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

Administrator

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

November 9, 2016

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

Dear Chairman Hart:

Thank you for your letter of July 12, 2016, urging the Pipeline and Hazardous Materials Safety Administration (PHMSA) to take action on Safety Recommendations R-14-6 and R-15-14 through R-15-17. This letter responds to these recommendations and further seeks to update the National Transportation Safety Board (NTSB) on continued Department of Transportation (DOT) administration actions to address recommendations pertaining to rail safety. Specifically, we provide updates on Safety Recommendations R-07-4, R-08-13, R-12-7, and R-14-5.

Real-Time Emergency Response Information

Safety Recommendation R-07-4 was issued as a result of a head-on collision between two freight trains in Anding, Mississippi on July 10, 2005.

R-07-4

> *With the assistance of the [Federal Railroad Administration] FRA, require that railroads immediately provide to emergency responders accurate, real-time information regarding the identity and location of all hazardous materials on a train.*

PHMSA and FRA have been working together under the scope of the Rail Safety Advisory Committee (RSAC) to address several hazardous materials issues.[1] Specifically, the RSAC Task No. 15-04 (Hazardous Materials Issues Working Group)—which kicked off in November 2015—discussed revisions to the emergency response information requirements under the general operating requirements in 49 CFR Part 174 for the provision of real-time information. PHMSA is also working on a rulemaking to provide accurate, real-time emergency response information in response to the mandate specified in Section 7302 of the Fixing America's Surface Transportation (FAST) Act of 2015. PHMSA is working on a notice of proposed rulemaking (NPRM) to address the FAST Act.

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[1] The Railroad Safety Advisory Committee (RSAC) was established by FRA to develop new regulatory standards, through a collaborative process, with all segments of the rail community working together to fashion mutually satisfactory solutions on safety regulatory issues. More about the history of the RSAC is available at: https://rsac.fra.dot.gov/about.php.

Operational and Design Requirements

Safety Recommendation R-08-13 was issued as a result of a train derailment in New Brighton, Pennsylvania on October 20, 2006. Safety Recommendation R-12-7 was issued as a result of a train derailment in Cherry Valley, Illinois on July 19, 2009.

R-08-13

> *With assistance from the FRA, evaluate the risks posed to train crews by unit trains transporting hazardous materials, determine the optimum separation requirements between occupied locomotives and hazardous materials cars, and revise 49 CFR 174.85 accordingly.*

R-12-7

> *Require that all newly manufactured and existing tank cars authorized for transportation of hazardous materials have center sill or draft sill attachment designs that conform to the revised Association of American Railroads' [AAR] design requirements adopted as a result of Safety Recommendation R-12-9.*

As previously mentioned, PHMSA and FRA are both participating in the RSAC Hazardous Materials Issues Working Group. This working group seeks to address two priority issues: (1) hazardous material train car separation requirements ("buffer cars"), and (2) incorporation into the Hazardous Materials Regulations (HMR) of an updated version of AAR's Manual of Standards and Recommended Practices, Section C Part III, Specifications for Tank Cars (M-1002). The next meeting will be held in January 2017. If the working group reaches an agreement in that meeting, the next opportunity for a consensus vote from the full RSAC will be in April 2017.

We note that Safety Recommendation R-12-9, as referenced in Safety Recommendation R-12-7, was issued to AAR and subsequently closed based on their acceptable action. Specifically, AAR amended section 6.1.2.7 of M-1002 to include new design standards (for new construction only) for transverse welds on sill reinforcing plates. Updating the most current edition of M-1002 into the HMR will capture the revised design standards and satisfy the intent of Safety Recommendation R-12-7.

Oil Spill Response and Hazardous Material Classification Requirements

Safety Recommendations R-14-5 and R-14-6 were issued as a result of a crude oil unit train derailment in Lac-Megantic, Quebec, Canada on July 6, 2013.

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.

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.

On July 29, 2016, PHMSA published an NPRM titled, "Hazardous Materials: Oil Spill Response Plans and Information Sharing for High-Hazard Flammable Trains," in the *Federal Register* [81 FR 50068]. The NPRM proposes changes that would expand the applicability of comprehensive oil spill response plans based on thresholds of liquid petroleum oil that apply to an entire train consist. In accordance with the FAST Act, this action proposes to require railroads to share information about high-hazard flammable train operations with State and Tribal emergency response commissions, thus further advancing information sharing in support of bolstering community preparedness.

With respect to Safety Recommendation R-14-6, PHMSA has long stressed that it is the offeror's responsibility, under § 173.22 of the HMR, to ensure that hazardous materials are properly classified. To reinforce this requirement with respect to unrefined petroleum-based products (e.g., crude oil), the HMR also require offerors to institute a sampling and testing program in accordance with § 173.41.

Tank Car Phase-Out and Specification Requirements for Transport of Flammable Liquids

Safety Recommendations R-15-14 through R-15-17 were issued as a result of NTSB's examination of damaged tank cars following the derailment of a crude oil unit train in Mount Carbon, WV on February 16, 2015, as well as their review of data collected from several other crude oil unit train accidents occurring in the same timeframe. These recommendations address the retrofit of DOT Specification 111 (DOT-111) tank cars with thermal protection systems that are used to transport Class 3 flammable liquids.

R-15-14

Require that all new and existing tank cars used to transport all Class 3 flammable liquids be equipped with thermal protection systems that meet or exceed the thermal performance standards outlined in Title 49 Code of Federal Regulations 179.18(a) and are appropriately qualified for the tank car configuration and the commodity transported.

R-15-15[2]

In conjunction with thermal protection systems called for in safety recommendation R-15-29, require that all new and existing tank cars used to transport all Class 3 flammable liquids be equipped with appropriately sized pressure relief devices that allow the release of pressure under fire conditions to ensure thermal performance that meets or exceeds the requirements of Title 49 Code of Federal Regulations 179.18(a), and that minimizes the likelihood of energetic thermal ruptures.

R-15-16

Require an aggressive, intermediate progress milestone schedule, such as a 20 percent yearly completion metric over a 5-year implementation period, for the replacement or retrofitting of legacy DOT-111 and CPC-1232 tank cars to appropriate tank car performance standards, that includes equipping these tank cars with jackets, thermal protection, and appropriately sized pressure relief devices.

R-15-17

Establish a publicly available reporting mechanism that reports at least annually, progress on retrofitting and replacing tank cars subject to thermal protection system performance standards as recommended in safety recommendation R-15-16.

In your letter of July 12, 2016, NTSB urged PHMSA to extend the requirement for thermal protection systems to all tank cars in Class 3 flammable liquids service, regardless of the type of train operation. Furthermore, NTSB urged PHMSA to issue thermal protection regulations in accordance with the FAST Act that would require thermal blankets capable of providing protection from pool fires and torch fires consistent with § 179.18(c) of the HMR. The NTSB also noted, in accordance with Section 7305 of the FAST Act, that each tank car built to meet the DOT Specification 117 (DOT-117) and each non-jacketed tank car modified to meet DOT-117R must be equipped with a thermal blanket with at least ½-inch-thick material. The NTSB further voiced its concern regarding the current pace of the retrofit and replacement of DOT-111 tank cars and urged PHMSA to establish a clear set of intermediate metrics to better evaluate the safety improvement progress.

On August 15, 2016, PHMSA published a final rule titled, "Hazardous Materials: FAST Act Requirements for Flammable Liquids and Rail Tank Cars," in the *Federal Register* [81 FR 53935]. The final rule codifies certain mandates and minimum requirements of the FAST Act. Specifically, the final rule codifies the following: (1) a revised phase-out schedule for all DOT-111 tank cars used to transport Class 3 flammable liquids broken into categories of unrefined petroleum products (e.g., petroleum crude oil), ethanol, and "other" Class 3 flammable liquids; (2) the mandate that each tank car built to DOT-117 and each non-jacketed tank car retrofitted to DOT-117R be equipped with a thermal protection blanket that is at least

[2] It is our understanding that this recommendation is meant to refer to R-15-14 instead of R-15-29, as we are unable to locate such a recommendation when reviewing the NTSB website.

½-inch thick and meets existing thermal protection standards; and (3) the minimum requirements for top fittings protection on tank cars retrofitted to DOT-117R. PHMSA believes the FAST Act and the conforming final rule satisfy the intent of Safety Recommendations R-15-14 through R-15-17.

The FAST Act limits PHMSA's ability to withdraw, change, or revise the mandated amendments. While the phase-out schedule for DOT-111 tank cars may not be as aggressive as NTSB desires, the deadlines represent the absolute last moment to meet the new standards. We encourage industry to phase out these tank cars ahead of the scheduled deadlines.

Section 7308 of the FAST Act further requires the collection and reporting of two data sets related to the retrofit and replacement of tank cars used in the flammable liquid service fleet. The first data set is retrospective in nature and requires DOT to collect information on the number of tank cars modified to meet the DOT-117R; the number of tank cars built to meet the DOT-117; and the number of tank cars used or likely to be used to transport Class 3 flammable liquids that have not been modified. In addition, the FAST Act requires collection of a second data set pertaining to future industry capacity projections. Specifically, DOT is required to conduct a survey of rail tank car facilities to determine statistically-valid estimates of the number of tank cars those facilities expect to process to meet the DOT-117R or DOT-117 demand in a given year.

The DOT is working with rail industry and tank car facilities, respectively, to develop reporting mechanisms to monitor progress. AAR has agreed to cooperate and is currently compiling retrospective data to be provided to DOT. In accordance with Section 7308(f) of the FAST Act, DOT will provide to Congress an annual, written report covering both data sets.

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 or by e-mail at Dirk.DerKinderen@dot.gov.

Sincerely,

Marie Therese Dominguez

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