



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

1200 New Jersey Avenue, SE
Washington, DC 20590

November 5, 2014

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

Dear Acting Chairman Hart:

Thank you for your March 27, 2014, letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA) regarding Safety Recommendation H-92-1. This letter provides additional updates on the collaborative actions of PHMSA and the Federal Motor Carrier Safety Administration (FMCSA) to address recommendation H-92-1 and the completed actions PHMSA described in a letter to NTSB dated January 27, 2014.

The NTSB issued the recommendation below, which addresses cargo rollover protection guidelines, as a result of a 1991 special investigation.

H-92-1

Provide cargo tank manufacturers with specific written guidance about (a) the factors and assumptions that must be considered when calculating the loads on cargo tank rollover protection devices in determining compliance with existing Department of Transportation performance standards; and (b) acceptable means to shield and protect the top-mounted closure fittings on all bulk liquid cargo tanks.

Paragraphs 1 and 2 describe the PHMSA's efforts to increase cargo tank rollover protection and reduce the risk of hazardous material release since the issuance of this recommendation.

- 1) PHMSA adopted and refined a requirement in the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180), changing the Pressure Relief Device (PRD) specifications to the following:

- a. Cargo tanks must reclose to a leak-tight position after being subjected to the dynamic forces of an accident without releasing more than one liter of hazardous material.¹
 - b. A PRD must be able to withstand a surge of up to 30 psig above the design set pressure for at least 60 milliseconds and must not release more than one gallon before reclosing to a leak tight position regardless of vehicle orientation.^b See 49 CFR § 178.345-10(b)(3).
- 2) PHMSA clarified the HMR to state specifically that an accident damage protection device (such as a rollover protection device) must be certified by a Design Certifying Engineer (DCE).² Certification by a DCE ensures that an experienced person is reviewing the design for compliance with specification requirements. The DCE must be registered with the FMCSA in accordance with 49 CFR Part 107, Subpart F. See 49 CFR § 178.320(b).

Additionally, PHMSA and FMCSA agree that providing manufacturers explicit guidelines can help achieve regulatory compliance thereby preventing or minimizing the risk of hazardous material release from a cargo tank rollover. As such, below are the completed actions as described in our January 27, 2014, letter to NTSB:

- 1) PHMSA updated previous guidance that included a chapter on rollover damage protection, and reissued it for public use as a standalone document entitled, “Guidelines for Structural Evaluation of Cargo Tank Rollover Damage Protection Devices;”
- 2) made it available for viewing and download at our respective websites;
- 3) supplemented this document with a link to a comparable industry document developed by the Tank Truck Manufacturer’s Association³ (TTMA)
- 4) increased awareness by notifying DCEs registered with the FMCSA and the TTMA to share with its association members.

¹ Final rules published June 12, 1989 (54 FR 24982); September 7, 1990 (55 FR 37028); June 7, 1991 (56 FR 27872); and November 3, 1994 (59 FR 55162).

² Final rule published April 18, 2003 (68 FR 19277).

³ DOT 400 Series Cargo Tank Rollover Protection, TTMA Recommended Practice, RP No. 87-13, reissued April 2013

We remind the NTSB that, according to the TTMA, most cargo tank manufacturers are members and these manufacturers represent approximately 92% of the cargo tanks built. Thus, taken together, we believe these actions will provide the necessary guidance and reach the intended audience.

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, Standards Development Branch at 202-366-4460 or by email at Dirk.DerKinderen@dot.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy P. Butters". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Timothy P. Butters
Acting Administrator