Notice to the BLM demonstrating that compliance with these requirements would impose such costs as to cause the operator to cease production and abandon significant oil reserves under the lease.

In response to comments described below, we have made several changes to the proposed rule requirements. Specifically, the final rule: (1) Clarifies that sources subject to, and in compliance with, subpart OOOO and subpart OOOOa are deemed to be in compliance with this section, without filing a Sundry Notice (as the proposed rule would have required); (2) limits coverage of this section to hydraulically fractured or refractured well completions; (3) adds text to clarify that a well that does not meet the definition of a ''well affected facility'' under either subpart OOOO or subpart OOOOa, will nevertheless be deemed to be in compliance with this section, since the NSPS provides that existing wells that are refractured and follow the well completion procedures in the NSPS are not affected facilities; (4) adds an exemption for technical infeasibility; and (5) adds an exemption from the requirements of this section when the operator can demonstrate that compliance would cause the operator to cease production and abandon significant recoverable oil reserves under the lease due to the cost of compliance.

Several commenters asserted that the requirements for well completions are duplicative with EPA requirements contained in 40 CFR part 60 subpart OOOO and subpart OOOOa. These EPA rules address emissions from flowback operations following completion of new gas and oil wells using hydraulic fracturing treatment. Commenters asserted that the EPA rules effectively cover all wells, because most new wells utilize hydraulic fracturing, and existing wells that undergo ''recompletion'' hydraulic fracturing will be covered as well, as they are considered a ''modified'' source post-recompletion. Commenters further argued that the BLM should allow for exemptions for wells that comply with either 40 CFR part 60, subpart OOOO or subpart OOOOa, rather than limiting the exemption to wells that comply with subpart OOOOa as the proposed rule would have done. Commenters asserted that several issues related to controlling emissions from well completion operations have already been worked out in detail with the EPA, and these issues would apply to the BLM's rule as well. These issues include inadequate well pressure or gas content during the well completion to operate surface equipment, and the need for an exemption for wells with less than 300 scf of gas per stock tank barrel of oil produced. Other commenters noted that the EPA's well completion requirements in subpart OOOOa do not cover conventional wells because of their low methane and VOC emissions, but that the proposed BLM rule would apply to conventional wells. Commenters also argued that the Sundry Notice requirement to document EPA compliance was an additional and unnecessary burden for sources already regulated elsewhere.

Although we believe that new wells will generally be subject to subpart OOOOa, after considering these comments, we have added language in the final rule stating that wells that are in compliance with either subpart OOOO or subpart OOOOa are deemed to be in compliance with the requirements of this section. We also agree with commenters that filing a Sundry Notice to this effect is unnecessary, and we have not included that proposed requirement in the final rule. We also revised the text to limit the coverage of this section to fractured and refractured wells. Upon consideration of the comments, the BLM agrees that the loss of gas from conventional well completions is very small and that regulating conventional well completions is not a particularly cost-effective way to reduce waste. We also revised the text to clarify that a well that does not meet the definition of a ''well affected facility'' under either subpart OOOO or subpart OOOOa, and is exempt from those subparts on that ground, is deemed to be in compliance with this section. This change aligns the coverage of the BLM requirements with the coverage of the EPA requirements, and it ensures that a well that the EPA exempted from the subpart OOOO and subpart OOOOa requirements would not become subject to the BLM requirements by virtue of that exemption.

The BLM is including requirements for well completions in this rulemaking to satisfy its statutory obligations to prevent waste of oil and gas on Federal lands. The well completion requirements are a key part of a comprehensive regulatory regime reducing waste from development of the public's oil and gas resources. The BLM requirements do not require any additional action from an operator that is in compliance with subparts OOOO and OOOOa. Thus, without imposing any burden on an operator, the BLM requirements provide a backstop in the unlikely event that subparts OOOO or OOOOa are no longer in effect. The BLM does not in any way question the validity of the EPA regulations, but we note that some of the same commenters that claim the BLM regulations are unnecessarily duplicative are separately challenging EPA's subpart OOOOa in court.

Commenters also questioned the technical feasibility of the proposed requirement that all gas that reaches the surface during well completion and post completion, drilling fluid recovery, or fracturing or refracturing must be captured and sold, flared, used on-site, or injected. These commenters contended that gas releases during these stages of development, especially immediately following drilling, may involve small quantities, or gas with low BTU or high contaminant concentrations. As a result, the commenters stated, the compliance options in the proposed rule are cost prohibitive and not technically feasible. They further argued that capturing low quantities of gas requires significant compression capacity to enter a sales line, that gas that does not meet pipeline specifications for sales is unlikely to burn (without makeup gas) or be appropriate for beneficial use, and that reinjection of small volumes produced for a limited time is cost prohibitive.

In response to these comments, the final rule includes an exemption from the requirements for handling gas from a well completion when it is technically infeasible to use or dispose of the gas using any of the four identified options. Commenters also asserted that under the proposed rule, absent an exemption, if using any of the four identified compliance options was technically infeasible, the operator would have been forced to abandon the well. While we do not believe that the requirements for well completions are likely to impose such costs as to cause an operator to abandon the lease, the final rule also includes an exemption from § 3179.102(a) when the operator can demonstrate that compliance would cause the operator to cease production and abandon significant recoverable oil reserves under the lease due to the cost of compliance.

The BLM also received comments asserting that it lacks the authority to require that gas reaching the surface during well completions be flared if not captured, used on the lease, or injected. Commenters argued that such a requirement does not fall within the BLM's MLA authority because it is not waste prevention—*i.e.,* the gas is lost whether it is vented or flared. These commenters then argued that the only possible justification for the requirement was control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA's domain.

The BLM disagrees with these comments for several reasons. First, the requirement in this section to flare rather than vent constitutes waste prevention because (a) all flaring covered by this section and § 3179.103 is subject to a volumetric royalty-free flaring limit of 20 MMcf/well; and (b) flared gas from well completions that exceeds this volumetric limit is treated as avoidably lost gas subject to royalties under § 3179.4(a)(1)(B). This royalty trigger provides an incentive for operators to stay under the 20 MMcf/ well flaring limit—and thus to limit their waste. Second, as discussed in connection with § 3179.6, a requirement to flare rather than vent associated gas is a safety measure under the MLA. It is generally safer to combust methane gas than to allow it to vent uncombusted into the surrounding air due to concerns over methane's explosiveness and the risk of hypoxia and exposure to various associated pollutants. In addition, also as discussed in connection with § 3179.6, the BLM has the authority to regulate air quality and GHG impacts on and from public lands pursuant to FLPMA and the MLA.

Section 3179.103 Initial Production Testing

This section clarifies when gas may be flared royalty-free during a well's initial production test. It provides that gas may be flared royalty-free during initial production testing until the first of the following events: (1) The operator determines that it has obtained adequate reservoir information for the well; (2) 30 days have elapsed; (3) 20 MMcf of gas have been flared (as measured in combination with volumes flared during well completion under section 3179.102); or (4) the beginning of well production. Under any of these scenarios, royalty-free flaring allowed by this section ends when production begins.

Paragraph (b) of this section allows the BLM to approve royalty-free flaring for up to an additional 60 days, if there are well or equipment problems or a need for additional testing to develop adequate reservoir information. Paragraph (d) allows a 90-day period for royalty-free flaring during dewatering and initial evaluation of an exploratory coalbed methane well, and the BLM may approve up to two extensions of 90 days each. This approach recognizes that it generally takes substantially more than 30 days to dewater a coalbed methane well, but the time required can vary considerably between different coalbed methane resources. The operator is required to submit a Sundry Notice to BLM if it wishes to request a longer test period under paragraph (b) or (d) of this section.

In response to comments described below, the final rule includes a new provision in paragraph (c) of this section that allows the BLM to increase the 20 MMcf royalty-free flaring limit by up to an additional 30 MMcf of gas for exploratory wells in remote locations where additional testing is needed in advance of development of pipeline infrastructure. The operator is required submit a Sundry Notice to BLM if it wishes to request this higher limit.

Under any of these circumstances, notwithstanding an extension of the test period, the well will still be subject to the royalty-free flaring limit of 20 MMcf limit or, upon approval through a Sundry Notice, the higher limit specified in paragraph (c) of this section. Volumes vented or flared under this section must be reported to ONRR as directed in § 3179.9 of this subpart.

Several commenters argued that the proposed royalty-free flaring limit of 20 MMcf was too low, and that higher limits are needed due to higher production rates being achieved through advancements in hydraulic fracturing. They further requested that the rule state that the duration and maximum gas volumes for initial production testing do not include the duration of flowback operations and gas volumes produced during those operations. In response to these comments, the BLM added new paragraph (c) of this section (discussed above), which allows the

BLM to increase the 20 MMcf royalty-free flaring limit by up to an additional 30 MMcf of gas for exploratory wells in remote locations where additional testing is needed in advance of the development of pipeline infrastructure. While the BLM believes that for established fields, adequate testing to determine a well's production capacity can be conducted with no more than 20 MMcf of flared gas (including flaring from flowback operations), we recognize that a higher amount of flaring may be necessary for exploratory wells that are located in remote areas where no existing infrastructure exists. To the extent that an operator chooses to conduct additional testing beyond the royalty-free limits established in this section, the operator is free to do so, but the operator is responsible for paying royalties on the flared gas, rather than being able to shift the associated royalty losses to the public.

Section 3179.104 Subsequent Well Tests

The requirement in this section is essentially the same as NTL–4A's requirement regarding subsequent well tests. This section limits to 24 hours any royalty-free flaring during production tests conducted after the initial production test, unless the BLM approves or requires a longer test period. The operator must submit via Sundry Notice its request for a longer test period. Volumes vented or flared under this section must be reported to ONRR as directed in proposed § 3179.9 of this subpart. The BLM received few comments on this provision and made no substantive changes to this provision from the proposed to final rule.

Section 3179.105 Emergencies

This section allows operators to flare (or in some cases vent) royalty-free during an emergency, which is a temporary, infrequent, and unavoidable situation in which the loss of gas is uncontrollable or necessary to avoid immediate and substantial adverse impacts to safety, public health, or the environment. Paragraph (a) further limits royalty-free emergency venting or flaring to a maximum of 24 hours per incident, unless the BLM agrees that the emergency conditions necessitate flaring—and possibly venting—for a longer period. In addition, paragraph (b) clarifies situations that do not constitute an emergency for purposes of royalty assessment, including: More than three failures of the same equipment within any 365-day period; failures from improperly sized, installed, or maintained equipment; failure to limit production when the production rate exceeds the capacity of related equipment or other infrastructure; scheduled maintenance; a situation caused by operator negligence; and when a lease, unit, or communitized area has already experienced three or more emergencies within the past 30 days, except when the BLM determines such emergencies were unanticipated and beyond the operator's control. Volumes vented or flared under this proposed section must be reported to ONRR as directed in § 3179.9 of this subpart.

Based on a number of comments requesting additional clarification, the BLM has added a definition of ''emergency'' to the final text. Additionally, in response to comments stating that certain emergency situations may necessitate flaring beyond 24 hours, the final rule allows operators to flare or vent royalty-free beyond the 24-hour limit, but only when necessary and with BLM approval. While the BLM asserts that in most cases, 24 hours is a sufficient timeframe to address an emergency and/or make an appropriate business decision, we acknowledge that venting or flaring beyond 24 hours might be necessary in a limited number of cases, such as a natural disaster that prevents access to the site.

Some commenters asserted that the BLM was being too strict in limiting royalty-free flaring in emergencies to 3 emergencies in a 30-day period. BLM believes that after multiple incidents in a short timeframe, operators should identify and correct any maintenance or operational issues, and that repetitive, systemic events do not constitute an emergency situation. Commenters also recommended that the BLM remove the provisions listing improper installation and scheduled maintenance as events that do not constitute emergencies. The BLM did not revise the rule based on these comments, as scheduled maintenance is not an unanticipated disruption and improper installation can be avoided through good work practices.

The BLM notes that the provisions on downhole well maintenance in § 3179.204 cover well maintenance activities.

Section 3179.201 Equipment Requirements for Pneumatic Controllers

This section addresses gas losses from pneumatic controllers. Paragraph (a) establishes that this section applies to pneumatic controllers that use natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease, if the controllers (1) have a continuous bleed rate greater than 6 scf/hour (''high-bleed'' controllers); and (2) are not covered by EPA regulations that prohibit the new use of high-bleed pneumatic controllers (40 CFR 60, subpart OOOO or subpart OOOOa), but would be subject to those regulations if the controllers were new, modified, or reconstructed sources.

Paragraph (b) of this section requires pneumatic controllers subject to the requirement to be replaced with controllers (including, but not limited to, continuous or intermittent pneumatic controllers) having a bleed rate of no more than 6 scf/hour, subject to the exceptions described below. Paragraph (c) is discussed below, in connection with the exceptions. Under paragraph (d), operators are required to replace such controllers within 1 year from the effective date of the final rule, or within 3 years from the effective date of the rule if the well or facility served by the controller has an estimated remaining productive life of 3 years or less. Under paragraph (e), operators are also required to ensure that pneumatic controllers are functioning within the manufacturers' specifications.

This section provides several exceptions to the replacement requirement in paragraph (b). First, an operator is not required to replace a controller if a high-bleed controller is necessary to perform the needed function. For example, replacement might not be required if a low-bleed controller would not provide a timely response, which would lead to greater waste or create a safety hazard. To avail themselves of this exception, operators must submit a Sundry Notice to the BLM that describes the functional needs requiring the use of higher-bleed controllers. Second, replacement is not required if the controller was routed to a flare device or low-pressure combustor as of the effective date of this rule, and continues to be so-routed. Third, an operator is not required to replace its pneumatic controller if it chooses to route the pneumatic controller exhaust to processing equipment for capture and sale. Fourth, an operator may be exempted from the replacement requirement if it demonstrates through a Sundry Notice (described in paragraph (c)), and the BLM concurs, that replacing the pneumatic controllers on the lease would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

In response to comments and to further clarify the section, the BLM made the following four changes to the proposed rule requirements: (1) Clarified that a pneumatic controller is subject to this section if it is not subject to 40 CFR part 60, subparts OOOO or OOOOa, but would be subject to either of those subparts if it were a new, modified, or reconstructed source; (2) clarified that the operator may replace a high-bleed pneumatic controller with a continuous pneumatic controller, an intermittent pneumatic controller, or a non-pneumatic device, as long as the replacement has a bleed rate no greater than 6 scf per hour; (3) clarified that an operator may be exempted from replacement if it was routing the controller exhaust to a flare or a low-pressure combustor device at the time the rule was effective, so long as the operator continues to do so; (4) allowed an operator to be exempted from replacement if it routes the controller exhaust to processing equipment; and (5) included in paragraph (c) the information that must be included in the Sundry Notice to demonstrate that the costs of replacing a pneumatic controller would cause the operator to cease production and abandon significant recoverable oil reserves.

Several commenters requested that the final rule clarify perceived conflicting regulatory coverage between the proposed rule and the EPA's subparts OOOO and OOOOa. Based on these comments, we revised § 3179.201(a)(2) to further qualify that a pneumatic controller is subject to this section if it ''[i]s not subject to any of the requirements of 40 CFR part 60, subpart OOOO or subpart OOOOa, but would be subject to one of those subparts if it were a new, modified, or reconstructed source.'' This change ensures that the BLM requirements do not inadvertently apply to existing equipment that would not be covered by the EPA requirements. We believe this change properly conveys our original intent to cover the same types of pneumatic controllers that EPA rules cover.

Some commenters stated that pneumatic controller exhaust should be allowed to be routed to processing equipment, such as a vapor recovery unit, on-site fuel line, or a control device (in addition to a flare), noting that Wyoming's recent regulation for existing pneumatic controllers in the Upper Green River Basin allow operators this flexibility. The BLM agrees with these comments and as stated previously, revised the rule to state that operators may route the pump to processing equipment. However, the final rule clarifies that with respect to routing pneumatic controller exhaust to a flare or low-pressure combustor, an operator may only be exempted from replacement of the controller if it is already routing such exhaust in this manner as of the effective date of the rule, and continues to do so. The BLM believes that given the low cost and high return on pneumatic controller replacement, spending capital to route controller exhaust to a flare or low-pressure combustor is unlikely to make sense from an economic, practical and waste prevention perspective.

Some commenters stated that the BLM should require the use of zero-bleed devices on leases where on-site electrical grid power is used, or that the BLM should require bleed gas to be routed to a flare or other control device. The final rule does not require the use of zero-bleed pneumatic controllers. Many sites using pneumatic controllers are not connected to the electric grid, and the BLM believes that requiring operators to route gas from pneumatic controllers would impose considerable costs on them and involve technical complications which could impact the cost effectiveness of the replacement requirement. The BLM did clarify in the final rule that operators using pneumatic controllers that have a bleed rate greater than 6 scf per hour have the option to route the exhaust to processing equipment rather than replace the controller.

Many commenters stated that one year is insufficient to replace high-bleed pneumatic controllers and requested that requirements be extended to two or three years. The BLM believes that one year is a sufficient time period for operators to replace high-bleed pneumatic controllers, given the relatively low cost and rapid pay-back period of these replacements, as discussed in section V. Discussion of the Proposed Rule of the preamble to the proposed rule. In addition, as included in the proposed rule, if the well or facility that the pneumatic controller serves has an estimated remaining productive life of three years or less from the effective date of the rule, the operator has three years from the effective date of the rule to replace the pneumatic controller, provided that the operator notifies the BLM through a Sundry Notice.

Several commenters argued that operators should not have to submit a Sundry Notice and wait for BLM approval, if they meet one of the exemptions to the requirements. These commenters also asserted that the requirement for submission of a Sundry Notice (and hence, they assumed, BLM approval) set a higher standard for retaining a high-bleed controller based on functional need than the requirements in 40 CFR part 60, subpart OOOOa, under which they claimed EPA only requires recordkeeping to document why a high bleed pneumatic controller is needed.

As provided in the proposed rule, operators seeking exemptions based on a functional need for the equipment need only notify the BLM of that need and do not have to get the BLM's approval. Further, if the exhaust from the pneumatic controller was already being routed to a flare or other control device on the effective date of the rule, or if the operator chooses to route the exhaust to processing equipment, no notice is required. The BLM only requires a Sundry Notice and approval for exemptions based on the cost of replacing the equipment.

The BLM also received comments asserting that it lacks the authority to require operators who opt not to install low-bleed pneumatic controllers to route their existing pneumatic controllers to a flare device (rather than venting). Commenters argued that such a requirement does not fall within the BLM's MLA authority because it is not waste prevention—*i.e.,* the gas is lost whether it is vented or flared. These commenters then argued that the only possible justification for the requirement was control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA's domain.

The BLM disagrees with these comments. The final rule does not require flaring in lieu of venting as a means of compliance with this section. The primary means of compliance is replacement with a low-bleed pneumatic controller, which prevents waste by reducing the amount of gas diverted to the pneumatic controllers—which, in turn, makes more gas available for capture. An operator is exempted from this requirement if a high-bleed pneumatic controller is required based on functional needs, if the operator directs its controller exhaust to processing equipment for capture, or if the operator is *already* directing the exhaust from the controller to a flare (or low-pressure combustor). The rule therefore imposes no new or additional flaring requirements.

Section 3179.202 Requirements for Pneumatic Diaphragm Pumps

This section establishes requirements for operators with pneumatic diaphragm pumps that use natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease. It applies to such pumps if they are not covered under EPA regulations at 40 CFR part 60, subpart OOOOa, but would be subject to that subpart if they were a new, modified, or reconstructed source. It does not apply to pneumatic diaphragm pumps that vent exhaust gas to the atmosphere or that operated fewer than 90 days in the prior calendar year (as documented in a Sundry Notice).

For covered pneumatic pumps, this section requires that the operator either replace the pump with a zero-emissions pump or route the pump exhaust to processing equipment for capture and sale. Alternatively, an operator may route the exhaust to a flare or low pressure combustion device if the operator makes a determination (and notifies the BLM through a Sundry Notice) that replacing the pneumatic diaphragm pump with a zero-emissions pump or capturing the pump exhaust is not viable because (1) a pneumatic pump is necessary to perform the function required, and (2) capturing the exhaust is technically infeasible or unduly costly. If an operator makes this determination and has no flare or low-pressure combustor on-site, or routing to such a device would be technically infeasible, the operator is not required to route the exhaust to a flare or low-pressure combustion device. Further, an operator that is required to replace a pump or route the exhaust gas from a pump either for capture or to a flare or combustion device may be exempt from the requirement if the operator demonstrates through a Sundry Notice, and the BLM concurs, that the cost would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

Operators must comply with these requirements no later than one year after the effective date of the rule. In addition, similar to the requirements for pneumatic controllers and based on the same rationale, this section provides that if the estimated remaining productive life of the well or facility is three years or less, the operator is allowed to notify BLM through a Sundry Notice and replace the pneumatic pump no later than three years from the effective date of this section, rather than within one year. The section also requires that pneumatic pumps function within manufacturers' specifications.

The final rule makes five changes to the proposed rule requirements. First, it restructures the requirements as discussed above to require that operators either replace pneumatic diaphragm pumps with zero emission pumps or capture the exhaust for sale. As explained above, the operator may route the exhaust to a flare or low pressure combustor device if it makes a determination that replacing the pump with a zero-emissions pump is not viable because (a) a pneumatic pump is necessary to perform the function required, and (b) capturing the pneumatic pump exhaust is technically infeasible or unduly costly. If an operator makes this determination and has no flare or low pressure combustor on-site (or flaring to such a device would be technically infeasible), the operator is not required to route the exhaust to a flare or low pressure combustion device. Second, in response to comments and as discussed below, the final rule removes chemical injection pumps from inclusion in this section. Third, it adds paragraph (b) stating that an operator is not required to replace a pump if the pump does not vent exhaust gas to the atmosphere (*e.g.,* already is routed to a flare or to capture equipment) or if the operator submits a Sundry Notice to the BLM documenting that the pump(s) operated fewer than 90 individual days in the prior calendar year. Fourth, the final rule clarifies that a pneumatic diaphragm pump is subject to this section if it is not subject to any of the requirements of 40 CFR part 60, subpart OOOOa, but would be subject to that subpart if it were a new, modified, or reconstructed source. Fifth, it adds paragraph (d), which includes information that must be included in the Sundry Notice specified in § 3179.202(f).

Some commenters suggested that the BLM require the use of zero-bleed pumps in all cases except where technically infeasible, while other commenters stated that routing pump exhaust to a flare offers no product recovery potential and does not minimize loss or waste. The BLM agrees that the installation of zero-bleed pumps is technically feasible in many cases. In response to these comments, and to require operators to employ waste minimization practices when feasible, the final rule is restructured to require operators, when feasible, to install zero-bleed pumps or route the pump exhaust to process equipment for capture and sale. However, in making this revision, the BLM does not intend to require operators to replace pumps that are already routed to flare or capture equipment (*i.e.,* pumps that do not currently vent exhaust gas to the atmosphere), and we have added clarifying language to avoid this result. As discussed below, the compliance mechanisms in this section are structured to encourage the prevention of waste.

Some commenters stated that chemical injection and temporary use pumps should be exempt because they have low aggregate emissions and operate intermittently. The BLM agrees that chemical injection pumps release substantially lower quantities of gas than diaphragm pumps. The BLM also recognizes that some diaphragm pumps are used very intermittently or only for a short portions of the year, and that low usages result in low quantities of lost gas. In the final rule, the BLM has specified that the rule does not apply to chemical injection pumps or to diaphragm pumps that operated fewer than 90 individual days in the prior calendar year. This change also aligns the requirements of this section with the requirements for pneumatic pumps under 40 CFR part 60 subpart OOOOa.

Several commenters requested that the final rule clarify perceived conflicting regulatory coverage between the proposed rule and 40 CFR part 60 subpart OOOOa. In addition to the change to chemical injection pumps, we revised § 3179.202(a)(2) to further qualify that a pneumatic diaphragm pump is subject to this section if it ''[i]s not subject to any of the requirements of 40 CFR part 60, subpart OOOOa, but would be subject to that subpart if it were a new or modified source.'' This change ensures that the BLM requirements do not inadvertently apply to existing equipment that would have been exempted under the EPA requirements. We believe this change properly conveys our original intent to cover the same types of pneumatic pumps that EPA rules cover.

Similar to comments received on pneumatic controllers, some commenters stated that pneumatic pumps should be allowed to be routed to processing equipment, such as a vapor recovery unit, on-site fuel line, or a control device (in addition to a flare). The BLM agrees with these comments and revised the rule to state that operators may route the pneumatic pump exhaust to processing equipment for capture and sale, or, under certain conditions described above, to either a low-pressure combustor device or a flare.

Several commenters stated that 1 year is insufficient to replace covered pneumatic pumps and requested that the replacement requirements be extended to 3 years. The BLM believes that one year is a sufficient time period for operators to replace pneumatic diaphragm pumps, or route them to a flare that is already installed on-site, given the relatively low cost and rapid pay-back period of these replacements, as discussed in the preamble to the proposed rule, and the relatively low cost of connecting a pump to a pre-existing on-site flare. Moreover, because the BLM is not including chemical injection pumps in this final rule, operators will need to address far fewer pneumatic pumps than the proposed rule would have required. In addition, as included in the proposed rule, if a well or facility that the pneumatic pump serves has an estimated remaining productive life of three years or less from the effective date of the rule, the operator has three years from the effective date of the rule to complete the replacement, provided that notification is filed through a Sundry Notice.

The BLM also received comments asserting that it lacks the authority to require operators who opt not to install zero-emission pneumatic pumps to route their existing pneumatic pumps to a flare device (rather than venting). Commenters argued that such a requirement does not fall within the BLM's MLA authority because it is not waste prevention—*i.e.,* the gas is lost whether it is vented or flared. These commenters then argued that the only possible justification for the requirement was control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA's domain.

The BLM disagrees with these comments for several reasons. First, the requirement in this section to flare rather than vent associated gas constitutes waste prevention. Requiring operators to (at minimum) direct associated gas that bleeds from their pneumatic pumps to a flare device eliminates the lowest cost method of handling such gas (that is, venting). This, in turn, provides a greater incentive for operators to upgrade to a zero-emission pneumatic pump or capture pump exhaust gas. Upgrading to a zero-emission pneumatic pump prevents waste by reducing the amount of gas diverted to the pneumatic pumps—which, in turn, directs more gas to either a capture line or the high-pressure flare. If an operator chooses to capture, upgrading the pneumatic pump will directly prevent waste by causing more gas to be sold.

Second, as discussed in connection with § 3179.6, a requirement to flare rather than vent associated gas is a safety measure under the MLA. It is generally safer to combust methane gas than to allow it to vent uncombusted into the surrounding air due to concerns over methane's explosiveness and the risk of hypoxia and exposure to various associated pollutants. In addition, also as discussed in connection with § 3179.6, the BLM has the authority to regulate air quality and GHG impacts on and from public lands pursuant to FLPMA and the MLA.

Some commenters raised concerns about differences between the proposed BLM and EPA requirements for pneumatic pumps, asserting that the BLM proposed rules are different and more stringent. First, they asserted that the EPA rule limits ''affected facilities'' to sites with a control device already on-site, while the proposed BLM requirements would apply to pneumatic pumps regardless of whether a control device is present. Second, commenters asserted that the EPA rule only requires operators to route pump emissions to a control device if one already exists on site, while the BLM proposed rule may require replacement with a zero emission pump in such a circumstance.

Some of these concerns were addressed by the EPA's final subpart OOOOa regulations, while other differences are appropriate given the different authorizing statutes and primary foci of the two sets of regulations. As an initial matter, the BLM requirements apply only to pumps that are not subject to subparts OOOO or OOOOa (but would be if the pump was new, modified, or reconstructed), so no pump will be subject to both regulations.

With regard to the first issue described above, the final BLM and EPA rules apply to the same types of pneumatic pumps. In its final rule, EPA noted that there was some confusion regarding the proposed definition of affected facility, and stated that it had modified the regulatory text to clarify that ''all natural gas-driven diaphragm pumps at natural gas processing plants or well sites are affected facilities, except for pumps at well sites that operate less than 90 days per calendar year.'' [145] The final subpart OOOOa text requires operators to maintain records on the control status of all pneumatic pump affected facilities and to include them all in the operators' annual reports. The final BLM rule aligns with the scope and requirements of the final EPA rule in these respects.

With regard to the second issue, the BLM final rule does apply somewhat different requirements to pumps covered by the BLM rule as compared to pumps covered by the EPA rule, due to differences between the two agencies' legal authorities. The legal authority for subpart OOOOa is section 111 of the Clean Air Act, which requires the EPA to set standards of performance for new sources and requires a ''standard of performance'' to be based on the best system of emission reduction (BSER) ''adequately demonstrated.'' [146] As noted in the proposed subpart OOOOa preamble, the EPA did not require zero emissions pumps at facilities other than gas processing plants because the availability of consistent, reliable electrical power at all affected facilities could not be reasonably assumed.[147] The BLM, however, has flexibility to require waste reduction measures at any site where such measures would work, without specifically defining such sites, even if the measures may not be available at all sites. Zero emission pumps are feasible where solar power is adequate to power the pump for its intended function and at sites where other sources of electric power are available. Where they are feasible, our analysis indicates that the cost of replacing a gas-driven pneumatic pump with a zero emission pump is modest and would be at least partially offset by the value of the saved gas.

Additionally, the BLM final rule establishes a preference for operators who do not replace their pumps with a zero-emissions pump to route exhaust gas to capture in lieu of routing to a flare. This emphasis on either replacement or capture is a function of the BLM's waste prevention focus. Thus, unlike subpart OOOOa, the final BLM rule requires operators with a gas-driven pneumatic pump that is currently venting to the atmosphere to replace it with a zero emission pump, if a zero-emission pump would work at that site to perform the function required, or route the exhaust gas to capture. If a zero-emission pump is not viable at that site and routing the exhaust gas to capture is technically infeasible or unduly costly, however, then the operator must comply with a requirement that tracks the requirement under subpart OOOOa—the operator must route the exhaust gas from the pneumatic pump to a flare, if there is already a flare on-site. While the BLM rule establishes an additional requirement on operators, it does not conflict in any way with the EPA rule or increase an operator's burden to comply with both rules. Any pump that is already routed to a flare in compliance with the EPA rule will also be in compliance with the BLM rule. For pumps without a flare on-site, the EPA rule requires no further action, while the BLM rule requires replacement or routing to capture, absent the listed conditions.

The third potential difference that commenters highlighted between the BLM and EPA requirements for pneumatic pumps is the level of documentation required to show that routing to a flare is technically infeasible. To clarify a possible misunderstanding by the commenters, a

[145] 81 FR 35851.

[146] 81 FR 35884.

[147] 80 FR 56625.

requirement to notify the BLM through a Sundry Notice, as specified in this section, is not a requirement to obtain approval from the BLM. Sundry Notices may be used simply for notification purposes, or to obtain approval from the BLM for an action. The final rule specifies the purpose of each requirement to file a Sundry Notice.

Here, the BLM final rule requires an operator to notify the BLM through a Sundry Notice if the operator is not replacing the pump for one of the reasons specified. The operator must also notify the BLM if the operator is not routing the pump to a flare because there is no flare on site or routing to a flare would be technically infeasible. Subpart OOOOa establishes requirements for an engineering evaluation of whether routing to a flare would be technically infeasible, requires the evaluation and determination of technical infeasibility to be certified by a qualified professional engineer, and requires this information to be included in the operator's annual report. Thus, while the specific documentation requirements for pumps covered by the BLM requirements differ from those established by the EPA, both rules require the operator, under specified circumstances, to either route the pump exhaust to a flare or notify the respective agency that the pump meets the criteria for an exemption. The BLM notification requirements are less specific than the EPA requirements, which the BLM believes will make compliance less burdensome for an operator.

Section 3179.203 Storage Vessels

This section addresses gas vented from crude oil, condensate, intermediate hydrocarbon liquid, or produced water storage vessels that contain production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease, and are not subject to 40 CFR part 60, subparts OOOO or OOOOa, but would be if they were new, modified, or reconstructed sources. If such storage vessels have the potential for VOC emissions equal to or greater than 6 tpy, the final rule requires operators to route all gas vapor from the vessels to a sales line. Alternatively, the operator may route the vapor to a combustion device if it determines that routing the vapor to a sales line is technically infeasible or unduly costly. The operator also may submit a Sundry Notice to the BLM that demonstrates that compliance with the above options would cause the operator to cease production and abandon significant recoverable oil reserves under the lease due to the cost of compliance. Operators must meet this requirement no later than one year after the rule becomes effective, or three years after the rule becomes effective if the operator needs to replace the storage vessel in order to comply.

Operators must determine the rate of VOC emissions from the storage vessel within 60 days after this rule is effective, and within 30 days after adding a new source of production to a storage vessel. This determination is based on the maximum average daily throughput for a 30-day period of production, and may take into account any legally and practically enforceable limits in an operating permit or other requirements applicable to the storage vessel. This section no longer applies to a storage vessel whose total uncontrolled VOC emissions rate declines to 4 tpy in the absence of controls for 12 consecutive months.

In response to comments, the BLM has made the following changes to the requirements in the proposed rule: (1) Clarified the exemption for sources subject to 40 CFR part 60, subparts OOOO or OOOOa; (2) extended the initial compliance period from 6 months to 1 year; (3) added a 3-year initial compliance period for operators that must replace storage vessels to comply with the requirements; (4) required gas to be routed to a sales line when that option is neither technically infeasible nor unduly costly, as determined by the operator; (5) added a requirement that operators must determine whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production, which may take into account legally and practically enforceable limits applicable to the storage vessel; (6) added a requirement that storage vessels subject to the final rule must be adequately sized to accommodate the operator's production levels and equipped to meet any applicable regulatory requirements for tank vapors; and (7) added a requirement that storage vessels subject to the final rule may only vent through properly functioning pressure relief devices. Each change is discussed below along with a summary of the relevant comments and responses.

Several commenters expressed concerns about differences between the types of new storage vessels that are subject to subparts OOOO or OOOOa and the types of existing storage vessels that would have been subject to the proposed rule. The BLM agrees that applying the requirements of this section, as proposed, to storage vessels "not subject to 40 CFR part 60, subparts OOOO or OOOOa" could encompass storage vessels that neither the EPA nor the BLM intended to cover. In the final rule, § 3179.203(a)(2) covers a storage vessel if it "[i]s not subject to any of the requirements of 40 CFR part 60, subparts OOOO or OOOOa, but would be subject to that subpart if it were a new, modified, or reconstructed source."

Several commenters argued that the proposed initial period of 6 months to comply with the emission reduction provisions was too short. Commenters stated that it would take longer than 6 months to complete engineering studies of existing storage vessels; design, order and construct the control device; and then install the control device. Commenters recommended various time periods ranging from 1 to 3 years. We believe a 1-year initial compliance period is adequate to perform the tasks necessary to install a control device, and we have modified § 3179.203(c) accordingly.

Commenters also stated that in some cases they would likely have to replace an existing tank in order to meet the emission limitations. In such cases, commenters stated that even more time would be needed to obtain capital funding approval and purchase the new storage vessel. In response, we further amended § 3179.203(c) to provide a 3-year initial compliance period when the operator must replace a storage vessel in order to comply with the rule requirements.

In the proposed rule, § 3179.203(c) allowed the operator to choose between routing emissions from storage vessels subject to the rule to a combustion control device, a continuous flare, or a sales line. Some commenters opposed these provisions because they believe BLM should focus on preventing loss of natural resources. The BLM agrees that this rule should focus on gas capture and use whenever possible, and in the final rule, § 3179.203(c) first requires the operator to route tank vapor gas from a storage vessel to a sales line. If the operator determines that routing the emissions to the sales line is technically infeasible or unduly costly, the operator may route the gas to a combustion device.

We also received numerous comments requesting that we align the final rule as much as possible with the requirements finalized by the EPA in subparts OOOO and OOOOa. As stated in the preamble to the proposed rule, the BLM and the EPA understand that aligning our requirements to the extent possible, provides common standards that ease implementation and reduce confusion for both the regulated industry and regulatory agencies.[148] Several small changes in the final rule help clarify the rule and better align it with the final requirements in subparts OOOO and OOOOa. In § 3179.203(b), the rule provides additional guidance to operators on how to make the threshold determination that a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy. Changes to the definition of ''storage vessel'' in § 3179.3 also synchronize the coverage between the two sets of rules, such that these provisions cover the same types of storage vessels that would be covered by subparts OOOO or OOOOa if they were new, modified, or reconstructed.

One commenter suggested that the BLM make it clear that venting from access points or pressure relief devices during normal operation is prohibited. The commenter stated that to account for those instances where venting may be necessary, the BLM could adopt the approach taken by Colorado by specifying those instances where venting is reasonably required, such as for ''maintenance, gauging or safety of personnel and equipment.'' The commenter also recommended that the BLM add a requirement that operators certify that their storage tank facilities are adequately sized in order to capture, convey, and control emissions. They stated that this is required in Colorado and is a direct response to the Air Pollution Control Division and EPA investigations that revealed significant leaks and venting from controlled facilities.

In response to this comment, final rule § 3179.203(f) provides that storage vessels subject to this section must be adequately sized to accommodate production levels and equipped to meet any applicable regulatory requirements for emissions. Also, § 3179.203(g) requires that storage vessels subject to this section may only vent through properly functioning pressure relief devices. We believe both of these provisions embody good engineering practices and should be common practice when operating a storage vessel.

The BLM also received comments asserting that it lacks the authority to require operators who opt not to capture tank vapor gas to route such gas to a flare device (rather than venting). Commenters argued that such a requirement does not fall within the BLM's MLA authority because it is not waste prevention—*i.e.,* the gas is lost whether it is vented or flared. These commenters then argued that the only possible justification for the requirement was control of GHGs and other air pollutants, which commenters assert is exclusively within the EPA's domain.

The BLM disagrees with these comments for several reasons. First, the requirement in this section to flare rather than vent tank vapor gas constitutes waste prevention. Requiring operators to (at minimum) direct tank vapor gas to a flare device eliminates the lowest cost method of handling such gas (*i.e.,* venting), and thereby provides a higher baseline for operators to calculate whether it would be economical to install a VRU to capture the tank vapor gas for sale. The BLM anticipates that this higher baseline may encourage more operators to install VRUs.

Second, as discussed in connection with § 3179.6, a requirement to flare rather than vent associated gas is a safety measure under the MLA. It is generally safer to combust methane gas than to allow it to vent uncombusted into the surrounding air due to concerns over methane's explosiveness and the risk of exposure to various associated pollutants. In addition, also as discussed in connection with § 3179.6, the BLM has the authority to regulate air quality and GHG impacts on and from public lands pursuant to FLPMA and the MLA.

Some commenters requested that the BLM require storage vessel vapors to be combusted at an efficiency of 98%. Storage vessel vapors can be combusted at an efficiency of 98% using an enclosed combustor. However, the BLM has determined that requiring the operator to install an enclosed combustor on a location with an existing flaring system would be relatively costly compared to the benefit of modestly higher combustion efficiency applied to a comparatively small volume of vapor coming from storage vessels flares. The BLM believes that in those instances where storage vessel vapors must be controlled on a site that does not have an existing flare system, the operator will likely elect to install an enclosed combustor rather than a flare, because it will more effectively combust the lower volumes of vapor associated with storage vessels.

Section 3179.204 Downhole Well Maintenance and Liquids Unloading

This section establishes requirements for venting and flaring during downhole well maintenance and liquids unloading. It requires the operator to use practices for such operations that minimize vented gas and the need for well venting, unless the practices are necessary for safety. The rule also requires that for wells equipped with a plunger lift system or an automated well control system, the operator must optimize the operation of the system to minimize gas losses.

For all wells, before the operator manually purges a well for the first time after the effective date of this section, the operator must document in a Sundry Notice that other methods for liquids unloading are technically infeasible or unduly costly. In addition, during any liquids unloading by manual well purging, the person conducting the well purging is required to be present on-site to minimize to the maximum extent practicable any venting to the atmosphere. This section also requires the operator to maintain records of the cause, date, time, duration and estimated volume of each venting event associated with manual well purging, and to make those records available to the BLM upon request.

The operator must notify the BLM by Sundry Notice within 30 days after the first liquids unloading by manual or automated well purging after the effective date of the rule. Additionally, operators must notify the BLM by Sundry Notice within 30 days after the following conditions are met: (1) The cumulative duration of manual well purging events for a well exceeds 24 hours during any production month; or (2) the estimated volume of gas vented in the process of conducting liquids unloading by manual well purging for a well exceeds 75 Mcf during any production month. The final rule also defines ''well purging'' for purposes of this section and requires operators to report to ONRR gas volumes vented during manual and automated downhole maintenance and liquids unloading, including through the operation of plunger lifts.

In response to comments on the proposed rule, we removed the proposed prohibition on well purging for wells drilled after the effective date of this section, as discussed in above in section III.D.3., and made several smaller changes in the final rule: (1) Removing the proposed requirement to flare unrecovered gas during downhole well maintenance and liquids unloading operations; (2) clarifying recordkeeping and reporting requirements and increased the length of time operators have to submit reports; and (3) revising the definition of ''well purging.''

The BLM is aware, and many commenters observed, that flares are not always feasible control options for downhole well maintenance and liquids unloading activities, and we recognize that there may be difficulties separating liquids from the purged gases. For these reasons, we proposed the use of flares

[148] *See, e.g.,* 81 FR 6647.

where other recovery or gas loss reduction technologies cannot be used, and only then when flaring is not technically infeasible or unduly costly (see proposed § 3179.204(a)). Although we attempted in the proposed rule to narrow the use of flares to situations in which they are more likely to be feasible, and provided an option for operators to document those situations where flaring is infeasible, commenters raised several concerns related to safety, cost and feasibility. Upon further review of the information provided by the commenters, we believe there is uncertainty in the ability of operators to be able to consistently and safely operate a flare during these operations.

For these reasons, we did not finalize the proposed flaring requirement. Instead, the final rule requires operators to minimize vented gas during downhole well maintenance and liquids unloading operations, and it specifies best management practices that operators must follow. For wells equipped with a plunger lift system or an automated well control system, these practices include optimizing the operation of the system to minimize gas losses.

Proposed § 3179.204(a) would have required the operator to use best practices to maximize the recovery of gas from downhole well maintenance and liquids unloading operations. Commenters expressed concern that the word ''maximize'' could be construed to imply that the operator must use the technology that provides the absolute highest amount of gas recovery, regardless of other concerns. This is not our intent, as evidenced by our discussion of the proposed requirements in the preamble to the proposed rule. For example, we discuss that some technologies are less costly than others, and that some technologies make more sense to install early in the life of a well rather than later. We also state that we expect most new wells to use plunger lifts, and that the proposed rule would not require (though it would encourage) the use of automated systems.[149] We expect the operator to make an informed and reasoned decision on which technology makes the most sense for each well based on the conditions and economics of the well. To further clarify this, rather than requiring operators to maximize recovery of gas, the final rule requires operators to minimize vented gas and the need for well venting associated with downhole well maintenance and liquids unloading operations.

Several commenters objected to the extent and content of the proposed recordkeeping requirements, but did not identify changes that could be made without compromising the information needed for effective implementation of the rule. The BLM believes the recordkeeping and reporting requirements are essential to verify compliance and to more accurately assess the amount of gas lost through liquids unloading events, including for the purposes of royalty calculations. In response to commenters' concerns, however, the final rule extends the time to submit a Sundry Notice of large quantity liquids unloading events from 14 days to 30 days, to allow operators more time to gather information. Similarly, we have extended the time to submit a Sundry Notice after the first liquids unloading event from 10 days to 30 days.

Some commenters contended that recordkeeping and reporting requirements related to each well purging event are unnecessary, but the BLM does not agree. Large quantities of gas are lost through well purging that cannot be used to supply the country's energy needs and provide no royalty revenues to taxpayers. Building a historical record of the amount of gas lost is key to determining proper management of these events in the future. For example, more accurate knowledge of the amount of gas lost to well purging events will allow operators to make better-informed decisions on the financial viability of each liquids unloading technology. Also, the BLM will be able to better estimate the cost of lost royalties associated with vented gas from well purging activities. We believe these important benefits justify the expenditures related to obtaining and reporting the required records.

A number of commenters asserted that BLM should withdraw the proposed downhole well maintenance and liquids unloading provisions of the rule because of the complexity of the issue. They argued that the BLM does not understand the impacts of the proposed requirements. In particular, they noted EPA's decision not to regulate liquids unloading.

The BLM has engaged numerous stakeholders throughout the rulemaking process to better inform its final rule decisions, and has coordinated closely with the EPA in sharing technical information and expertise.[150] This is an area where differences between the two agencies' approaches stem in large part from their different statutory authorities. As noted above in connection with § 3179.202, the legal authority for 40 CFR part 60 subpart OOOOa is section 111of the Clean Air Act, which requires the EPA to set a standard of performance for new sources and defines a ''standard of performance'' as to be based on the best system of emission reduction (BSER) ''adequately demonstrated.''[151]

In explaining its decision not to regulate liquids unloading at this time, the EPA stated that although it had received valuable information from the public on technologies to reduce emissions, ''the information was not sufficient to finalize a national standard representing BSER for liquids unloading.''[152] The BLM, however, has the flexibility to require a suite of best management practices to achieve waste reduction, as we have done here, rather than being required to identify the best system of emission reduction under the specific criteria in section 111 of the Clean Air Act.

Section 3179.301 Operator Responsibility

This section establishes that the LDAR requirements in §§ 3179.301 through 3179.305 of this subpart apply to oil or natural gas wells and all equipment associated with the well sites that produce, process, compress, treat, store, or measure natural gas from a Federal or Indian lease, or from a unit or communitized area, where the site is upstream of or contains the approved point of royalty measurement. These sections also apply to a site and all equipment operated by the operator and associated with a site that is used to store, measure, or dispose of produced water that is located on a Federal or Indian lease. The sections obligate operators to inspect all equipment that is used to produce, compress, treat, store, or measure natural gas or to store, measure or dispose of produced water for gas leaks from leak components, with the exception of wells and well equipment that have been depressurized, and sites that contain only a well head and no other equipment. The first inspection must occur within one year of the effective date of the rule for sites that have begun production prior to the effective date. For production sites that begin production after the effective date, the first inspection must occur within 60 days of beginning production. For sites that were out of service and brought back into service, the first inspection must occur within 60 days of the date the site is brought back into service and

[149] 81 FR 6655–6656.

[150] 81 FR 6617–6618.

[151] 42 U.S.C. 7411(a)(1).

[152] 81 FR 35846.

re-pressurized. These sections do not apply to a site that contains a wellhead or wellheads and no other equipment, nor to a well or well equipment that has been depressurized.

Operators are required to conduct the inspections during production operations, and to fix any leaks found. Subsequent inspections must be conducted according to the schedule in § 3179.303. Operators may satisfy the requirements of §§ 3179.301 through 3179.305 for all of their equipment on a given lease by complying with the fugitive emissions requirements established under 40 CFR part 60, subpart OOOOa with respect to all equipment covered by the BLM leak detection requirements. This includes equipment such as covers and closed vent systems, and thief hatches and other openings on controlled storage vessels, which if new, modified or reconstructed, are subject to 40 CFR 60.5411a or 60.5395a under OOOOa and not the fugitive emissions requirements under OOOOa. Specifically, the operator must treat each of its sites and equipment as if it were a collection of fugitive emissions components as defined in 40 CFR part 60 subpart OOOOa; comply with the requirements of 40 CFR part 60 subpart, OOOOa that apply to affected facility fugitive emissions components at a well site or compressor station, as applicable, under 40 CFR part 60, subpart OOOOa; and notify the BLM through a Sundry Notice of such compliance.

Several changes were made to this section in response to comments and to provide additional clarity. As discussed in Section V.B.2., § 3179.301(a) clarifies the specific sites and equipment subject to the leak inspection requirements, which apply to all equipment handling Federal or Indian gas, upstream of and including the site where the royalty measurement point is located—whether the equipment is on or off the lease and regardless of the ownership of the equipment. This section also specifies that the leak detection requirements apply to equipment handling produced water only if the equipment is operated by the operator and located on the Federal or Indian lease. The BLM added a provision to § 3179.301(b) stating that the LDAR requirements do not apply to a well or well equipment that has been depressurized, nor to a site that contains a wellhead or wellheads and no other equipment. In § 3179.301(c), the BLM clarified that the operator must inspect for gas leaks from leak components. In conjunction with this change, we added definitions for ''leak'' and ''leak component'' in § 3179.3. We also moved the definition of ''site'' from § 3179.303(a) to § 3179.301(e) and revised the definition for clarity.

Additionally, the BLM moved the requirement in proposed § 3179.303(c) that exempts leak components that are not accessible from the inspection and monitoring requirements to paragraph (d) of this section; added paragraph (f) to specify when the first inspection must take place; and replaced proposed paragraph (e) with new paragraph (j) to provide an exemption for sites and equipment that are in compliance with the fugitive emission requirements under 40 CFR part 60, subpart OOOOa.

This section of the preamble discusses additional comments on the LDAR provisions in § 3179.301, beyond the comments discussed in Section IV.A.d. The BLM made changes to clarify the scope of LDAR coverage in the final rule in response to commenters who asserted that the proposed rule was not entirely clear on the scope of coverage. The final rule now explicitly describes the ''sites'' to which the LDAR provisions apply and no longer makes use of the term ''facilities.'' The proposed rule covered ''facilities,'' as well as compressors that were on lease and operated by the operator, regardless of whether they handled Federal or Indian product. ''Facility'' is defined in section 3170.3 to include a site and associated equipment used to process, treat, store, or measure production from a Federal or Indian lease, unit or communitized area, as well a site and associated equipment used to store, measure, or dispose of produced water. With respect to produced water, the definition of ''facility'' only includes sites on a Federal or Indian lease, unit or communitized area, but the definition is not similarly limited with respect to sites associated with Federal or Indian production. Using the term ''facilities'' to define the coverage of the LDAR program would create a distinction between equipment upstream and downstream of the approved point of royalties measurement on an otherwise covered site. In addition, the BLM has not retained in the final rule the proposed coverage for compressors that do not handle Federal or Indian product. Given the potential for confusion here, we believe that it is clearer to simply specify the sites and equipment subject to the LDAR requirements in the final rule, rather than use the term ''facilities.''

With respect to the LDAR requirements in this rule, the BLM believes it is reasonable and appropriate to apply the requirements to all equipment at a site that is subject to these requirements. Once an operator is already on-site, inspecting additional equipment adds little cost and burden, particularly if the operator is using optical gas imaging technology, and inspecting such equipment offers the same potential additional benefits as any other inspection. Thus, the BLM believes that requiring inspection of all of the equipment at a given site will make the rule more cost-effective in avoiding waste, as compared to exempting inspection of some equipment at a site that is already being inspected. Moreover, the BLM believes that applying the LDAR requirements to most but not all of the equipment at a single site would heighten the potential for inspection errors and confusion, and make administration and tracking of the results more difficult.

Commenters also urged the BLM to exclude from the LDAR requirements the following additional types of sites or equipment, beyond those discussed in Section IV.A.d,: Wells that are shut-in at the time of an LDAR inspection; sites where there is only a small amount of mineral interest from or allocated to a Federal or Indian lease, unit, or communitization agreement; equipment operated by an entity other than the operator; sites with a legally and practically enforceable leak detection and repair requirement in an operating permit, or other enforceable requirement established under a Federal, State, local or tribal authority; and sites located on the North Slope of Alaska.

With respect to wells that are shut-in at the time an inspection occurs, coverage under LDAR depends on whether the shut-in is temporary, or the well or well equipment has been depressurized. Leaks will only be detectable when a well is operating, so the rule provides that leak inspections must occur during production operations. The BLM agrees that a well that has been depressurized is no longer in operation and should not leak, and the BLM has excluded such wells from the LDAR requirements. Depressurized wells that are brought back into service do not need to be inspected until 60 days after the date that the well is re-pressurized. A well that is temporarily shut-in but not depressurized, however, may have significant leaks when it is brought back into production. Exempting such a well from any inspection obligations might provide an incentive for operators to schedule inspections during shut-ins to reduce the number of sites that would need to be inspected.

With respect to leases where the Federal or Indian mineral interest is a minority interest, the BLM has the authority and an obligation to minimize the waste of Federal and Indian mineral resources. The waste of Federal and Indian resources is of no less concern to the BLM when the Federal or Indian interest is a minority interest. Even a small percentage interest could still represent a significant volume of Federal or Indian resources, depending on the reservoir. Also, as a policy matter, the BLM believes that the LDAR requirements of this rule are cost-effective and provide net public benefits. Thus, the BLM does not believe that it is appropriate to arbitrarily limit the benefits of this rule based on the proportion of the Federal or Indian mineral interest at issue in the lease, unit, or communitized area. In the final rule, the BLM has clarified that where a site is upstream of or contains the royalty measurement point, the LDAR provisions cover the site and all equipment associated with it that handles Federal or Indian gas.

Similarly, neither legal nor policy considerations support exempting equipment operated by an entity other than the site operator. The operator is responsible for ensuring that operations conducted pursuant to a Federal or Indian lease are in compliance with the lease terms and applicable regulations.[153] Exempting equipment that is operated by an entity other than the operator could create an incentive for operators to establish contractual arrangements that avoid the LDAR requirements. The BLM believes that through cooperation with contractors that own or operate equipment on the lease, the operator has the practical means of ensuring compliance with the LDAR requirements on lease, regardless of who owns the equipment.

The BLM recognizes that some equipment at the site containing the facility measurement point, such as storage vessels or compressors, may be downstream of the measurement point and may be in control of the purchaser rather than the operator.[154] Nevertheless, as discussed previously, the BLM believes that it is appropriate to require the operator to conduct LDAR on all equipment located at the site. Once the operator is inspecting a given site, particularly when using optical gas imaging, it will add minimal time and cost to inspect additional co-located equipment. It should be noted that, although a facility measurement point may be located on lands not covered by a Federal or Indian lease, unit, or communitization agreement (as might be the case when off-lease measurement occurs pursuant to applicable regulations in 43 CFR subpart 3173), the LDAR requirements of this rule do not apply to sites that are not located on a Federal or Indian lease, unit or communitized area.

In addition, the BLM disagrees with the suggestion to create a blanket exemption from the LDAR requirements for sites with another legally and practically enforceable leak detection and repair requirement in an operating permit or other enforceable Federal, State, local or tribal requirement. The final rule already contains provisions to address overlapping EPA or State requirements, as discussed in sections III.B.3 VI.A. of this preamble. An operator with a specific program contained in its operating permit could, under section 3179.303(b) request approval of that program as an alternative to the BLM requirements, provided the permit program is at least equally effective at detecting and reducing losses from leaks as the BLM requirements. By contrast, exempting any site with existing enforceable LDAR requirements provides no assurance that those requirements will produce results equivalent to the BLM requirement.

The BLM also declines to exclude automatically from the LDAR requirements sites that are located on the North Slope of Alaska. The BLM notes that one operator has argued that conditions on the North Slope make it impossible to meet all of the LDAR requirements, and that the operator has in place alternative practices, equipment, and techniques that reduce the likelihood of leaks and facilitate prompt detection of any that might occur. The final provision allowing the BLM to approve an operator's alternative instrument-based leak detection program is designed to address just this sort of situation.

Certain operators requested that facilities subject to the EPA subpart OOOOa fugitive emissions requirement be exempt from the BLM LDAR requirements. After review of these comments, the BLM agrees that those facilities should not have to comply with both the EPA subpart OOOOa program and a separate BLM LDAR program, and the final rule provides that an operator in compliance with the requirements of subpart OOOOa will be deemed in compliance with the BLM LDAR requirements as well. In addition, even though the BLM and the EPA have largely aligned their leak detection requirements, an operator might prefer to comply with the OOOOa requirements for all of its facilities on a lease, including existing facilities that are not covered by subpart OOOOa, rather than complying with subpart OOOOa for new, modified and reconstructed facilities and the BLM LDAR requirements for existing facilities. Thus, the final rule provides that an operator may satisfy the BLM LDAR requirements by complying with the subpart OOOOa fugitive emission requirements for all sites and equipment on a given lease.

However, by providing that compliance with subpart OOOOa is deemed compliance with the BLM requirements, rather than simply exempting all facilities subject to subpart OOOOa, the BLM maintains enforcement authority if an operator is subject to both subpart OOOOa and the BLM requirements, but complies with neither. Under this approach, a BLM inspector in the field could review information to confirm that the operator is in fact in compliance with one set of leak detection requirements.

Section 3179.302 Approved Instruments and Methods

This section prescribes the types of instruments that an operator must use to inspect for leaks. Specifically, operators must use: (1) An optical gas imaging device such as an infrared camera; (2) a portable analyzer capable of detecting leaks in compliance with Method 21 of 40 CR part 60, appendix A–7; or (3) a leak detection device not listed in this section that has been approved by BLM. The persons using the above devices must be adequately trained in their use.

Anyone may request approval of an alternative monitoring device and protocol by submitting a Sundry Notice with the information specified in paragraph (c) of this section, subject to the approval of the BLM as specified in paragraph (d).

In the final rule, the BLM amended paragraph (a) of this section by removing reference to monitoring methods since this paragraph specifies monitoring equipment, not methods. In paragraph (a)(2), we added a provision that portable analyzers must be operated in compliance with Method 21 rather than manufacturers specifications. We removed from paragraph (a) the proposed option of using a comprehensive program approved by the BLM under § 3179.303(b).

The BLM also added a provision at paragraph (b) that the person operating the leak detection device must be adequately trained in the proper use of the device. We added an option at

[153] *See* Luff Exploration Co., 115 IBLA 134 (1990) (upholding enforcement action against operator based on noncompliant equipment owned and operated by purchaser).

[154] The BLM's jurisdiction over Federal and Indian oil and gas production does not cease at the point of royalty measurement. *See* Wexpro Company, 174 IBLA 57 (2008) (requiring BLM to consider whether use of gas in operations downstream of the royalty measurement point constituted royalty-free ''beneficial use'').

paragraph (c) where any person may request approval of an alternative monitoring device and protocol by submitting a Sundry Notice with the information specified in paragraph (c). The request will be subject to the approval of the BLM as specified in newly added paragraph (d), which includes the requirement that it must be demonstrated that the alternative leak detection device and associated protocol will achieve equal or greater reduction of gas lost through leaks compared to the approach specified in § 3179.302(a)(1). Paragraph (d) also establishes that the BLM will provide public notice of the submission of an alternative device or monitoring protocol for approval, and will post on the BLM Web site a list of each approved alternative monitoring device and protocol and limitations on its use. The final rule also notes that the BLM may approve an alternative device and monitoring protocol for use in all or most applications, or instead just for use on a pilot or demonstration basis.

Please see Section III.A.d for a discussion of major comments received on this section of the proposed rule.

Section 3179.303 Leak Detection Inspection Requirements for Natural Gas Wellhead Equipment and Other Equipment

This section requires operators to conduct initial site inspections within specified timeframes after the effective date of the rule. The section requires the operator initially to conduct site inspections twice a year, with consecutive semiannual inspections conducted at least four months apart; and to conduct compressor station inspections quarterly, with consecutive quarterly inspections conducted at least 60 days apart. The inspection frequencies are fixed.

Paragraph (b) of this section authorizes the BLM to approve an alternative instrument-based leak detection program if the BLM finds that the alternative would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in §§ 3179.302(a)(1) and 3179.303(a). The operator must submit the request through a Sundry Notice. The operator also has the option to request approval of a leak detection program that does not meet the criterion specified in § 3179.303(b) when it can be demonstrated that compliance with the requirements of §§ 3179.301 through 3179.305 would cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

In the final rule, the BLM clarified in paragraph (a) of this section that the operator must inspect leak components at the site, and that the inspection must be conducted using a leak detection device listed under § 3179.302. The BLM is maintaining a semiannual inspection frequency for each site, and added provisions for quarterly inspections of compressor stations. In the final rule, these inspection frequencies are fixed, and the BLM did not finalize the proposed table of variable, performance-based inspection frequencies.

Paragraph (b) of this section allows for BLM approval of an alternative program, if an operator submits an approval request via a Sundry Notice. It is the BLM's intent that those approvals be made at the State office level for intrastate programs, and at the national or Washington office level for interstate programs. Final § 3179.303(b) differs slightly from the proposed version of this provision. First, the final rule specifies that the approval applies to an ''alternative instrument-based leak detection program'' instead of the proposed ''alternative leak detection device, program, or method.'' Next, the rule specifies that the approval is in lieu of complying with paragraph (a) of this section, and that the alternative must achieve equal or greater reduction of gas lost through leaks compared with the approach specified in §§ 3179.302(a)(1) and 3179.303(a). The BLM also added details of what the Sundry Notice must include at § 3179.303(b)(1)–(5), and added paragraph (e) stating that approved alternative LDAR programs will be posted online.

Additionally, the BLM added a provision at paragraph (c) of this section to provide the operator with the option to request approval of a leak detection program that does not meet the criterion specified in § 3179.303(b) when it can be demonstrated that compliance with the requirements of §§ 3179.301 through 3179.305 would cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease. The BLM also added paragraph (d) setting forth the requirements for the Sundry Notice to support a demonstration under paragraph (c).

Please see Section III.A.d for a discussion of major comments received on this section of the proposed rule.

Section 3179.304 Repairing Leaks

This section requires operators to repair any leak as soon as practicable and no later than 30 calendar days after discovery of the leak, unless there is good cause for repair to take longer. The rule requires the operator to notify the BLM by Sundry Notice if there is good cause to delay the repairs beyond 30 days, and to complete the repair at the earliest opportunity, but in no case longer than 2 years after discovery. The rule also requires the operator to conduct a follow-up inspection, using an authorized method, to verify the effectiveness of the repair within 30 calendar days after the repair, and to make additional repairs within 15 calendar days if the previous repair was not effective. This repair and follow-up process must be followed until the repair is effective. The BLM does not consider an inspection to verify the effectiveness of a repair to be a periodic inspection under § 3179.303.

In the final rule, the BLM increased the time period for completing repairs from the proposed 15 days to 30 days. Operators also have 30 days, as opposed to the proposed 15 days, to verify the effectiveness of the repair through a follow-up inspection. While the proposed rule would have required that the follow-up inspection be carried out using the method originally used to detect the leak, the final rule specifies that any of the instruments specified or approved under § 3179.302(a) or the soap bubble test under EPA's Method 21, section 8.3.3, may be used.

In paragraph (a) of this section in the proposed rule, the BLM specified that the operator must repair any leak ''not associated with normal equipment operations.'' In the final rule, we specify that ''any leak'' must be repaired as soon as practicable, but within 30 days after discovery. In conjunction with this change, we have added to § 3179.3 a definition of ''leak'' that excludes releases due to normal operation of equipment that is intended to vent.

The proposed rule, as well as the final rule, allows the owner to delay repair if a good cause exists. Although ''good cause'' was not defined in the proposed rule, we have added a definition in paragraph (a) of the final rule. Also, the final rule allows the operator up to two years to repair a leak if good cause for delay exists, although the operator must submit a Sundry Notice and repair the leak sooner than 2 years if the opportunity arises. Previously, we had proposed that the operator repair the leak within 15 days after the cause for the delay ceases to exist.

Please see Section III.A.d for a discussion of major comments received on this section of the proposed rule.

Section 3179.305 Leak Detection Inspection, Recordkeeping and Reporting

This section requires operators to maintain records of LDAR inspections and repairs, including dates, locations, methods, where leaks were found, dates of repairs, and dates of follow-up inspections. These records must be made available to the BLM upon request. AVO inspections only have to be documented if they find a leak requiring repair. Paragraph (b) of the section also requires operators to submit to the BLM, by March 31 of each calendar year, an annual summary report on the previous year's LDAR inspection activities. The BLM plans to make these reports available to the public, subject to any protections for confidential business information.

The final rule amends the records that must be maintained. The BLM did not finalize the proposed recordkeeping requirements regarding the equipment or facility inspected, descriptions of each leak, and the date of each leak repair attempt. We clarified, however, that AVO checks need only be documented if they find a leak requiring repair.

Please see Section III.A.d for a discussion of major comments received on this section of the proposed rule.

Section 3179.401 State or Tribal Requests for Variances From the Requirements of This Subpart

This section creates a variance procedure under which the BLM State Director may grant a State or tribe's request to have a State, local or tribal regulation apply in place of a provision or provisions of this subpart. The variance request must: (1) Identify the specific provisions of the BLM requirements for which the variance is requested; (2) identify the specific State, local or tribal regulation that would substitute for the BLM requirements; (3) explain why the variance is needed; and (4) demonstrate how the State, local or tribal regulation will satisfy the purposes of the relevant BLM provisions. The BLM State Director will review a State or tribal variance request. To approve a request, the BLM State Director will determine that the State, local or tribal regulation: (1) Would perform at least equally well in terms of avoiding waste of oil and gas, reducing environmental impacts from venting and/or flaring of gas, and ensuring the safe and responsible production of oil and gas, compared to the particular provision(s) from which the State or tribe is requesting the variance, and (2) would be consistent with the terms of the affected Federal or Indian leases and applicable statutes.

This section also clarifies that a variance granted under this proposed section does not constitute a variance from provisions of regulations, laws, or orders other than subpart 3179, and it reserves the BLM's authority to rescind a variance or modify any condition of approval in a variance. Additionally, this section requires States or tribes with approved variances to notify the BLM in writing of any substantive amendments, revisions, or other changes to the applicable State, local or tribal regulation(s) or rule(s). This section further specifies that if the BLM approves a variance for State, local or tribal regulation(s) or rule(s), the variance can be enforced by the BLM as if the regulation(s) or rule(s) were provided for in this Subpart.

In response to comments received, the BLM made the following changes to the proposed rule requirements: (1) Revised paragraph (a)(1) to change a reference to granting a variance from ''any individual provision of this subpart'' to ''any provisions of this subpart''; (2) revised paragraphs (a)(2)(iv) and (b) to state that the State, local or tribal regulations or rules would ''perform at least equally well in terms of reducing waste of oil and gas, reducing environmental impacts from venting and/or flaring of gas, and ensuring the safe and responsible production of oil and gas, compared to the particular provision(s) from which the State or tribe is requesting the variance''; (3) added text to allow variances for requirements and regulations of local governments, in addition to State and tribal requirements (though the variance request must still come from the State or tribe, not from a locality); (4) added new paragraph (e) that requires the State or tribe that requested the variance to notify the BLM of substantive amendments, revisions, or other changes to the applicable State, local or tribal regulation(s) or rule(s); and (5) added new paragraph (f) that clarifies that if the BLM approves a variance for State, local or tribal regulation(s) or rule(s), the variance can be enforced by the BLM as if the regulation(s) or rule(s) were provided for in this Subpart. Paragraph (f) also clarifies that a State's or tribe's enforcement of its own regulations would not be affected by the BLM's approval of a variance.

Major comments received on variances are discussed in Section III.E.3 of this preamble; additional comments on variances are discussed below.

Some commenters requested that additional entities be allowed to apply for variances, such as local air authorities, multiple State agencies, or operators. Commenters asserted that allowing only States or tribes to request variances causes uncertainty for operators, and that if a State declined to put forth a variance request, companies would bear the cost and burden of complying with multiple regulatory regimes. As stated above, the BLM has modified the rule to allow local requirements, in addition to State and tribal requirements, to substitute for BLM requirements. Regarding the comment that multiple State agencies may need to request a variance, the final rule does not preclude different State or tribal agencies from requesting variances from different provisions of the rule. The BLM has not modified the final rule to allow localities or operators, in addition to States and tribes, to request a variance to be able to comply with State, local or tribal requirements in lieu of the BLM requirements. Specifically with respect to local requirements, the BLM believes that it is important to ensure that the State supports a variance request, and thus that the State prefers the BLM to enforce the State's or locality's requirements rather than federal requirements. Additionally, we believe that a State has the best understanding of its own regulatory requirements and how those compare to the requirements of this rule.

Several commenters asserted that the variance application and approval processes were unclear and/or overly burdensome. These commenters expressed various concerns, including: (1) Lack of a clear and comprehensive description of the information needed to request a variance; (2) lack of timelines for review and approval; (3) lack of criteria by which the BLM would evaluate variance requests; and (4) lack of provisions stating how the BLM will address future modifications to either this rule or State regulations once variances are approved. Commenters were also concerned about the BLM's ability to review variance requests in a timely manner. To address these concerns, comments suggested clarifying the regulatory text as well as developing formal implementation guidance in consultation with the States prior to the effective date of the rule.

In response to these comments, as discussed in Section III.E.2 of this preamble, the final rule provides three specific criteria for evaluating whether it is appropriate to apply the State, local or tribal requirements in lieu of this rule. In addition, the final rule added new paragraph (e) that requires the State or tribe that requested the variance to notify the BLM of substantive amendments, revisions, or other changes to the applicable State, local or tribal regulation(s) or rule(s). This requirement will ensure that the BLM is aware of changes to State, local or tribal regulations that may impact whether the State, local or tribal regulation or requirement continues to meet the variance criteria established in the final rule. Regarding the comments arguing for a timeline for submittal and processing of the variances, the BLM is confident that it will be able to process these requests in a timely manner that will allow sufficient time for operators to have a clear understanding of their compliance requirements.

Some commenters also expressed concern with the proposed BLM State Director review of the variance requests. These commenters asserted that delegating the approval process to the BLM State Director could result in uneven treatment among States. The BLM agrees that achieving consistent implementation of the regulations is an important goal, and this is one reason why the BLM does not believe that decisions on variance requests should be made below the BLM State Director level. Further, the BLM believes that BLM State Directors are in a good position to evaluate how State, local or tribal rules or requirements compare to the requirements of this rule, given their familiarity with the regulatory regimes that apply in the relevant State or States. In addition, once the rule is in effect, the BLM would have the opportunity to issue guidance to enhance coordination among State Directors in evaluating variances, as well as with the BLM Washington office, to help ensure consistency across the BLM State Offices. Finally, the more specific criteria in the final rule for evaluating a variance request will enhance consistency across States.

Some commenters also opposed the proposed provision in § 3179.401(d) stating that the ''BLM reserves the right to rescind a variance or modify any condition of approval.'' These commenters asserted that such a proposal undermines certainty for operators and discourages States and tribes from seeking a variance. Other commenters requested that the BLM include an appeals process for revoked or denied variances, stating that if a variance were requested and denied, States would have no administrative means by which to address the BLM decision without going to court.

The BLM believes that maintaining BLM authority to rescind a variance or modify any condition of approval is necessary to guard against situations in which a variance leads to unintended or unforeseen consequences that run counter to the BLM's determination that the State, local, or tribal regulation performs at least as well as the BLM rule. The BLM expects that such situations will arise infrequently, but the BLM nevertheless believes it is important to include a mechanism for addressing such situations as they occur. After considering the comments, the BLM determined that consideration of waste reduction, environmental, and safety interests outweighs commenters' concerns. As a result, the final rule maintains the BLM's discretion to rescind a variance or modify any condition of approval. Regarding the comments requesting that the BLM include an appeals process for revoked or denied variances, the BLM did not provide for administrative appeals on similar variance decisions under the hydraulic fracturing rule, and the BLM is maintaining this practice in this final rule. Applying this approach also helps to avoid a protracted appeals process with respect to State and tribal variances.

VIII. Analysis of Impacts

A. Description of the Regulated Entities

1. Potentially Affected Entities

Entities that will be directly affected by the rule include most, if not all, entities involved in the exploration and development of oil and natural gas on Federal and Indian lands. According to AFMSS data (as of March 27, 2015), there are up to 1,828 entities that currently operate Federal and Indian leases.[155] We believe that these 1,828 entities will be most affected by the rule, in addition to entities currently involved with drilling and support activities, and any entities that become involved in the future.

The potentially affected entities are likely to fall within one of the following industries, identified by the North American Industry Classification System (NAICS) codes:

- NAICS Code 21111 ''Oil and Gas Extraction''
- NAICS Code 213111 ''Drilling Oil and Gas Wells''
- NAICS Code 213112 ''Support Activities''

According to 2014 data from the U.S. Census Bureau, there were 6,532 entities directly involved in extraction of oil and gas in the United States, 2,121 entities involved in the drilling of wells, and 8,577 entities providing other support functions.[156] Therefore, the approximately 17,000 entities associated with developing, and producing of domestic oil and gas [157] represent an upper bound estimate of the operators that could potentially be affected by this rulemaking.

2. Affected Small Entities

The Small Business Administration (SBA) has developed size standards to carry out the purposes of the Small Business Act.[158] For mining, including the extraction of crude oil and natural gas, the SBA defines a small entity as an individual, limited partnership, or small company, at ''arm's length'' from the control of any parent companies, with fewer than 1,250 employees. For entities drilling oil and gas wells, the threshold is 1,000 employees. For entities involved in support activities, the standard is annual receipts of less than $38.5 million Table 9–3a in the RIA displays the number of establishments in the oil and gas sector using a 1,000 employee cutoff. This table shows that over 99% of the establishments involved in oil and gas extraction and the drilling of oil and gas wells are classified as small.

To estimate a percentage of small firms involved in oil and gas support activities, we reference Table 9–3d of the RIA, which provides the NAICS information for firms involved in oil and gas support activities based on the size of receipts. The most recent data available from the U.S. Census Bureau for establishment/firm size based on receipts is for 2007. Of the firms providing oil and gas support activities in 2007, about 97 percent had annual receipts of less than $35 million and are classified as small.[159]

B. Impacts of the Requirements

1. Overall Costs of the Rule

Overall, the BLM estimates that this rule will pose costs of about $114–279 million per year (with capital costs annualized using a 7% discount rate) or $110–275 million per year (with capital costs annualized using a 3% discount rate).[160] These costs include engineering compliance costs and the social cost of minor additions of carbon dioxide to the

[155] The actual number is expected to be slightly lower due to duplicate entries.

[156] RIA at 122.

[157] U.S. Census Bureau data does not readily differentiate between the number of firms involved in oil development and production activities versus gas development and production.

[158] 13 CFR 121.201.

[159] U.S. Census Bureau does not provide receipt data that allow a break at the $38.5 million threshold as defined by SBA. As such, the 97 percent figure is a slight underestimate.

[160] RIA at 4.

atmosphere.[161] The engineering compliance costs presented do not include potential cost savings from the recovery and sale of natural gas (those savings are shown in the summary of benefits). In some areas, operators have already undertaken, or plan to undertake, voluntary actions to address gas losses. To the extent that operators are already in compliance with the requirements of this rule, the above estimates overstate the likely impacts of the rule.

2. Overall Benefits of the Rule

The benefits of the rule include the additional production of resources from Federal and Indian leases; reductions in venting, flaring, and leaks of gas, including GHG emissions; and increased opportunities for royalties. We measure the benefits of the rule as the cost savings that the industry will receive from the recovery and sale of natural gas and the projected environmental benefits of reducing the amount of GHG pollution released into the atmosphere. As with the estimated costs, we expect benefits on an annual basis.

The BLM estimates that this rule would result in monetized benefits of $209–403 million per year (calculating the monetized emissions reductions using model averages of the social cost of methane with a 3 percent discount rate).[162] We estimate that the rule would reduce methane emissions by 175,000–180,000 tpy, which we estimate to be worth $189–247 million per year (this social benefit is included in the monetized benefit above). We estimate that the rule would reduce VOC emissions by 250,000–267,000 (this benefit is not monetized in our calculations).[163] Overall, we predict the rule will reduce methane emissions by 35% from the 2014 estimates and reduce the flaring of associated gas by 49%, when the capture requirements are fully phased in.[164]

The rule will also have numerous ancillary benefits. These include improved quality of life for nearby residents, who note that flares are noisy and unsightly at night; reduced release of VOCs, including benzene and other hazardous air pollutants; and reduced production of NO_X and particulate matter, which can cause respiratory and heart problems.

[161] Some gas that would have otherwise been vented would now be combusted on-site or downstream to generate electricity. The estimated value of the carbon additions do not exceed $30,000 in any given year.

[162] RIA at 5.

[163] RIA at 106.

[164] *Id.*

3. Net Benefits of the Rule

Overall, the BLM estimates that the benefits of this rule outweigh its costs by a significant margin. The BLM expects net benefits ranging from $46–199 million per year (capital costs annualized using a 7% discount rate) or $50–204 million per year (capital costs annualized using a 3% discount rate).[165]

4. Distributional Impacts

a. Energy Systems

The rule has a number of requirements that are expected to influence the production of natural gas and crude oil from onshore Federal and Indian oil and gas leases. We estimate the following incremental changes in production, noting the representative share of the total U.S. production in 2015 for context. We estimate additional natural gas production ranging from 9–41 Bcf per year (representing 0.03–0.15 percent of the total U.S. production) and a reduction in crude oil production ranging from 0.0–3.2 million bbl per year (representing 0–0.07 percent of the total U.S. production).[166] Separate from the volumes listed above, we also expect 0.8 Bcf of gas to be combusted on-site that would have otherwise been vented. Since the relative changes in production are expected to be small, we do not expect that the rule would significantly impact the price, supply, or distribution of energy.

b. Royalties

The rule is expected to increase natural gas production from Federal and Indian leases, and likewise, is expected to increase annual royalties to the Federal Government, tribal governments, States, and private landowners. For requirements that would result in incremental gas production, we calculate the additional royalties based on that production. We estimate that the rule will result in additional royalties of $3–13 million per year.[167]

Royalty payments are recurring income to Federal or tribal governments and costs to the operator or lessee. As such, they are private transfer payments that do not affect the total resources available to society. An important but sometimes difficult problem in cost estimation is to distinguish between real costs and transfer payments. While transfers should not be included in the economic analysis of the benefits and costs of a regulation, they may be important for describing distributional effects.

[165] RIA at 6. The highs and lows of the benefits and costs do not occur during the same years; therefore, the net benefit ranges presented here do not calculate simply as the range of benefits minus the range of costs presented above.

[166] RIA at 7.

[167] RIA at 8.

c. Small Businesses

The BLM identified up to 1,828 entities that currently operate Federal and Indian leases. The vast majority of these entities are small businesses, as defined by the SBA. We estimated a range of potential per-entity costs, based on different discount rates and scenarios. Those per-entity compliance costs are presented in the RIA.[168]

Recognizing that the SBA defines a small business for oil and gas producers as one with fewer than 1,250 employees, a definition that encompasses many oil and gas producers, the BLM looked at company data for 26 different small-sized entities that currently hold BLM-managed oil and gas leases. The BLM ascertained the following information from the companies' annual reports to the U.S. Securities and Exchange Commission (SEC) for 2012 to 2014. From data in the companies' 10–K filings to the SEC, the BLM was able to calculate the companies' profit margins[169] for the years 2012, 2013 and 2014. We then calculated a profit margin figure for each company when subject to the average annual cost increase associated with this rule. For simplicity, we used the midpoint of the low and high average per-entity cost increase figures, or $55,200, recognizing that this figure includes compliance costs (annualized using a 7% discount rate) and cost savings. For these 26 small companies, a per-entity compliance cost increase of $55,200 would result in an average reduction in profit margin of 0.15 percentage points (based on the 2014 company data). The full detail of this calculation is available in the RIA.[170]

d. Employment

Executive Order 13563 states, ''Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation.''[171] An analysis of employment impacts is a standalone analysis and the impacts should not be included in the estimation of benefits and costs.

[168] The BLM conducted a Final Regulatory Flexibility Analysis, RIA at 123–136.

[169] The profit margin was calculated by dividing the net income by the total revenue as reported in the companies' 10–K filings.

[170] RIA at 129.

[171] Executive Order 13563, *Improving Regulation and Regulatory Review* (Jan. 18, 2011).

The rule is not expected to materially impact employment within the oil and gas extraction, drilling, and support industries.[172] As noted previously, the anticipated additional gas production volumes represent only a small fraction of the U.S. natural gas production volumes. Additionally, the annualized compliance costs represent only a small fraction of the annual net incomes of companies likely to be impacted. Therefore, we believe that the rule would not alter the investment or employment decisions of firms or significantly adversely impact employment.

The requirements would require the one-time installation or replacement of equipment and the ongoing implementation of an LDAR program, and labor would be necessary to comply with each of these. The Supporting Statement for the Paperwork Reduction Act describes the labor requirements posed by the rule.

e. Impacts on Tribal Lands

This section presents the costs, benefits, net benefits, and incremental production associated with operations on Indian leases, as well as royalty implications for tribal governments.[173] We estimate that the rule's operation on Indian lands would pose costs ranging from $15–$39 million per year (using a 7% discount rate to annualize capital costs) or $14–$39 million per year (using a 3% discount rate to annualize capital costs).[174] Projected benefits from the rule's operation on Indian lands range from $3–$23 million per year (using model averages of the social cost of methane with a 3 percent discount rate).[175] Net benefits from operation of the rule on leases on Indian lands range from $3–$25 million per year (with capital costs annualized using 7% and 3% discount rates).[176]

For impacts on production from leases on Indian lands, the rule is projected to result in additional natural gas production ranging from 1.1–5.8 Bcf per year and a reduction in crude oil production ranging from 0–320,000 bbl per year.[177] We further estimate that the rule would reduce methane emissions from leases on Indian lands by 22,000 tpy, and would reduce VOC emissions by 30,000–32,000 tpy.[178] We estimate additional royalties from leases on Indian lands of $0.3–1.9 million per year.[179]

IX. Procedural Matters

A. Executive Order 12866, Regulatory Planning and Review[180]

Executive Order 12866 requires agencies to assess the benefits and costs of regulatory actions, and, for significant regulatory actions, submit a detailed report of their assessment to the OMB for review. A rule is deemed significant under Executive Order 12866 if it may:

(a) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(b) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(c) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(d) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

After reviewing the requirements, the BLM has determined that the rule is an economically significant regulatory action according to the criteria of Executive Order 12866, and we have prepared a regulatory impact analysis for the rule.

B. Regulatory Flexibility Act and Small Business Regulatory Enforcement Fairness Act of 1996[181]

The Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act, unless the head of the agency certifies that the rule would not have a significant economic impact on a substantial number of small entities.[182] Congress enacted the RFA to ensure that government regulations do not unnecessarily or disproportionately burden small entities. Small entities include small businesses, small governmental jurisdictions, and small not-for-profit enterprises.

The BLM reviewed the Small Business Administration (SBA) size standards for small businesses and the number of entities fitting those size standards as reported by the U.S. Census Bureau in the Economic Census. The BLM concludes that the vast majority of entities operating in the relevant sectors are small businesses as defined by the SBA. As such, the rule will likely affect a substantial number of small entities. The BLM believes, however, that the final rule will not have a significant economic impact on a substantial number of small entities. Although the rule will affect a substantial number of small entities, the BLM does not believe that these effects would be economically significant. The screening analysis conducted by BLM estimates the average reduction in profit margin for small companies will be just a fraction of one percentage point, which is not a large enough impact to be considered significant.

Although it is not required, the BLM nevertheless chose to prepare an Initial Regulatory Flexibility Analysis and Final Regulatory Flexibility Analysis for this rule. Due to the fact that the rule is economically significant and impacts a substantial number of small entities, the BLM believes it is prudent, and potentially helpful to small entities, to provide an IRFA and FRFA for the rulemaking. We do not believe this decision should be viewed as a precedent for other rulemakings.

C. Unfunded Mandates Reform Act of 1995

Under the Unfunded Mandates Reform Act (UMRA), agencies must prepare a written statement about benefits and costs prior to issuing a proposed rule that includes any Federal mandate that is likely to result in aggregate expenditure by State, local, and tribal governments, or by the private sector, of $100 million or more in any 1 year, and prior to issuing any final rule for which a proposed rule was published.

This final rule does not contain a Federal mandate that may result in expenditures of $100 million or more by State, local, and tribal governments, in the aggregate, or by the private sector in any 1 year. Thus, the final rule is also not subject to the requirements of Section 205 of UMRA.

This final rule is also not subject to the requirements of Section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. It contains no requirements that apply to

[172] RIA at 118.

[173] RIA at 118–120.

[174] RIA at 118.

[175] RIA at 119.

[176] RIA at 119. The highs and lows of the benefits and costs do not occur during the same years; therefore, the net benefit ranges presented here do not calculate simply as the range of benefits minus the range of costs presented above.

[177] *Id.*

[178] *Id.*

[179] RIA at 120.

[180] RIA at 138.

[181] RIA at 167–168.

[182] 5 U.S.C. 601–612. The exception is found in 5 U.S.C. 605(b).

such governments, nor does it impose obligations upon them.

D. Executive Order 12630, Governmental Actions and Interference With Constitutionally Protected Property Rights (Takings)

Under Executive Order 12630, the final rule would not have significant takings implications. A takings implication assessment is not required. The final rule would establish a limited set of standards under which gas can be flared or vented, and under which an operator can use oil and gas on a lease, unit, or communitized area for operations and production purposes, without paying royalty.

Oil and gas operators on BLM-administered leases are subject to lease terms that expressly require that subsequent lease activities be conducted in compliance with applicable Federal laws and regulations. The final rule is consistent with the terms of those Federal leases and is authorized by applicable statutes. Thus, the final rule is not a governmental action capable of interfering with constitutionally protected property rights, it would not cause a taking of private property, and it does not require further discussion of takings implications under this Executive Order.

E. Executive Order 13132, Federalism

The final rule would not have a substantial direct effect on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the levels of government. It would not apply to States or local governments or State or local government entities. Therefore, in accordance with Executive Order 13132, the BLM has determined that this final rule does not have sufficient Federalism implications to warrant preparation of a Federalism Assessment.

F. Executive Order 12988, Civil Justice Reform

This final rule would comply with the requirements of Executive Order 12988. Specifically, this rulemaking: (a) Meets the criteria of section 3(a) requiring that all regulations be reviewed to eliminate errors and ambiguity and be written to minimize litigation; and (b) Meets the criteria of section 3(b)(2) requiring that all regulations be written in clear language and contain clear legal standards.

G. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

In accordance with Executive Order 13175, the BLM has evaluated this rulemaking and determined that it will not have substantial direct effects on federally recognized Indian tribes. Nevertheless, on a government-to-government basis we initiated consultation with tribal governments that the final rule may affect.

In 2014, the BLM conducted a series of forums to consult with tribal governments to inform the development of this proposal. We held tribal outreach sessions in Denver, Colorado (March 19, 2014), Albuquerque, New Mexico (May 7, 2014), Dickinson, North Dakota (May 9, 2014), and Washington, DC (May 14, 2014).[183] At the Denver and Washington, DC sessions, the tribal meetings were live-streamed to allow for the greatest possible participation by tribes and others. The tribal outreach sessions served as initial consultation with Indian tribes to comply with Executive Order 13175. As part of our outreach efforts, the BLM accepted informal comments generated as a result of the public/tribal outreach sessions through May 30, 2014.

After the proposed rule published on February 8, 2016, the BLM conducted another round of outreach meetings, with the tribal sessions taking place in the morning, and the general-public sessions taking place in the afternoon, with a conference call-in number for the public to listen in remotely. These meetings were held at four locations: Farmington, New Mexico (February 16, 2016), Oklahoma City, Oklahoma (February 18, 2016), Denver, Colorado (March 1, 2016), and Dickinson, North Dakota (March 3, 2016).

H. Paperwork Reduction Act

1. Overview

The Paperwork Reduction Act (PRA) [184] provides that an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information, unless it displays a currently valid OMB control number. Collections of information include requests and requirements that an individual, partnership, or corporation obtain information, and report it to a Federal agency. See 44 U.S.C. 3502(3); 5 CFR 1320.3(c) and (k).

This rule contains information collection activities that require approval by the OMB under the PRA. The BLM included an information collection request in the proposed rule. OMB has approved the information collection for the final rule under control number 1004–0211.

2. Summary of Information Collection Requirements

• *Title:* Waste Prevention, Production Subject to Royalties, and Resource Conservation (43 CFR parts 3160 and 3170).
• *Forms:* Form 3160–3, Application for Permit to Drill or Reenter; and Form 3160–5, Sundry Notices and Reports on Wells.
• *OMB Control Number:* 1004–0211.
• *Description of Respondents:* Holders of Federal and Indian (except Osage Tribe) oil and gas leases, those who belong to federally approved units and CAs, and those who are parties to IMDA oil and gas agreements.
• *Respondents' Obligation:* Required to obtain or retain a benefit.
• *Frequency of Collection:* On occasion and monthly.
• *Abstract:* This rule updates standards to reduce wasteful venting, flaring, and leaks of natural gas from onshore wells located on Federal and Indian oil and gas leases, units and CAs.
• *Estimated Number of Responses:* 63,200.
• *Estimated Total Annual Burden Hours:* 82,170 hours.
• *Estimated Total Non-Hour Cost:* None.

3. Discussion of Regulations

Except for the recordkeeping required by 43 CFR 3179.305, the information-collection activities in the final rule involve new uses and burdens for BLM Forms 3160–3 and 3160–5, the use of which has been cleared by OMB under control number 1004–0137, Onshore Oil and Gas Operations (43 CFR part 3160) (expiration date January 31, 2018). After this rule goes into effect, the BLM plans to request that OMB merge the new uses and burdens of Forms 3160–3 and 3160–5 with control number 1004–0137.

The information collection activities in this rule are described below along with estimates of the annual burdens. Included in the burden estimates are the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing each component of the information collection.

Plan to Minimize Waste of Natural Gas (43 CFR 3162.3–1)

This rule adds a new provision to 43 CFR 3162.3–1 that requires a plan to

[183] More info can be found at: *http://www.blm.gov/wo/st/en/prog/energy/public_events_on_oil.html.*

[184] 44 U.S.C. 3501–3521.

minimize waste of natural gas when submitting an APD for a development oil well. This information is in addition to the APD information that the BLM already collects under OMB Control Number 1004–0137. The required elements of the waste minimization plan are listed at paragraphs (j)(1) through (j)(7).

Request for Approval for Royalty-Free Uses On-Lease or Off-Lease (43 CFR 3178.5, 3178.7, 3178.8, and 3178.9)

Section 3178.5 requires submission of a Sundry Notice (Form 3160–5) to request prior written BLM approval for use of gas royalty-free for the following operations and production purposes on the lease, unit or communitized area:

- Using oil or gas that an operator removes from the pipeline at a location downstream of the facility measurement point (FMP);
- Removal of gas initially from a lease, unit PA, or communitized area for treatment or processing because of particular physical characteristics of the gas, prior to use on the lease, unit PA or communitized area; and
- Any other type of use of produced oil or gas for operations and production purposes pursuant to § 3178.3 that is not identified in § 3178.4.

Section 3178.7 requires submission of a Sundry Notice (Form 3160–5) to request prior written BLM approval for off-lease royalty-free uses in the following circumstances:

- The equipment or facility in which the operation is conducted is located off the lease, unit, or communitized area for engineering, economic, resource-protection, or physical-accessibility reasons; and
- The operations are conducted upstream of the FMP.

Section 3178.9 requires the following additional information in a request for prior approval of royalty-free use under section 3178.5, or for prior approval of off-lease royalty-free use under section 3178.7:

- A complete description of the operation to be conducted, including the location of all facilities and equipment involved in the operation and the location of the FMP;
- The volume of oil or gas that the operator expects will be used in the operation and the method of measuring or estimating that volume;
- If the volume expected to be used will be estimated, the basis for the estimate (*e.g.,* equipment manufacturer's published consumption or usage rates); and
- The proposed disposition of the oil or gas used (*e.g.,* whether gas used would be consumed as fuel, vented through use of a gas-activated pneumatic controller, returned to the reservoir, or some other disposition).

Notification of Choice To Comply on County- or State-Wide Basis (43 CFR 3179.7(c)(3)(ii))

Section 3179.7 requires operators flaring gas from development oil wells to capture a specified percentage of the operator's adjusted volume of gas produced over the relevant area. The ''relevant area'' is each of the operator's leases, units, or communitized areas, unless the operator chooses to comply on a county- or State-wide basis and the operator notifies the BLM of its choice by Sundry Notice by January 1 of the relevant year.

Request for Approval of Alternative Capture Requirement (43 CFR 3179.8(b))

Section 3179.8 applies only to leases issued before the effective date of the final rule and to operators choosing to comply with the capture requirement in section 3179.7 on a lease-by-lease, unit-by-unit, or communitized area-by-communitized area basis. The regulation provides that operators who meet those parameters may seek BLM approval of a capture percentage other than that which is applicable under 43 CFR 3179.7. The operator must submit a Sundry Notice that includes the following information:

- The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;
- The oil and gas production levels of each of the operator's wells on the lease, unit, or communitized area for the most recent production month for which information is available and the volumes being vented and flared from each well;

In addition, the request must include map(s) showing:

- The entire lease, unit, or communitized area, and the surrounding lands to a distance and on a scale that shows the field in which the well is or will be located (if applicable), and all pipelines that could transport the gas from the well;
- All of the operator's producing oil and gas wells, which are producing from Federal or Indian leases, (both on Federal or Indian leases and on other properties) within the map area;
- Identification of all of the operator's wells within the lease from which gas is flared or vented, and the location and distance of the nearest gas pipeline(s) to each such well, with an identification of those pipelines that are or could be available for connection and use; and
- Identification of all of the operator's wells within the lease from which gas is captured;

The following information is also required:

- Data that show pipeline capacity and the operator's projections of the cost associated with installation and operation of gas capture infrastructure, to the extent that the operator is able to obtain this information, as well as cost projections for alternative methods of transportation that do not require pipelines; and
- Projected costs of and the combined stream of revenues from both gas and oil production, including:
  - The operator's projections of gas prices, gas production volumes, gas quality (*i.e.,* heating value and H_2S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and
  - The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Request for Exemption From Well Completion Requirements (43 CFR 3179.102(c) and (d))

Section 3179.102 lists several requirements pertaining to gas that reaches the surface during well completion and related operations. An operator may seek an exemption from these requirements by submitting a Sundry Notice that includes the following information:

(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance; and

(4) Projected costs of and the combined stream of revenues from both gas and oil production, including: the operator's projections of oil and gas prices, production volumes, quality (*i.e.,* heating value and H_2S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

The rule also provides that an operator that is in compliance with the EPA regulations for well completions under 40 CFR part 60, subpart OOOO or subpart OOOOa is deemed in compliance with the requirements of this section. As a practical matter, all hydraulically fractured or refractured wells are now subject to the EPA requirements, so the BLM does not believe that the requirements of this section would have any independent effect, or that any operator would request an exemption from the requirements of this section, as long as the EPA requirements remain in effect.

Request for Extension of Royalty-Free Flaring During Initial Production Testing (43 CFR 3179.103)

Section 3179.103 allows gas to be flared royalty-free during initial production testing. The regulation lists specific volume and time limits for such testing. An operator may seek an extension of those limits by submitting a Sundry Notice to the BLM.

Request for Extension of Royalty-Free Flaring During Subsequent Well Testing (43 CFR 3179.104)

Section 3179.104 allows gas to be flared royalty-free for no more than 24 hours during well tests subsequent to the initial production test. The operator may seek authorization to flare for a longer period by submitting a Sundry Notice to the BLM.

Reporting of Venting or Flaring (43 CFR 3179.105)

Section 3179.105 allows an operator to flare gas royalty-free during a temporary, short-term, infrequent, and unavoidable emergency. Venting gas is permissible if flaring is not feasible during an emergency. The regulation defines limited circumstances that constitute an emergency, and other circumstances that do not constitute an emergency. The operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented in the following circumstances that, as provided by 43 CFR 3179.105, do not constitute emergencies for the purposes of royalty assessment:

(1) More than 3 failures of the same component within a single piece of equipment within any 365-day period;

(2) The operator's failure to install appropriate equipment of a sufficient capacity to accommodate the production conditions;

(3) Failure to limit production when the production rate exceeds the capacity of the related equipment, pipeline, or gas plant, or exceeds sales contract volumes of oil or gas;

(4) Scheduled maintenance;

(5) A situation caused by operator negligence; or

(6) A situation on a lease, unit, or communitized area that has already experienced 3 or more emergencies within the past 30 days, unless the BLM determines that the occurrence of more than 3 emergencies within the 30 day period could not have been anticipated and was beyond the operator's control.

Pneumatic Controllers—Introduction

Section 3179.201 pertains to any pneumatic controller that: (1) Is not subject to EPA regulations at 40 CFR 60.5360 through 60.5390, but would be subject to those regulations if it were a new or modified source; and (2) has a continuous bleed rate greater than 6 standard cubic feet (scf) per hour. Section 3179.201(b) requires operators to replace each high-bleed pneumatic controller with a controller with a bleed rate lower than 6 scf per hour within 1 year of the effective date of the rule, unless (1) the pneumatic controller exhaust is routed to processing equipment; (2) the pneumatic controller exhaust was, as of the effective date of the rule, and continues to be routed to a flare device or low pressure combustor; or (3) one of the following applies:

Notification of Functional Needs for a Pneumatic Controller (43 CFR 3179.201(b)(1))

The operator notifies the BLM through a Sundry Notice that use of a pneumatic controller with a bleed rate greater than 6 scf per hour is required based on functional needs that may include, but are not limited to, response time, safety, and positive actuation, and the Sundry Notice describes those functional needs.

Showing That Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (Pneumatic Controllers) (43 CFR 3179.201(b)(4) and 3175.201(c))

The operator demonstrates to the BLM through a Sundry Notice, and the BLM agrees, that replacement of a pneumatic controller would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. The Sundry Notice must include the following information:

(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance;

(4) Projected costs of and the combined stream of revenues from both gas and oil production, including: The operator's projections of gas prices, gas production volumes, gas quality (*i.e.,* heating value and H_2S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and the operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Showing in Support of Replacement of Pneumatic Controller Within 3 Years (43 CFR 3179.201(d))

The operator may replace a high-bleed pneumatic controller within 3 years of the effective date of the rule (instead of within 1 year of the effective date) if the operator notifies the BLM through a Sundry Notice that the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less from the effective date of the rule.

Pneumatic Diaphragm Pumps—Introduction

With some exceptions, section 3179.202 pertains to any pneumatic diaphragm pump that: (1) Uses natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and (2) Is not subject to EPA regulations at 40 CFR 60.5360 through 60.5390, but would be subject to those regulations if it were a new or modified source. This regulation generally requires replacement of such a pump with a zero-emissions pump or routing of the pump's exhaust gas to processing equipment for capture and sale within 1 year of the effective date of the final rule.

This requirement does not apply to pneumatic diaphragm pumps that do not vent exhaust gas to the atmosphere. In addition, this requirement does not apply if one of the following applies:

Showing That a Pneumatic Diaphragm Pump Was Operated on Fewer Than 90 Individual Days in the Prior Calendar Year (43 CFR 3179.202(b)(2))

A pneumatic diaphragm pump is not subject to section 3179.202 if the operator documents in a Sundry Notice that the pump was operated fewer than 90 days in the prior calendar year.

Notification of Functional Needs for a Pneumatic Diaphragm Pump (43 CFR 3179.202(d))

In lieu of replacing a pneumatic diaphragm pump or routing the pump exhaust gas to processing equipment, an operator may submit a Sundry Notice to the BLM showing that replacing the pump with a zero emissions pump is not viable because a pneumatic pump is necessary to perform the function required, and that routing the pump exhaust gas to processing equipment for capture and sale is technically infeasible or unduly costly.

Showing That Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves (Pneumatic Diaphragm Pumps) (43 CFR 3179.202(f) and (g))

An operator may be exempted from the replacement requirement if the operator submits a Sundry Notice to the BLM that provides an economic analysis that demonstrates, and the BLM agrees, that compliance with these requirements would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease. The Sundry Notice must include the following information:

(1) Well information that must include: (i) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated; and (ii) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(2) Data that show the costs of compliance with paragraphs (c) through (e) of § 3179.202; and

(3) The operator's estimate of the costs and revenues of the combined stream of revenues from both the gas and oil components, including: (i) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.,* heating value and H_2S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and (ii) the operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Showing in Support of Replacement of Pneumatic Diaphragm Pump Within 3 Years (43 CFR 3179.202(h))

The operator may replace a pneumatic diaphragm pump within 3 years of the effective date of the rule (instead of within 1 year of the effective date) if the operator notifies the BLM through a Sundry Notice that the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less from the effective date of the rule.

Storage Vessels (43 CFR 3179.203(c))

A storage vessel is subject to 43 CFR 3179.203(c) if the vessel: (1) Contains production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and (2) Is not subject to any of the requirements of EPA regulations at 40 CFR part 60, subpart OOOO, but would be subject to that subpart if it were a new or modified source.

Within 60 days after the effective date of this section, and within 30 days after any new source of production is added to the tank, the operator must determine, record, and make available to the BLM upon request, whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a federal, state, local or tribal authority that limit the VOC emissions to less than 6 tpy.

If a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy, no later than 1 year after the effective date of this section, or 3 years if the operator must and will replace the storage vessel at issue in order to comply with the requirements of this section, the operator must:

(1) Route all tank vapor gas from the storage vessel to a sales line;

(2) If the operator determines that compliance with paragraph (c)(1) of this section is technically infeasible or unduly costly, route all tank vapor gas from the storage vessel to a device or method that ensures continuous combustion of the tank vapor gas; or

(3) Submit an economic analysis to the BLM through a Sundry Notice that demonstrates, and the BLM agrees, based on the information identified in paragraph (d) of this section, that compliance with paragraph (c)(2) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

To support the demonstration described above, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance with paragraph (c)(1) or (c)(2) of this section on the lease; and

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components, including: The operator's projections of oil and gas prices, production volumes, quality (*i.e.,* heating value and H_2S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

Downhole Well Maintenance and Liquids Unloading—Documentation and Reporting (43 CFR 3179.204(c) and (e))

The operator must minimize vented gas and the need for well venting associated with downhole well maintenance and liquids unloading, consistent with safe operations. Before the operator manually purges a well for liquids unloading for the first time after the effective date of this section, the operator must consider other methods for liquids unloading and determine that they are technically infeasible or unduly costly. The operator must provide information supporting that determination as part of a Sundry Notice within 30 calendar days after the first liquids unloading event by manual or automated well purging conducted after the effective date of this section. This requirement applies to each well the operator operates.

For any liquids unloading by manual well purging, the operator must:

(1) Ensure that the person conducting the well purging remains present on-site throughout the event to minimize to the maximum extent practicable any venting to the atmosphere;

(2) Record the cause, date, time, duration, and estimated volume of each venting event; and

(3) Maintain the records for the period required under § 3162.4–1 and make them available to the BLM, upon request.

Downhole Well Maintenance and Liquids Unloading—Notification of Excessive Duration or Volume (43 CFR 3179.204(f))

The operator must notify the BLM by Sundry Notice, within 30 calendar days, if:

(1) The cumulative duration of manual well purging events for a well exceeds 24 hours during any production month; or

(2) The estimated volume of gas vented in liquids unloading by manual well purging operations for a well exceeds 75 Mcf during any production month.

Leak Detection—Compliance With EPA Regulations (43 CFR 3179.301(j))

Sections 3179.301 through 3179.305 include information collection activities pertaining to the detection and repair of gas leaks during production operations. These regulations require operators to inspect all equipment covered under § 3179.301(a) for gas leaks. Section 3179.301(k) allows an operator to satisfy the requirements of §§ 3179.301 through 3179.305 for all of the equipment on a given lease by notifying the BLM in a Sundry Notice that the operator is applying the EPA subpart OOOOa fugitive emissions requirements to such equipment.

Leak Detection—Request To Use an Alternative Monitoring Device and Protocol (43 CFR 3179.302(c))

Section 3175.302 specifies the instruments and methods that an operator may use to detect leaks. Section 3175.302(d) allows the BLM to approve an alternative monitoring device and associated inspection protocol if the BLM finds that the alternative would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in § 3179.302(a)(1) when used according to § 3179.303(a).

Any person may request approval of an alternative monitoring device and protocol by submitting a Sundry Notice to BLM that includes the following information: (1) Specifications of the proposed monitoring device, including a detection limit capable of supporting the desired function; (2) The proposed monitoring protocol using the proposed monitoring device, including how results will be recorded; (3) Records and data from laboratory and field testing, including but not limited to performance testing; (4) A demonstration that the proposed monitoring device and protocol will achieve equal or greater reduction of gas lost through leaks compared with the approach specified in the regulations; (5) Tracking and documentation procedures; and (6) Proposed limitations on the types of sites or other conditions on deploying the device and the protocol to achieve the demonstrated results.

Leak Detection—Operator Request To Use an Alternative Leak Detection Program (43 CFR 3179.303(b))

Section 3179.303(b) allows an operator to submit a Sundry Notice requesting authorization to detect gas leaks using an alternative instrument-based leak detection program, different from the specified requirement to inspect each site semi-annually using an approved monitoring device.

To obtain approval for an alternative leak detection program, the operator must submit a Sundry Notice that includes the following information:

(1) A detailed description of the alternative leak detection program, including how it will use one or more of the instruments specified in or approved under § 3179.302(a) and an identification of the specific instruments, methods and/or practices that would substitute for specific elements of the approach specified in §§ 3179.302(a) and 3179.303(a);

(2) The proposed monitoring protocol;

(3) Records and data from laboratory and field testing, including, but not limited to, performance testing, to the extent relevant;

(4) A demonstration that the proposed alternative leak detection program will achieve equal or greater reduction of gas lost through leaks compared to compliance with the requirements specified in §§ 3179.302(a) and 3179.303(a);

(5) A detailed description of how the operator will track and document its procedures, leaks found, and leaks repaired; and

(6) Proposed limitations on types of sites or other conditions on deployment of the alternative leak detection program.

Leak Detection—Operator Request for Exemption Allowing Use of an Alternative Leak-Detection Program That Does Not Meet Specified Criteria (43 CFR 3179.303(d))

An operator may seek authorization for an alternative leak detection program that does not achieve equal or greater reduction of gas lost through leaks compared to the required approach, if the operator demonstrates that compliance with the leak-detection regulations (including the option for an alternative program under 43 CFR 3179.303(b)) would impose such costs as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease. The BLM may approve an alternative leak detection program that does not achieve equal or greater reduction of gas lost through leaks, but is as effective as possible consistent with not causing the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

To obtain approval for an alternative program under this provision, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance on the lease with the requirements of §§ 3179.301–305 and with an alternative leak detection program that meets the requirements of § 3179.303(b);

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide the operator's projections of oil and gas prices, production volumes, quality (*i.e.,* heating value and H_2S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less;

(5) The information required to obtain approval of an alternative program under § 3179.303(b), except that the estimated volume of gas that will be lost through leaks under the alternative program must be compared to the volume of gas lost under the required program, but does not have to be shown to be at least equivalent.

Leak Detection—Notification of Delay in Repairing Leaks (43 CFR 3179.304(a))

Section 3179.304(a) requires an operator to repair any leak no later than 30 calendar days after discovery of the leak, unless there is good cause for delay in repair. If there is good cause for a delay beyond 30 calendar days, section 3179.304(b) requires the operator to submit a Sundry Notice notifying the BLM of the cause.

Leak Detection—Inspection Recordkeeping and Reporting (43 CFR 3179.305)

Section 3179.305 requires operators to maintain the following records and make them available to the BLM upon request: (1) For each inspection required under § 3179.303, documentation of the date of the inspection and the site where the inspection was conducted; (2) The monitoring method(s) used to determine the presence of leaks; (3) A list of leak components on which leaks were found; (4) The date each leak was repaired; and (5) The date and result of the follow-up inspection(s) required under § 3179.304. By March 31 each calendar year, the operator must provide to the BLM an annual summary report on the previous year's inspection activities that includes: (1) The number of sites inspected; (2) The total number of leaks identified, categorized by the type of component; (3) The total number of leaks repaired; (4) The total number of leaks that were not repaired as of December 31 of the previous calendar year due to good cause and an estimated date of repair for each leak; and (5) A certification by a responsible officer that the information in the report is true and accurate.

Leak Detection—Annual Reporting of Inspections (43 CFR 3179.305(b))

By March 31 each calendar year, the operator must provide to the BLM an annual summary report on the previous year's inspection activities that includes:

(1) The number of sites inspected;

(2) The total number of leaks identified, categorized by the type of component;

(3) The total number of leaks repaired;

(4) The total number leaks that were not repaired as of December 31 of the previous calendar year due to good cause and an estimated date of repair for each leak.

(5) A certification by a responsible officer that the information in the report is true and accurate to the best of the officer's knowledge.

4. Burden Estimates

The following table details the estimated annual burdens of activities that would involve APDs and Sundry Notices, the use of which has been authorized under Control Number 1004–0137.

ESTIMATED HOUR BURDENS

Type of response A.	Number of responses B.	Hours per response C.	Total hours (column B × column C) D.
Plan to Minimize Waste of Natural Gas, 43 CFR 3162.3–1, Form 3160–3	2,000	8	16,000
Request for Approval for Royalty-Free Uses On-Lease or Off-Lease, 43 CFR 3178.5, 3178.7, 3178.8, and 3178.9, Form 3160–5	50	4	200
Notification of Choice to Comply on County- or State-wide Basis, 43 CFR 3179.7(c)(3)(iii)	200	1	200
Request for Approval of Alternative Capture Requirement, 43 CFR 3179.8(b), Form 3160–5	50	16	800
Request for Exemption from Well Completion Requirements, 43 CFR 3179.102(c) and (d), Form 3160–5	0	0	0
Request for Extension of Royalty-Free Flaring During Initial Production Testing, 43 CFR 3179.103, Form 3160–5	500	2	1,000
Request for Extension of Royalty-Free Flaring During Subsequent Well Testing, 43 CFR 3179.104, Form 3160–5	5	2	10
Reporting of Venting or Flaring, 43 CFR 3179.105, Form 3160–5	250	2	500
Notification of Functional Needs for a Pneumatic Controller, 43 CFR 3179.201(b)(1), Form 3160–5	10	2	20
Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves, 43 CFR 3179.201(b)(4) and 3179.201(c), Form 3160–5	50	4	200
Showing in Support of Replacement of Pneumatic Controller within 3 Years, 43 CFR 3179.201(d), Form 3160–5	100	1	100
Showing that a Pneumatic Diaphragm Pump was Operated on Fewer than 90 Individual Days in the Prior Calendar Year, 43 CFR 3179.202(b)(2), Form 3160–5	100	1	100
Notification of Functional Needs for a Pneumatic Diaphragm Pump, 43 CFR 3179.202(d), Form 3160–5	150	1	150
Showing that Cost of Compliance Would Cause Cessation of Production and Abandonment of Oil Reserves, 43 CFR 3179.202(f) and (g), Form 3160–5	10	4	40
Showing in Support of Replacement of Pneumatic Diaphragm Pump within 3 Years, 43 CFR 3179.202(h), Form 3160–5	100	1	100
Storage Vessels, 43 CFR 3179.203(c), Form 3160–5	50	4	200
Downhole Well Maintenance and Liquids Unloading—Documentation and Reporting, 43 CFR 3179.204(c) and (e), Form 3160–5	5,000	1	5,000
Downhole Well Maintenance and Liquids Unloading—Notification of Excessive Duration or Volume, 43 CFR 3179.204(f), Form 3160–5	250	1	250
Leak Detection—Compliance with EPA Regulations, 43 CFR 3179.301(j), Form 3160–5	50	4	200
Leak Detection—Request to Use an Alternative Monitoring Device and Protocol, 43 CFR 3179.302(c), Form 3160–5	5	40	200
Leak Detection—Operator Request to Use an Alternative Leak Detection Program, 43 CFR 3179.303(b), Form 3160–5	20	40	800
Leak Detection—Operator Request for Exemption Allowing Use of an Alternative Leak-Detection Program that Does Not Meet Specified Criteria, 43 CFR 3179.303(d), Form 3160–5	150	20	3,000
Leak Detection—Notification of Delay in Repairing Leaks, 43 CFR 3179.304(a), Form 3160–5	100	1	100
Leak Detection—Inspection Recordkeeping and Reporting, 43 CFR 3179.305	52,000	.25	13,000
Leak Detection—Annual Reporting of Inspections, 43 CFR 3179.305(b), Form 3160–5	2,000	20	40,000
Totals	63,200		82,170

I. National Environmental Policy Act

The BLM prepared a draft environmental assessment (EA) to determine whether issuance of this proposed regulation pertaining to oil and gas waste prevention and royalty clarification would constitute a ''major Federal action significantly affecting the quality of the human environment'' under Section 102(2)(C) of the National Environmental Policy Act (NEPA). This EA was posted for public comment for a period of 75 days, from February 8 through April 22, 2016. During the public comment period for the proposed rule and draft EA, BLM received comments that further informed the analysis of the potential environmental impacts of the rule. In response to these comments, BLM incorporated changes in the final EA, which will be released concomitantly with the rule.

The BLM believes that the rule would benefit the environment by reducing emissions of methane (a potent GHG), VOCs (which contribute to smog), and hazardous air pollutants such as benzene (a known carcinogen). In addition, the rule would reduce light pollution and other impacts from flaring. These reductions would contribute to a more robust environmental quality overall. BLM has determined that the rule may also have a certain degree of adverse environmental impacts, primarily due to land disturbance from increased or accelerated construction of gas gathering lines or pipelines and compressors and/or increased truck traffic on existing disturbed surfaces from the increased use of mobile capture technology. After careful consideration of the impacts and alternatives discussed in the final EA, BLM has determined that this action does not meet the criteria of significance under 40 CFR 1508.27 either in terms of context or intensity; therefore, BLM finds that the promulgation of the rule has no significant impact.

J. Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

Under Executive Order 13211, agencies are required to prepare and submit to OMB a Statement of Energy Effects for significant energy actions. This statement is to include a detailed statement of ''any adverse effects on energy supply, distribution, or use (including a shortfall in supply, price increases, and increase use of foreign supplies)'' for the action and reasonable alternatives and their effects.

Section 4(b) of Executive Order 13211 defines a ''significant energy action'' as ''any action by an agency (normally published in the **Federal Register**) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of proposed rulemaking, and notices of proposed rulemaking: (1)(i) That is a significant regulatory action under Executive Order 12866 or any successor order, and (ii) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) that is designated by the Administrator of (OIRA) as a significant energy action.''

Since the compliance costs for this rule would represent such a small fraction of company net incomes, we believe that the rule is unlikely to impact the investment decisions of firms. Also, the incremental production of gas estimated to result from the rule's enactment constitutes a small fraction of total U.S. production, and any potential and temporary deferred production of oil would likewise constitute a small fraction of total U.S. production. For these reasons, we do not expect that the final rule will significantly impact the supply, distribution, or use of energy. As such, the rulemaking is not a ''significant energy action'' as defined in Executive Order 13211.

K. Executive Order 13563, Improving Regulation and Regulatory Review

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this final rule in a manner consistent with these requirements.

X. Authors

The principal authors of this rule are: Timothy Spisak and James Tichenor of the BLM Washington Office; Eric Jones of the BLM Moab, Utah Field Office; and David Mankiewicz of the BLM Farmington, New Mexico Field Office; assisted by Faith Bremner of the staff of the BLM's Regulatory Affairs Division.

List of Subjects

43 CFR Part 3100

Government contracts; Mineral royalties; Oil and gas reserves; Public lands-mineral resources; Reporting and recordkeeping requirements; Surety bonds.

43 CFR Part 3160

Administrative practice and procedure; Government contracts; Indians—lands; Mineral royalties; Oil and gas exploration; Penalties; Public lands—mineral resources; Reporting and recordkeeping requirements.

43 CFR Part 3170

Administrative practice and procedure; Flaring; Government contracts; Incorporation by reference; Indians—lands; Mineral royalties; Immediate assessments; Oil and gas exploration; Oil and gas measurement; Public lands—mineral resources; Reporting and record keeping requirements; Royalty-free use; Venting.

Dated: November 14, 2016.

Amanda Leiter,

Acting Assistant Secretary, Land and Minerals Management.

43 CFR Chapter II

For the reasons set out in the preamble, the Bureau of Land Management amends 43 CFR parts 3100, 3160 and 3170 as follows:

PART 3100—ONSHORE OIL AND GAS LEASING

■ 1. Amend the authority citation for part 3100 to read as follows:

Authority: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359 and 1751; 43 U.S.C. 1732(b), 1733, and 1740; and the Energy Policy Act of 2005 (Pub. L. 109–58).

■ 2. Revise § 3103.3–1 to read as follows:

§ 3103.3–1 Royalty on production.

(a) Royalty on production will be payable only on the mineral interest owned by the United States. Royalty must be paid in amount or value of the production removed or sold as follows:

(1) For leases issued on or before January 17, 2017, the rate prescribed in the lease or in applicable regulations at the time of lease issuance;

(2) For leases issued January 17, 2017:

(i) 12½ percent on all noncompetitive leases;

(ii) A rate of not less than 12½ percent on all competitive leases, exchange and renewal leases, and leases issued in lieu of unpatented oil placer mining claims under § 3108.2–4 of this title;

(3) 16⅔ percent on noncompetitive leases reinstated under § 3108.2–3 of this title plus an additional 2 percentage-point increase added for each succeeding reinstatement;

(4) The rate used for royalty determination that appears in a lease that is reinstated or that is in force for competitive leases at the time of issuance of the lease that is reinstated, plus 4 percentage points, plus an additional 2 percentage points for each succeeding reinstatement.

(b) Leases that qualify under specific provisions of the Act of August 8, 1946 (30 U.S.C. 226c) may apply for a limitation of a 12½ percent royalty rate.

(c) The average production per well per day for oil and gas will be determined pursuant to 43 CFR 3162.7–4.

(d) Payment of a royalty on the helium component of gas will not convey the right to extract the helium from the gas stream. Applications for the right to extract helium from the gas stream will be made under part 16 of this title.

PART 3160—ONSHORE OIL AND GAS OPERATIONS

■ 3. The authority citation for part 3160 continues to read as follows:

Authority: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359, and 1751; and 43 U.S.C. 1732(b), 1733, and 1740.

§ 3160.0–5 [Amended]

■ 4. Amend § 3160.0–5 by removing the definition of ''Avoidably lost.''

■ 5. Amend § 3162.3–1 by adding paragraph (j) to read as follows:

§ 3162.3–1 Drilling applications and plans.

* * * * *

(j) When submitting an Application for Permit to Drill an oil well, the operator must also submit a plan to minimize waste of natural gas from that well. The waste minimization plan must accompany, but would not be part of, the Application for Permit to Drill. The waste minimization plan must set forth a strategy for how the operator will comply with the requirements of 43 CFR subpart 3179 regarding control of waste from venting and flaring, and must explain how the operator plans to capture associated gas upon the start of oil production, or as soon thereafter as reasonably possible, including an explanation of why any delay in capture of the associated gas would be required. Failure to submit a complete and adequate waste minimization plan is grounds for denying or disapproving an Application for Permit to Drill. The waste minimization plan must include the following information:

(1) The anticipated completion date of the proposed well(s);

(2) A description of anticipated production, including:

(i) The anticipated date of first production;

(ii) The expected oil and gas production rates and duration from the proposed well. If the proposed well is on a multi-well pad, the plan should include the total expected production for all wells being completed;

(iii) The expected production decline curve of both oil and gas from the proposed well; and

(iv) The expected Btu value for gas production from the proposed well.

(3) Certification that the operator has provided one or more midstream processing companies with information about the operator's production plans, including the anticipated completion dates and gas production rates of the proposed well or wells;

(4) Identification of a gas pipeline to which the operator plans to connect, with sufficient capacity to accommodate the anticipated production of the proposed well(s), and information on the pipeline, including, to the extent that the operator can obtain it, the following information:

(i) Maximum current daily capacity of the pipeline;

(ii) Current throughput of the pipeline;

(iii) Anticipated daily capacity of the pipeline at the anticipated date of first gas sales from the proposed well;

(iv) Anticipated throughput of the pipeline at the anticipated date of first gas sales from the proposed well; and

(v) Any plans known to the operator for expansion of pipeline capacity for the area that includes the proposed well; and

(5) If an operator cannot identify a gas pipeline with sufficient capacity to accommodate the anticipated production of the proposed well(s), the waste minimization plan must also include:

(i) A gas pipeline system location map of sufficient detail, size, and scale as to show the field in which the proposed well will be located, and all existing gas trunklines within 20 miles of the well. The map should also contain:

(A) The name and location of the gas processing plant(s) closest to the proposed well(s), and of the intended destination processing plant, if different;

(B) The location and name of the operator of each gas trunkline within 20 miles of the proposed well;

(C) The proposed route and tie-in point that connects or could connect the subject well to an existing gas trunkline;

(ii) The total volume of produced gas, and percentage of total produced gas, that the operator is currently flaring or venting from wells in the same field and any wells within a 20-mile radius of that field; and

(iii) A detailed evaluation, including estimates of costs and returns, of opportunities for on-site capture approaches, such as compression or liquefaction of natural gas, removal of natural gas liquids, or generation of electricity from gas.

PART 3170—ONSHORE OIL AND GAS PRODUCTION

■ 6. The authority citation for part 3170 continues to read as follows:

Authority: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359, and 1751; and 43 U.S.C. 1732(b), 1733, and 1740.

■ 7. Add subparts 3178 and 3179 to part 3170, to read as follows:

Subpart 3178—Royalty-Free Use of Lease Production

Sec.

Subpart 3179—Waste Prevention and Resource Conservation

§ 3178.1 Purpose.

The purpose of this subpart is to address the circumstances under which oil or gas produced from Federal and Indian leases may be used royalty-free in operations on the lease, unit, or communitized area. This subpart supersedes those portions of Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil or Gas Lost (NTL–4A), pertaining to oil or gas used for beneficial purposes.

§ 3178.2 Scope.

(a) This subpart applies to:

(1) All onshore Federal and Indian (other than Osage Tribe) oil and gas leases, units, and communitized areas, except as otherwise provided in this subpart;

(2) Indian Mineral Development Act (IMDA) oil and gas agreements, unless specifically excluded in the agreement or unless the relevant provisions of this subpart are inconsistent with the agreement;

(3) Leases and other business agreements and contracts for the development of tribal energy resources under a Tribal Energy Resource Agreement entered into with the Secretary, unless specifically excluded in the lease, other business agreement, or Tribal Energy Resource Agreement;

(4) Committed State or private tracts in a federally approved unit or communitization agreement defined by or established under 43 CFR subpart 3105 or 43 CFR part 3180; and

(5) All onshore wells, and production equipment located on a Federal or Indian lease or a federally approved unit or communitized area, and compressors located on a Federal or Indian lease or a federally approved unit or communitized area and which compress production from the same Federal or Indian lease or federally approved unit or communitized area.

(b) For purposes of this subpart, the term ''lease'' also includes IMDA agreements.

§ 3178.3 Production on which royalty is not due.

(a) To the extent specified in §§ 3178.4 and 3178.5, royalty is not due on:

(1) Oil or gas that is produced from a lease or communitized area and used for operations and production purposes (including placing oil or gas in marketable condition) on the same lease or communitized area without being removed from the lease or communitized area; or

(2) Oil or gas that is produced from a unit PA and used for operations and production purposes (including placing oil or gas in marketable condition) on the unit, for the same unit PA, without being removed from the unit.

(b) For the uses described in § 3178.5, the operator must obtain prior written BLM approval for the volumes used for operational and production purposes to be royalty free.

§ 3178.4 Uses of oil or gas on a lease, unit, or communitized area that do not require prior written BLM approval for royalty-free treatment of volumes used.

(a) Oil or gas produced from a lease, unit, or communitized area may be used royalty-free for operations and production purposes on the lease, unit, or communitized area without prior written BLM approval in the following circumstances:

(1) Use of fuel to generate power or operate combined heat and power;

(2) Use of fuel to power equipment, including artificial lift equipment, equipment used for enhanced recovery, drilling rigs, and completion and workover equipment;

(3) Use of gas to actuate pneumatic controllers or operate pneumatic pumps at production facilities;

(4) Use of fuel to heat, separate, or dehydrate production;

(5) Use of gas as a pilot fuel or as assist gas for a flare, combustor, thermal oxidizer, or other control device;

(6) Use of fuel to compress or treat gas to place it in marketable condition;

(7) Use of oil to clean the well and improve production, *e.g.,* hot oil treatments. The operator must document the removal of the oil from the tank or pipeline under Onshore Oil and Gas Order No. 3 (Site Security), or any successor regulation;

(8) Use of oil as a circulating medium in drilling operations, if the use is part of an approved Drilling Plan under Onshore Oil and Gas Order No. 1;

(9) Injection of gas for the purpose of conserving gas or increasing the recovery of oil or gas, if the BLM has approved the injection under applicable regulations in parts 3100, 3160, or 3180 of this title; and

(10) Injection of gas that is cycled in a contained gas-lift system.

(b) The volume to be treated as royalty free must not exceed the amount of fuel reasonably necessary to perform the operational function, using equipment of appropriate capacity.

§ 3178.5 Uses of oil or gas on a lease, unit, or communitized area that require prior written BLM approval for royalty-free treatment of volumes used.

(a) Oil or gas produced from a lease, unit, or communitized area may also be used royalty-free for the following operations and production purposes on the lease, unit, or communitized area, but prior written BLM approval is required to ensure that production accountability is maintained:

(1) Use of oil or gas that the operator removes from the pipeline at a location downstream of the Facility Measurement Point (FMP);

(2) Use of gas that has been removed from the lease, unit PA, or communitized area for treatment or processing because of particular physical characteristics of the gas that require the gas to be treated or processed prior to use, where the gas is returned to, and used on, the lease, unit PA, or communitized area from which it was produced; and

(3) Any other types of use of produced oil or gas for operations and production purposes, which are not identified in § 3178.4.

(b)(1) The operator must obtain BLM approval to conduct activities under paragraph (a) of this section by submitting a Form 3160–5, Sundry Notices and Reports on Wells (Sundry Notice) containing the information required under § 3178.9. If the BLM disapproves a request for royalty-free treatment for volumes used under this section, the operator must pay royalties on such volumes. If the BLM approves a request for royalty-free treatment for volumes used under this section, such approval will be deemed effective from the date the request was filed.

(2) With respect to uses under paragraph (a)(1) of this section, the operator must measure the volume of oil or gas used in accordance with Onshore Oil and Gas Orders No. 4 (oil) and 5 (gas) as applicable, or other successor regulations.

(3) With respect to removals under paragraph (a)(2) of this section, the operator must measure any gas returned to the lease, unit, or communitized area under such an approval in accordance with Onshore Oil and Gas Order No. 5 or other successor regulations.

§ 3178.6 Uses of oil or gas moved off the lease, unit, or communitized area that do not require prior written approval for royalty-free treatment of volumes used.

Oil or gas used after being moved off the lease, unit, or communitized area may be treated as royalty free without prior written BLM approval only if the use meets the criteria under § 3178.4 and when:

(a) The oil or gas is transported from one area of the lease, unit, or communitized area to another area of the same lease, unit, or communitized area where it is used, and no oil or gas is added to or removed from the pipeline while crossing lands that are not part of the lease, unit, or communitized area; or

(b) A well is directionally drilled, the wellhead is not located on the producing lease, unit, or communitized area, and oil or gas is used on the same well pad for operations and production purposes for that well.

§ 3178.7 Uses of oil or gas moved off the lease, unit, or communitized area that require prior written approval for royalty-free treatment of volumes used.

(a) Except as provided in § 3178.6(b) and paragraph (b) of this section, royalty is owed on all oil or gas used in operations conducted off the lease, unit, or communitized area.

(b) The BLM may grant prior written approval to treat oil or gas used in operations conducted off the lease, unit, or communitized area as royalty free (referred to as off-lease royalty-free use) if the use is among those listed in § 3178.4(a) and § 3178.5(a) and if:

(1) The equipment or facility in which the operation is conducted is located off the lease, unit, or communitized area for engineering, economic, resource protection, or physical accessibility reasons; and

(2) The operations are conducted upstream of the FMP.

(c) The operator must obtain BLM approval under paragraph (b) of this section by submitting a Sundry Notice containing the information required under § 3178.9. If the BLM disapproves a request for royalty-free treatment for volumes used under this section, the operator must pay royalties on such volumes. If the BLM approves a request for royalty-free treatment for volumes used under this section, such approval will be deemed effective from the date the request was filed.

(d) Approval of measurement or commingling off the lease, unit, or communitized area under other regulations does not constitute approval of off-lease royalty-free use. The operator or lessee must expressly request, and submit its justification for, approval of off-lease royalty-free use.

(e) If equipment or a facility located on a particular lease, unit, or communitized area treats oil or gas produced from properties that are not unitized or communitized with the property on which the equipment or facility is located, in addition to treating oil or gas produced from the lease, unit, or communitized area on which the equipment or facility is located, the operator may report as royalty free only that portion of the oil or gas used as fuel that is properly allocable to the share of production contributed by the lease, unit, or communitized area on which the equipment is located, unless otherwise authorized by the BLM under this section.

§ 3178.8 Measurement or estimation of volumes of oil or gas that are used royalty-free.

(a) The operator must measure or estimate the volumes of royalty-free gas used in operations upstream of the FMP.

(b) The operator must measure the volume of gas that is removed from the product stream downstream of the FMP and used royalty-free pursuant to sections 3178.4 through 3178.7.

(c) The operator must measure the volume of oil that is used royalty-free pursuant to sections 3178.4 through 3178.7. The operator must also document removal of such oil from the tank or pipeline.

(d) If the operator removes oil or gas downstream of the FMP and that oil or gas is used royalty-free pursuant to sections 3178.4 through 3178.7, the operator must apply for an FMP under section 3173.12 to measure the oil or gas that is removed for use.

(e) When estimating gas volumes, the operator must use the best available information to make a reasonable estimate.

(f) Each of the volumes required to be measured or estimated, as applicable, under this subpart, must be reported by the operator following applicable ONRR reporting requirements.

§ 3178.9 Requesting approval of royalty-free treatment when approval is required.

To request written approval of royalty-free use when required under § 3178.5 or § 3178.7, the operator must submit a Sundry Notice that includes the following information:

(a) A complete description of the operation to be conducted, including the location of all facilities and equipment involved in the operation and the location of the FMP;

(b) The volume of oil or gas that the operator expects will be used in the operation, and the method of measuring or estimating that volume;

(c) If the volume of gas expected to be used will be estimated, the basis for the estimate (*e.g.,* equipment manufacturer's published consumption or usage rates); and

(d) The proposed disposition of the oil or gas used (*e.g.,* whether gas used would be consumed as fuel, vented through use of a gas-activated pneumatic controller, returned to the reservoir, or used in some other way).

§ 3178.10 Facility and equipment ownership.

The operator is not required to own or lease the equipment or facility that uses oil or gas royalty free. The operator is responsible for obtaining all authorizations, measuring production, reporting production, and all other applicable requirements.

Subpart 3179—Waste Prevention and Resource Conservation

§ 3179.1 Purpose.

The purpose of this subpart is to implement and carry out the purposes of statutes relating to prevention of waste from Federal and Indian (other than Osage Tribe) leases, conservation of surface resources, and management of the public lands for multiple use and sustained yield. This subpart supersedes those portions of Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost (NTL–4A),, pertaining to, among other things, flaring and venting of produced gas, unavoidably and avoidably lost gas, and waste prevention.

§ 3179.2 Scope.

(a) This subpart applies to:

(1) All onshore Federal and Indian (other than Osage Tribe) oil and gas leases, units, and communitized areas, except as otherwise provided in this subpart;

(2) IMDA oil and gas agreements, unless specifically excluded in the agreement or unless the relevant provisions of this subpart are inconsistent with the agreement;

(3) Leases and other business agreements and contracts for the development of tribal energy resources under a Tribal Energy Resource Agreement entered into with the Secretary, unless specifically excluded in the lease, other business agreement, or Tribal Energy Resource Agreement;

(4) Committed State or private tracts in a federally approved unit or communitization agreement defined by or established under 43 CFR subpart 3105 or 43 CFR part 3180;

(5) All onshore wells, tanks, compressors, and other equipment located on a Federal or Indian lease or a federally approved unit or communitized area; and

(b) For purposes of this subpart, the term ''lease'' also includes IMDA agreements.

§ 3179.3 Definitions and acronyms.

As used in this subpart, the term:

Accessible component means a component that can be reached, if necessary, by safe and proper use of portable ladders or by built-in ladders and walkways. Accessible components also include components that can be reached by the safe use of an extension on a monitoring probe.

Automatic ignition system means an automatic ignitor and, where needed to ensure continuous combustion, a continuous pilot flame.

Capture means the physical containment of natural gas for transportation to market or productive use of natural gas, and includes reinjection and royalty-free on-site uses pursuant to subpart 3178.

Capture infrastructure means any pipelines, facilities, or other equipment (including temporary or mobile equipment) used to capture, transport, or process gas. Capture infrastructure includes, but is not limited to, equipment that compresses or liquefies natural gas, removes natural gas liquids, or generates electricity from gas.

Compressor station means any permanent combination of one or more compressors that move natural gas at increased pressure through gathering or transmission pipelines, or into or out of storage. This includes, but is not limited to, gathering and boosting stations and transmission compressor stations. The combination of one or more compressors located at a well site, or located at an onshore natural gas processing plant, is not a compressor station.

Continuous bleed means a continuous flow of pneumatic supply natural gas to a pneumatic controller.

Development oil well or *development gas well* means a well drilled to produce oil or gas, respectively, from an established field in which commercial quantities of hydrocarbons have been discovered and are being produced. For purposes of this subpart, the BLM will determine when a well is a development oil well or development gas well in the event of a disagreement between the BLM and the operator.

Gas-to-oil ratio (GOR) means the ratio of gas to oil in the production stream expressed in standard cubic feet of gas per barrel of oil.

Gas well means a well for which the energy equivalent of the gas produced, including its entrained liquefiable hydrocarbons, exceeds the energy equivalent of the oil produced. Unless more specific British thermal unit (Btu) values are available, a well with a gas-to-oil ratio greater than 6,000 standard cubic feet (scf) of gas per barrel of oil is a gas well. Except where gas has been re-injected into the reservoir, a mature oil well would not be reclassified as a gas well even after normal production decline has caused the GOR to increase beyond 6,000 scf of gas per barrel of oil.

High pressure flare means an open-air flare stack or flare pit designed for the combustion of natural gas leaving a pressurized production vessel (such as a separator or heater-treater) that is not a storage vessel.

Leak means a release of natural gas from a component that is not associated with normal operation of the component, when such release is:

(1) A visible hydrocarbon emission detected by use of an optical gas imaging instrument;

(2) At least 500 ppm of hydrocarbon detected using a portable analyzer or other instrument that can measure the quantity of the release; or

(3) Visible bubbles detected using soap solution.

Releases due to normal operation of equipment intended to vent as part of normal operations, such as gas-driven pneumatic controllers and safety release devices, are not considered leaks unless the releases exceed the quantities and frequencies expected during normal operations. Releases due to operator errors or equipment malfunctions or from control equipment at levels that exceed applicable regulatory requirements, such as releases from a thief hatch left open, a leaking vapor recovery unit, or an improperly sized combustor, are considered leaks.

Leak component means any component that has the potential to leak gas and can be monitored in the manner described in sections 3179.301 through 3179.305 of this subpart, including, but not limited to, valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems, thief hatches or other openings on a storage vessel, compressors, instruments, and meters.

Liquid hydrocarbon means chemical compounds of hydrogen and carbon atoms that exist as a liquid under the temperature and pressure at which they are measured. The term is used to refer to oil, condensate, liquefied petroleum gas (LPG), liquefied natural gas (LNG), and natural gas liquids (NGL).

Liquids unloading means the removal of an accumulation of liquid hydrocarbons or water from the wellbore of a completed gas well.

Lost oil or lost gas means produced oil or gas that escapes containment, either intentionally or unintentionally, or is flared before being removed from the lease, unit, or communitized area, and cannot be recovered.

Pneumatic controller means an automated instrument used for maintaining a process condition such as liquid level, pressure, delta-pressure, or temperature.

Storage vessel means a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of non-earthen materials (such as wood, concrete, steel, fiberglass, or plastic), which provide structural support. A well completion vessel that receives recovered liquids from a well after startup of production following flowback, for a period that exceeds 60 days, is considered a storage vessel under this subpart unless the storage of the recovered liquids in the vessel is governed by § 3162.3–3 of this title. For purposes of this subpart, the following are not considered storage vessels:

(1) Vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges or ships), and are intended to be located at a site for less than 180 consecutive days. This exclusion does not apply to well completion vessels or to storage vessels that are located at a site for at least 180 consecutive days.

(2) Process vessels such as surge control vessels, bottoms receivers, or knockout vessels.

(3) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.

(4) Tanks holding hydraulic fracturing fluid prior to implementation of an approved permanent disposal plan under Onshore Oil and Gas Order No. 7.

Volatile organic compounds (VOC) has the same meaning as defined in 40 CFR 51.100(s).

§ 3179.4 Determining when the loss of oil or gas is avoidable or unavoidable.

For purposes of this subpart:

Unavoidably lost oil or gas means lost oil or gas provided that the operator has not been negligent; the operator has complied fully with applicable laws, lease terms, regulations, provisions of a previously approved operating plan, or other written orders of the BLM; and the oil or gas is:

(1) Produced oil or gas that is lost from the following operations or sources, and that cannot be recovered in the normal course of operations, where the operator has taken prudent and reasonable steps to avoid waste:

(i) Well drilling;

(ii) Well completion and related operations;

(iii) Initial production tests, subject to the limitations in § 3179.103;

(iv) Subsequent well tests, subject to the limitations in § 3179.104;

(v) Exploratory coalbed methane well dewatering;

(vi) Emergencies, subject to the limitations in § 3179.105;

(vii) Normal operating losses from a natural gas-activated pneumatic controller or pump that is in compliance with § 3179.201 and § 3179.202;

(viii) Normal operating losses from a storage vessel or other low pressure production vessel that is in compliance with § 3179.203 and § 3174.5(b);

(ix) Well venting in the course of downhole well maintenance and/or liquids unloading performed in compliance with § 3179.204;

(x) Leaks, when the operator has complied with the leak detection and repair requirements in §§ 3179.301–305;

(xi) Facility and pipeline maintenance, such as when an operator must blow-down and depressurize equipment to perform maintenance or repairs; or

(xii) Flaring of gas from which at least 50 percent of natural gas liquids have been removed and captured for market, if the operator has notified the BLM through a Sundry Notice that the operator is conducting such capture; or

(2) Produced gas that is flared or vented from a well that is not connected to a gas pipeline, provided the BLM has not determined loss of gas through such venting or flaring is otherwise avoidable.

Avoidably lost oil or gas means: Lost oil or gas that is not ''unavoidably lost,'' as defined in paragraph (a) of this section; waste oil that became waste oil through operator negligence; and, any ''excess flared gas,'' as defined in § 3179.7.

§ 3179.5 When lost production is subject to royalty.

(a) Royalty is due on all avoidably lost oil or gas.

(b) Royalty is not due on any unavoidably lost oil or gas.

§ 3179.6 Venting prohibition.

(a) Gas well gas may not be flared or vented, except where it is unavoidably lost pursuant to § 3179.4(a).

(b) The operator must flare rather than vent any gas that is not captured, except:

(1) When flaring the gas is technically infeasible, such as when the gas is not readily combustible or the volumes are too small to flare;

(2) Under emergency conditions, as defined in § 3179.105, when the loss of gas is uncontrollable or venting is necessary for safety;

(3) When the gas is vented through normal operation of a natural gas-activated pneumatic controller or pump;

(4) When the gas is vented from a storage vessel, provided that § 3179.203 does not require the combustion or flaring of the gas;

(5) When the gas is vented during downhole well maintenance or liquids unloading activities performed in compliance with § 3179.204;

(6) When the gas is vented through a leak, provided that the operator is in full compliance with §§ 3179.301 through 3179.305;

(7) When the gas venting is necessary to allow non-routine facility and pipeline maintenance to be performed, such as when an operator must, upon occasion, blow-down and depressurize equipment to perform maintenance or repairs; or

(8) When a release of gas is unavoidable under § 3179.4 and flaring is prohibited by Federal, State, local or Tribal law, regulation, or enforceable permit term.

(c) For purposes of this subpart, all flares or combustion devices must be equipped with an automatic ignition system.

§ 3179.7 Gas capture requirement.

(a) Except as provided in § 3179.8, on a monthly basis, each operator must capture for sale or use on site a volume of gas sufficient to meet the ''capture percentage'' requirement specified in paragraph (b) of this section.

(b) Beginning January 17, 2018, the operator's capture percentage must equal:

(1) For each month during the period from January 17, 2018 until December 31, 2019: 85 percent;

(2) For each month during the period from January 1, 2020 until December 31, 2022: 90 percent;

(3) For each month during the period from January 1, 2023 until December 31, 2025: 95 percent; and

(4) For each month beginning January 1, 2026: 98 percent.

(c) The term ''capture percentage'' in this section means the ''total volume of gas captured'' over the ''relevant area'' divided by the ''adjusted total volume of gas produced'' over the ''relevant area.''

(1) The term ''total volume of gas captured'' in this section means: for each month, the volume of gas sold from all of the operator's development oil wells in the relevant area plus the volume of gas from such wells used on lease, unit, or communitized area in the relevant area.

(2) The term ''adjusted total volume of gas produced'' in this section means: the total volume of gas captured over the month *plus* the total volume of gas flared over the month from high pressure flares from all of the operator's development oil wells that are in production in the relevant area, *minus*:

(i) For each month from January 17, 2018 until December 31, 2018: 5,400 Mcf times the total number of development oil wells ''in production'' in the relevant area;

(ii) For each month in calendar year 2019: 3,600 Mcf times the total number of development oil wells in production in the relevant area;

(iii) For each month in calendar year 2020: 1,800 Mcf times the total number of development oil wells in production in the relevant area; and

(iv) For each month in calendar year 2021: 1,500 Mcf times the total number of development oil wells in production in the relevant area;

(v) For each month in calendar years 2022–2023: 1,200 Mcf times the total number of development oil wells in production in the relevant area;

(vi) For each month in calendar year 2024: 900 Mcf times the total number of development oil wells in production in the relevant area; and

(vii) For each month in calendar year 2025 and thereafter: 750 Mcf times the total number of development oil wells in production in the relevant area.

(3) The term ''relevant area'' in this section means:

(i) Each of the operator's leases, units, or communitized areas; or

(ii) All of the operator's development oil wells on leases, units, and communitized areas within a county or within a State, if the operator notifies the BLM by Sundry Notice by January 1, of the relevant year that the operator has chosen to comply on a county- or State-wide basis.

(4) An oil well is considered ''in production'' only after the well has begun producing oil, and only during a month in which it produces gas (that is sold or flared) for 10 or more days.

(d) In any month in which the operator fails to meet the required capture percentage, the ''excess flared gas'' is royalty-bearing under § 3179.4. The term ''excess flared gas'' means:

Excess flared gas = (required capture percentage * adjusted total volume of gas produced over the relevant area) − total volume of gas captured.

(e) For purposes of calculating royalties on an operator's excess flared gas in a given month, the operator must prorate the excess flared gas across the relevant area to each lease, unit or communitized area *that reported high-pressure flaring during the month.*

§ 3179.8 Alternative capture requirement.

(a) With respect to leases issued before the effective date of this regulation, for operators choosing to comply with the capture requirement in § 3179.7 on a lease-by-lease, unit-by-unit, or communitized area-by-communitized area basis, the BLM may approve a capture percentage lower than the applicable capture percentage specified under § 3179.7, if the operator demonstrates, and the BLM agrees, that the applicable capture percentage under § 3179.7 would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

(b) To support a demonstration under paragraph (a) of this section, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available and the volumes being vented and flared from each well;

(3) Map(s) showing:

(i) The entire lease, unit, or communitized area and the surrounding lands to a distance and on a scale that shows the field in which the well or wells are or will be located (if applicable), and all pipelines that could transport the gas from the well or wells;

(ii) All of the operator's producing oil and gas wells, which are producing from Federal or Indian leases (both on Federal or Indian leases and on other properties) within the map area;

(iii) Identification of all of the operator's wells within the lease, unit, or communitized area from which gas is flared or vented, and the location and distance of the nearest gas pipeline(s) to each such well, with an identification of those pipelines that are or could be available for connection and use; and

(iv) Identification of all of the operator's wells within the lease, unit, or communitized area from which gas is captured;

(4) Data that show pipeline capacity and the operator's projections of the cost associated with installation and operation of gas capture infrastructure, to the extent that the operator is able to obtain this information, as well as cost projections for alternative methods of transportation that do not require pipelines;

(5) Projected costs of and the combined stream of revenues from both gas and oil production, including:

(i) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.,* heating value and H_2S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and

(ii) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

(c) In establishing an alternative capture requirement under this section, the BLM will set the capture percentage at the highest level that the BLM determines, considering the information identified in paragraph (b) of this section, will not cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

§ 3179.9 Measuring and reporting volumes of gas vented and flared.

(a) The operator must estimate or measure all volumes of gas vented or flared from wells, facilities and equipment on a lease, unit PA, or communitized area and report those volumes under applicable ONRR reporting requirements.

(b) The operator may estimate such volumes, except:

(1) If the operator estimates that the volume of gas flared from a high pressure flare stack or manifold equals or exceeds an average of 50 Mcf per day for the life of the flare, or the previous 12 months, whichever is shorter, then, beginning January 17, 2018 the operator must either:

(i) *Measure* the volume of the flared gas; or

(ii) Calculate the volume of the flared gas based on the results of a regularly performed GOR test and measured values for the volumes of oil production and gas sales, so as to allow *BLM to independently verify the volume, rate, and heating value of the flared gas*; or

(2) If the BLM determines and informs the operator that the additional accuracy offered by measurement is necessary for effective implementation of this Subpart, then the operator must measure the volume of the flared gas.

(c) If measurement or calculation is required under paragraph (b) of this section for a flare that is combusting gas that is combined across multiple leases, unit PAs, or communitized areas, the operator may measure or calculate the gas at a single point at the flare, but must use an allocation method approved by the BLM to allocate the quantities of flared gas to each lease, unit PA, or communitized area.

§ 3179.10 Determinations regarding royalty-free flaring.

(a) Approvals to flare royalty free, which are in effect as of the effective date of this rule, will continue in effect until January 17, 2018.

(b) The provisions of this subpart do not affect any determination made by the BLM before or after January 17, 2017, with respect to the royalty-bearing status of flaring that occurred prior to January 17, 2017.

§ 3179.11 Other waste prevention measures.

(a) If production from an oil well newly connected to a gas pipeline results or is expected to result in one or more producing wells already connected to the pipeline being forced off the pipeline, the BLM may exercise its authority under applicable laws and regulations, as well as its authority under the terms of applicable permits, orders, leases, and unitization or communitization agreements, to limit the production level from the new well until the pressure of gas production from the new well stabilizes at levels that allow transportation of gas from all wells connected to the pipeline.

(b) If gas capture capacity is not yet available on a given lease, the BLM may exercise its authority under applicable laws and regulations, as well as its authority under the terms of applicable permits, orders, leases, and unitization or communitization agreements, to delay action on an APD for that lease, or approve the APD with conditions for gas capture or limitations on production. If the lease for which an APD is submitted is not yet producing, the BLM may direct or grant a lease suspension under 43 CFR 3103.4–4.

§ 3179.12 Coordination with State regulatory authority.

To the extent that any BLM action to enforce a prohibition, limitation, or order under this subpart may adversely affect production of oil or gas that comes from non-Federal and non-Indian mineral interests, the BLM will coordinate, on a case-by-case basis, with the State regulatory authority having jurisdiction over the oil and gas production from the non-Federal and non-Indian interests.

Flaring and Venting Gas During Drilling and Production Operations

§ 3179.101 Well drilling.

(a) Except as provided in § 3179.6 of this subpart, and unless technically infeasible, gas that reaches the surface as a normal part of drilling operations must be:

(1) Captured and sold;

(2) Directed to a flare pit or flare stack to combust any flammable gasses;

(3) Used in operations on the lease, unit, or communitized area; or

(4) Injected.

(b) If gas is lost as a result of loss of well control, the BLM will make a determination of whether the loss of well control is due to operator negligence. Such gas is avoidably lost if the BLM determines that the loss of well control is due to operator negligence. The BLM will notify the operator in writing when it makes a determination that gas was lost due to operator negligence.

§ 3179.102 Well completion and related operations.

(a) Except as provided in § 3179.6, and unless technically infeasible, after a well has been hydraulically fractured or refractured, gas that reaches the surface during well completion, post-completion, and fluid recovery operations must be:

(1) Captured and sold;

(2) Directed to a flare pit or flare stack to combust any flammable gasses, subject to the volumetric limitations in § 3179.103(a)(3);

(3) Used in operations on the lease, unit, or communitized area; or

(4) Injected.

(b) An operator will be deemed to be in compliance with the requirements of paragraph (a) of this section, if the operator is in compliance with the requirements for control of gas from well completions established under 40 CFR part 60, subpart OOOO or subpart OOOOa or if the well is not a ''well affected facility'' under either of those subparts.

(c) The requirements of paragraph (a) of this section will not apply where the operator demonstrates through a Sundry Notice, and the BLM agrees, that compliance with paragraph (a) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

(d) To support a demonstration under paragraph (d) of this section, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance with paragraph (a) of this section on the lease; (4) Projected costs of and the combined stream of revenues from both gas and oil production, including: the operator's projections of oil and gas prices, production volumes, quality (*i.e.,* heating value and H_2S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

§ 3179.103 Initial production testing.

(a) Gas flared during a well's initial production test is royalty-free under §§ 3179.4(a)(1)(iii) and 3179.5(b) of this subpart until one of the following occurs:

(1) The operator determines that it has obtained adequate reservoir information for the well;

(2) 30 days have passed since the beginning of the production test, except as provided in paragraph (b) and paragraph (d) of this section;

(3) The operator has flared 20 million cubic feet (MMcf) of gas, when volumes flared under this section are combined with volumes flared under § 3179.102(a)(2), except as provided in paragraph (c) of this section; or

(4) Production begins.

(b) The BLM may extend the period specified in paragraph (a)(2) not to exceed an additional 60 days, based on testing delays caused by well or equipment problems or if there is a need for further testing to develop adequate reservoir information.

(c) The BLM may increase the limit specified in paragraph (a)(3) by up to an additional 30 million cubic feet of gas for exploratory wells in remote locations where additional testing is needed in advance of development of pipeline infrastructure.

(d) During the dewatering and initial evaluation of an exploratory coalbed methane well, the 30-day period specified in paragraph (a)(2) of this section is extended to 90 days. The BLM may approve up to two extensions of this evaluation period, of up to 90 days each.

(e) The operator must submit its request for a longer test period or increased limit under paragraphs (b), (c), or (d) of this section using a Sundry Notice.

§ 3179.104 Subsequent well tests.

During well tests subsequent to the initial production test, the operator may flare gas for no more than 24 hours royalty free, unless the BLM approves or requires a longer period. The operator must request a longer period under this section using a Sundry Notice.

§ 3179.105 Emergencies.

(a) An operator may flare or, if flaring is not feasible given the emergency, vent gas royalty-free under § 3179.4(a)(vi) of this subpart during an emergency. For purposes of this subpart, an ''emergency'' is a temporary, infrequent and unavoidable situation in which the loss of gas or oil is uncontrollable or necessary to avoid risk of an immediate and substantial adverse impact on safety, public health, or the environment. For purposes of royalty assessment, an ''emergency'' is limited to a short-term situation of 24 hours or less (unless the BLM agrees that the emergency conditions necessitating venting or flaring extend for a longer period) caused by an unanticipated event or failure that is out of the operator's control and was not due to operator negligence.

(b) The following do not constitute emergencies for the purposes of royalty assessment:

(1) More than 3 failures of the same component within a single piece of equipment within any 365-day period;

(2) The operator's failure to install appropriate equipment of a sufficient

capacity to accommodate the production conditions;

(3) Failure to limit production when the production rate exceeds the capacity of the related equipment, pipeline, or gas plant, or exceeds sales contract volumes of oil or gas;

(4) Scheduled maintenance;

(5) A situation caused by operator negligence; or

(6) A situation on a lease, unit, or communitized area that has already experienced 3 or more emergencies within the past 30 days, unless the BLM determines that the occurrence of more than 3 emergencies within the 30 day period could not have been anticipated and was beyond the operator's control.

(c) Within 45 days of the start of the emergency, the operator must estimate and report to the BLM on a Sundry Notice the volumes flared or vented beyond the timeframes specified in paragraph (b) of this section.

Gas Flared or Vented From Equipment and During Well Maintenance Operations

§ 3179.201 Equipment requirements for pneumatic controllers.

(a) A pneumatic controller that uses natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease, is subject to this section if the pneumatic controller:

(1) Has a continuous bleed rate greater than 6 standard cubic feet (scf) per hour; and

(2) Is not subject to any of the requirements of 40 CFR part 60, subpart OOOO or subpart OOOOa, but would be subject to one of those subparts if it were a new, modified, or reconstructed source.

(b) The operator must replace a pneumatic controller subject to this section with a controller (including but not limited to a continuous or intermittent pneumatic controller) having a bleed rate of 6 scf per hour or less within the timeframes set forth in paragraph (d) of this section, unless:

(1) Use of a pneumatic controller with a bleed rate greater than 6 scf per hour is required based on functional needs that may include, but are not limited to, response time, safety, and positive actuation, provided that the operator notifies the BLM through a Sundry Notice that describes the functional needs necessitating the use of a pneumatic controller with a bleed rate greater than 6 scf per hour;

(2) The pneumatic controller exhaust was, as of January 17, 2017 and continues to be, routed to a flare device or low-pressure combustor;

(3) The pneumatic controller exhaust is routed to processing equipment; or

(4) The operator notifies the BLM through a Sundry Notice and demonstrates, and the BLM agrees, based on the information identified in paragraph (c) of this section, that replacement of a pneumatic controller subject to paragraph (a)(1)(i) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

(c) To support a demonstration under paragraph (b)(4) of this section, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each of the operator's wells, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance with paragraph (b) of this section on the lease;

(4) Projected costs of and the combined stream of revenues from both gas and oil production, including:

(i) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.,* heating value and H_2S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and

(ii) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

(d) The operator must replace the pneumatic controller(s) no later than 1 year after the effective date of this section as required under paragraph (b) of this section. If, however, the well or facility that the pneumatic controller serves has an estimated remaining productive life of 3 years or less from the effective date of this section, then the operator may notify the BLM through a Sundry Notice and replace the pneumatic controller no later than 3 years from the effective date of this section.

(e) The operator must ensure pneumatic controllers are functioning within manufacturers' specifications.

§ 3179.202 Requirements for pneumatic diaphragm pumps.

(a) A pneumatic diaphragm pump is subject to this section if it:

(1) Uses natural gas produced from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and

(2) Is not subject to any of the requirements of 40 CFR part 60, subpart OOOOa, but would be subject to that subpart if it were a new, modified or reconstructed source.

(b) An operator is not required to comply with paragraphs (c) through (h), with respect to a pneumatic diaphragm pump or pumps if:

(1) The pump does not vent exhaust gas to the atmosphere; or

(2) The operator submits a Sundry Notice to the BLM documenting that the pump(s) operated on less than 90 individual days in the prior calendar year.

(c) For each pneumatic diaphragm pump subject to this section and within the timeframes set forth in paragraph (h) of this section, the operator must:

(1) Replace the pump with a zero-emissions pump, which may be an electric-powered pump; or

(2) Route the pump exhaust gas to processing equipment for capture and sale.

(d) As an alternative to compliance with paragraph (c), the operator may route the pump exhaust gas to a flare or low pressure combustor device within the timeframes set forth in paragraph (h) of this section, if the operator determines and notifies the BLM through a Sundry Notice that:

(1) Replacing the pump with a zero-emissions pump is not viable because a pneumatic pump is necessary to perform the function required; and

(2) Routing the pump exhaust gas to processing equipment for capture and sale is technically infeasible or unduly costly.

(e) If the operator has met the criteria in paragraph (d) allowing the operator to use the compliance alternative provided in paragraph (d), but the operator has no flare or low pressure combustor device on site, or routing the exhaust gas to such a flare or low pressure combustor device would be technically infeasible, the operator need take no further action to comply with paragraphs (c) through (h).

(f) An operator that is required to replace a pump or route the exhaust gas from a pump to capture or a flare or combustion device under this section, may nonetheless be exempt from such requirement if the operator submits a Sundry Notice to the BLM that provides an economic analysis that demonstrates, and the BLM agrees, based on the information identified in paragraph (g) of this section, that compliance with the provisions of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

(g) The Sundry Notice described in paragraph (f) must include the following information:

(1) Well information must include:

(i) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated; and

(ii) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(2) Data that show the costs of compliance with paragraphs (c) through (e) of this section on the lease;

(3) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide:

(i) The operator's projections of gas prices, gas production volumes, gas quality (*i.e.,* heating value and H_2S content), revenues derived from gas production, and royalty payments on gas production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less; and

(ii) The operator's projections of oil prices, oil production volumes, costs, revenues, and royalty payments from the operator's oil and gas operations within the lease over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

(h) The operator must replace the pneumatic diaphragm pump(s) or route the exhaust gas to capture or to a flare or combustion device no later than 1 year after the effective date of this section, except that if the operator will comply with paragraph (c) of this section by replacing the pneumatic diaphragm pump with a zero-emission pump and the well or facility that the pneumatic diaphragm pump serves has an estimated remaining productive life of 3 years or less from the effective date of this section, the operator must notify the BLM through a Sundry Notice and replace the pneumatic diaphragm pump no later than 3 years from the effective date of this section.

(i) The operator must ensure its pneumatic diaphragm pumps are functioning within manufacturers' specifications.

§ 3179.203 Storage vessels.

(a) A storage vessel is subject to this section if the vessel:

(1) Contains production from a Federal or Indian lease, or from a unit or communitized area that includes a Federal or Indian lease; and

(2) Is not subject to any of the requirements of 40 CFR part 60, subparts OOOO or OOOOa, but would be subject to one of those subparts if it were a new, modified or reconstructed source.

(b) Within 60 days after the effective date of this section, and within 30 days after any new source of production is added to the storage vessel, the operator must determine, record, and make available to the BLM upon request, whether the storage vessel has the potential for VOC emissions equal to or greater than 6 tpy based on the maximum average daily throughput for a 30-day period of production. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a federal, state, local or tribal authority that limit the VOC emissions to less than 6 tpy.

(c) If a storage vessel has the potential for VOC emissions equal to or greater than 6 tpy under paragraph (b) of this section, no later than one year after the effective date of this section, or three years if the operator must and will replace the storage vessel at issue in order to comply with the requirements of this section, the operator must:

(1) Route all tank vapor gas from the storage vessel to a sales line;

(2) If the operator determines that compliance with paragraph (c)(1) of this section is technically infeasible or unduly costly, route all tank vapor gas from the storage vessel to a device or method that ensures continuous combustion of the tank vapor gas; or

(3) Submit an economic analysis to the BLM through a Sundry Notice that demonstrates, and the BLM agrees, based on the information identified in paragraph (d) of this section, that compliance with paragraph (c)(2) of this section would impose such costs as to cause the operator to cease production and abandon significant recoverable oil reserves under the lease.

(d) To support a demonstration under paragraph (c) of this section, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance with paragraph (c)(1) or (c)(2) of this section on the lease;

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide:

(i) The operator's projections of oil and gas prices, production volumes, quality (*i.e.,* heating value and H_2S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less.

(e) If the rate of total uncontrolled VOCs released from a storage vessel declines to 4 tpy or less for any continuous 12 month period, the requirements of paragraph (c) no longer apply.

(f) Storage vessels subject to this section must be adequately sized to accommodate the operator's production levels and equipped to meet any applicable regulatory requirements regarding tank vapors.

(g) Storage vessels subject to this section may only vent through properly functioning pressure relief devices.

§ 3179.204 Downhole well maintenance and liquids unloading.

(a) The operator must minimize vented gas and the need for well venting associated with downhole well maintenance and liquids unloading, consistent with safe operations.

(b) For wells equipped with a plunger lift system and/or an automated well control system, minimizing gas venting under paragraph (a) includes optimizing the operation of the system to minimize gas losses to the extent possible consistent with removing liquids that would inhibit proper function of the well.

(c) Before the operator manually purges a well for liquids unloading for the first time after the effective date of this section, the operator must consider other methods for liquids unloading and determine that they are technically infeasible or unduly costly. The operator must provide information supporting that determination as part of the Sundry Notice required under paragraph (e) of this section.

(d) For any liquids unloading by manual well purging, the operator must:

(1) Ensure that the person conducting the well purging remains present on-site throughout the event to minimize to the maximum extent practicable any venting to the atmosphere;

(2) Record the cause, date, time, duration, and estimated volume of each venting event; and

(3) Maintain the records for the period required under § 3162.4–1 of this title and make them available to the BLM, upon request.

(e) The operator must notify the BLM by Sundry Notice within 30 calendar days after the first liquids unloading event by manual or automated well purging conducted after the effective date of this section. This requirement applies to each well the operator operates.

(f) The operator must notify the BLM by Sundry Notice, within 30 calendar days, if:

(1) The cumulative duration of manual well purging events for a well exceeds 24 hours during any production month; or

(2) The estimated volume of gas vented in liquids unloading by manual well purging operations for a well exceeds 75 Mcf during any production month.

(g) For purposes of this section, ''well purging'' means blowing accumulated liquids out of a wellbore by reservoir gas pressure, whether manually or by an automatic control system that relies on real-time pressure or flow, timers, or other well data, where the gas is vented to the atmosphere, and it does not apply to wells equipped with a plunger lift system.

(h) Total estimated volumes vented as a result of downhole well maintenance and liquids unloading, including through the operation of plunger lifts and automated well controls, during the production month must be included in volumes reported to ONRR as vented.

Leak Detection and Repair (LDAR)

§ 3179.301 Operator responsibility.

(a) The requirements of §§ 3179.301 through 3179.305 of this subpart apply to:

(1) A site and all equipment associated with it used to produce, process, compress, treat, store, or measure natural gas (including oil wells that also produce natural gas) from or allocated to a Federal or Indian lease, unit, or communitized area, where the site is upstream of or contains the approved point of royalty measurement; and

(2) A site and all equipment operated by the operator and associated with a site used to store, measure, or dispose of produced water, where the site is located on a Federal or Indian lease.

(b) The requirements of §§ 3179.301 through 3179.305 of this subpart do not apply to:

(1) A site that contains a wellhead or wellheads and no other equipment; or

(2) A well or well equipment that has been depressurized.

(c) As prescribed in §§ 3179.302 and 3179.303 of this subpart, the operator must inspect all equipment covered under this section, as provided in paragraph (a) of this section, for gas leaks from leak components.

(d) The operator is not required to inspect or monitor a leak component that is not an accessible component.

(e) For purposes of §§ 3179.301 through 3179.305, the term ''site'' means a discrete area located on a lease, unit, or communitized area, and containing a wellhead, wellhead equipment, or other equipment used to produce, process, compress, treat, store, or measure natural gas or store, measure, or dispose of produced water, which is suitable for inspection in a single visit.

(f) The operator must make the first inspection of each site:

(1) Within one year of January 17, 2017 for sites that have begun production prior to January 17, 2017;

(2) Within 60 days of beginning production for sites that begin production after January 17, 2017; and

(3) Within 60 days of the date when a site that was out of service is brought back into service and re-pressurized.

(g) The operator must make subsequent inspections as prescribed in § 3179.303.

(h) All leak inspections must occur during production operations.

(i) The operator must fix identified leaks as prescribed in §§ 3179.304 and 3179.305 of this subpart. See 43 CFR 3162.5–1 for responsibility to repair oil leaks.

(j) With respect to new, modified or reconstructed equipment, an operator will be deemed to be in compliance with the requirements of this section for such equipment, if the operator is in compliance with the requirements of subpart OOOOa applicable to such equipment.

(k) For each lease, unit, or communitized area, for all covered sites and equipment not already deemed in compliance with the requirements of this section pursuant to paragraph (j), an operator may choose to satisfy the requirements of §§ 3179.301 through 3179.305 by:

(1) Treating each of those sources as if it were a collection of fugitive emissions components as defined in 40 CFR part 60 subpart OOOOa;

(2) Complying with the requirements of 40 CFR part 60 subpart OOOOa that apply to affected facility fugitive emissions components at a well site (or for compressor stations, that apply to affected facility fugitive emissions components at a compressor station) under 40 CFR part 60, subpart OOOOa; and

(3) Notifying the BLM through a Sundry Notice regarding such compliance.

§ 3179.302 Approved instruments and methods.

(a) The operator must use one or more of the following instruments, operated according to the manufacturer's specifications or as specified below, to detect leaks:

(1) An optical gas imaging device capable of imaging a gas that is half methane, half propane at a concentration of 10,000 ppm at a flow rate of less than or equal to 60 grams per hour from a quarter inch diameter orifice;

(2) A portable analyzer device capable of detecting leaks, such as catalytic oxidation, flame ionization, infrared absorption or photoionization devices, used for a leak detection survey conducted in compliance with the relevant sections of Method 21 at 40 CFR part 60, appendix A–7, including section 8.3.1. and assisted by audio, visual, and olfactory inspection; or

(3) A leak detection device not listed in this section that is approved by the BLM for use by any operator under § 3179.302(d) of this subpart.

(b) The person operating any of the leak detection devices listed in or approved under this section must be adequately trained in the proper use of the device.

(c) Any person may request approval of an alternative monitoring device and protocol by submitting a Sundry Notice to BLM that includes the following information:

(1) Specifications of the proposed monitoring device, including a detection limit capable of supporting the desired function;

(2) The proposed monitoring protocol using the proposed monitoring device, including how results will be recorded;

(3) Records and data from laboratory and field testing, including but not limited to performance testing;

(4) A demonstration that the proposed monitoring device and protocol will achieve equal or greater reduction of gas lost through leaks compared with the approach specified in § 3179.302(a)(1) when used according to § 3179.303(a) of this subpart;

(5) Tracking and documentation procedures; and

(6) Proposed limitations on the types of sites or other conditions on deploying the device and the protocol to achieve the demonstrated results.

(d) The BLM may approve an alternative monitoring device and associated inspection protocol, if the BLM finds that the alternative would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in § 3179.302(a)(1) when used according to § 3179.303(a) of this subpart.

(1) The BLM will provide public notice of a submission for approval under section 3179.302(c).

(2) The BLM may approve an alternative device and monitoring protocol for use in all or most applications, or for use on a pilot or demonstration basis under specified circumstances that limit where and for how long the device may be used.

(3) The BLM will post on the BLM Web site a list of each approved alternative monitoring device and protocol, along with any limitations on its use.

§ 3179.303 Leak detection inspection requirements for natural gas wellhead equipment and other equipment.

(a) Except as provided below or otherwise authorized in paragraph (b) of this section, the operator must inspect leak components located on and around the equipment identified in § 3179.301(a) of this subpart for leaks using a leak detection device listed under § 3179.302 according to the following parameters:

(1) The operator must inspect each site at least semi-annually, and consecutive semiannual inspections must be conducted at least 4 months apart; and

(2) The operator must inspect each compressor station at least quarterly, and consecutive quarterly inspections must be conducted at least 60 days apart.

(b) The BLM may approve an operator's request to use an alternative instrument-based leak detection program, in lieu of compliance with the requirements of § 3179.303(a), if the BLM finds that the alternative program would achieve equal or greater reduction of gas lost through leaks compared with the approach specified in §§ 3179.302(a)(1) and 3179.303(a) of this subpart. The operator must submit its request for an alternative leak detection program through a Sundry Notice that includes the following information:

(1) A detailed description of the alternative leak detection program, including how it will use one or more of the instruments specified in or approved under § 3179.302(a) and an identification of the specific instruments, methods and/or practices that would substitute for specific elements of the approach specified in §§ 3179.302(a) and 3179.303(a);

(2) The proposed monitoring protocol;

(3) Records and data from laboratory and field testing, including, but not limited to, performance testing, to the extent relevant;

(4) A demonstration that the proposed alternative leak detection program will achieve equal or greater reduction of gas lost through leaks compared to compliance with the requirements specified in §§ 3179.302(a) and 3179.303(a);

(5) A detailed description of how the operator will track and document its procedures, leaks found, and leaks repaired; and

(6) Proposed limitations on types of sites or other conditions on deployment of the alternative leak detection program.

(c) If the operator demonstrates, and the BLM agrees, that compliance with the requirements of §§ 3179.301–305, including the option for compliance with an alternative leak detection program under § 3179.303(b) would impose such costs as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease, the BLM may approve an alternative leak detection program for that operator that does not meet the criterion specified in § 3179.303(b)(4), but is as effective as possible consistent with not causing the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

(d) To support a demonstration under paragraph (c) of this section, the operator must submit a Sundry Notice that includes the following information:

(1) The name, number, and location of each well, and the number of the lease, unit, or communitized area with which it is associated;

(2) The oil and gas production levels of each of the operator's wells on the lease, unit or communitized area for the most recent production month for which information is available;

(3) Data that show the costs of compliance on the lease with the requirements of §§ 3179.301–305 and with an alternative leak detection program that meets the requirements of § 3179.303(b);

(4) The operator must consider the costs and revenues of the combined stream of revenues from both the gas and oil components and provide the operator's projections of oil and gas prices, production volumes, quality (*i.e.,* heating value and H_2S content), revenues derived from production, and royalty payments on production over the next 15 years or the life of the operator's lease, unit, or communitized area, whichever is less;

(5) The information required under § 3179.303(b), except that in lieu of the demonstration required under § 3179.303(b)(4), the operator must demonstrate that the alternative program is as effective as possible, consistent with not imposing such costs as to cause the operator to cease production and abandon significant recoverable oil or gas reserves under the lease.

(e) For any BLM approval of an operator's use of an alternative leak detection program under subparagraph (b) or (c) of this section, the BLM will post online the alternative program approved for that operator, including, at minimum, the information required in subparagraph (b)(1), (b)(2), (b)(5), and (b)(6) of this section.

§ 3179.304 Repairing leaks.

(a) The operator must repair any leak as soon as practicable, and in no event later than 30 calendar days after discovery, unless good cause exists for repair requiring a longer period. Good cause for delay of repair exists if the repair (including replacement) is technically infeasible (including unavailability of parts that have been ordered), would require a pipeline blowdown, a compressor station shutdown, a well shut-in, or would be unsafe to conduct during operation of the unit.

(b) If there is good cause for delaying the repair beyond 30 calendar days, the operator must notify the BLM of the cause by Sundry Notice and must complete the repair at the earliest opportunity, for example during the next compressor station shutdown, well shut-in, or pipeline blowdown. In no case may the repair be delayed beyond 2 years.

(c) Not later than 30 calendar days after completion of a repair, the operator must verify the effectiveness of the repair through a follow-up inspection using one of the instruments specified or approved under § 3179.302(a) or a soap bubble test under Section 8.3.3 of EPA Method 21—Determination of Volatile Organic Compound Leaks (40 CFR Appendix A–7 to part 60).

(d) If the repair is not effective, the operator must complete additional repairs within 15 calendar days, and conduct follow-up inspections and repairs until the leak is repaired.

(e) A follow-up inspection to verify the effectiveness of repairs does not constitute an inspection for purposes of § 3179.303.

§ 3179.305 Leak detection inspection recordkeeping and reporting.

(a) The operator must maintain the following records for the period required under § 3162.4–1 of this title and make them available to the BLM upon request:

(1) For each inspection required under § 3179.303 of this subpart, documentation of:

(i) The date of the inspection; and

(ii) The site where the inspection was conducted;

(2) The monitoring method(s) used to determine the presence of leaks;

(3) A list of leak components on which leaks were found;

(4) The date each leak was repaired; and

(5) The date and result of the follow-up inspection(s) required under § 3179.304 paragraph (c) or (d) of this subpart.

(b) By March 31 each calendar year, the operator must provide to the BLM an annual summary report on the previous year's inspection activities that includes:

(1) The number of sites inspected;

(2) The total number of leaks identified, categorized by the type of component;

(3) The total number of leaks repaired;

(4) The total number leaks that were not repaired as of December 31 of the previous calendar year due to good cause and an estimated date of repair for each leak.

(5) A certification by a responsible officer that the information in the report is true and accurate to the best of the officer's knowledge.

(c) AVO checks are not required to be documented unless they find a leak requiring repair.

State or Tribal Variances

§ 3179.401 State or tribal requests for variances from the requirements of this subpart.

(a)(1) At the request of a State (for Federal land) or a tribe (for Indian lands), the BLM State Director may grant a variance from any provision(s) of this Subpart that would apply to all Federal leases, units, or communitized areas within a State or to all tribal leases, units, or communitized areas within that tribe's lands, or to specific fields or basins within the State or that tribe's lands, if the BLM finds that the variance would meet the criteria in paragraph (b) of this section.

(2) A State or tribal variance request must:

(i) Identify the provision(s) of this subpart from which the State or tribe is requesting the variance;

(ii) Identify the State, local, or tribal regulation(s) or rule(s) that would be applied in place of the provision(s) of this subpart;

(iii) Explain why the variance is needed; and

(iv) Demonstrate how the State, local, or tribal regulation(s) or rule(s) would perform at least equally well in terms of reducing waste of oil and gas, reducing environmental impacts from venting and or flaring of gas, and ensuring the safe and responsible production of oil and gas, compared to the particular provision(s) from which the State or tribe is requesting the variance.

(b) The BLM State Director, after considering all relevant factors, may approve the request for a variance, or approve it with one or more conditions, only if the BLM determines that the State, local or tribal regulation(s) or rule(s) would perform at least equally well in terms of reducing waste of oil and gas, reducing environmental impacts from venting and/or flaring of gas, and ensuring the safe and responsible production of oil and gas, compared to the particular provision(s) from which the State or tribe is requesting the variance, and would be consistent with the terms of the affected Federal or Indian leases and applicable statutes. The decision to grant or deny the variance will be in writing and is within the BLM's discretion. The decision on a variance request is not subject to administrative appeals under 43 CFR part 4.

(c) A variance from any particular requirement of this rule does not constitute a variance from provisions of other regulations, laws, or orders.

(d) The BLM reserves the right to rescind a variance or modify any condition of approval.

(e) If the BLM approves a variance under this section, the State or tribe that requested the variance must notify the BLM in writing in a timely manner of any substantive amendments, revisions, or other changes to the State, local or tribal regulation(s) or rule(s) to be applied under the variance.

(f) If the BLM approves a variance under this section, the State, local or tribal regulation(s) or rule(s) to be applied under the variance can be enforced by the BLM as if the regulation(s) or rule(s) were provided for in this Subpart. The State, locality, or tribes' own authority to enforce its regulation(s) or rule(s) to be applied under the variance would not be affected by the BLM's approval of a variance.

[FR Doc. 2016–27637 Filed 11–17–16; 8:45 am]

BILLING CODE 4310–84–P

FEDERAL REGISTER

Vol. 81 Friday,

No. 223 November 18, 2016

Part IX

Department of Defense

General Services Administration

National Aeronautics and Space Administration

48 CFR Chapter 1

Federal Acquisition Regulations; Final Rules

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Chapter 1

[Docket No. FAR 2016–0051, Sequence No. 6]

Federal Acquisition Regulation; Federal Acquisition Circular 2005–92; Introduction

AGENCIES: Department of Defense (DoD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

ACTION: Summary presentation of final rules.

SUMMARY: This document summarizes the Federal Acquisition Regulation (FAR) rules agreed to by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) in this Federal Acquisition Circular (FAC) 2005–92. A companion document, the *Small Entity Compliance Guide* (SECG), follows this FAC. The FAC, including the SECG, is available via the Internet at *http://www.regulations.gov.*

DATES: For effective dates see the separate documents, which follow.

FOR FURTHER INFORMATION CONTACT: The analyst whose name appears in the table below in relation to the FAR case. Please cite FAC 2005–92 and the specific FAR case number. For information pertaining to status or publication schedules, contact the Regulatory Secretariat Division at 202–501–4755.

RULES LISTED IN FAC 2005–92

Item	Subject	FAR Case	Analyst
I	Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation.	2015–024	Gray.
II	Removal of Regulations Relating to Telegraphic Communication	2015–035	Francis.
III	Technical Amendments.		

SUPPLEMENTARY INFORMATION: Summaries for each FAR rule follow. For the actual revisions and/or amendments made by these rules, refer to the specific item numbers and subjects set forth in the documents following these item summaries. FAC 2005–92 amends the FAR as follows:

Item I—Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation (FAR Case 2015–024)

This final rule amends the FAR to establish an annual representation requirement to indicate whether or not and where contractors publicly disclose greenhouse gas emissions and greenhouse gas emission reduction goals or targets. This representation is optional for contractors that received less than $7.5 million in contract awards from the Government during the previous Federal fiscal year. The information obtained from these representations will assist agencies in developing strategies to engage with contractors to reduce supply chain emissions, as directed in the Executive Order 13693, Planning for Federal Sustainability in the Next Decade.

Item II—Removal of Regulations Relating to Telegraphic Communication (FAR Case 2015–035)

This rule amends the FAR to delete the use of ''telegram,'' ''telegraph,'' and related terms. The objective is to delete reference to obsolete technologies no longer in use and replace with references to electronic communications. In addition, conforming changes are made covering expedited notice of termination and change orders.

The rule is not anticipated to have a significant economic impact on small business entities, as the rule provides recognition of current options for transmitting documents between the Government and contractors. The rule also revises the means of disseminating contract termination documents between the Government and contractors; however, this change only affects the Government's responsibility for transmitting termination notices.

Item III—Technical Amendments

Editorial changes are made at FAR 2.101, 7.105, 19.1506, 34.000, 34.005–2, 34.201, 34.203, 42.709, 52.234–2, 52.234–3, and 52.234–4.

Dated: November 10, 2016.

William F. Clark,

Director, Office of Government-wide Acquisition Policy, Office of Acquisition Policy, Office of Government-wide Policy.

Federal Acquisition Circular (FAC) 2005–92 is issued under the authority of the Secretary of Defense, the Administrator of General Services, and the Administrator for the National Aeronautics and Space Administration.

Unless otherwise specified, all Federal Acquisition Regulation (FAR) and other directive material contained in FAC 2005–92 is effective November 18, 2016 except for items I, and II, which are effective December 19, 2016.

Dated: November 10, 2016.

Claire M. Grady,

Director, Defense Procurement and Acquisition Policy.

Dated: November 10, 2016.

Jeffrey A. Koses,

Senior Procurement Executive/Deputy CAO, Office of Acquisition Policy, U.S. General Services Administration.

Dated: November 9, 2016.

William P. McNally,

Assistant Administrator, Office of Procurement National Aeronautics and Space Administration.

[FR Doc. 2016–27687 Filed 11–17–16; 8:45 am]

BILLING CODE 6820–EP–P

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Parts 1, 4, 23, and 52

[FAC 2005–92; FAR Case 2015–024; Item I; Docket No. 2015–0024, Sequence No. 1]

RIN 9000–AM90

Federal Acquisition Regulation; Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation

AGENCY: Department of Defense (DoD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

ACTION: Final rule.

SUMMARY: DoD, GSA, and NASA are issuing a final rule amending the Federal Acquisition Regulation (FAR) to establish a representation for offerors to indicate if and where they publicly disclose greenhouse gas emissions and greenhouse gas reduction goals or targets.

DATES: *Effective:* December 19, 2016.

FOR FURTHER INFORMATION CONTACT: Mr. Charles Gray, Procurement Analyst, at 703–795–6328 for clarification of content. For information pertaining to status or publication schedules, contact the Regulatory Secretariat Division at 202–501–4755. Please cite FAC 2005–92, FAR Case 2015–024.

SUPPLEMENTARY INFORMATION:

I. Background

DoD, GSA, and NASA published a proposed rule in the **Federal Register** at 81 FR 33192 on May 25, 2016, containing a new FAR provision that will enable the Federal Government to better understand the greenhouse gas management practices of its industry partners. In accordance with the provision, offerors seeking to do business with the Federal Government that are registered in the System for Award Management (SAM) database and received $7.5 million or more in contract awards during the prior Federal fiscal year are required to represent whether or not they publicly disclose their greenhouse gas emissions and their greenhouse gas emissions reduction goals. This representation is voluntary for offerors that received less than $7.5 million during the prior fiscal year.

The information obtained from these representations will assist agencies in developing strategies to engage with offerors to reduce supply chain emissions, as directed in the Executive Order (E.O.) 13693, Planning for Federal Sustainability in the Next Decade. Seventeen respondents submitted comments on the proposed rule.

II. Discussion and Analysis

The Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (the Councils) reviewed the public comments in the development of the final rule. A discussion of the comments and the changes made to the rule as a result of those comments are provided as follows:

A. Summary of Significant Changes

At FAR 52.212–3, Offeror Representations and Certifications—Commercial Items, the representation at (t)(2)(i) has been revised to clarify that the Greenhouse Gas Protocol Corporate Standard is an example of a greenhouse gas accounting standard, and that the emissions reduction goals are to be made accessible on a publicly accessible Web site.

At FAR 52.223–22, Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation, paragraph (b)(1) has been revised to clarify that the Greenhouse Gas Protocol Corporate Standard is intended to serve as an example of a greenhouse gas accounting standard. In paragraph (b)(2) of the same provision, language has been added to clarify that to disclose emissions reduction goals means to make such goals available on a publicly accessible website.

B. Analysis of Public Comments

1. Support for the Rule

Comment: Most respondents expressed their support for the rule.

Response: The Councils appreciate and note the numerous comments supporting this rule.

2. Legal Authority for the Rule

Comment: One respondent believed that the rule is not supported by adequate legal authority, noting that the statement ''the rule is not based in statute . . .'' appeared in the preamble of the **Federal Register** notice. This respondent further stated that the rule must be based on a grant or rulemaking authority from Congress, and they believed in this instance there is no adequate nexus between the rule and any rulemaking authority granted by Congress.

Response: The authority for this rule is E.O. 13693. The language in question was in relation to 41 U.S.C. 1905, 1906, and 1907, which require a listing of provisions of law that are inapplicable to acquisitions under the simplified acquisition threshold (SAT), or for commercial items including commercially available off-the-shelf (COTS) items.

Statutory rulemaking authority for the FAR is listed in FAR rules as 40 U.S.C. 121(c), 10 U.S.C. chapter 137, and 51 U.S.C. 20113.

3. Concerns Regarding the Need for Public Disclosure and Public Access to Companies' Greenhouse Gas Emissions Inventory

The concerns expressed by respondents in this area generally fell into four categories: (A) General concerns regarding the clarity of the rule; (B) The use of equivalents to the Greenhouse Gas Corporate Protocol Standard; (C) Reporting requirements for offeror's parent company or for companies that are not the owner of facility; and (D) Concerns regarding the proposed reporting thresholds.

(A) General Concerns Regarding the Clarity of the Rule

Comment: Several respondents stated that the rule was unclear regarding its breadth and utility. One respondent commented that such disclosures on a publicly accessible website may compromise trade secrets or be the impetus for an overwhelming number of bid protests and unacceptable delays. Another respondent expressed concern that the Government would capture and use unreliable data generated and reported by a third-party. Others raised concerns regarding the utility to the rule without an industry-by-industry analysis, citing the analytical methodology employed by the Environmental Protection Agency (EPA). Two respondents remarked that the rule was unclear regarding the meaning of the phrase ''available on a publicly accessible Web site.''

Response: This rule does not require offerors to disclose greenhouse gas emissions and/or goals; rather, it requires offerors seeking to do business with the Federal Government to represent whether or not they do make such disclosures, and if so, provide the publicly accessible website. As such, the rule will not lead to the inadvertent disclosure of trade secrets by an offeror.

With regard to the reliability of the data obtained, the representation relates only to information made available by the offeror, regardless of where the information is hosted. Since an offeror that responds affirmatively to the representation is also required to provide the website address, the Government will only be directed to the offeror's publicly accessible information.

This rule does not regulate industry, which is why the analytical techniques employed by the EPA were not used. The purpose of the rule is to obtain a better understanding of Federal supply chain greenhouse gas emissions. Utilizing existing public information significantly reduces the burden on potential offerors while providing useful strategic information and encouraging transparency.

Finally, the plain meaning of the phrase ''available on a publicly accessible Web site'' is that the information must be accessible to the general public.

(B) Equivalents to the Greenhouse Gas Corporate Protocol Standard

Comment: Many respondents requested that the language, ''via a recognized, third-party greenhouse gas emissions reporting program'' be updated with language identifying specific reporting programs or additional standards.

Response: In order for the Federal Government to gain insight into its supplier actions, the regulation does not use language that will limit its awareness of greenhouse gas (GHG) management practices; however, the reference to ''recognized'' standards has been updated in the final rule to ''accounting standards with publicly available and consistently applied criteria'' in order to provide clarity to respondents while allowing insight into any accounting methods used. The standard was intentionally left open, so as not to require any specific accounting or reporting methodology.

To further clarify this intent, the language in the final rule has been amended to state that the Greenhouse Gas Protocol Corporate Standard is intended to serve as an example of greenhouse gas accounting standard, rather than the only acceptable standard.

(C) Reporting Requirements for Offerors' Parent Company or for Companies That Are Not the Owner of the Facility

Comment: Many respondents sought clarification as to an offeror's obligation to report on the greenhouse gas emissions management practices of its parent or controlling entity or when it is not the owner of the facility.

Response: The rule does not obligate offerors to report on the emissions of their parent companies or the emissions management practices of a facility that they do not own.

(D) Concerns Regarding the Proposed Reporting Thresholds

Comment: Although there was support for the $7.5 million threshold, recognizing that it extends to a variety of companies with regard to type, size, and location, a few comments suggested that the $7.5 million threshold was not the best definitive characterization for reporting. Alternative reporting delineations proposed were an annual facility emission of 25,000 tons or more of CO_2 or identification by North American Industry Classification System (NAICS) codes to eliminate small businesses and non-greenhouse gas emitting industries.

Response: In order to gain insight into its supplier actions, the Government does not want to limit its awareness of greenhouse gas management practices by limiting the information to specific emissions thresholds (such as 25,000 tons of CO_2) or NAICS codes. In particular, the use of NAICS codes in this context may impose artificial limitations; when registering in the SAM, offerors select their primary NAICS code, even though they can and do work in other areas.

4. Nitrogen Trifluoride Should Not Be Identified in the FAR as a Greenhouse Gas

Comment: One respondent remarked that the proposal to include nitrogen trifluoride in the definition for greenhouse gases at FAR 23.001 should be withdrawn since, unlike the other six greenhouse gases already listed in the FAR, nitrogen trifluoride is not directly emitted (the direct result of human activity) and therefore cannot be identified and quantified for reporting purposes.

Response: Section 19 of E.O. 13693 identifies nitrogen trifluoride as a greenhouse gas, and for this reason the definition for greenhouse gas at FAR 23.001 includes nitrogen trifluoride.

5. Rule is Vague Regarding Requirements for Disclosure of Emissions Reduction Goals

Comment: Some respondents stated that the requirements for greenhouse gas emissions reduction goals were not sufficiently stringent or specific. Many respondents were concerned that the information obtained from the inventory would be of little use to agencies and could negatively impact any polices developed.

Response: The intent of this rule is not to require greenhouse gas emissions reduction goals, but to gather information regarding whether or not such information is disclosed. To that end, further guidance has been added in the final rule to clarify that to disclose emissions reduction goals means to make such goals available on a publicly accessible website.

Although the concerns regarding the usefulness of the inventory information are noted, the information gathered will be considered with a variety of other factors.

6. The Rule Is Unclear Whether the Information Obtained From the Representations Would Be Used in Individual Procurements

Comment: Several respondents indicated that the purpose and benefit of the rule is obscure. A number of these respondents expressed concern that the representations set forth in the rule would place a company that did not disclose its emissions inventory information at a significant competitive disadvantage in comparison with companies that did disclose during source selection.

Response: The rule does not establish evaluation criteria to be used in a source selection decision.

7. The Rule Requires Reporting of Information Already Reported to Other Agencies, Such as the EPA

Comment: A few respondents stated that certain large facilities and companies already provided greenhouse gas emission information to the EPA and therefore the new reporting in SAM would be redundant.

Response: The representations required by the rule indicate if and where offerors publicly disclose greenhouse gas emissions and greenhouse gas reduction goals rather than specific emission information reported to EPA.

8. The Rule Needs To Specify the Scope of Emissions Being Represented

Comment: Several respondents commented that the rule should specify the scope of greenhouse gas emissions in order to make the disclosure meaningful.

Response: Understanding the source of emissions, (*i.e.,* whether it is a scope 1, 2, or 3 emission) is an important consideration within the broader context of achieving greenhouse gas emission reductions. However, the purpose of the rule is to obtain information regarding whether offerors are publicly disclosing their greenhouse gas emissions. Specifying that the disclosure must include the scope of the greenhouse gas emission would limit the ability of the Government to gather information on all types of reporting practices.

9. The Rule Should Not Exclude Commercial Item or COTS Item Vendors From the Disclosure Requirements

Comment: One respondent remarked that if sellers of commercial items and COTS items are exempted from the rule's disclosure requirements, the rule's benefits would be sub-optimal.

Response: The rule does not provide an exemption for commercial items and COTS items. All offerors that meet or exceed the rule's threshold are required to provide the representation.

10. Out of Scope

Comment: Several respondents submitted comments encouraging the Councils to take a more proactive approach to the rule. These respondents suggested various ways to strengthen the rule, such as—

- Requiring Government agencies to take vendor emission disclosures and emission reduction goals into consideration during source selection;
- Requiring vendors to disclose emissions information and emissions reduction goals, as opposed to indicating ''whether or not'' they disclose;
- Adding an option to have vendors identify ''serious'' or ''substantial'' reduction goals, noting that a 40 percent reduction from the 2008 greenhouse gas baseline was mentioned in E.O. 13693;
- Another respondent observed that the greenhouse gas problem should not be attributed to the companies that sell greenhouse gas-emitting products (such as fuels), but rather, the users that consume these products. This respondent suggested that the Government pursue a revenue neutral course of action.

Response: The Councils note and appreciate the suggestions offered by these respondents; however, they are beyond the scope of the rule. The rule is intended to be a low-burden, minimally intrusive effort to report data in SAM that the Council on Environmental Quality will use to develop an annual inventory, thus allowing for greater insight into the greenhouse gas management practices of the Federal supplier base.

11. Rationale for the Removal of Paragraphs (a) Through (g) at FAR 23.000

Comment: One respondent did not understand the reasoning behind the removal of FAR paragraphs 23.000(a) through (g), as these paragraphs provided the means by which acquisitions based on ''improving the quality of the environment . . .'' and their removal would lead to subjective agency decisions.

Response: FAR 23.000 is an overview of the acquisitions policies and procedures found in part 23. The rule amends the FAR to remove information that is discussed in greater detail in other areas of part 23; however, the scope for the FAR part remains.

12. Consideration of Climate Change Risk

Note: The preamble of the **Federal Register** for the proposed rule solicited public feedback regarding means and methods to enable agencies to evaluate climate change risks and vulnerabilities. One of the approaches put forth in the preamble was the inclusion of a new representation that would allow offerors to indicate whether or not they assess the risks imposed by extreme weather conditions and other climate change effects, including the physical impacts of such risks. It was also suggested that offerors should represent if they do or do not discuss climate change risk in their filings with the Securities and Exchange Commission. The comments received in response to climate change risk assessment are summarized as follows:

Comment: Several respondents recommended including disclosure of vendor climate risk analyses in addition to information about greenhouse gas inventories. One respondent expressed the viewpoint that the preferred location for such disclosure was the Securities and Exchange Commission filing. However, one respondent believed that the ''does/does not'' model will not provide sufficient insight.

Response: The Councils extend their appreciation for the input provided by the public regarding climate change risk assessment. It will be critical to understand climate change risks moving forward.

C. Other Changes

A number of conforming changes were made to the final rule, due to changes made in the FAR text since the publication of the proposed rule.

III. Applicability to Acquisitions at or Below the Simplified Acquisition Threshold, Commercial Items, and Commercially Available Off-the-Shelf Items

This rule establishes a new provision at FAR 52.223–22, Public Disclosure of Greenhouse Gas Emissions and Reductions Goals—Representation, and establishes its commercial item equivalent at FAR 52.212–3, Offeror Representations and Certifications—Commercial Items. The new provision requires offerors that received $7.5 million or more in contracts from the Federal Government during the prior Federal fiscal year, to represent whether or not they publicly disclose their greenhouse gas emissions and whether or not they publicly disclose a quantitative greenhouse gas emissions reduction goal. This information will be used by the Federal Government to assess the scope of greenhouse gas management undertaken by companies seeking to do business with the Federal Government. Application of the provision in solicitations and contracts at or below the SAT and to the acquisition of commercial items, including COTS items, is necessary in order to comply with E.O. 13693. If the requirements of the provision(s) are not made applicable to acquisitions below the SAT, or to acquisitions for commercial items or COTS items, the Government will be unable to obtain valuable information from a large segment of its supplier base, which in turn will undermine the overarching purpose of the rule.

41 U.S.C. 1905 through 1907 make certain provisions of law inapplicable to solicitations and contracts at or below the SAT and to the acquisition of commercial items, including COTS items, unless the FAR Council/ Administrator for Federal Procurement Policy determine that such exemption from the statute(s) would not be in the best interest of the Government. However, 41 U.S.C. 1905 through 1907 are only applicable to statutory provisions, not Executive Orders.

IV. Executive Orders 12866 and 13563

Executive Orders (E.O.s) 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). E.O. 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This is a significant regulatory action and, therefore, was subject to review under Section 6(b) of E.O. 12866, Regulatory Planning and Review, dated September 30, 1993. This rule is not a major rule under 5 U.S.C. 804.

V. Regulatory Flexibility Act

DoD, GSA, and NASA have prepared a Final Regulatory Flexibility Analysis (FRFA) consistent with the Regulatory Flexibility Act, 5 U.S.C. 601, *et seq.* The FRFA is summarized as follows:

> As stated in E.O. 13693, Federal agencies shall increase their efficiency and improve their environmental performance, including the reduction of greenhouse gas emissions across Federal operations and the Federal supply chain. In keeping with this policy, the objective of the rule is to obtain information from offerors that will assist agencies in developing strategies to reduce supply chain greenhouse emissions.
>
> Specifically, the rule amends the Federal Acquisition Regulation to create a new provision in which offerors that received $7.5 million in contract awards during the previous Federal fiscal year (FY) are required to represent whether or not they publicly disclose their greenhouse gas emissions and their greenhouse gas emissions reduction goal. We anticipate this rule will apply to approximately 2,700 small entities, based on an analysis of FY 2015 Federal Data Procurement Data (FPDS).

There were no significant issues raised by the public comments in response to the initial regulatory flexibility analysis. The reporting requirements for the rule are considered to be minimal, and there is no recordkeeping associated with the disclosure representation. The economic impact of the rule is minimized by the fact that only offerors that received Federal awards in excess of $7.5 million in the previous Federal fiscal year are required to make this representation.

Interested parties may obtain a copy of the FRFA from the Regulatory Secretariat Division. The Regulatory Secretariat Division has submitted a copy of the FRFA to the Chief Counsel for Advocacy of the Small Business Administration.

VI. Paperwork Reduction Act

The Paperwork Reduction Act (44 U.S.C. Chapter 35) applies. The rule contains information collection requirements. OMB has cleared this information collection requirement under OMB Control Number 9000–0194, titled: Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation, in the amount of 1,375 burden hours.

List of Subjects in 48 CFR Parts 1, 4, 23, and 52

Government procurement.

Dated: November 10, 2016.

William F. Clark,

Director, Office of Government-wide Acquisition Policy, Office of Acquisition Policy, Office of Government-wide Policy.

Therefore, DoD, GSA, and NASA amend 48 CFR parts 1, 4, 23, and 52 as set forth below:

■ 1. The authority citation for 48 CFR parts 1, 4, 23, and 52 continues to read as follows:

Authority: 40 U.S.C. 121(c); 10 U.S.C. chapter 137; and 51 U.S.C. 20113.

PART 1—FEDERAL ACQUISITION REGULATIONS SYSTEM

1.106 [Amended]

■ 2. Amend section 1.106 in the table following the introductory text, by adding in numerical sequence, FAR segment ''52.223–22'' and its corresponding OMB control number ''9000–0194''.

PART 4—ADMINISTRATIVE MATTERS

■ 3. Amend section 4.1202 by redesignating paragraphs (a)(25) through (32) as paragraphs (a)(26) through (33), respectively; and adding a new paragraph (a)(25) to read as follows:

4.1202 Solicitation provision and contract clause.

(a) * * *

(25) 52.223–22, Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation.

* * * * *

PART 23—ENVIRONMENT, ENERGY AND WATER EFFICIENCY, RENEWABLE ENERGY TECHNOLOGIES, OCCUPATIONAL SAFETY, AND DRUG–FREE WORKPLACE

23.000 [Amended]

■ 4. Amend section 23.000 by removing from the end of the introductory text ''and encouraging the safe operation of vehicles by—'' and adding ''and for encouraging the safe operation of vehicles.'' in its place; and removing paragraphs (a) through (g).

23.001 [Amended]

■ 5. Amend section 23.001 in the definition ''Greenhouse gases'' by removing ''perflourocarbons,'' and adding ''perflourocarbons, nitrogen triflouride,'' in its place.

■ 6. Revise subpart 23.8 heading to read as follows:

Subpart 23.8—Ozone-Depleting Substances and Greenhouse Gases

■ 7. Revise section 23.800 to read as follows:

23.800 Scope of subpart.

This subpart—

(a) Sets forth policies and procedures for the acquisition of items that—

(1) Contain, use, or are manufactured with ozone-depleting substances; or

(2) Contain or use high global warming potential hydrofluorocarbons; and

(b) Addresses public disclosure of greenhouse gas emissions and reduction goals.

■ 8. Amend section 23.802 by—

■ a. Removing from paragraph (a) ''hydrofluorocarbons; and'' and adding ''hydrofluorocarbons;'' in its place;

■ b. Removing from paragraph (b)(2) ''hydrofluorocarbons.'' and adding ''hydrofluorocarbons;'' in its place; and

■ c. Adding paragraphs (c) and (d).

The additions read as follows:

23.802 Policy.

* * * * *

(c) Lead efforts to reduce greenhouse gas emissions at the Federal level in accordance with Executive Order 13693 and the President's Climate Action Plan of June 2013; and

(d) In order to better understand both direct and indirect greenhouse gas emissions that result from Federal activities, require offerors that are registered in the System for Award Management (SAM) database and received $7.5 million or more in Federal contract awards in the prior Federal fiscal year to—

(1) Represent whether they publicly disclose greenhouse gas emissions;

(2) Represent whether they publicly disclose a quantitative greenhouse gas emissions reduction goal; and

(3) Provide the website for any such disclosures.

■ 9. Amend section 23.804 by—

■ a. Revising the section heading;

■ b. Redesignating paragraphs (a)(1) through (8) as paragraphs (a)(1)(i) through (viii), and paragraph (a) introductory text as paragraph (a)(1) introductory text;

■ c. Redesignating the section introductory text as paragraph (a) introductory text, and removing from the newly redesignated paragraph (a) introductory text ''areas, insert'' and adding ''areas, the contracting officer shall insert'' in its place;

■ d. Redesignating paragraph (b) introductory text as paragraph (a)(2) introductory text, and paragraphs (b)(1) and (2) as paragraphs (a)(2)(i) and (ii);

■ e. Redesignating paragraph (c) introductory text as paragraph (a)(3) introductory text, and paragraphs (c)(1) and (2) as paragraphs (a)(3)(i) and (ii);

■ f. Redesignating paragraph (d) introductory text as paragraph (a)(4) introductory text, and paragraphs (d)(1) and (2) as paragraphs (a)(4)(i) and (ii); and

■ g. Adding a new paragraph (b).

The revision and addition reads as follows:

23.804 Contract provision and clauses.

* * * * *

(b) The provision at 52.223–22, Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation, is required only when 52.204–7, System for Award Management, is included in the solicitation (see 52.204–8, Annual Representations and Certifications).

PART 52—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

■ 10. Amend section 52.204–8 by—

■ a. Revising the date of the provision;

■ b. Redesignating paragraphs (c)(1)(xviii) through (xxiii) as paragraphs (c)(1)(xix) through (xxiv), respectively; and

■ c. Adding new paragraph (c)(1)(xviii).

The revision and addition reads as follows:

52.204–8 Annual Representations and Certifications.

* * * * *

Annual Representations and Certifications (Dec 2016)

* * * * *

(c)(1) * * *

(xviii) 52.223–22, Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation. This provision applies to solicitations that include the clause at 52.204–7.)

* * * * *

■ 11. Amend section 52.212–3 by—

■ a. Revising the date of the provision;

■ b. Removing from the introductory text ''Web site located at *https://www.sam.gov/portal*'' and adding ''Web site located at *https://www.sam.gov/portal.*'' in its place;

■ c. Removing from the introductory text of the clause and paragraph (b)(2) ''(c) through (s)'' and adding ''(c) through (t)'' in its place; and

■ d. Adding paragraph (t).

The revision and addition reads as follows:

52.212–3 Offeror Representations and Certifications—Commercial Items.

* * * * *

Offeror Representations and Certifications—Commercial Items (Dec 2016)

* * * * *

(t) *Public Disclosure of Greenhouse Gas Emissions and Reduction Goals.* Applies in all solicitations that require offerors to register in SAM (52.212–1(k)).

(1) This representation shall be completed if the Offeror received $7.5 million or more in contract awards in the prior Federal fiscal year. The representation is optional if the Offeror received less than $7.5 million in Federal contract awards in the prior Federal fiscal year.

(2) *Representation.* [*Offeror to check applicable block(s) in paragraph (t)(2)(i) and (ii)].* (i) The Offeror (itself or through its immediate owner or highest-level owner) [ ] does, [ ] does not publicly disclose greenhouse gas emissions, *i.e.,* makes available on a publicly accessible Web site the results of a greenhouse gas inventory, performed in accordance with an accounting standard with publicly available and consistently applied criteria, such as the Greenhouse Gas Protocol Corporate Standard.

(ii) The Offeror (itself or through its immediate owner or highest-level owner) [ ] does, [ ] does not publicly disclose a quantitative greenhouse gas emissions reduction goal, *i.e.,* make available on a publicly accessible Web site a target to reduce absolute emissions or emissions intensity by a specific quantity or percentage.

(iii) A publicly accessible Web site includes the Offeror's own Web site or a recognized, third-party greenhouse gas emissions reporting program.

(3) If the Offeror checked ''does'' in paragraphs (t)(2)(i) or (t)(2)(ii) of this provision, respectively, the Offeror shall provide the publicly accessible Web site(s) where greenhouse gas emissions and/or reduction goals are reported:_____.

* * * * *

■ 12. Amend section 52.213–4 by—

■ a. Revising the date of the clause; and

■ b. Removing from paragraph (b)(1)(xi) ''FAR 23.804(a))'' and adding ''FAR 23.804(a)(1))'' in its place.

The revision reads as follows:

52.213–4 Terms and Conditions—Simplified Acquisitions (Other Than Commercial Items).

* * * * *

Terms and Conditions—Simplified Acquisitions (Other Than Commercial Items). (Dec 2016)

* * * * *

52.223–11 [Amended]

■ 13. Amend section 52.223–11 by removing from the introductory text ''in 23.804(a)'' and adding ''in 23.804(a)(1)'' in its place.

52.223–12 [Amended]

■ 14. Amend section 52.223–12 by removing from the introductory text ''in 23.804(b)'' and adding ''in 23.804(a)(2)'' in its place.

52.223–20 [Amended]

■ 15. Amend section 52.223–20 by removing from the introductory text ''in 23.804(c)'' and adding ''in 23.804(a)(3)'' in its place.

52.223–21 [Amended]

■ 16. Amend section 52.223–21 by removing from the introductory paragraph ''in 23.804(d)'' and adding ''in 23.804(a)(4)'' in its place.

■ 17. Add section 52.223–22 to read as follows:

52.223–22 Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation.

As prescribed in 23.804(b), insert the following provision:

Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation (Dec 2016)

(a) This representation shall be completed if the Offeror received $7.5 million or more in Federal contract awards in the prior Federal fiscal year. The representation is optional if the Offeror received less than $7.5 million in Federal contract awards in the prior Federal fiscal year.

(b) *Representation. [Offeror is to check applicable blocks in paragraphs (b)(1) and (2).]*

(1) The Offeror (itself or through its immediate owner or highest-level owner) [ ] does, [ ] does not publicly disclose greenhouse gas emissions, *i.e.,* make available on a publicly accessible Web site the results of a greenhouse gas inventory, performed in accordance with an accounting standard with publicly available and consistently applied criteria, such as the Greenhouse Gas Protocol Corporate Standard.

(2) The Offeror (itself or through its immediate owner or highest-level owner) [ ] does, [ ] does not publicly disclose a quantitative greenhouse gas emissions reduction goal, *i.e.,* make available on a publicly available Web site a target to reduce absolute emissions or emissions intensity by a specific quantity or percentage.

(3) A publicly accessible Web site includes the Offeror's own Web site or a recognized, third-party greenhouse gas emissions reporting program.

(c) If the Offeror checked ''does'' in paragraphs (b)(1) or (b)(2) of this provision, respectively, the Offeror shall provide the publicly accessible Web site(s) where greenhouse gas emissions and/or reduction goals are reported:_____.

(End of provision)

[FR Doc. 2016–27686 Filed 11–17–16; 8:45 am]

BILLING CODE 6820–EP–P

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Parts 5, 14, 19, 22, 25, 28, 43, 47, 49, 52, and 53

[FAC 2005–92; FAR Case 2015–035; Item II; Docket No. 2015–0035, Sequence No. 1]

RIN 9000–AN23

Federal Acquisition Regulation: Removal of Regulations Relating to Telegraphic Communication

AGENCY: Department of Defense (DoD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

ACTION: Final rule.

SUMMARY: DoD, GSA, and NASA are issuing a final rule amending the Federal Acquisition Regulation (FAR) to delete the use of ''telegram,'' ''telegraph,'' and related terms. The objective is to delete references to obsolete technologies no longer in use and replace with references to electronic communications. In addition, conforming changes are made regarding expedited notices of termination and change orders.

DATES: *Effective:* December 19, 2016.

FOR FURTHER INFORMATION CONTACT: Ms. Camara Francis, Procurement Analyst, at 202–550–0935 for clarification of content. For information pertaining to status or publication schedules, contact the Regulatory Secretariat Division at 202–501–4755. Please cite FAC 2005–92, FAR Case 2015–035.

SUPPLEMENTARY INFORMATION:

I. Background

DoD, GSA, and NASA published a proposed rule in **Federal Register** at 81 FR 36245 on June 6, 2016, soliciting public comments on this rule, to amend the FAR to delete the use of the terms ''telegram,'' ''telegraph,'' ''telegraphic,'' and related terminology and make conforming changes to the instructions for expedited notices of termination and change orders.

This rule is consistent with the Office of Federal Procurement Policy (OFPP) memorandum dated December 4, 2014, on transforming the marketplace, which describes ongoing actions to support the needs of a 21st century Government.

Two public comments were received supporting the changes.

II. Discussion and Analysis

The Councils reviewed the public comments in development of the final rule.

A. Summary of Significant Changes

There were no changes made to the rule as a result of the comments received.

B. Analysis of Public Comments

Comment: Two respondents expressed support for the changes, highlighting the benefit of removing outdated terms and modernizing technologies and regulations.

Response: The Government notes the public support for this rule.

III. Executive Orders 12866 and 13563

Executive Orders (E.O.s) 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). E.O. 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This is not a significant regulatory action and, therefore, was not subject to review under Section 6(b) of E.O. 12866, Regulatory Planning and Review, dated September 30, 1993. This rule is not a major rule under 5 U.S.C. 804.

IV. Regulatory Flexibility Act

DoD, GSA, and NASA have prepared a Final Regulatory Flexibility Analysis (FRFA) consistent with the Regulatory Flexibility Act, 5 U.S.C. 601, *et seq.* The FRFA is summarized as follows:

The final rule amends the Federal Acquisition Regulation (FAR) to delete the use of ''telegram,'' ''telegraph,'' and related terms. These terms are replaced with an option for electronic communications. The objective is to delete obsolete technologies no longer in use within the context of the FAR requirements. This proposed rule is consistent with the Office of Federal Procurement Policy (OFPP) memorandum dated December 4, 2014, on transforming the marketplace, which describes ongoing actions to support the needs of a 21st century Government.

There were no significant issues raised by the public in response to the Initial Regulatory Flexibility Analysis provided in the proposed rule.

The final rule would apply to all entities, both small and other than small, performing as contractors or subcontractors on U.S. Government contracts. In 2014 there were about 350,000 active registrants in the System for Award Management (SAM). DoD, GSA, and NASA estimate approximately half of the registrants (175,000) are small entities that will receive a contract or subcontract in a given year. In 2014 small entities received 1,398,605 or about 9 percent of all actions in that year per the Federal Procurement Data System (FPDS). However, the small entities are not expected to be affected by this rule, as the only change provided in this rule is a revision of the means of disseminating contract termination documents between the Government and contractors. This change only affects the Government's responsibility for transmitting termination notices.

Interested parties may obtain a copy of the FRFA from the Regulatory Secretariat Division. The Regulatory Secretariat Division has submitted a copy of the FRFA to the Chief Counsel for Advocacy of the Small Business Administration.

V. Paperwork Reduction Act

The rule does not contain any information collection requirements that require the approval of the Office of Management and Budget under the Paperwork Reduction Act (44 U.S.C. chapter 35).

List of Subjects in 48 CFR Parts 5, 14, 19, 22, 25, 28, 43, 47, 49, 52, and 53

Government procurement.

Dated: November 10, 2016.

William F. Clark,

Director, Office of Government-wide Acquisition Policy, Office of Acquisition Policy, Office of Government-wide Policy.

Therefore, DoD, GSA, and NASA amend 48 CFR parts 5, 14, 19, 22, 25, 28, 43, 47, 49, 52, and 53 as follows:

■ 1. The authority citation for 48 CFR parts 5, 14, 19, 22, 25, 28, 43, 47, 49, 52, and 53 continues to read as follows:

Authority: 40 U.S.C. 121(c); 10 U.S.C. chapter 137; and 51 U.S.C. 20113.

PART 5—PUBLICIZING CONTRACT ACTIONS

5.504 [Amended]

■ 2. Amend section 5.504 by removing from paragraph (d) ''telegrams,''.

PART 14—SEALED BIDDING

14.201–6 [Amended]

■ 3. Amend section 14.201–6 by removing and reserving paragraph (g).

14.202–2 [Removed and Reserved]

■ 4. Remove and reserve section 14.202–2.

■ 5. Amend section 14.208 by revising paragraph (b) to read as follows:

14.208 Amendment of invitation for bids.

* * * * *

(b) Before amending an invitation for bids, the contracting officer shall consider the period of time remaining until bid opening and the need to extend this period.

* * * * *

14.301 [Amended]

■ 6. Amend section 14.301 by removing paragraph (b) and redesignating paragraphs (c) through (e) as paragraphs (b) through (d), respectively.

■ 7. Revise section 14.302 to read as follows:

14.302 Bid submission.

Bids shall be submitted so that they will be received in the office designated in the invitation for bids not later than the exact time set for opening of bids.

■ 8. Amend section 14.303 by revising paragraph (a) to read as follows:

14.303 Modification or withdrawal of bids.

(a) Bids may be modified or withdrawn by any method authorized by the solicitation, if notice is received in the office designated in the solicitation not later than the exact time set for opening of bids. If the solicitation authorizes facsimile bids, bids may be modified or withdrawn via facsimile received at any time before the exact time set for receipt of bids, subject to the conditions specified in the provision prescribed in 14.201–6(v). Modifications received by facsimile shall be sealed in an envelope by a proper official.

(1) The official shall—

(i) Write on the envelope—

(A) The date and time of receipt and by whom; and

(B) The number of invitation for bids; and

(ii) Sign the envelope.

(2) No information contained in the envelope shall be disclosed before the time set for bid opening.

* * * * *

14.407–3 [Amended]

■ 9. Amend section 14.407–3 by removing paragraph (g)(4) and redesignating paragraph (g)(5) as (g)(4).

14.408–1 [Amended]

■ 10. Amend section 14.408–1 by removing from paragraph (d)(2) ''telegrams or electronic transmissions'' and adding ''electronic communications'' in its place.

PART 19—SMALL BUSINESS PROGRAMS

19.302 [Amended]

■ 11. Amend section 19.302 by removing from paragraph (d)(1)(ii) ''telegram,''.

PART 22—APPLICATION OF LABOR LAWS TO GOVERNMENT ACQUISITIONS

22.1003–3 [Amended]

■ 12. Amend section 22.1003–3 by removing from paragraph (d) ''telegraph,''.

PART 25—FOREIGN ACQUISITION

25.401 [Amended]

■ 13. Amend section 25.401, in the table, by removing from paragraph (b)(2)(iii) ''telegraph services,'', and removing ''47 U.S.C. 153(20)'' and adding ''47 U.S.C. 153(24)'' in its place.

PART 28—BONDS AND INSURANCE

28.101–4 [Amended]

■ 14. Amend section 28.101–4 by removing paragraph (c)(6) and redesignating paragraphs (c)(7) through (9) as paragraphs (c)(6) through (8), respectively.

PART 43—CONTRACT MODIFICATIONS

■ 15. Amend section 43.201 by revising paragraph (c) to read as follows:

43.201 General.

* * * * *

(c) The contracting officer may issue a change order by electronic means without a SF 30 under unusual or urgent circumstances, *provided* that the message contains substantially the information required by the SF 30 and immediate action is taken to issue the SF 30.

PART 47—TRANSPORTATION

■ 16. Amend section 47.305–10 by revising paragraph (c) to read as follows:

47.305–10 Packing, marking, and consignment instructions.

* * * * *

(c) If necessary to meet required delivery schedules, the contracting officer may issue instructions by telephone or electronic means. The contracting officer shall confirm telephonic instructions in writing, and confirm electronic instructions if the contracting officer did not receive confirmation of receipt.

* * * * *

PART 49—TERMINATION OF CONTRACTS

■ 17. Amend section 49.102 by revising the introductory text of paragraph (a) to read as follows:

49.102 Notice of termination.

(a) *General.* The contracting officer shall terminate contracts for convenience or default only by a written notice to the contractor (see 49.601). The notice of termination may be expedited by means of electronic communication capable of providing confirmation of receipt by the contractor. When the notice is mailed, it shall be sent by certified mail, return receipt requested. When the contracting office arranges for hand delivery of the notice, a written acknowledgment shall be obtained from the contractor. The notice shall state—

* * * * *

■ 18. Amend section 49.601–1 by—
■ a. Revising the section heading;
■ b. Adding introductory text;
■ c. Removing from paragraph (a) ''telegraphic'', ''[*insert* ''immediately'''', and ''Telegraph'', and adding ''electronic'', ''[*insert* ''immediately, (*today's date*)'''', and ''Provide by electronic means'' in their places, respectively; and
■ d. Removing from paragraph (b) ''telegraphic'', ''[*insert* ''immediately'''', and ''Telegraph'', and adding ''electronic'', ''[*insert* ''immediately, (*today's date*)'''', and ''Provide by electronic means'' in their places, respectively.

The revision and addition reads as follows:

49.601–1 Electronic notice.

The contracting officer may provide expedited notice of termination by electronic means that includes a requirement for the contractor to confirm receipt. If the contractor does not confirm receipt promptly, the contracting officer shall resend the notice electronically, and expedite the letter notice described in 49.601–2. If confirmation of the electronic notice is received, and the electronic notice includes all content in 49.601–2, the contracting officer need not send the letter notice described in 49.601–2.

* * * * *

■ 19. Amend section 49.601–2 by—
■ a. Revising the third and fourth sentences of the introductory text;
■ b. Removing from paragraph (a), ''telegram'' and adding ''electronic notice'' in its places (two times); and
■ c. Revising the introductory text of the Alternate notice.

The revisions read as follows:

49.601–2 Letter notice.

* * * This notice shall be sent by certified mail, return receipt requested, or electronically, provided evidence of receipt is received by the contracting officer. If no prior electronic notice was issued, or if no confirmation of an electronic notice was received, use the alternate notice that follows this notice.

* * * * *

Alternate notice. Substitute the following paragraph (a) for paragraph (a) of 49.601–2, Notice of Termination to Prime Contractors, if no prior electronic notice was issued, or if no confirmation of an electronic notice was received:

* * * * *

PART 52—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

■ 20. Amend section 52.214–3 by revising the date of the provision and paragraph (b) to read as follows:

52.214–3 Amendments to Invitations for Bids.

* * * * *

Amendments to Invitations for Bids DEC 2016

* * * * *

(b)(1) Bidders shall acknowledge receipt of any amendment to this solicitation—

(i) By signing and returning the amendment;

(ii) By identifying the amendment number and date in space provided for this purpose on the form for submitting a bid;

(iii) By letter;

(iv) By facsimile, if facsimile bids are authorized in the solicitation; or

(v) By email, if email bids are authorized in the solicitation.

(2) The Government must receive the acknowledgement by the time and at the place specified for receipt of bids.

■ 21. Amend section 52.214–5 by—
■ a. Revising the date of the provision;
■ b. Removing paragraph (c); and

■ c. Redesignating paragraphs (d) and (e), as paragraphs (c) and (d), respectively.

The revision reads as follows:

52.214–5 Submission of Bids.

* * * * *

Submission of Bids Dec 2016

* * * * *

52.214–13 [Removed and Reserved]

■ 22. Remove and reserve section 52.214–13.

PART 53—FORMS

53.213 [Amended]

■ 23. Amend section 53.213 by removing from paragraph (b) ''(*10/83*)'' and adding ''(*11/2016*)'' in its place.

53.215–1 [Amended]

■ 24. Amend section 53.215–1 by removing from paragraph (b) ''(*10/83*)'' and adding ''(*11/2016*)'' in its place.

53.243 [Amended]

■ 25. Amend section 53.243, introductory text, by removing ''(*10/83*)'' and adding ''(*11/2016*)'' in its place.

■ 26. Revise 53.301–30 to read as follows:

53.301–30 SF 30, Amendment of Solicitation/Modification of Contract.

BILLING CODE 6820–EP–P

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE

PAGE OF PAGES

2. AMENDMENT/MODIFICATION NUMBER

3. EFFECTIVE DATE

4. REQUISITION/PURCHASE REQUISITION NUMBER

5. PROJECT NUMBER *(If applicable)*

6. ISSUED BY CODE

7. ADMINISTERED BY *(If other than Item 6)* CODE

8. NAME AND ADDRESS OF CONTRACTOR *(Number, street, county, State and ZIP Code)*

(X)

9A. AMENDMENT OF SOLICITATION NUMBER

9B. DATED *(SEE ITEM 11)*

10A. MODIFICATION OF CONTRACT/ORDER NUMBER

10B. DATED *(SEE ITEM 13)*

CODE

FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
(a) By completing items 8 and 15, and returning ____________ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NUMBER AS DESCRIBED IN ITEM 14.

CHECK ONE	
☐	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NUMBER IN ITEM 10A.
☐	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation data, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
☐	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
☐	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☐ is not ☐ is required to sign this document and return __________ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
15B. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*	16C. DATE SIGNED

Previous edition unusable

STANDARD FORM 30 (REV. 11/2016)
Prescribed by GSA FAR (48 CFR) 53.243

INSTRUCTIONS *(Back Page)*:

Instructions for items other than those that are self-explanatory, are as follows:

(a) Item 1 (Contract ID Code). Insert the contract type identification code that appears in the title block of the contract being modified.

(b) Item 3 (Effective date).

(1) For a solicitation amendment, change order, or administrative change, the effective date shall be the issue date of the amendment, change order, or administrative change.

(2) For a supplemental agreement, the effective date shall be the date agreed to by the contracting parties.

(3) For a modification issued as an initial or confirming notice of termination for the convenience of the Government, the effective date and the modification number of the confirming notice shall be the same as the effective date and modification number of the initial notice.

(4) For a modification converting a termination for default to a termination for the convenience of the Government, the effective date shall be the same as the effective date of the termination for default.

(5) For a modification confirming the contracting officer's determination of the amount due in settlement of a contract termination, the effective date shall be the same as the effective date of the initial decision.

(c) Item 6 (Issued By). Insert the name and address of the issuing office. If applicable, insert the appropriate issuing office code in the code block.

(d) Item 8 (Name and Address of Contractor). For modifications to a contract or order, enter the contractor's name, address, and code as shown in the original contract or order, unless changed by this or a previous modification.

(e) Items 9, (Amendment of Solicitation Number - Dated), and 10, (Modification of Contract/Order Number - Dated). Check the appropriate box and in the corresponding blanks insert the number and date of the original solicitation, contract, or order.

(f) Item 12 (Accounting and Appropriation Data). When appropriate, indicate the impact of the modification on each affected accounting classification by inserting one of the following entries:

(1) Accounting classification ....
Net increase $ ....

(2) Accounting classification ....
Net decrease $ ....

NOTE: If there are changes to multiple accounting classifications that cannot be placed in block 12, insert an asterisk and the words "See continuation sheet".

(g) Item 13. Check the appropriate box to indicate the type of modification. Insert in the corresponding blank the authority under which the modification is issued. Check whether or not contractor must sign this document. (See FAR 43.103.)

(h) Item 14 (Description of Amendment/Modification).

(1) Organize amendments or modifications under the appropriate Uniform Contract Format (UCF) section headings from the applicable solicitation or contract. The UCF table of contents, however, shall not be set forth in this document.

(2) Indicate the impact of the modification on the overall total contract price by inserting one of the following entries:

(i) Total contract price increased by $ ....

(ii) Total contract price decreased by $..................

(iii) Total contract price unchanged.

(3) State reason for modification.

(4) When removing, reinstating, or adding funds, identify the contract items and accounting classifications.

(5) When the SF 30 is used to reflect a determination by the contracting officer of the amount due in settlement of a contract terminated for the convenience of the Government, the entry in Item 14 of the modification may be limited to --

(i) A reference to the letter determination; and

(ii) A statement of the net amount determined to be due in settlement of the contract.

(6) Include subject matter or short title of solicitation/contract where feasible.

(i) Item 16B. The contracting officer's signature is not required on solicitation amendments. The contracting officer's signature is normally affixed last on supplemental agreements.

STANDARD FORM 30 (REV. 11/2016) **BACK**

[FR Doc. 2016–27684 Filed 11–17–16; 8:45 am]
BILLING CODE 6820–EP–C

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Parts 2, 7, 19, 34, 42, and 52

[FAC 2005–92; Item III; Docket No. 2016–0052; Sequence No. 5]

Federal Acquisition Regulation; Technical Amendments

AGENCY: Department of Defense (DoD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

ACTION: Final rule.

SUMMARY: This document makes amendments to the Federal Acquisition Regulation (FAR) in order to make editorial changes.

DATES: *Effective:* November 18, 2016.

FOR FURTHER INFORMATION CONTACT: Ms. Hada Flowers, Regulatory Secretariat Division (MVCB), 1800 F Street NW., 2nd Floor, Washington, DC 20405, 202–501–4755. Please cite FAC 2005–92, Technical Amendments.

SUPPLEMENTARY INFORMATION: In order to update certain elements in 48 CFR parts 2, 7, 19, 34, 42, and 52 this document makes editorial changes to the FAR.

List of Subjects in 48 CFR Parts 2, 7, 19, 34, 42, and 52

Government procurement.

Dated: November 10, 2016.

William F. Clark,

Director, Office of Government-wide Acquisition Policy, Office of Acquisition Policy, Office of Government-wide Policy.

Therefore, DoD, GSA, and NASA amend 48 CFR parts 2, 7, 19, 34, 42, and 52 as set forth below:

■ 1. The authority citation for 48 CFR parts 2, 7, and 19 continues to read as follow:

Authority: 40 U.S.C. 121(c); 10 U.S.C. chapter 137; and 51 U.S.C. 20113.

PART 2—DEFINITIONS OF WORDS AND TERMS

■ 2. Amend section 2.101, in paragraph (b)(2) by revising the definition ''Earned value management system'' to read as follows:

2.101 Definitions.

* * * * *

(b) * * *

(2) * * *

Earned value management system means a project management tool that effectively integrates the project scope of work with cost, schedule and performance elements for optimum project planning and control. The qualities and operating characteristics of an earned value management system are described in Electronic Industries Alliance Standard 748 (EIA–748), Earned Value Management Systems. (See OMB Circular A–11, Part 7.)

* * * * *

PART 7—ACQUISITION PLANNING

7.105 [Amended]

■ 3. Amend section 7.105 by removing from paragraph (b)(11) ''American National Standards Institute/Electronics Industries Alliance (ANSI/EIA) Standard–748, Earned Value Management Systems'' and adding ''Electronic Industries Alliance Standard 748 (EIA–748)'' in its place.

PART 19—SMALL BUSINESS PROGRAMS

■ 4. Revise section 19.1506 to read as follows:

19.1506 Women-Owned Small Business Program sole source awards.

(a) A contracting officer shall consider a contract award to an EDWOSB concern on a sole source basis (see 6.302–5(b)(7)) before considering small business set-asides (see 19.203 and subpart 19.5) provided none of the exclusions at 19.1504 apply and—

(1) The acquisition is assigned a NAICS code in which SBA has determined that WOSB concerns are underrepresented in Federal procurement;

(2) The contracting officer does not have a reasonable expectation that offers would be received from two or more EDWOSB concerns; and

(3) The conditions in paragraph (c) of this section exist.

(b) A contracting officer shall consider a contract award to a WOSB concern (including EDWOSB concerns) eligible under the WOSB Program on a sole source basis (see 6.302–5(b)(7)) before considering small business set-asides (see 19.203 and subpart 19.5) provided none of the exclusions at 19.1504 apply and—

(1) The acquisition is assigned a NAICS code in which SBA has determined that WOSB concerns are substantially underrepresented in Federal procurement;

(2) The contracting officer does not have a reasonable expectation that offers would be received from two or more WOSB concerns (including EDWOSB concerns); and

(3) The conditions in paragraph (c) of this section exist.

(c)(1) The anticipated award price of the contract, including options, will not exceed—

(i) $6.5 million for a requirement within the NAICS codes for manufacturing; or

(ii) $4 million for a requirement within any other NAICS codes.

(2) The EDWOSB concern or WOSB concern has been determined to be a responsible contractor with respect to performance.

(3) The award can be made at a fair and reasonable price.

(d) The SBA has the right to appeal the contracting officer's decision not to make a sole source award to either an EDWOSB concern or WOSB concern eligible under the WOSB program.

PART 34—MAJOR SYSTEM ACQUISITION

■ 5. The authority citation for 48 CFR part 34 is revised to read as follows:

Authority: 40 U.S.C. 121(c); 10 U.S.C. chapter 137; and 51 U.S.C. 20113.

Subpart 34.0 [Amended]

■ 6. Remove the heading of subpart 34.0.

34.005–2 [Amended]

■ 7. Amend section 34.005–2 by removing from paragraph (b)(6) ''ANSI/EIA Standard—748'' and adding ''Electronic Industries Alliance Standard 748 (EIA–748)'' in its place.

34.201 [Amended]

■ 8. Amend section 34.201 by removing from paragraph (b) ''American National Standards Institute/Electronics Industries Alliance (ANSI/EIA) Standard—748, Earned Value Management Systems'' and adding ''Electronic Industries Alliance Standard 748 (EIA–748)'' in its place.

34.203 [Amended]

■ 9. Amend section 34.203 by—

■ a. Removing from paragraph (a) ''Notice of Earned Value Management System—Pre-Award IBR'' and adding ''Notice of Earned Value Management System—Preaward Integrated Baseline Review'' in its place; and

■ b. Removing from paragraph (b) ''Notice of Earned Value Management System—Post-Award IBR'' and adding ''Notice of Earned Value Management System—Postaward Integrated Baseline Review'' in its place.

PART 42—CONTRACT ADMINISTRATION AND AUDIT SERVICES

■ 10. The authority citation for 48 CFR part 42 continues to read as follows:

Authority: 40 U.S.C. 121(c); 10 U.S.C. chapter 137; and 51 U.S.C. 20113.

42.709 [Redesignated as Section 42.709–0]

■ 11. Section 42.709 is redesignated as section 42.709–0, and a new section 42.709 is added to read as follows:

42.709 Penalties for Unallowable Costs.

* * * * *

PART 52—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

■ 12. The authority citation for 48 CFR part 52 continues to read as follows:

Authority: 40 U.S.C. 121(c); 10 U.S.C. chapter 137; and 51 U.S.C. 20113.

■ 13. Amend section 52.234–2 by—
■ a. Revising the section and provision headings;
■ b. Removing from paragraph (a) ''ANSI/EIA Standard—748'' and adding ''Electronic Industries Alliance Standard 748 (EIA–748)'' in its place; and
■ c. Removing from paragraph (b)(4) ''ANSI/EIA Standard—748'' and adding ''EIA–748'' in its place.

The revisions read as follows:

52.234–2 Notice of Earned Value Management System—Preaward Integrated Baseline Review.

* * * * *

Notice of Earned Value Management System—Preaward Integrated Baseline Review NOV 2016

* * * * *

■ 14. Amend section 52.234–3 by—
■ a. Revising the section and provision headings;
■ b. Removing from paragraph (a) ''ANSI/EIA Standard—748'' and adding ''Electronic Industries Alliance Standard 748 (EIA–748)'' in its place; and

■ c. Removing from paragraph (b)(4) ''ANSI/EIA Standard—748'' and adding ''EIA–748'' in its place.

The revisions read as follows:

52.234–3 Notice of Earned Value Management System—Postaward Integrated Baseline Review.

* * * * *

Notice of Earned Value Management System—Postaward Integrated Baseline Review NOV 2016

* * * * *

■ 15. Amend section 52.234–4 by—

■ a. Revising the date of the clause;

■ b. Removing from paragraph (a) ''ANSI/EIA Standard—748'' and adding ''Electronic Industries Alliance Standard 748 (EIA–748)'' in its place; and

■ c. Removing from paragraph (b) introductory text ''ANSI/EIA Standard—748'' and adding ''EIA–748'' in its place.

The revision reads as follows:

52.234–4 Earned Value Management System.

* * * * *

Earned Value Management System NOV 2016

* * * * *

[FR Doc. 2016–27688 Filed 11–17–16; 8:45 am]

BILLING CODE 6820–EP–P

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Chapter 1

[Docket No. FAR 2016–0051, Sequence No. 6]

Federal Acquisition Regulation; Federal Acquisition Circular 2005–92; Small Entity Compliance Guide

AGENCY: Department of Defense (DoD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

ACTION: Small Entity Compliance Guide.

SUMMARY: This document is issued under the joint authority of DOD, GSA, and NASA. This *Small Entity Compliance Guide* has been prepared in accordance with section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996. It consists of a summary of the rules appearing in Federal Acquisition Circular (FAC) 2005–92, which amends the Federal Acquisition Regulation (FAR). An asterisk (*) next to a rule indicates that a regulatory flexibility analysis has been prepared. Interested parties may obtain further information regarding these rules by referring to FAC 2005–92, which precedes this document. These documents are also available via the Internet at *http://www.regulations.gov.*

DATES: November 18, 2016.

FOR FURTHER INFORMATION CONTACT: For clarification of content, contact the analyst whose name appears in the table below. Please cite FAC 2005–92 and the FAR case number. For information pertaining to status or publication schedules, contact the Regulatory Secretariat Division at 202–501–4755.

RULES LISTED IN FAC 2005–92

Item	Subject	FAR case	Analyst
*I	Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation	2015–024	Gray.
*II	Removal of Regulations Relating to Telegraphic Communication	2015–035	Francis.
III	Technical Amendments.		

SUPPLEMENTARY INFORMATION: Summaries for each FAR rule follow. For the actual revisions and/or amendments made by these rules, refer to the specific item numbers and subjects set forth in the documents following these item summaries. FAC 2005–92 amends the FAR as follows:

Item I—Public Disclosure of Greenhouse Gas Emissions and Reduction Goals—Representation (FAR Case 2015–024)

This final rule amends the FAR to establish an annual representation requirement to indicate whether or not and where contractors publicly disclose greenhouse gas emissions and greenhouse gas emission reduction goals or targets. This representation is optional for contractors that received less than $7.5 million in contract awards from the Government during the previous Federal fiscal year. The information obtained from these representations will assist agencies in developing strategies to engage with contractors to reduce supply chain emissions, as directed in the Executive Order 13693, Planning for Federal Sustainability in the Next Decade.

Item II—Removal of Regulations Relating to Telegraphic Communication (FAR Case 2015–035)

This rule amends the FAR to delete the use of ''telegram,'' ''telegraph,'' and related terms. The objective is to delete reference to obsolete technologies no longer in use and replace with references to electronic communications. In addition, conforming changes are made covering expedited notice of termination and change orders.

The rule is not anticipated to have a significant economic impact on small business entities, as the rule provides recognition of current options for transmitting documents between the Government and contractors. The rule also revises the means of disseminating contract termination documents between the Government and contractors; however, this change only affects the Government's responsibility for transmitting termination notices.

Item III—Technical Amendments

Editorial changes are made at FAR 2.101, 7.105, 19.1506, 34.000, 34.005–2, 34.201, 34.203, 42.709, 52.234–2, 52.234–3, and 52.234–4.

Dated: November 10, 2016.

William F. Clark,

Director, Office of Government-wide Acquisition Policy, Office of Acquisition Policy, Office of Government-wide Policy.

[FR Doc. 2016–27697 Filed 11–17–16; 8:45 am]

BILLING CODE 6820–EP–P

Reader Aids

Federal Register

Vol. 81, No. 223

Friday, November 18, 2016

CUSTOMER SERVICE AND INFORMATION

Federal Register/Code of Federal Regulations

General Information, indexes and other finding aids	**202–741–6000**
Laws	**741–6000**

Presidential Documents

Executive orders and proclamations	**741–6000**
The United States Government Manual	**741–6000**

Other Services

Electronic and on-line services (voice)	**741–6020**
Privacy Act Compilation	**741–6050**
Public Laws Update Service (numbers, dates, etc.)	**741–6043**

ELECTRONIC RESEARCH

World Wide Web

Full text of the daily Federal Register, CFR and other publications is located at: **www.fdsys.gov.**

Federal Register information and research tools, including Public Inspection List, indexes, and Code of Federal Regulations are located at: **www.ofr.gov.**

E-mail

FEDREGTOC (Daily Federal Register Table of Contents Electronic Mailing List) is an open e-mail service that provides subscribers with a digital form of the Federal Register Table of Contents. The digital form of the Federal Register Table of Contents includes HTML and PDF links to the full text of each document.

To join or leave, go to **https://public.govdelivery.com/accounts/USGPOOFR/subscriber/new**, enter your email address, then follow the instructions to join, leave, or manage your subscription.

PENS (Public Law Electronic Notification Service) is an e-mail service that notifies subscribers of recently enacted laws.

To subscribe, go to **http://listserv.gsa.gov/archives/publaws-l.html** and select *Join or leave the list (or change settings);* then follow the instructions.

FEDREGTOC and **PENS** are mailing lists only. We cannot respond to specific inquiries.

Reference questions. Send questions and comments about the Federal Register system to: **fedreg.info@nara.gov**

The Federal Register staff cannot interpret specific documents or regulations.

CFR Checklist. Effective January 1, 2009, the CFR Checklist no longer appears in the Federal Register. This information can be found online at **http://bookstore.gpo.gov/.**

FEDERAL REGISTER PAGES AND DATE, NOVEMBER

CFR PARTS AFFECTED DURING NOVEMBER

At the end of each month the Office of the Federal Register publishes separately a List of CFR Sections Affected (LSA), which lists parts and sections affected by documents published since the revision date of each title.

42 CFR

Proposed Rules:

43 CFR

Proposed Rules:

44 CFR

45 CFR

47 CFR

Proposed Rules:

48 CFR

Proposed Rules:

49 CFR

Proposed Rules:

50 CFR

Proposed Rules:

LIST OF PUBLIC LAWS

Note: No public bills which have become law were received by the Office of the Federal Register for inclusion in today's **List of Public Laws**.

Last List October 19, 2016

Public Laws Electronic Notification Service (PENS)

PENS is a free electronic mail notification service of newly enacted public laws. To subscribe, go to *http://listserv.gsa.gov/archives/publaws-l.html*

Note: This service is strictly for E-mail notification of new laws. The text of laws is not available through this service. **PENS** cannot respond to specific inquiries sent to this address.