U.S. Department of Transportation
National Highway Traffic Safety Administration

1200 New Jersey Avenue SE.
Washington, DC 20590

April 2, 2021

The Honorable Robert L. Sumwalt, III
Chairman
National Transportation Safety Board
490 L'Enfant Plaza East, SW
Washington, DC 20594

Dear Chairman Sumwalt:

We have reviewed the National Transportation Safety Board's (NTSB) November 13, 2020, report, *Safety Risks to Emergency Responders from Lithium-Ion Battery Fires in Electric Vehicles* (SR-20/01), and the safety recommendations to the National Highway Traffic Safety Administration (NHTSA). NHTSA's responses to the recommendations are discussed below.

NTSB Recommendations and Requested Designations:

H-20-30
When determining a vehicle's U.S. New Car Assessment Program score, factor in the availability of a manufacturer's emergency response guide and its adherence to International Organization for Standardization standard 17840 and SAE International recommended practice J2990.

NHTSA Action:
NHTSA's New Car Assessment Program (NCAP) is a consumer information program that evaluates the safety performance of vehicles and provides comparative information on new vehicles. NCAP also provides consumers with information on the availability of new vehicle safety features. This information is provided to assist consumers with vehicle purchasing decisions and to encourage safety improvements in vehicle design.

NHTSA believes it is more effective to address risks to emergency responders by working directly with the emergency response community. NHTSA issues guidance, supports the development of training for emergency responders, and supports other entities in providing emergency response guides from manufacturers.

In 2012 and 2014, NHTSA provided interim guidance to emergency responders on the handling of electric powered vehicles in an emergency. NHTSA has also partnered with the U.S. Department of Energy, the U.S. Fire Administration, and the National Fire Protection Association (NFPA) to support the development of training to emergency responders on handling and managing fire incidents involving alternative fuel vehicles, including electric powered vehicles. This training and information is maintained and administered by NFPA.[1]

[1] https://www.nfpa.org/Training-and-Events/By-topic/Alternative-Fuel-Vehicle-Safety-Training

NFPA also makes available manufacturers supplied emergency response guides for various alternative fuel vehicles make and models[2]. We will partner with the NFPA and advocate for an immediate update to their 2018 Emergency Field Guide to incorporate recently manufactured EVs and underscore the need for a recurring, biennial update to this publication.

Additionally, NHTSA is conducting research to inform the agency's decision-making in this area. Our research will focus on managing stranded energy in electric vehicle battery packs and on developing practical strategies for responders to control and manage the stranded energy in an emergency. The agency will consider next steps after the completion of this research.

NHTSA requests this recommendation be classified as **Open, Acceptable Response**.

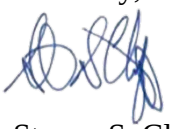
H-20-31
Convene a coalition of stakeholders to continue research initiated by your organization on ways to mitigate or deenergize the stranded energy in high-voltage lithium-ion batteries and to reduce the hazards associated with thermal runaway resulting from high-speed, high-severity crashes. Publish the research results.

NHTSA Action:
As NTSB noted in the subject report (SR-20/01), NHTSA has published a report on methods to de-energize stranded energy in high-voltage lithium-ion batteries.[3] In 2015, NHTSA held a symposium to demonstrate these methods to interested stakeholders. NHTSA is continuing its lithium-ion battery research efforts, with a focus on battery diagnostics and prognostics to detect battery damage prior to the onset of thermal runaway. Stranded energy research requires a broader understanding of crash situations and vehicle designs before planning appropriate research. NHTSA will continue to publish reports to share research results with the public. This process is open to all stakeholders rather than to a set coalition, and best ensures all interested persons are involved in addressing the issue and informed of new developments.

NHTSA requests this recommendation be classified as **Open, Acceptable Response**.

If you have any questions, or require additional information, please contact me or Darren Hall, Governmental Affairs, Policy and Strategic Planning, at 202-366-7463.

Sincerely,



Steven S. Cliff, Ph.D.
Acting Administrator

[2] https://nfpa.org/Training-and-Events/By-topic/Alternative-Fuel-Vehicle-Safety-Training/Emergency-Response-Guides
[3] https://rosap.ntl.bts.gov/view/dot/43941