



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

Administrator

1200 New Jersey Avenue, SE  
Washington, DC 0590

June 11, 2014

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

Dear Chairman Hersman:

I am writing to provide you with a status report regarding the Pipeline and Hazardous Materials Safety Administration's (PHMSA) actions to address the National Transportation Safety Board (NTSB) Safety Recommendations R-14-4, R-14-5, and R-14-6. These recommendations were issued to PHMSA as a result of NTSB's participation in the Transportation Safety Board of Canada's (TSB) investigation of the July 6, 2013, derailment of a Montreal, Maine & Atlantic (MMA) freight train in Lac-Mégantic, Quebec, Canada.

On January 23, 2014, NTSB recommended that PHMSA address what they have identified as the contributing factors to the Lac-Mégantic accident. Specifically, NTSB requests PHMSA: (1) expand the hazardous materials route analysis and planning to include key trains transporting flammable liquids<sup>a</sup>; (2) expand the applicability of oil spill prevention and response plans to include unit trains transporting oil and petroleum products<sup>b</sup>; and (3) require shippers to sufficiently test and document the physical and chemical characteristics of hazardous materials. The NTSB's recommendations and PHMSA's completed and planned actions are discussed below.

#### R-14-4

*Work with the Federal Railroad Administration to expand hazardous materials route planning and selection requirements for railroads under Title 49 Code of Federal Regulations 172.820 to include key trains transporting flammable liquids as defined by the Association of American Railroads (AAR) Circular No. OT-55-N and, where technically feasible, require rerouting to avoid transportation of such hazardous materials through populated and other sensitive areas.*

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<sup>a</sup> A "Key Train" is a train with: One tank car load of Poison or Toxic Inhalation Hazard (PIH or TIH) (Hazard Zone A, B, C, or D), anhydrous ammonia (UN1005), or ammonia solutions (UN3318); 20 car loads or intermodal portable tank loads of any combination of hazardous material; or one or more car loads of Spent Nuclear Fuel (SNF), High Level Radioactive Waste (HLRW).

<sup>b</sup> A "Unit Train" is a train consisting of cars shipped from the same origin to the same destination.

Significant progress was made by the DOT with regard to NTSB Recommendation R-14-4 before the recommendation was issued. On January 9, 2014, Secretary Anthony Foxx issued a “Call to Action,” to challenge stakeholders from the rail and crude oil industries to implement immediate safety measures. On January 16, 2014, Secretary Foxx, Federal Railroad Administrator Joseph Szabo, Federal Motor Carrier Safety Administrator Anne Ferro, and I convened a meeting with stakeholders from the rail and oil industries requesting them to identify prevention, mitigation and response strategies that could be implemented immediately to enhance the safe transportation of crude oil by rail. During that meeting the rail industry agreed to pursue a number of actions, including applying the OT-55-N routing protocol to “key trains” consisting of 20 or more tank cars of crude oil.

Subsequently, on January 22, 2014, the AAR confirmed its agreement to, by no later than July 1, 2014, apply the routing requirements (49 CFR § 172.820) to trains carrying more than 20 cars of crude oil.<sup>c</sup> In addition, the AAR agreed to further address risks of unit trains of crude oil by restricting speeds for trains carrying more than 20 cars of crude oil to 50 mph and restricting speeds for trains carrying more than 20 cars of crude oil with at least one DOT-111 or non-specification tank cars traveling through high threat urban areas as designated by the Department of Homeland Security to 40 mph.

AAR’s agreement to expand the routing requirements to trains carrying more than 20 cars of crude oil is an important step in reducing the risk of future accidents. PHMSA and the Federal Railroad Administration (FRA) plan to address rail routing in future rulemaking.

#### R-14-5

*Revise the spill response planning thresholds contained in Title 49 Code of Federal Regulations Part 130 to require comprehensive response plans to effectively provide for the carriers’ ability to respond to worst-case discharges resulting from accidents involving unit trains or blocks of tank cars transporting oil and petroleum products.*

While many rail carriers are subject to the basic oil spill response required by 49 CFR Part 130, there have historically been no crude oil cars that exceed the volume threshold requiring a comprehensive oil spill response plan. PHMSA is aware of the unique challenges unit trains transporting oil and petroleum products may pose to emergency response and prevention.

PHMSA is committed to improving emergency response, and recent efforts highlight this focus. As a part of the Department’s “Call to Action,” PHMSA held an emergency responder stakeholder engagement meeting on February 10, 2014. The discussion focused on the level of preparedness that emergency responders and public safety officials have to respond to incidents involving the rail transportation of crude oil unit trains through their communities. Additional

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[http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Files/Letter\\_from\\_Secretary\\_Foxx\\_Follow\\_up\\_to\\_January\\_16.pdf](http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Files/Letter_from_Secretary_Foxx_Follow_up_to_January_16.pdf).

roundtable meetings were subsequently held with emergency responders to develop response guidelines and other training programs.

In addition, on May 7, 2014, DOT issued an emergency order to rail carriers transporting Bakken crude oil.<sup>d</sup> Under the order, DOT required each rail carrier transporting  $\geq 1,000,000$  gallons of Bakken crude oil in a single train to provide to State Emergency Response Commission (SERC) of effected states information on the expected movement of Bakken crude oil through that state. The information provided must include all applicable emergency response information and a point of contact regarding the oil transport. If notification is not made to a SERC within 30 days of the date of the order, a carrier is prohibited from operating any train transporting  $\geq 1,000,000$  gallons of Bakken crude oil in that state until such notification is provided.

Finally, as a result of the “Call to Action,” the American Petroleum Institute (API) committed to work with the railroads to enhance emergency response training through the Transportation Community Awareness and Emergency Response (TRANSCAER) training program. The AAR also committed to inventory crude oil routes and to share this information with emergency responders, develop and provide emergency response training for crude oil transportation for emergencies and work with local communities along crude oil train routes to address location-specific concerns.

All these efforts are important steps in improving emergency preparedness and response. PHMSA and FRA are also currently considering revisions to 49 CFR Part 130 as part of a future rulemaking.

#### R-14-6

*Require shippers to sufficiently test and document the physical and chemical characteristics of hazardous materials to ensure the proper classification, packaging, and record-keeping of products offered in transportation.*

The Hazardous Materials Regulations (HMR) require that shippers properly and accurately classify and describe hazardous materials before transportation.

PHMSA agrees with NTSB that the inherent safety of the transportation system is based on the shippers’ initial classification of their hazardous materials. PHMSA has taken many actions to clarify the current regulatory requirements.

Before this recommendation was issued on November 20, 2013, PHMSA and FRA jointly issued Safety Advisory 2013-07 to reinforce the importance of proper characterization, classification, and selection of packing group for flammable materials.<sup>e</sup> The safety advisory emphasized

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<sup>d</sup> See Emergency Order Docket No. DOT-OST-2014-0067:

[http://www.phmsa.dot.gov/pv\\_obj\\_cache/pv\\_obj\\_id\\_D9E224C13963CAF0AE4F15A8B3C4465BAEAF0100/filename/Final\\_EO\\_on\\_Transport\\_of\\_Bakken\\_Crude\\_Oi\\_05\\_07\\_2014.pdf](http://www.phmsa.dot.gov/pv_obj_cache/pv_obj_id_D9E224C13963CAF0AE4F15A8B3C4465BAEAF0100/filename/Final_EO_on_Transport_of_Bakken_Crude_Oi_05_07_2014.pdf)

<sup>e</sup> <https://federalregister.gov/a/2013-27785>

specific definitions for the proper classification of petroleum crude oil and the selection of shipping names and packing groups. The advisory also announced PHMSA's "Operation Classification" initiative, in which PHMSA and FRA conducted unannounced inspections and testing to verify hazardous material classifications selected and certified by shippers of petroleum crude oil. PHMSA continues to test samples of crude oil to further evaluate the chemical characteristics of this material.

On January 2, 2014, PHMSA also issued a safety alert warning of the flammability of the crude oil extracted from the Bakken Shale region in the United States.<sup>f</sup> PHMSA noted that the alert reinforces the requirement to properly test, characterize, classify, and where appropriate sufficiently degasify hazardous materials prior to transportation. PHMSA also stressed that offerors "must ensure that all potential hazards of the materials are properly characterized," and assign the appropriate classification and packing group to crude oil shipments.

In addition, as one of its commitments to the "Call to Action," API agreed to cooperate with PHMSA to share information and expertise on crude oil characteristics. Specifically, API committed to develop a comprehensive standard for testing and classification of crude oil based on the best available science and data. PHMSA is participating in this effort aimed at ensuring crude oil is packaged and shipped safely and appropriately.

Finally, on March 6, 2014, Secretary Foxx issued an amended and restated Emergency Restriction / Prohibition Order (EO).<sup>g</sup> This EO directed all persons who offer for transportation, or transport, in tank cars by rail in commerce to, from and within the United States, a bulk quantity of petroleum crude oil to ensure that the petroleum crude oil is properly tested and classified in accordance with the HMR. Thus, the order requires flash point and initial boiling point classification testing to have been conducted within the reasonable, recent past for all crude oil in order to assign a proper packing group. For offerors without sufficient knowledge to classify their petroleum crude oil, in addition to the tests required by the Amended Order, testing to characterize and classify the hazardous materials necessary to comply with the HMR may include, but is not limited to, percentage presence of flammable gases; vapor pressure; presence, concentration and content of compounds such as sulfur/hydrogen sulfide; and corrosivity.

PHMSA, in coordination with FRA, is developing a notice of proposed rulemaking (NPRM) titled "Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains (HM-251)" (Docket No. PHMSA-2012-0082). This rulemaking will propose a comprehensive approach to rail safety to improve tank car integrity, provide additional operational controls, enhance emergency response, and establish methods to improve classification and characterization of hazardous materials.

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<sup>f</sup> [http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/1\\_2\\_14%20Rail\\_Safety\\_Alert.pdf](http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/1_2_14%20Rail_Safety_Alert.pdf)

<sup>g</sup> United States Department of Transportation Amended and Restated Emergency Restriction/Prohibition Order (Docket No. DOT-OST-2014-0025):

[http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Amended\\_Emergency\\_Order\\_030614.pdf](http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Amended_Emergency_Order_030614.pdf)

If we can be of further assistance or answer any additional questions, please do not hesitate to contact Dirk Der Kinderen, NTSB Program Manager, Office of Hazardous Materials Safety, Standards Development Division at 202-366-4460 or by email at [Dirk.DerKinderen@dot.gov](mailto:Dirk.DerKinderen@dot.gov).

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