



Office of the Chairman

National Transportation Safety Board

Washington, D.C. 20594

SEP 26 2002

Honorable Ellen G. Engleman
Administrator
Research and Special Programs Administration
Washington, D.C. 20590

Dear Ms. Engleman:

Thank you for the Research and Special Programs Administration's (RSPA's) June 10, 2002, response to the National Transportation Safety Board regarding Safety Recommendations A-99-80, -82, -83, and -84, stated below. These recommendations were issued to RSPA as a result of the Safety Board's investigation of an April 28, 1999, fire on cargo pallets containing shipments of lithium batteries at Northwest Airlines' cargo facility at Los Angeles International Airport in Los Angeles, California.

A-99-80

With the Federal Aviation Administration [FAA], evaluate the fire hazards posed by lithium batteries in an air transportation environment and require that appropriate safety measures be taken to protect aircraft and occupants. The evaluation should consider the testing requirements for lithium batteries in the United Nation's [UN's] *Transport of Dangerous Goods Manual of Tests and Criteria*, the involvement of packages containing large quantities of tightly packed batteries in a cargo compartment fire, and the possible exposure of batteries to rough handling in an air transportation environment, including being crushed or abraded open.

A-99-82

Require that packages containing lithium batteries be identified as hazardous materials, including appropriate marking and labeling of the packages and proper identification in shipping documents, when transported on aircraft.

A-99-83

Pending completion of your evaluation of the fire hazards posed by lithium batteries in an air transportation environment, notify the International Civil Aviation Organization's [ICAO] Dangerous Goods Panel about the circumstances of the fire in the Northwest Airlines cargo facility at Los Angeles International Airport on April 28, 1999. Also pending completion of your evaluation of the fire

hazards posed by lithium batteries in an air transportation environment, initiate action through the Dangerous Goods Panel to revise the *Technical Instructions for the Safe Transportation of Dangerous Goods by Air* to prohibit the transportation of lithium batteries on passenger-carrying aircraft.

A-99-84

Initiate action through the Dangerous Goods Panel to revise the *Technical Instructions for the Safe Transportation of Dangerous Goods by Air* to require that packages containing lithium batteries be identified as hazardous materials when transported on aircraft.

On April 2, 2002, RSPA published a notice of proposed rulemaking (NPRM) titled "Hazardous Materials: Transportation of Lithium Batteries," which proposes changes to test methods for lithium batteries; revisions to exceptions for small batteries, including new marking requirements; elimination of certain exceptions for larger batteries; and other modifications. RSPA reports that it is continuing to reevaluate the hazards posed by lithium batteries in transportation by collecting information from lithium battery manufacturers, shippers, and federal agencies with extensive experience in testing and use of lithium batteries.

On June 14, 2002, the Safety Board submitted comments to the docket for the NPRM. The Board's comments noted that although the measures proposed in the NPRM are responsive to element (1) of Safety Recommendation A-99-80—the testing requirements in the UN recommendations—the NPRM does not propose standards that fully address elements (2) and (3)—the involvement of packages containing large quantities of tightly packed batteries in a cargo compartment fire, and the possible exposure of batteries to rough handling in an air transportation environment, including being crushed or abraded open. The Board notes that RSPA states it is continuing to evaluate the hazards posed by lithium batteries and will initiate additional actions as deemed necessary upon completion of the evaluation. The Board urges RSPA to expedite its evaluation. Pending issuance of a final rule based on the NPRM and development and issuance of appropriate standards that consider the potential involvement of packages with large quantities of lithium batteries in a cargo compartment fire on an airplane and the potential exposure of lithium batteries to rough handling during air transportation, Safety Recommendation A-99-80 remains classified "Open—Acceptable Response."

The NPRM also proposes requirements that would enhance the identification of packages of lithium batteries and provide guidance if a package were damaged. However, the proposed requirements do not fully address the Safety Board's concern in Safety Recommendation A-99-82 that cargo handlers need to be properly alerted to the dangers posed by lithium batteries. If cargo handlers can determine from shipping documents and the marking and labeling on packages of lithium batteries that the contents contain a hazardous material, they are more likely to handle the package carefully. The Board believes that a package containing more than 12 small lithium batteries or 24 lithium cells should be classified as a Department of Transportation Class 9 miscellaneous hazardous material, which is subject to the requirements in the hazardous materials regulations for labeling of the package and shipping papers. The Board notes that RSPA is continuing its analysis and evaluation of issues related to air shipment of packages of

lithium batteries. The Board urges RSPA to consider the need to classify lithium batteries as a Class 9 hazardous material. Pending issuance of such a requirement, Safety Recommendation A-99-82 is classified "Open—Acceptable Response."

The NPRM letter is not directly relevant to Safety Recommendations A-99-83 and -84. However, these recommendations were discussed at the July 18, 2002, meeting on open safety recommendations. RSPA stated that it has taken the following actions in response to those two recommendations: the publication of a safety advisory in the *Federal Register* on September 7, 2000, regarding the transportation of lithium batteries; notification of the ICAO Dangerous Goods Panel as specified in both safety recommendations; and revisions to the ICAO *Technical Instructions for the Transport of Dangerous Goods by Air* that are consistent with the changes proposed in the NPRM (i.e., incorporation of UN testing criteria for packaging for lithium batteries, warning labels and marking for packages of lithium batteries, and emergency instructions to be included with the shipping documents for lithium batteries).

Regarding Safety Recommendation A-99-83, RSPA stated in the NPRM and reconfirmed during our July 18 meeting that its evaluation of the hazards of lithium batteries was ongoing, and it would initiate additional action if necessary to address other hazards identified during this evaluation. The commitment by RSPA to seek additional international restrictions on air shipment of lithium batteries if RSPA's analysis of the fire hazards indicates that such action is warranted, is an acceptable alternative method of addressing the recommendation. Because RSPA brought this issue before the international community and has committed to initiate additional action based on its completed evaluation, Safety Recommendation A-99-83 is classified "Closed—Acceptable Alternate Action."

Regarding Safety Recommendation A-99-84, the Safety Board acknowledges that RSPA initiated this proposal to the ICAO Dangerous Goods Panel as recommended. Additionally, RSPA staff provided examples of the warning labels developed by the battery industry and that shippers of lithium batteries will voluntarily place on packages of lithium batteries. The Board believes that the use of these labels in conjunction with recent revisions to UN and ICAO standards to mark packages of lithium batteries and to include emergency instructions with the shipping documents is responsive to the recommendation. Consequently, Safety Recommendation A-99-84 is classified "Closed—Acceptable Action."

Sincerely,



Carol J. Carmody
Acting Chairman

cc: Mr. Robert Clarke, Safety and Health Team Leader
Office of Transportation Policy Development