



U.S. Department  
of Transportation  
**Pipeline and Hazardous  
Materials Safety  
Administration**

Administrator

1200 New Jersey Ave., S.E.  
Washington, DC 20590

August 30, 2016

The Honorable Christopher A. Hart  
Chairman  
National Transportation Safety Board  
490 L'Enfant Plaza, SW  
Washington, DC 20594

Dear Chairman Hart:

This letter provides an update on continued U.S. Department of Transportation (DOT) actions since our last correspondence regarding Safety Recommendation H-11-4. The National Transportation Safety Board (NTSB) issued this recommendation to PHMSA on September 2, 2011, as a result of its investigation of a rollover accident that occurred on October 22, 2009, outside of Indianapolis, Indiana, involving 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.

#### 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.<sup>1</sup>*

#### **Cargo Tank Driver Rollover Prevention Video**

PHMSA previously informed the NTSB of feedback received from the public regarding the release of the FMCSA Cargo Tank Driver Rollover Prevention video, as well as efforts to promote the video as an integral part of a hazardous material (hazmat) employer's training. To date, over 22,000 videos have been distributed to cargo tank motor carriers, industry associations, and truck driver training schools; and FMCSA has received nearly 50,000 combined hits on the internet versions. The video is available on YouTube, Twitter, and other social media outlets, all accessible through the FMCSA website. Moreover, FMCSA is aware of private companies that are currently using the rollover prevention video as a part of their training. Scottsdale Insurance of Minneapolis, Minnesota, for example, uses the video in its driver training for motor carrier clients. Exxon Worldwide also uses the video in its company

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<sup>1</sup> The FMCSA was issued a companion recommendation (i.e., H-11-2) recommending it work with PHMSA to develop and disseminate cargo tank motor vehicle rollover guidance.

training and further translated it into the many languages currently used by its varied employees. Likewise, Methanex Asia-Pacific, which is a partner in the American Chemistry Council's Responsible Care Program, has translated the video into Japanese for use in its operation in Japan. The video has even found utility for non-hazmat transport as the National Tank Truck Carriers (NTTC) has developed and distributed a version specific to the operation of water trucks used by fire fighters.

The rollover prevention video remains the hallmark of FMCSA's outreach tools in the effort to develop and disseminate guidance to assist entities in implementing a comprehensive rollover prevention program. Additionally, we remind the NTSB that FMCSA's "Cargo Tank Rollover Toolbox," which includes guidance information on rollover prevention in downloadable formats for drivers and companies, went live back in late 2013.

### **Cargo Tank Truck Rollover Prevention Webpage / Interactive Mapping System**

PHMSA previously highlighted FMCSA's partnership with the American Transportation Research Institute (ATRI) to create an interactive mapping system of the United States roadways showing the places with the highest frequency of large truck rollovers. The ATRI Interactive Rollover Hotspot Map<sup>2</sup> is now live and has been linked to the FMCSA *Cargo Tank Truck Rollover Prevention* webpage.<sup>3</sup> Companies can utilize this information as part of training or as a preparatory tool in route planning. Further outreach efforts include cargo tank rollover prevention training for industry. FMCSA is specifically exploring the concept of a training program similar to the Cargo Tank Inspection Seminars conducted jointly by FMCSA and NTTC. FMCSA is also considering making training available online to companies, associations, etc.

### **Investigation / Root Cause Analysis**

PHMSA and FMCSA continue to collaborate in the investigation of rollover incidents and the motor carriers involved. With these continued efforts, we seek to better understand the factors leading to these incidents and to continuously improve guidance or potential regulatory requirements. The motor carriers involved in such incidents are being identified through a number of resources, including hazmat request notices (FMCSA forms used by their Divisions to report serious hazmat incidents), the Safety Measurement System (SMS), Emergency Response Center notices (usually e-mail notifications regarding serious crashes and hazmat incidents), and PHMSA incident reports.

### **National Training Standards**

With respect to the training aspect of the recommendation, FMCSA has proposed a set of comprehensive national prerequisite training standards for those seeking to obtain a commercial driver's license (CDL). The notice of proposed rulemaking (NPRM), published in the *Federal Register* on March 7, 2016 (81 FR 11944), reflects consensus recommendations on

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<sup>2</sup> <http://atri-online.org/2012/05/09/safety-impacts-of-roadway-geometric-design-standards-mapping-rollovers-and-designing-a-driver-information-delivery-system-2/>

<sup>3</sup> <https://www.fmcsa.dot.gov/rolloverprevention>

entry-level driver training standards by a negotiated rulemaking committee (i.e., the Entry-Level Driver Training Advisory Committee (ELDTAC)) comprised of FMCSA representatives and 25 stakeholders and responds to a Congressional mandate under the Moving Ahead for Progress in the 21<sup>st</sup> Century Act. The NPRM proposes that applicants seeking a “Class A” CDL—necessary for operating a combination tractor-trailer type vehicle weighing 26,001 lbs. or more—would be required to obtain a minimum of 30 hours of behind-the-wheel training from an instructional program that meets FMCSA standards, including a minimum of 10 hours of operating the vehicle on a practice driving range. Applicants seeking a “Class B” CDL—necessary for operating a heavy straight truck (such as a dump truck or box truck)—would be required to obtain a minimum of 15 hours of behind-the-wheel training, including a minimum of seven hours of practice range training. Applicants seeking a hazmat endorsement on his or her CDL would need to complete further “theory” training that covers a minimum set of topics in the curriculum (e.g., specialized requirements for transportation of bulk packages, route planning, etc.). Although there is no proposed minimum hours of this further training, FMCSA will be providing additional guidance on available resources to supplement a curriculum (e.g., the Cargo Tank Rollover Toolbox).

Under this proposal, the following individuals in all 50 states, the District of Columbia, and all U.S. territories would be subject to mandatory, comprehensive training:

- First-time CDL applicants;
- Current CDL holders seeking a license upgrade (e.g., a Class B CDL holder seeking a Class A CDL) or an additional endorsement (e.g., to transport hazmat); and
- A previously disqualified CDL holder seeking to reacquire a license.

These individuals would be subject to the proposed entry-level driver training requirements and must complete a course of instruction provided by a registered entity that meets the minimum qualifications for training providers and covers the approved curriculum, after which a certificate of completion of training must be transmitted electronically to FMCSA.

### **Rulemaking Efforts**

The National Highway Transportation Safety Administration (NHTSA) published a final rule<sup>4</sup> that establishes a new Federal Motor Vehicle Safety Standard No. 136 to require electronic stability control (ESC) systems on truck tractors with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds. ESC systems in truck tractors are designed to reduce untripped rollovers and mitigate severe understeer or oversteer conditions that lead to loss of control by using automatic computer controlled braking and reducing engine torque output. Although the final rule does not apply to vehicles with a GVWR greater than 10,000 pounds up to 26,000 pounds as recommended by the NTSB, we believe the rule will still have a meaningful impact on hazmat transportation safety for those tractor trailer combinations transporting bulk quantities of material that require a tractor with a GVWR greater than 26,000 pounds.

From January 2006 through May 2016, there were approximately 1,800 rollover incidents involving cargo tank motor vehicles (or “tank trucks”) contributing to approximately 50 fatalities, or an average of about 170 rollovers and five fatalities annually. Assuming a similar

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<sup>4</sup> Final rule “Federal Motor Vehicle Safety Standards; Electronic Stability Control Systems for Heavy Vehicles,” June 23, 2015, 80 FR 36050.

trend through 2018 when new heavy trucks will have to be installed with ESC systems and using the effectiveness rates developed by NHTSA, our best-case scenario estimate is that this rule would prevent 32–45 rollovers and one fatality annually. We acknowledge uncertainty in the data and effectiveness of ESC systems under certain accident scenarios (e.g., liquid sloshing), but the estimate is such that even if there is a departure from the best-case scenario, there is opportunity for further prevention of rollovers and associated fatalities, injuries, and harm to the public and the environment from installation of this equipment.

In summary, we believe these Department-wide actions combine to address the intent of Safety Recommendation H-11-4. Specifically, the combination of guidance material, training requirements, and equipment installation act to fulfill the intent of a comprehensive rollover prevention program, and therefore I request that NTSB change the status of this recommendation to “Closed – Acceptable Alternate Action.”

If we can be of further assistance, please do not hesitate to contact Dirk Der Kinderen, NTSB Program Manager for the Office of Hazardous Materials Safety by phone at 202-366-8553.

Sincerely,

A handwritten signature in black ink that reads "Marie Therese Dominguez". The signature is written in a cursive style with a long, sweeping flourish at the end of the name.

Marie Therese Dominguez