

Lithium Battery Air Safety Advisory Committee

Meeting Minutes

May 4, 2022

I. Call to Order

Chairman Bob Brown called the fifth meeting of the Lithium Battery Air Safety Advisory Committee to order at 9:08 AM EDT on May 4th. The meeting was hosted at the Department of Transportation (DOT) Headquarters with virtual attendance via Microsoft Teams. Serving as Designated Federal Officer (DFO), Duane Pfund from PHMSA, and as Alternate Designated Federal Officer (ADFO), Richard Hill from FAA.

II. Quorum

Chairman Brown surveyed those in attendance to determine the presence of a quorum. Twenty of twenty-two Committee members were in attendance:

BOB BROWN, Chairman, Coalition of Airline Pilots Associations

DOUGLAS CARR, National Business Aviation Association

JAMES DAVIS, AccuFleet Testing

RAJU DESAI, Apple

DOUG FERGUSON, Boeing

LINDA GABOR, Call2Recycle

GEORGE KERCHNER, PRBA - the Rechargeable Battery Association

JENNIFER LITTENBERG, Hawaiian Airlines

TODD MACKINTOSH, General Motors

BRANDON MARTIN, Outdoor Power Equipment Institute

ROBERT McCLELLAND, UPS Airlines

DINKAR MOKADM, Association of Flight Attendants- CWA

KATHLEEN O'SHEI, Integer

MARIANNA PATTERSON, Amazon

WILLIAM REESE, Commercial Vehicle Safety Alliance

PAUL ROGERS, International Association of Fire Fighters

STEPHANE ROSSETTI, Medtronic

TIM SHEPPARD, Samsung Electronics America

III. Opening Remarks

Opening remarks were provided by William Schoonover, Associate Administrator, Office of Hazardous Materials, PHMSA; Ben Supko, Executive Director, FAA Office of Hazardous Materials and Chairman Bob Brown. Associate Administrator Schoonover noted the renewal of the Committee's charter, thanked those that had served and are no longer part of the Committee, thanked Chairman Brown for continuing to chair the group, and welcomed the new Committee members. He noted increased incidents involving lithium batteries being shipped for disposal and recycling. He said that PHMSA would continue to work collaboratively with industry, modal partners, and other federal partners on this issue. Additionally, he expressed encouragement that the Committee is being utilized to inform the ICAO Energy Storage Device Working Group members as they perform their risk assessments on lithium batteries contained in and packed with equipment. Executive Director Supko provided an update on lithium battery air transportation incidents collected by the FAA. He noted 36 incidents between September 2021 and May 2022. This increased from 26 incidents in the same time frame from September 2018 and May 2019 pre-COVID. Mr. Supko noted that members of this Committee have the opportunity to build a collaborative process between lithium battery manufacturers and users of batteries, e-commerce platforms, airlines, and other industry stakeholders that lay a foundation for a safety management culture that stems across the entire supply chain. Chairman Brown welcomed the committee's new members and highlighted the different perspectives each will bring to the Committee. Chairman Brown then gave a brief history of the Committee's work so far and his vision for the future using a crawl, walk run metaphor.

IV. Previous Meeting Minutes and Agenda Adoption

Chairman Brown noted that 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 Mackintosh. 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 Martin and a second from member Wroth. Noting no objections to the agenda as presented, the agenda was approved.

V. Member Introductions

Each member of the Committee introduced themselves, whom they represent, and what they hope to get out of being a part of the Committee. This was primarily for the benefit of the four new Committee members; Douglas Carr represents the National Business Aviation Association, Linda Gabor represents Call2Recycle, Dinkar Mokdam represents the Association of Flight Attendants- CWA, and

VI. Reports from Sub-Committees

The Sub-Committee Chairs provided the Committee an update on work undertaken by their groups since the last Committee meeting.

a. A Data Collection & Analysis Sub-Committee update was provided by its Chair David Wroth who gave the Committee an update on the Thermal Runaway Incident Program (TRIP), indicating the onboarding of 2 international members, the incorporation of near-miss incidents, sharing of incident data with relevant partners, and the most recently compiled 2022 incident data through April 15, 2022. It was noted that over five years, an estimated one-third of incidents reported involving batteries in or with equipment. Next steps include advancing the TRIP program through additional database enhancements and upgrades and adding other participants.

Mr. Wroth also updated the Committee on the work of this Sub-Committee concerning forensic evaluations. The Sub-Committee has a general agreement around when a forensic evaluation would be appropriate and has developed a draft flowchart on when to conduct various evaluations and the types of inspections that might be performed in various contexts. Outstanding issues such as the authority to take possession of devices, handling potential personally identifiable information on devices, shipping of damaged devices for analysis, and notification to device manufacturers were noted as ongoing discussions within the Sub-Committee.

- b. Member Doug Ferguson provided a Regulations & Gap Analysis Sub-Committee update. This update discussed potential regulatory gaps the Sub-Committee is examining, including differences in USPS regulations and regulations applied to nonpostal shipments, imposing a state of charge (SOC) limit on batteries packed with or contained in equipment, prohibitions on damaged or defective batteries carried on board by passengers or crew, and differing requirements for inter-Alaskan shipments of batteries.

Alternate DFO Dick Hill provided information regarding a discussion starter concept that would divide UN3481 batteries shipped in or with equipment into two groups. This concept would generally delineate between batteries packed with or contained in equipment shipped at 30% SOC or less and those sent above 30% SOC, which would require extra mitigation efforts to be implemented. This led to some discussion on the impacts of requiring batteries packed with or contained in equipment to be shipped at a specific SOC, including implications to carbon emissions if fire covers were required, potential concerns over device or battery damage or usability, and applicability to particular device types such as implantable medical devices.

- c. A Supply Chain Safety and Integrity Sub-Committee update was provided by its Chair Bob McClelland. This update discussed the Sub-Committees continuing work to refine their existing life cycle spreadsheet, identify life cycle activities that presented the most risk for air transportation and set priorities within the Sub-Committee on the targeted areas of focus. Mr. McClelland presented a simplified supply chain product lifecycle flowchart that the Sub-Committee will utilize in future discussions. Future work envisioned includes further refinement of the lifecycle spreadsheet and flowchart, identifying lifecycle activities that represent the most risk for air transportation, and setting priorities within the Sub-Committee on the targeted focus areas.
- d. Chairman Bob Brown presented on behalf of the Hazard Analysis Sub-Committee that covered recent supply chain lithium battery incidents, design elements of the supply chain and

counterfeit products, and an open discussion on intentionally non-compliant shipments and quality control. An illustrative chart noting various options for battery or cell manufacturers, point of purchase, and distribution network was utilized to show that each path can succeed or fail if the wrong steps are followed at any point along the supply chain.

VII. International Update

DFO Duane Pfund provided an update on lithium battery-related proposals to be considered by the 60th session of the UN Sub-Committee of Experts on the Transport of Dangerous Goods in June/July and an ICAO update that focused on work by the ICAO DGP Energy Storage Devices Working Group (ESD WG) to conduct a safety risk assessment of lithium batteries packed with and contained in equipment. Additionally, member Kerchner gave a presentation on the “right to repair” movement that has pending legislation in several states to allow consumers access to the tools and resources to repair their own electronic devices.

The UN update addressed proposals concerning articles containing prototype lithium batteries, when a lithium battery test summary document must be made available, and the ability to transport multiple batteries in a large package. The ICAO update informed the Committee of the intent of the ICAO DGP, through the ESD WG, to complete a safety risk assessment of lithium batteries packed with and contained in equipment consisting of a structured approach to assess hazards and consider mitigation measures.

DFO Pfund informed the Committee that the action plan involves resource planning, process planning, identifying information needs, and stakeholder engagement. It was noted that the statutory mandate of the Committee is to facilitate communication between those in the air transport supply chain and the federal government regarding the safe air transportation of lithium cells and batteries and economic and social impacts of the regulation of such transportation, and to provide a forum for the Secretary to provide information on and to discuss the activities of the Department of Transportation relating to lithium battery transportation safety; that the Committee could be used as a mechanism for stakeholder engagement. Information concerning the work of the ESD WG and their ongoing risk assessment of lithium batteries packed with and contained in equipment would be shared with Committee members, and he suggested time could be dedicated within the work of the Regulations & Gap Analysis Sub-Committee to review the information within the context of their current work. There was agreement that the Committee would be utilized to gather, coordinate, and provide U.S. stakeholder inputs to PHMSA and FAA to support the ICAO DGP risk assessment initiative. Updates on the work of the ESD WG on this subject will be provided to the Committee and made publicly available to ensure transparency and equitable opportunities for U.S. stakeholders to participate in the data sharing and fully inform the U.S. representative of the working group.

VIII. Adjournment/Closing Remarks

Chairman Bob Brown thanked everyone for a productive meeting, welcomed the new members again, and extended his appreciation to members that are no longer serving, Dr. Tom Chapin and Dave Weilert, for their contributions to the Committee's work on supply chain issues and counterfeit batteries respectively. Chairman Brown noted that the next meeting would be in approximately six months. The meeting was adjourned at 4:45 PM EDT.

At this moment, I certify that the preceding minutes are accurate and complete to the best of my knowledge.

A handwritten signature in cursive script that reads "Bob Brown".

Bob Brown
Chairman
Lithium Battery Air Safety Advisory Committee

Date: July 20th, 2022