

Lithium Battery Air Safety Advisory Committee

Meeting Minutes

September 16, 2020

I. Call to Order

Chairman Bob Brown called to order the second meeting of the Lithium Battery Air Safety Advisory Committee at 10:30 AM EDT on September 16th. The meeting was hosted virtually via Microsoft Teams. Serving as Designated Federal Officer (DFO), Duane Pfund from PHMSA, and as Alternate Designated Federal Officer Richard Hill from FAA.

II. Roll Call

Roll call was conducted by means of introductions of Committee members and staff. Eighteen of twenty Committee members were in attendance:

BOB BROWN, Chairman, Coalition of Airline Pilots Associations

J. THOMAS CHAPIN, Underwriters Laboratories

JAMES DAVIS, AccuFleet Testing

RAJU DESAI, Apple

DOUG FERGUSON, Boeing

GEORGE KERCHNER, PRBA - the Rechargeable Battery Association

TODD MACKINTOSH, General Motors

BRANDON MARTIN, Outdoor Power Equipment Institute

ROBERT McCLELLAND, UPS Airlines

KATHLEEN O'SHEI, Integer

WILLIAM REESE, Commercial Vehicle Safety Alliance

PAUL ROGERS, International Association of Fire Fighters

SCOTT SCHWARTZ, Air Line Pilots Association

TIM SHEPPARD, Samsung Electronics America

PHILIP SQUAIR, National Electrical Manufacture Association

MICHAEL TOBIN, Alaska Airlines

DAVID WEILERT, Viking Packing Specialist

VERONICA WILSON, Walmart

III. Opening Remarks

Opening remarks were provided by Elaine L. Chao, Secretary, Department of Transportation, Howard “Skip” Elliott, Administrator, PHMSA, Ben Supko, Executive Director, FAA Office of Hazardous Materials, and Chairman Bob Brown. All speakers recognized the diverse backgrounds of the Committee membership and highlighted the important work to be carried out. Secretary Chao thanked the Committee members for their commitment to lithium battery transportation safety and for their work in continuing commerce during the COVID-19 public health emergency. Administrator Elliott stressed the importance of a sound safety management system (SMS) within companies to help further the goal of 0 incidents involving hazardous materials. Executive Director Supko spoke about the important work the Committee is undertaking to improve lithium battery and air transportation safety. Chairman Brown provided his vision for success for the Committee and discussed the interoperability of the work being undertaken by each of the sub-committees in working towards success.

IV. Previous Meeting Minutes & Agenda Adoption

Chairman Brown noted the minutes from the previous meeting were provided to all and made available on the Committee’s webpage and asked for a motion to adopt the minutes. A motion was received from member McClelland and a second from member Chapin. The minutes were adopted as provided. Chairman Brown then reviewed the current meeting agenda. A motion to approve the meeting agenda was provided by member Chapin and a second from member Martin. Noting no objections to the agenda as presented, the agenda was approved.

V. Reports from Sub-Committees

Each of the four sub-committee chairmen provided the Committee with an update of the work that their committee had undertaken since the last Committee meeting and an idea of future work to be conducted.

- a. Bob Brown, chairman of the Hazard Review Sub-Committee, provided an overview of the Committee meeting at the FAA Technical Center in February 2020. He noted that those in attendance were able to witness and discuss fire risks and flight crew procedures, types and classifications of types of lithium batteries and cargo compartments, and potential mitigation strategies. He further indicated, given this sub-committee is comprised of all members of the Committee, it is expected next steps would involve an education on FAA Safety Management (SMS) principles and ICAO Annex 6 recommendations, examining the impact of packaging standards under development, and evaluating new technologies in mitigation that may be presented to the sub-committee.

- b. Bob McClelland, chairman of the Data Collection and Analysis Sub-Committee, provided the Committee with an update of the sub-committees work to examine the elements currently captured by voluntary industry reporting mechanisms for lithium battery incidents and to determine what additional elements may provide enhancements to a centralized repository for air transportation incidents involving lithium batteries and equipment containing lithium batteries (e.g., root cause analysis, location on aircraft where the incident occurred, phase of flight, device type, etc.)
- c. Bob Brown, chairman of the Regulations and Gap Analysis Sub-Committee, noted the unfortunate passing of the previous chairman of the sub-committee, Bill Wojtas from United Airlines and noted that he had taken over as the temporary chairman until a suitable replacement can be identified. Chairman Brown then noted the results of a survey sent to sub-committee members that indicated a preference to pursue work focusing on ICAO Annex 6 recommendations and associated operational measures and FAA SMS principles. Additional comments to the survey indicated a desire to simplify the regulations related to lithium battery transportation and increase outreach to the public, shippers, and freight forwarders.
- d. Dr. Tom Chapin, chairman of the Supply Chain Safety and Integrity Sub-Committee, provided an overview of the work done by the sub-committee to analyze the supply chain and provided a work plan that consists of three key phases. The first phase consists of the creation of a working document that defines the key aspects of the supply chain for generic and battery specific operations. The second phase is to identify information that pertains to key aspects of the battery supply chain. The third phase is to examine the supply chain documentation and combine data from the data collection and regulations and gap analysis sub-committees to determine information that is important and relevant to ensuring or improving aviation battery transportation safety.

VI. Sub-Committee Next Steps & Prioritization

The Committee began a discussion about establishing priorities and forming recommendations both for the report and for further work of the sub-committees. These discussions utilized a list of recommendations developed from the presentations given by the sub-committee chairs during the reports of the sub-committee. A list of potential recommendations for the Supply Chain Safety and Integrity Sub-Committee was provided on screen and Committee members discussed and added their concerns or potential work items in this area. The allocated meeting time for day 1 of the Committee meeting ended and discussion on this agenda item was tabled until day 2.

VII. Adjournment

Chairman Bob Brown adjourned the meeting for the day at 3:47 PM EDT.

Lithium Battery Air Safety Advisory Committee Meeting Minutes

September 17, 2020

VIII. Call to Order

Chairman Bob Brown called to order the second day of the second meeting of the Lithium Battery Air Safety Advisory Committee at 10:30 AM EDT on September 17th. The meeting was hosted via Microsoft Teams.

IX. Roll Call

Seventeen of twenty Committee members were in attendance:

BOB BROWN, Chairman, Coalition of Airline Pilots Associations

J. THOMAS CHAPIN, Underwriters Laboratories

JAMES DAVIS, AccuFleet Testing

RAJU DESAI, Apple

DOUG FERGUSON, Boeing

GEORGE KERCHNER, PRBA - the Rechargeable Battery Association

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PHILIP SQUAIR, National Electrical Manufacture Association

MICHAEL TOBIN, Alaska Airlines

VERONICA WILSON, Walmart

X. Opening Remarks

Chairman Brown provided opening remarks summarizing the work done during day one and outlined the agenda for the second day of the meeting.

XI. Sub-Committee Next Steps & Prioritization (cont.)

The Committee continued the discussion on establishing priorities and forming recommendations from day 1. The three sub-committee recommendations as provided by their respective chairs were discussed by the Committee and additional concerns or potential areas of work noted by Committee members were added to the record for the discussions on this agenda item.

XII. Reporting

The Committee discussed general topic areas of a potential mandated report to the Secretary of Transportation and the appropriate committees of Congress. The Committee expressed general agreement with the proposed framework of the report. The Committee suggested noting the importance of the interoperability of the sub-committees to ensure the Committee accomplishes its goals. It was also indicated that international engagement should be addressed in the report.

A list of recommendations to be included in the report, based on discussions during the sub-committee next steps & prioritization section of the agenda, were developed. These recommendations will be included in the draft report being developed and coordinated by the Committee. Each recommendation, either to continue work in a particular area or a specific recommendation for action will be supplemented in the report with appropriate background information.

The following recommendations are provided as documented during the meeting with minimal edits for clarity and are in no particular order. It is expected that these recommendations will be edited when drafting the report to ensure context and clarity.

1. Examine and define the supply chain/battery life-cycle process.
2. Assess best practices or principles in quality management/conformity assessment and identify safety processes that apply across the supply chain.
3. Document current information baseline available and provided to end users.
4. Identify requisite data set required by the aviation sector to validate safety and compliance.
5. Understand and assess the impacts of ICAO Annex 6 and FAA SMS mandates on air operators.

6. Provide an overview by aircraft manufacturers of their risk assessments for batteries shipped as cargo in cargo compartments.
7. Establish an enhanced lithium battery/battery powered device incident reporting system/database with the aim of capturing information beyond that required by existing reporting mechanisms. Consider and recommend where the reporting system and data should reside (ASIAS has been suggested).
8. Create a process for forensic evaluation and root cause analysis of lithium batteries and equipment involved in an aviation related incident.
9. Provide appropriate stakeholders with data and analysis from reporting mechanism (to working groups like CAST, other).
10. Examine and discuss ways to improve communication and cooperation between competent authorities to enforce lithium battery dangerous goods regulations.
11. Identify regulatory gaps that do not support air operators in accomplishing the ICAO Annex 6 mandate and provide recommendations to eliminate identified gaps.
12. Assess current domestic and international regulatory provisions and identify opportunities for simplification, clarity, and enhanced safety.
13. Identify best practices from freight forwarders and carriers to limit undeclared/misdeclared shipments.

XIII. Stakeholder Engagement in International Forums

- a. A presentation on the ongoing work by the SAE G-27 committee to develop a performance-based packaging standard for lithium batteries transported as cargo on aircraft was presented by member Ferguson.
- b. A presentation on the work of the UN Sub-Committee of Experts on the Transport of Dangerous Goods (SCOE TDG) Informal Working Group on Hazard Based Classification of Lithium Batteries and Cells was provided by member Kerchner.
- c. A presentation covering lithium battery proposals to be discussed at the 57th session of the UN SCOE TDG and areas of focus for the upcoming ICAO DGP-WG/20 was provided by DFO Pfund.
- d. A presentation addressing NTSB Safety Recommendations A-20-31 & A-20-32 concerning the shipment of prototype or low production run lithium batteries by air was provided by Rachael Gunaratnam, Hazardous Materials Accident Investigator, NTSB.
- e. A presentation covering PHMSA's Check the Box program was provided by Aaron Mitchell, Director, Outreach Engagement and Grants Division, PHMSA.

XIV. Future Work

The Committee discussed dates for the next Committee meeting. It was noted that the results of a survey taken by Committee members indicated that the dates with the most availability were March 3-4, 2021. The Committee tentatively selected March 3-4, 2021 as the dates for the next meeting, subject to required Department of Transportation approval.

XV. Adjournment

Chairman Bob Brown adjourned the meeting at 4:55 PM EDT.

I hereby certify that, to the best of my knowledge, the foregoing minutes are accurate and complete.

A handwritten signature in cursive script that reads "Bob Brown". The signature is written in dark ink and is positioned above a horizontal line.

Bob Brown
Chairman
Lithium Battery Air Safety Advisory Committee

Date: October 27, 2020