National Transportation Safety Board

Washington, D.C. 20594

Office of the Chairman

MAY 1 2 2009

Ms. Cynthia Douglass
Acting Deputy Administrator
Pipeline and Hazardous Materials
Safety Administration
1200 New Jersey Avenue, S.E.
East Building, 2nd Floor, PH
Washington, D.C. 20590

Dear Ms. Douglass:

Thank you for the August 18, 2008, response signed by Ms. Stacey L. Gerard, Assistant Administrator/Chief Safety Officer, to the National Transportation Safety Board (NTSB) regarding Safety Recommendation R-08-13, stated below. The NTSB issued this recommendation to the Pipeline and Hazardous Materials Safety Administration (PHMSA) as a result of the NTSB's investigation of the derailment of Norfolk Southern Railway Company train 68QB119 with a release of hazardous materials and fire in New Brighton, Pennsylvania, on October 20, 2006.

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> With the assistance of the Federal Railroad Administration [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 *Code of Federal Regulations* [CFR] 174.85 accordingly.

The NTSB has reviewed the history of buffer car regulations from the early 1900s on, provided in PHMSA's letter, which resulted in the current standard of a five-car buffer between an occupied locomotive and a hazardous materials car. PHMSA indicated that it interprets the current requirements in 49 CFR 174.85(d) as follows:

> For Placard Group 2 materials, including Class 3 materials such as ethanol, this section requires a placarded car to be no nearer than the sixth car from the engine or occupied caboose when train length permits: This requirement applies so long as there are sufficient non-hazardous materials rail cars within the standing train consist to fulfill the requirement. When train length does not permit placement of a placarded car no nearer than the sixth car from the engine or occupied caboose, the placarded car must be placed near the middle of the train, but not nearer than the second car from the engine or occupied caboose. The phrase "when train length does not permit" means that the train does not have sufficient buffer cars in the consist to locate the placarded car(s) six deep and, therefore, the placarded car(s) must be placed near the middle of the train.

The NTSB notes that the FRA's 2005 report to Congress, titled *Safe Placement of Train Cars*, summarizes a number of studies of the placement of hazardous materials cars and concludes (1) the safety risk associated with the additional switching of cars does not offer advantages sufficient to offset the costs involved for adoption of various refinements to train placement requirements and (2) heavy cars decelerate more slowly than empty cars, and if empty buffer cars were placed in front, the loaded cars would 'push' the more rapidly decelerating empty cars in front of them, generating high buff forces.

Because of these points, PHMSA contends that changing the current regulations to require the addition of empty cars to the consist could have a negative impact on railroad costs and operations. PHMSA is also concerned that the addition of five empty cars between the locomotive and the placarded cars, while possibly reducing risk of exposure to the crew during a train's operation, could introduce additional risks of derailment.

The NTSB believes that PHMSA misunderstood the intent of the recommendation. The NTSB did not recommend making additional switching moves to add five *empty* buffer cars to unit trains transporting hazardous materials. A safety analysis may determine that one solution would be to fill the first few tank cars with water, sand, or other inert matter not requiring any additional switching. Unit trains carrying hazardous materials present a special risk because of their high concentration of hazardous materials, and such trains do not permit the repositioning of cars to provide a five-car buffer. Therefore, on unit trains, only one buffer car is currently used. This practice can result in the contradictory circumstance of a train of mixed freight cars with a single hazardous materials car being required to use five buffer cars but a unit train consisting of all hazardous materials cars traveling across the country using only a single buffer car.

The NTSB recognizes that none of the historical standards—not the 15-, the 5-, nor the 1-car buffer—has been based upon any rigorous engineering safety analysis. Without sufficient validation of the one-car buffer standard, the current regulations for the separation of hazardous materials cars from locomotives and their interpretation by the FRA, PHMSA, and the railroads create different levels of protection from hazardous materials for crews on board unit trains and general freight trains.

Although the NTSB appreciates that this is a difficult issue to resolve, PHMSA has failed to address the intent of Safety Recommendation R-08-13 in its response. Consequently, this recommendation is classified "Open—Unacceptable Response" pending PHMSA's consideration of the NTSB's comments. We look forward to receiving further updates as progress continues to address this recommendation.

Sincerely,

Mark V. Rosenker
Acting Chairman

cc: Ms. Linda Lawson, Director
Office of Safety, Energy, and Environment
Office of Transportation Policy

Ms. Stacey L. Gerard
Assistant Administrator/Chief Safety Officer