



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

Administrator

1200 New Jersey Avenue SE
Washington, DC 20590

APR 24 2013

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

Dear Chairman Hersman:

This letter serves to update the National Transportation Safety Board (NTSB) on PHMSA's actions and decision-making since our last correspondence regarding Safety Recommendations H-11-1, and H-11-4 through H-11-6. These recommendations were issued to the DOT and PHMSA, respectively, on September 2, 2011 as a result of the NTSB investigation of a rollover accident that occurred on October 22, 2009 outside of Indianapolis IN. The incident involved a DOT Specification MC 331 cargo tank motor vehicle carrying 9,000 gallons of liquefied petroleum gas. The accident resulted in injuries to the commercial truck driver and members of the general public and caused damage to a bridge overpass. The safety recommendations and PHMSA's actions are discussed below.

H-11-1

Require all intrastate and interstate hazardous materials carriers to submit annually the number and types of U.S. Department of Transportation specification cargo tanks that are owned or leased in addition to data displayed on the specification plates of such tanks and, if necessary, modify the appropriate database to accept additional data fields.

NTSB and PHMSA share the common goal of improving transportation safety; however, we do not believe collection of the recommended data will improve our trend analyses. A comprehensive trend analysis would require additional information such as vehicle-miles traveled, number of daily trips, and the commodity transported. Collection of such data would further increase the paperwork burdens for both the public and PHMSA. The safety benefit derived from gathering the additional data recommended by the NTSB would not outweigh the burdens associated with collecting and maintaining that data. PHMSA can enhance the safety of transportation by the alternative measures discussed below. Thus, PHMSA does not intend to require motor carriers to submit the number and types of DOT specification cargo tank motor vehicles owned or leased along with the information displayed on the specification plates for the cargo tanks annually.

In the September 2, 2011 letter, the NTSB reasoned that the absence of a requirement for motor carriers (transporting hazardous material) to periodically provide these data limits DOT's ability

to perform accurate trend analyses. PHMSA has stated in the past that with additional data on the number and type of specification DOT cargo tank motor vehicles in use, we could better evaluate the performance of the different specification tanks. However, after further evaluation, PHMSA has concluded that a requirement to collect these data will not significantly advance safety when considering: (1) current methods PHMSA uses to capture cargo tank information to improve safety; (2) implementation of alternative measures to improve safety; and (3) the cost to collect the data recommended by NTSB.

The NTSB had suggested that the population of specification DOT cargo tank motor vehicles could be obtained by modifying PHMSA's Hazardous Materials Registration Statement (DOT Form F 5800.2) (the "5800.2 form"). We have determined that it would not be appropriate to expand the scope of information collected on the 5800.2 form to include data other than what is necessary for registration purposes. The 5800.2 form is not a data collection tool, but rather a means to gather registrant information for those persons who are subject to the fee used to fund the Hazardous Materials Emergency Preparedness grant program. Currently, there is no requirement for a registrant to include any specific information associated with the packaging used to transport the hazardous material. A registrant is only required to include the activity that triggers execution of the fee. We are directed by the Federal hazardous materials transportation law (49 U.S.C. 5108 *et seq.*) to simplify the registration process by minimizing the number of applications, documents, and other information a person is required to file. Requiring, at a minimum, the inclusion of the number and types of specification DOT cargo tank motor vehicles counters this directive. Furthermore, the registration program permits registration for multiple years to lessen industry paperwork burdens. Requiring annual submission (and possibly updates within a given year) of cargo tank data will adversely affect implementation of this program.

PHMSA's current methods of capturing cargo tank motor vehicle information include incident reporting, accident investigations, and inspections. Although these methods do not provide us with the population of cargo tank motor vehicles in service (by total and type), they do provide valuable insight on their safety. NTSB acknowledged this in its instruction to PHMSA under Safety Recommendation H-11-5, which asked us to conduct an analysis using data collected from the Hazardous Materials Incident Report (i.e., DOT Form F 5800.1) (the "5800.1 form"). The 5800.1 form includes fields for describing packaging information that encompasses much of the same information found on the cargo tank specification plate. The 5800.1 form must include, for an incident involving a cargo tank, the manufacturer; manufacture date; serial number; last test date; material of construction; design pressure; shell thickness; head thickness; and service pressure.

Additionally, PHMSA and its modal partner, the Federal Motor Carrier Safety Administration (FMCSA), have the ability to collect similar data through accident investigations or inspections. For example, should an accident investigation reveal the presence of a design defect that affects the safety of operation of a DOT specification cargo tank motor vehicle, we have the authority to address the issue with the publication of a Federal Register notice (or a safety advisory). FMCSA has done this to alert motor carriers to immediately discontinue use of the non-compliant cargo tank(s) and warn motor carriers that FMCSA would place them out of service

and issue civil penalties if it were to discover continued use of the cargo tank(s) without first correcting the design flaws.¹

The NTSB also suggested the FMCSA Motor Carrier Identification Report (Form MCS-150) (the “MCS-150 form”) could be used to obtain the population of specification DOT cargo tank motor vehicles. In our November 17, 2011 letter, we indicated PHMSA was awaiting FMCSA’s decision on whether Form MCSA-1,² which would replace the MCS-150 form, should incorporate the data suggested under Safety Recommendation H-11-1. FMCSA has decided not to collect these data as part of its motor carrier registration process. A complete summary of FMCSA’s decision and rationale will be made available in a yet to be published final rule implementing the Unified Registration System (URS).

Information collected by the Federal government is subject to review and approval by the Office of Management and Budget under the Paperwork Reduction Act (44 U.S.C. §§ 3501-3520). This Act seeks to minimize the paperwork burden on the public; ensure the benefit and utility of the information; improve its quality; and minimize the cost of management of the information to the Federal government. The ownership of cargo tank motor vehicles is often subject to change, and a particular cargo tank may have several lease agreements in a given year. Due to this dynamic environment, collection of specification plate information would be challenging. Trying to accurately capture this information would also lead to undue paperwork burdens on the public, and administrative burdens on PHMSA. The certification and marking requirements for the design and construction of DOT specification cargo tank motor vehicles under 49 CFR Part 178 of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) include numerous fields of information on the specification plate and, in some cases, name plate information is combined with the specification plate.³ We believe that gathering the data in this recommendation would impose a significant information collection burden for both the public and for PHMSA, without providing a corresponding safety benefit. Therefore, we plan no further action to address Safety Recommendation H-11-1.

H-11-4

Work with the Federal Motor Carrier Safety Administration [FMCSA], as appropriate, to develop and disseminate guidance to assist hazardous materials carriers in implementing comprehensive cargo tank motor vehicle rollover prevention programs, including the active participation of drivers, dispatchers, and management through training, loading practices, delivery schedules, and acquisition of equipment.

In our November 22, 2011 letter, we highlighted a Cargo Tank Driver Rollover Prevention video produced by FMCSA and PHMSA. Following its release, the National Tank Truck Carriers circulated surveys to its members to measure the impact and effectiveness of this video. Members that provided feedback generally had a positive view of the video. This feedback also

¹ Review, for example, the February 11, 1998 notice (63 FR 7047) and the December 12, 2001 safety advisory (66 FR 64337).

² Form MCSA-1 would be used by entities to register with FMCSA under a Unified Registration System (URS).

³ For example, name plate information (e.g., water capacity) for Specification DOT 331 cargo tank motor vehicles are outlined in 49 CFR 178.337-17(b) and may be combined with the specification plate as authorized in 49 CFR 178.337-17(a)(3).

indicated that over 33,000 employees from member companies had viewed the video, and that companies had shared the video with their safety departments, drivers, insurance companies, shippers, dispatchers, and managers.

This video will remain an important part of PHMSA's and FMCSA's rollover prevention program. We will promote it as essential to a hazmat employer's training and will emphasize that the video should be shared with a broader audience than hazmat employees, such as dispatchers and managers. We regularly consider options to enhance the video or to provide additional guidance to persons associated with drivers. We also continue to promote and disseminate the video via our respective websites and promote awareness of the video via conferences, multi-modal training seminars and workshops, social media, and training materials. PHMSA is augmenting its Hazardous Materials Transportation Training Module 5.1 by adding a section that will include information about the rollover video, and FMCSA will prominently feature the video on its website and highlight the video to remind the cargo tank industry about the importance of rollover prevention training.

Additionally, FMCSA, in partnership with the American Transportation Research Institute, will create an interactive mapping system of the United States roadways showing the places with the highest frequency of large truck rollovers. The FMCSA website will maintain a link to this mapping system, and will provide the public with an electronic bulletin board to contribute information on rollover events such as rollover hotspots. Finally, PHMSA has sponsored a research project by the Transportation Research Board (TRB) entitled "Role of Human Factors in Preventing Cargo Tank Rollovers" with FMCSA participation. The project analyzed the major driver-related factors contributing to cargo tank motor vehicle rollovers and proposed safety, management, and communication practices that could potentially decrease driver errors. PHMSA and FMCSA are reviewing the report⁴ for possible further actions in augmenting our comprehensive rollover prevention program.

H-11-5

Conduct a comprehensive analysis of all available accident data on U.S. Department of Transportation specification cargo tanks to identify cargo tank designs and the associated dynamic forces that pose a higher risk of failure and release of hazardous materials in accidents. Once such cargo tanks have been identified, study the dynamic forces acting on susceptible structures under varying accident conditions and develop performance standards to eliminate or mitigate these risks.

H-11-6

Once the performance standards in Safety Recommendation H-11-5 have been developed, require that all newly manufactured cargo tanks comply with the performance standards.

⁴ The report may be reviewed at the following TRB webpage:
<http://www.trb.org/Publications/PubsHMCRPPProjectReports.aspx>

As PHMSA continues to work to ensure that existing and incoming incident data are complete and accurate, we are confident we can use the data to conduct a comprehensive analysis of specification DOT cargo tank motor vehicles to identify those that pose a higher risk. To realize a more complete analysis, on October 1, 2012, PHMSA initiated a 6-month special study to improve the data quality on cargo tank rollover incidents that occur after the study start date. PHMSA will review the 5800.1 forms submitted to us during this time period to ensure quality of data, and will follow-up with the person submitting the form regarding incomplete information (i.e., missing data) and to request additional information. The study will provide supplemental information (copy enclosed) to include: the configuration of the cargo tank motor vehicle (e.g., truck and semi-trailer); the cargo tank type (e.g., circular); the vehicle gross weight; the degree and direction of rollover; the rollover protection device(s); and the specifics of damage to a tank shell (e.g., length of the dent). PHMSA will continue to provide the NTSB with periodic updates including progress on the special study and any further actions in response to Safety Recommendation H-11-5, and subsequently Safety Recommendation H-11-6.

If you have questions, or comments regarding this or any other hazardous materials safety matter, please contact me directly at 202-366-4433.

Regards,

A handwritten signature in black ink, appearing to read "Cynthia L. Quarterman". The signature is fluid and cursive, with a large loop at the end.

Cynthia L. Quarterman

Enclosure: Cargo Tank Rollover Special Study Supplemental Data