



U.S. Department
of Transportation

Administrator

1200 New Jersey Avenue, SE
Washington, DC 0590

**Pipeline and Hazardous
Material Safety
Administration**

June 6, 2012

The Honorable Deborah A. P. Hersman
Chairman
National Transportation Safety Board
490 L'Enfant Plaza, SW
Washington, DC 20594

Dear Chairman Hersman:

This is in response to your June 15, 2011 letter regarding NTSB Safety Recommendations A-07-104 through -108. This letter provides an update on Pipeline and Hazardous Materials Safety Administration (PHMSA) actions relative to those recommendations (excluding A-07-106 that has been closed) as well as Safety Recommendation A-07-109. The National Transportation Safety Board (NTSB) issued the recommendations based on an investigation of a fire on a United Parcel Service cargo aircraft at Philadelphia International Airport, Philadelphia, Pennsylvania, and on concerns about the increasing number of incidents documented by the Federal Aviation Administration (FAA) involving overheating and fires initiated by rechargeable lithium ion batteries.

As you may know, recent Congressional action limits PHMSA's ability to address several of the referenced recommendations. On February 14, 2012, Congress enacted the FAA Modernization and Reform Act of 2012 (the FAA Act). The FAA Act specifically restricts PHMSA's authority to issue any regulations that are more stringent than the requirements of the International Civil Aviation Organization's Technical Instructions on the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions). The FAA Act, in part, says:

The Secretary of Transportation, including a designee of the Secretary, may not issue or enforce any regulation or other requirement regarding the transportation by aircraft of lithium metal cells or batteries or lithium ion cells or batteries, whether transported separately or packed with or contained in equipment, if the requirement is more stringent than the requirements of the ICAO Technical Instructions. Pub. L. 112-95 section 828.

The FAA Act does, under certain conditions, allow for more stringent PHMSA action only when PHMSA obtains a credible report that demonstrates that the presence of lithium cells or batteries, transported in accordance with the ICAO Technical Instructions, substantially contributed to the initiation or propagation of an onboard fire.

A-07-104

Require aircraft operators to implement measures to reduce the risk of primary lithium batteries becoming involved in fires on cargo-only aircraft, such as transporting such batteries in fire resistant containers and/or in restricted quantities at any single location on the aircraft.

Because of the limitations of the FAA Act, PHMSA plans no further action beyond harmonizing the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) with the ICAO Technical Instructions. Specifically, PHMSA does not intend to require the use of specialized containers or further restrict their stowage locations unless: 1) the ICAO adopts such measures; or 2) PHMSA obtains a credible report that demonstrates a deficiency in the ICAO Technical Instructions that has substantially contributed to an onboard fire, and also suggests specialized packaging, additional stowage restrictions, or other measures would address the deficiency.

A-07-105

Until fire suppression systems are required on cargo-only aircraft, as asked for in Safety Recommendation A-07-99, require that cargo shipments of secondary lithium batteries, including those contained in or packed with equipment; be transported in crew-accessible locations where portable fire suppression systems can be used.

PHMSA plans no further action to restrict the stowage location of cargo shipments of lithium ion batteries on cargo-only aircraft beyond harmonizing the HMR with the ICAO Technical Instructions. As previously indicated, the FAA Act limits our ability to issue regulations for the transport of lithium batteries. At this time, we have not been provided with a credible report demonstrating that lithium ion batteries, packaged and transported aboard cargo aircraft in accordance with the ICAO Technical Instructions, substantially contributed to an onboard fire. Commenters responding to PHMSA's proposal (75 FR 1302; January 11, 2010) stated that implementing this recommendation would result in significant disruption to the efficient transport of these goods, and did not provide evidence that it would prevent future incidents. Commenters to the proposed rule also stated that requiring lithium ion cells and batteries to be transported in accessible locations or in compartments or containers equipped with an FAA-approved fire suppression system would: 1) require significant changes to aircraft loading procedures; 2) limit the space available for transport of other commercial goods; and 3) place lithium ion batteries in close proximity to highly flammable material potentially increasing the consequences of an onboard fire. Other commenters noted that requiring lithium ion batteries to be stowed in accessible locations provides only a limited means of fire suppression since a crewmember would be required to leave the cockpit and enter the cargo area with a portable fire extinguisher in response to a fire with a portable fire extinguisher. All comments to the proposed rule are available for review in the docket [PHMSA-2009-0095] to the rulemaking at www.regulations.gov.

Require commercial cargo and passenger operators to report to the Pipeline and Hazardous Materials Safety Administration all incidents involving primary and secondary lithium batteries, including those contained in or packed with equipment that occurs either on board or during loading or unloading operations and retain the failed items for evaluation purposes.

PHMSA plans no further action to require cargo and passenger operators to retain failed items for evaluation purposes. Our standard investigative process has been successful in providing us with the required information about lithium battery incidents and specific information regarding the material being shipped (e.g., test reports for the batteries) and the condition of the package or article involved in the incident. Carriers have been notifying PHMSA about incidents involving batteries, which has allowed for the inspection of failed items, and offering to release these items to us for evaluation. Also, shippers have been doing their own analysis and sharing the results with us. PHMSA uses all this information to conduct follow-up investigations with shippers. This process can be illustrated through the following example. A small parcel carrier discovered a damaged package that contained a single lithium ion battery in a padded envelope. A visual examination of the battery and package by the shipper revealed that impact damage to a protruding tab was the most likely cause of the incident. PHMSA conducted a follow-up investigation and determined the battery and the package were in compliance with the applicable requirements. The company informed us they have since phased out this battery design and stated that future shipments of replacement batteries will be enclosed in rigid outer packagings to prevent a similar occurrence. This cooperation between PHMSA, package carriers and shippers serves as a positive example of our ability to make timely improvements to shipping practices that will prevent similar incidents. PHMSA will determine, on a case by case basis, whether the analysis of a failed item could potentially provide valuable information and if so; require the person in possession to retain such batteries for evaluation.

Currently, the HMR requires the reporting of transportation incidents involving lithium batteries to PHMSA. However, the regulations do not require the shipper, carrier, or any other person in possession of an item, at the time of the incident, to retain any failed items for evaluation. In the January 2010 proposed rule, PHMSA recommended additional revisions that would require a person reporting an incident to also provide reasonable access to a failed item, if available. NTSB noted in its comments that it remained concerned that the proposed rule would not specifically require retention of failed items for evaluation. Moreover, it noted that effective transportation requirements could not be established “without a regulatory requirement to retain failed batteries and a program to analyze the retained batteries and equipment.” Several commenters to the proposal raised concerns about workplace safety and environmental issues associated with the storage of items involved in an incident. We accept that a requirement for a person (e.g., a carrier) to retain a failed item may present environmental and workplace safety concerns. PHMSA specified “reasonable access” in its proposal to permit a certain amount of discretion in the disposition of the failed item consistent with protecting human health and the

environment as well as legitimate privacy concerns regarding personal property. We expect all persons involved in a lithium battery incident to fully cooperate with any investigations including providing access to records and failed items. Based on the success of our current process for investigating lithium battery incidents, and on the comments on the January 2010 proposal, we do not believe that it is necessary to specifically require operators to retain failed items for evaluation in order to have an effective program for the safe transportation of lithium batteries.

A-07-108

Analyze the causes of all thermal failures and fires involving secondary and primary lithium batteries and, based on this analysis, take appropriate action to mitigate any risks determined to be posed by transporting secondary and primary lithium batteries, including those contained in or packed with equipment, on board cargo and passenger aircraft as cargo; checked baggage; or carry-on items.

A-07-109

Eliminate regulatory exemptions for the packing, marking, and labeling of cargo shipments of small secondary lithium batteries (no more than 8 grams equivalent lithium content) until the analysis of the failures and the implementation of risk-based requirements asked for in Safety Recommendation A-07-108 are completed.

PHMSA is currently evaluating the safety impacts of changes made to the ICAO Technical Instructions relative to these recommendations and will provide NTSB with an update after a determination is made based on the evaluation. The January 2010 proposed rule effectively eliminated the regulatory exceptions for packages of small lithium batteries when transported aboard aircraft. PHMSA chose this regulatory approach because a multi-layered safety system encompassing packaging, hazard communication and employee training has proven to be effective for ensuring the safe transport of larger lithium batteries as well as other hazardous material. Since publication of the proposal, the ICAO Dangerous Goods Panel has adopted more stringent rules with regard to the air transport of lithium batteries under the 2013-2014 ICAO Technical Instructions. These new rules would subject packages containing more than 8 small lithium cells or 2 small lithium batteries, which were previously excepted from most of the requirements of the ICAO Technical Instructions, to additional requirements. These requirements include package weight limits (10 kg for lithium ion cells and batteries and 2.5 kg for lithium metal cells and batteries) and hazard communication requirements including a notice to the pilot in command and a requirement for air carrier personnel to inspect such packages.

PHMSA recently published a notice (70 FR 21714; April 11, 2012) seeking additional comment on the impact of these changes and others. PHMSA is considering whether to harmonize with these requirements and the notice will allow opportunity to supplement comments to our January 2010 proposed rule.

Regards,



Cynthia L. Quateman

