

Proposed Rules

Federal Register

Vol. 81, No. 17

Wednesday, January 27, 2016

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA-2015-5391; Notice No. 25-16-01-SC]

Special Conditions: The Boeing Company, Boeing 767-2C Airplane; Non-Rechargeable Lithium Battery Installations

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed special conditions.

SUMMARY: This action proposes special conditions for the Boeing Model 767-2C airplane. This airplane will have a novel or unusual design feature when compared to the state of technology envisioned in the airworthiness standards for transport-category airplanes. This design feature is non-rechargeable lithium battery systems. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These proposed special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: Send your comments on or before March 14, 2016.

ADDRESSES: Send comments identified by docket number FAA-2015-5391 using any of the following methods:

- *Federal eRegulations Portal:* Go to <http://www.regulations.gov/> and follow the online instructions for sending your comments electronically.

- *Mail:* Send comments to Docket Operations, M-30, U.S. Department of Transportation (DOT), 1200 New Jersey Avenue SE., Room W12-140, West Building Ground Floor, Washington, DC, 20590-0001.

- *Hand Delivery or Courier:* Take comments to Docket Operations in Room W12-140 of the West Building

Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- *Fax:* Fax comments to Docket Operations at 202-493-2251.

Privacy: The FAA will post all comments it receives, without change, to <http://www.regulations.gov/>, including any personal information the commenter provides. Using the search function of the docket Web site, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the **Federal Register** published on April 11, 2000 (65 FR 19477-19478), as well as at <http://DocketsInfo.dot.gov/>.

Docket: Background documents or comments received may be read at <http://www.regulations.gov/> at any time. Follow the online instructions for accessing the docket or go to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Nazih Khaouly, Airplane and Flight Crew Interface Branch, ANM-111, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington, 98057-3356; telephone 425-227-2432; facsimile 425-227-1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite interested people to take part in this rulemaking by sending written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data.

We will consider all comments we receive by the closing date for comments. We may change these special conditions based on the comments we receive.

Background

On January 18, 2010, The Boeing Company applied for an amendment to Type Certificate No. A1NM to include a new Model 767-2C airplane. The Model

767-2C airplane is a twin-engine, transport-category airplane that is a freighter derivative of the Model 767-200 airplane currently approved under Type Certificate No. A1NM. The Model 767-2C airplane incorporates freighter features such as a main deck cargo door and strengthened floors to provide cargo carriage capability on the main deck. Provisions are also incorporated to support subsequent supplemental type certificate (STC) modifications which are intended to provide additional mission capabilities, including provisions to support conversion into an aerial refueling platform (*i.e.*, tanker) configuration.

Type Certification Basis

Under the provisions of Title 14, Code of Federal Regulations, (14 CFR) 21.101, The Boeing Company must show that the Model 767-2C airplane meets the applicable provisions of the regulations listed in Type Certificate A1NM or the applicable regulations in effect on the date of application for the change, except for earlier amendments as agreed upon by the FAA. The regulations listed in the type certificate are commonly referred to as the "original type certification basis." The regulations listed in Type Certificate No. A1NM are 14 CFR part 25 effective February 1, 1965 including Amendments 25-1 through 25-37 with exceptions listed in the type certificate. In addition, the certification basis includes other regulations, special conditions, and exemptions that are not relevant to these proposed special conditions. Type Certificate No. A1NM will be updated to include a complete description of the certification basis for this airplane model.

In addition to the applicable airworthiness regulations and special conditions, the Model 767-2C airplane must comply with the fuel-vent and exhaust-emission requirements of 14 CFR part 34, and the noise-certification requirements of 14 CFR part 36.

If the Administrator finds that the applicable airworthiness regulations (*i.e.*, 14 CFR part 25) do not contain adequate or appropriate safety standards for the Model 767-2C airplane because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

Special conditions are initially applicable to the model for which they are issued. Should the type certificate

for that model be amended later to include any other model that incorporates the same or similar novel or unusual design feature, or should any other model already included on the same type certificate be modified to incorporate the same novel or unusual design feature, these special conditions would also apply to the other model under § 21.101.

The FAA issues special conditions, as defined in 14 CFR 11.19, in accordance with § 11.38, and they become part of the type-certification basis under § 21.101.

Novel or Unusual Design Features

A battery system consists of the battery and any protective, monitoring and alerting circuitry or hardware inside or outside of the battery and venting capability where necessary. For the purpose of these special conditions, we refer to a battery and battery system as a battery. The Model 767-2C airplane will incorporate non-rechargeable lithium batteries, which are novel or unusual design features.

Discussion

We derived the current regulations governing installation of batteries in transport-category airplanes from Civil Air Regulations (CAR) 4b.625(d) as part of the re-codification of CAR 4b that established 14 CFR part 25 in February 1965. We basically reworded the battery requirements, which are currently in § 25.1353(b)(1) through (b)(4), from the CAR requirements. Non-rechargeable lithium batteries are novel and unusual with respect to the state of technology considered when these requirements were codified. These batteries introduce higher energy levels into airplane systems through new chemical compositions in various battery-cell sizes and construction. Interconnection of these cells in battery packs introduces failure modes that require unique design considerations, such as provisions for thermal management.

Recent events involving rechargeable and non-rechargeable lithium batteries prompted the FAA to initiate a broad evaluation of these energy-storage technologies. In January 2013, two independent events involving rechargeable lithium-ion batteries demonstrated unanticipated failure modes. A National Transportation Safety Board (NTSB) letter to the FAA, dated May 22, 2014, which is available at <http://www.nts.gov>, filename A-14-032-036.pdf, describes these events.

On July 12, 2013, an event involving a non-rechargeable lithium battery, in an emergency locator transmitter installation, demonstrated

unanticipated failure modes. Air Accident Investigations Branch Bulletin S5/2013 describes this event.

Some other known uses of rechargeable and non-rechargeable lithium batteries on airplanes include:

- Flight deck and avionics systems such as displays, global positioning systems, cockpit voice recorders, flight data recorders, underwater locator beacons, navigation computers, integrated avionics computers, satellite network and communication systems, communication-management units, and remote-monitor electronic line-replaceable units (LRU);
- Cabin safety, entertainment, and communications equipment, including life rafts, escape slides, seatbelt air bags, cabin management systems, Ethernet switches, routers and media servers, wireless systems, internet and in-flight entertainment systems, satellite televisions, remotes, and handsets;
- Systems in cargo areas including door controls, sensors, video surveillance equipment, and security systems.

Some known potential hazards and failure modes associated with non-rechargeable lithium batteries are:

- Internal failures

In general, these batteries are significantly more susceptible to internal failures that can result in self-sustaining increases in temperature and pressure (*i.e.*, thermal runaway) than their nickel-cadmium or lead-acid counterparts. The metallic lithium can ignite, resulting in a self-sustaining fire or explosion.

- Fast or imbalanced discharging
- Fast discharging or an imbalanced discharge of one cell of a multi-cell battery may create an overheating condition that results in an uncontrollable venting condition, which in turn leads to a thermal event or an explosion.
- Flammability

Unlike nickel-cadmium and lead-acid batteries, these batteries use higher energy and current in an electrochemical system that can be configured to maximize energy storage of lithium. They also use liquid electrolytes that can be extremely flammable. The electrolyte, as well as the electrodes, can serve as a source of fuel for an external fire if the battery casing is breached.

Proposed Special Condition 1 requires that each individual cell within a battery be designed to maintain safe temperatures and pressures. Proposed Special Condition 2 addresses these same issues but for the entire battery.

Proposed Special Condition 2 requires the battery be designed to prevent propagation of a thermal event, such as self-sustained, uncontrolled increases in temperature or pressure from one cell to adjacent cells.

Proposed Special Conditions 1 and 2 are intended to ensure that the battery and its cells are designed to eliminate the potential for uncontrolled failures. However, a certain number of failures will occur due to various factors beyond the control of the designer. Therefore, other special conditions are intended to protect the airplane and its occupants if failure occurs.

Proposed Special Conditions 3, 9 and 10 are self-explanatory, and the FAA does not provide further explanation for them at this time.

The FAA proposes Special Condition 4 to make it clear that the flammable-fluid fire-protection requirements of § 25.863 apply to non-rechargeable lithium battery installations. Section 25.863 is applicable to areas of the airplane that could be exposed to flammable fluid leakage from airplane systems. Non-rechargeable lithium batteries contain electrolyte that is a flammable fluid.

Proposed Special Condition 5 requires each non-rechargeable lithium battery installation to not damage surrounding structure or adjacent systems, equipment, or electrical wiring from corrosive fluids or gases that may escape. Proposed Special Condition 6 requires each non-rechargeable lithium battery installation to have provisions to prevent any hazardous effect on airplane structure or systems caused by the maximum amount of heat it can generate due to any failure of it or its individual cells. The means of meeting these proposed special conditions may be the same, but they are independent requirements addressing different hazards. Proposed Special Condition 5 addresses corrosive fluids and gases, whereas Proposed Special Condition 6 addresses heat.

Proposed Special Conditions 7 and 8 require non-rechargeable lithium batteries to have automatic means for battery disconnection and control of battery discharge rate due to the fast-acting nature of lithium-battery chemical reactions. Manual intervention would not be timely or effective in mitigating the hazards associated with these batteries.

These special conditions will apply to all non-rechargeable lithium battery installations in lieu of § 25.1353(b)(1) through (b)(4) at Amendment 25-123. Sections 25.1353(b)(1) through (b)(4) at Amendment 25-123 will remain in effect for other battery installations.

These proposed special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

Applicability

As discussed above, these special conditions are applicable to the Model 767-2C airplane. Should the applicant apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, or should any other model already included on the same type certificate be modified to incorporate the same novel or unusual design feature, these special conditions would apply to that model as well.

Conclusion

This action affects only certain novel or unusual design features on one model of airplane. It is not a rule of general applicability.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and record keeping requirements.

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702, 44704.

The Proposed Special Conditions

Accordingly, the FAA proposes the following special conditions as part of the type certification basis for Boeing Model 767-2C airplane.

Non-Rechargeable Lithium Battery Installations

In lieu of § 25.1353(b)(1) through (b)(4) at Amendment 25-123, each non-rechargeable lithium battery installation must:

1. Maintain safe cell temperatures and pressures under all foreseeable operating conditions to prevent fire and explosion.
2. Prevent the occurrence of self-sustaining, uncontrolled increases in temperature or pressure.
3. Not emit explosive or toxic gases, either in normal operation or as a result of its failure, that may accumulate in hazardous quantities within the airplane.
4. Meet the requirements of § 25.863.
5. No damage surrounding structure or adjacent systems, equipment, or electrical wiring from corrosive fluids or gases that may escape.
6. Have provisions to prevent any hazardous effect on airplane structure or systems caused by the maximum amount of heat it can generate due to any failure of it or its individual cells.

7. Be capable of automatically controlling the discharge rate of each cell to prevent cell imbalance, back-charging, overheating, and uncontrollable temperature and pressure.

8. Have a means to automatically disconnect from its discharging circuit in the event of an over-temperature condition, cell failure or battery failure.

9. Have a failure sensing and warning system to alert the flightcrew if its failure affects safe operation of the airplane.

10. Have a means for the flightcrew or maintenance personnel to determine the battery charge state if the battery's function is required for safe operation of the airplane.

Note 1: A battery system consists of the battery and any protective, monitoring and alerting circuitry or hardware inside or outside of the battery. It also includes vents (where necessary) and packaging. For the purpose of these special conditions, a battery and battery system are referred to as a battery.

Issued in Renton, Washington, on January 20, 2016.

Michael Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016-01582 Filed 1-26-16; 8:45 am]

BILLING CODE 4910-13-P

SECURITIES AND EXCHANGE COMMISSION

17 CFR Parts 240 and 249

[Release No. 34-76958; File No. S7-25-15]

RIN 3235-AL53

Extension of Comment Period for Disclosure of Payments by Resource Extraction Issuers

AGENCY: Securities and Exchange Commission.

ACTION: Extension of comment period.

SUMMARY: The Securities and Exchange Commission is extending the comment period for a release proposing new Rule 13q-1 and an amendment to Form SD to implement Section 1504 of the Dodd-Frank Wall Street Reform and Consumer Protection Act relating to disclosure of payments by resource extraction issuers [Release No. 34-76620 (Dec. 11, 2015); 80 FR 80057 (Dec. 23, 2015)]. The comment period for the proposal is divided between an initial comment period and a period for reply comments. The original initial comment period is scheduled to end on January 25, 2016 and the original period for reply comments is scheduled to end on

February 16, 2016. The Commission is extending the time period in which to provide the Commission with initial comments until February 16, 2016 and to provide reply comments until March 8, 2016. This action will allow interested persons additional time to analyze the issues and prepare their comments.

DATES: The comment period for the proposed rule published on December 23, 2015 (80 FR 80057), is extended. Initial comments are due on February 16, 2016. Reply comments, which may respond only to issues raised in the initial comment period, are due on March 8, 2016. In developing the final rules, the Commission may rely on both new comments and comments that have been received to date, including those that were provided in connection with the prior rules that the Commission issued under Section 13(q).

ADDRESSES: Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment forms (<http://www.sec.gov/rules/proposed.shtml>);
- Send an email to rule-comments@sec.gov. Please include File Number S7-25-15 on the subject line; or
- Use the Federal Rulemaking Portal (<http://www.regulations.gov>). Follow the instructions for submitting comments.

Paper Comments

- Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549-1090.

All submissions should refer to File Number S7-25-15. This file number should be included on the subject line if email is used. To help us process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (<http://www.sec.gov/rules/proposed.shtml>). Comments also are available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Room 1580, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. All comments received will be posted without change; we do not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly.

Studies, memoranda or other substantive items may be added by the Commission or staff to the comment file during this rulemaking. A notification of