

**DEPARTMENT OF TRANSPORTATION**

**Pipeline and Hazardous Materials Safety Administration**

**39 CFR Parts 172 and 177**

[Docket Number PHMSA–2007–28119 (HM–247)]

RIN 2137–AE37

**Hazardous Materials: Cargo Tank Motor Vehicle Loading and Unloading Operations**

**AGENCY:** Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** In this NPRM, PHMSA is proposing to amend the Hazardous Materials Regulations to require each person (*i.e.*, carrier or facility) who engages in cargo tank loading or unloading operations to perform a risk assessment of the loading and unloading operation and develop and implement safe operating procedures based upon the results of the risk assessment. The proposed operational procedures include requirements to address several aspects of loading and unloading, including provisions for facilities to develop maintenance testing programs for transfer equipment (*i.e.*, hose maintenance programs) used to load or unload cargo tank motor vehicles (CTMVs). In addition, PHMSA is proposing to require each employee who engages in cargo tank loading or unloading operations to receive training and be evaluated on the employee’s qualifications to perform loading or

unloading functions. PHMSA is proposing these amendments to reduce the risk associated with the loading and unloading of cargo tank motor vehicles that contain hazardous materials.

**DATES:** Submit comments by May 10, 2011. To the extent possible, PHMSA will consider late-filed comments as a final rule is developed.

**ADDRESSES:** You may submit comments identified by the docket number (PHMSA–2007–28119) by any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the online instructions for submitting comments.
- *Fax:* 1–202–493–2251.
- *Mail:* Docket Operations, U.S. Department of Transportation, West Building, Ground Floor, Room W12–140, Routing Symbol M–30, 1200 New Jersey Avenue, SE., Washington, DC 20590.

• *Hand Delivery:* To Docket Operations, Room W12–140 on the ground floor of the West Building, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays.

*Instructions:* All submissions must include the agency name and docket number for this notice at the beginning of the comment. Note that all comments received will be posted without change to the docket management system, including any personal information provided.

*Docket:* For access to the dockets to read background documents or comments received, go to <http://www.regulations.gov>, or DOT’s Docket Operations Office (*see ADDRESSES*).

*Privacy Act:* Anyone is able to search the electronic form of any written communications and comments received into any of our dockets by the name of the individual submitting the document (or signing the document, if submitted on behalf of an association, business, labor union, *etc.*). You may review DOT’s complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477) or you may visit <http://www.regulations.gov>.

**FOR FURTHER INFORMATION CONTACT:** Kurt Eichenlaub or Dirk Der Kinderen, Office of Hazardous Materials Standards, (202) 366–8553, Pipeline and Hazardous Materials Safety Administration.

**SUPPLEMENTARY INFORMATION:**

**I. Executive Summary**

This NPRM proposes requirements for each person (*i.e.*, carrier or facility) who loads, unloads, or provides transfer equipment<sup>1</sup> to load or unload a hazardous material to or from a cargo tank motor vehicle in accordance with part 177. The proposal addresses safety concerns raised by National Transportation Safety Board (NTSB) and Chemical and Safety Hazard Investigation Board (CSB) investigations, and PHMSA’s internal review of hazardous material incident data. The proposal aims to reduce the overall number of hazardous material incidents caused by human error and equipment failures during cargo tank loading and unloading operations. As discussed in more detail throughout this document, the NPRM proposes the following requirements:

Affected entities	Proposal
Cargo tank carriers, and facilities that engage in part 177 loading or unloading operations.	<ul style="list-style-type: none"> <li>• Assess the risks of loading and unloading operations and develop written operating procedures.</li> <li>• Train hazmat employees in the relevant aspects of the operational procedures.</li> <li>• Annually qualify hazmat employees who perform loading and unloading operations.</li> </ul>
Facilities providing transfer equipment for cargo tank loading and unloading operations under part 177.	<ul style="list-style-type: none"> <li>• Develop and implement a periodic maintenance schedule to prevent deterioration of equipment and conduct periodic operational tests to ensure that the equipment functions as intended.</li> <li>• Ensure that the equipment meets the performance standards in part 178 for specification cargo tanks.</li> </ul>

The overall costs and benefits of the proposed regulations are dependent on the level of existing pre-compliance and the overall effectiveness of the proposed regulations (reduction in loading/

unloading incidents). To monetize the costs and benefits PHMSA used a number of assumptions to develop a base case.<sup>2</sup> In aggregate, PHMSA estimates the mean present value of the

total monetizable costs of these proposals (over 20 years, 7% discount

<sup>1</sup> The phrase “transfer equipment” includes any device in the loading and unloading system that is designed specifically to transfer product between the internal valve on the cargo tank and the first

permanent valve on the supply or receiving equipment (*e.g.*, pumps, piping, hoses, connections, *etc.*).

<sup>2</sup> PHMSA’s assumptions used to develop the base case are described in detail in the preliminary regulatory impact assessment, which is available for review in the docket for this rulemaking.

rate<sup>3</sup>) to be \$18.5 million and total monetizable benefits (over 20 years, 7%

discount rate) to be \$18.3 million. A summary of the expected annual costs

and benefits is provided in the table below.

BASE CASE BENEFITS AND COSTS

Year	Annual benefit	Discount factor (7%)	PV benefit (7%)	Annual cost	PV cost (7%)
2012	\$1,729,971	1.07	\$1,616,795	\$ 1,744,861	\$ 1,630,711
2013	1,729,971	1.14	1,511,023	1,744,861	1,524,029
2014	1,729,971	1.23	1,412,171	1,744,861	1,424,326
2015	1,729,971	1.31	1,319,786	1,744,861	1,331,146
2016	1,729,971	1.40	1,233,445	1,744,861	1,244,061
2017	1,729,971	1.50	1,152,752	1,744,861	1,162,674
2018	1,729,971	1.61	1,077,339	1,744,861	1,086,611
2019	1,729,971	1.72	1,006,859	1,744,861	1,015,525
2020	1,729,971	1.84	940,989	1,744,861	949,089
2021	1,729,971	1.97	879,429	1,744,861	886,999
2022	1,729,971	2.10	821,897	1,744,861	828,971
2023	1,729,971	2.25	768,128	1,744,861	774,739
2024	1,729,971	2.41	717,876	1,744,861	724,055
2025	1,729,971	2.58	670,912	1,744,861	676,687
2026	1,729,971	2.76	627,021	1,744,861	632,418
2027	1,729,971	2.95	586,001	1,744,861	591,045
2028	1,729,971	3.16	547,664	1,744,861	552,378
2029	1,729,971	3.38	511,836	1,744,861	516,241
2030	1,729,971	3.62	478,351	1,744,861	482,468
2031	1,729,971	3.87	447,057	1,744,861	450,905
			18,327,332	.....	18,485,077

PHMSA requests comments on the analysis underlying these estimates, as well as possible approaches to reduce the costs of this rule while maintaining or increasing the benefits. While PHMSA has concluded that the aggregate benefits justify the aggregate costs, under some scenarios, the monetizable benefits may fall short of the monetizable costs. PHMSA seeks comments on possible changes or flexibilities that might improve the rule.

II. Background

On January 4, 2008, PHMSA published a notice (73 FR 916) to solicit comments and information on a set of recommended practices for loading and unloading operations involving bulk packagings used to transport hazardous materials. In that notice, PHMSA summarized incident data related to bulk loading and unloading operations, discussed recommendations issued by the NTSB and CSB, provided an overview of current Federal regulations applicable to bulk loading and unloading operations, summarized the results of a public workshop PHMSA hosted in June 2007, and set forth proposed recommended practices for bulk loading and unloading operations. PHMSA indicated its intention to consider strategies for enhancing the safety of bulk loading and unloading operations, including whether

additional regulatory requirements may be necessary. In addition, PHMSA solicited comments on whether there are existing gaps or overlaps in regulations promulgated by PHMSA, the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA), and the United States Coast Guard (USCG) that adversely affect the safety of these operations, and how any identified gaps or overlaps in Federal regulations should be addressed.

The proposed recommended practices set forth in the notice suggested that an offeror, carrier, or facility operator should conduct a thorough, orderly, systematic analysis to identify, evaluate, and control the hazards associated with specific loading and unloading operations and develop a step-by-step guide to loading and unloading that is clear, concise, and appropriate to the level of training and knowledge of its employees. PHMSA recommended that operating procedures address specific pre-loading/pre-unloading operations, loading/unloading operations, and post-loading/post-unloading operations and the procedures should be reviewed as often as necessary to ensure that they reflect current operating practices, materials, technology, personnel responsibilities, and equipment. In addition, PHMSA suggested that the operating procedures should identify

and implement emergency procedures (including training and drills), maintenance and testing of equipment, and training in the operational procedures.

In this NPRM, PHMSA is proposing to amend the Hazardous Materials Regulations (HMR; 49 CFR parts 171–180) to require persons who load a hazardous material into, or unload a hazardous material from, a CTMV to develop and implement safety procedures governing such operations. PHMSA’s review of transportation incident data and the findings of several NTSB and CSB accident investigations involving bulk hazardous materials loading and unloading operations suggest there may be opportunities to enhance the safety of such operations. (See Section II of this notice for detailed discussion). Several comments PHMSA received in response to our January 2008 notice generally support this view. PHMSA has identified a broad range of highway- and rail-specific loading and unloading safety issues that should be addressed through rulemaking. PHMSA plans to address the identified safety issues through separate rulemakings. PHMSA is evaluating the safety issues associated with rail tank car loading and unloading operations and may propose regulatory changes if our safety analysis concludes that such action is warranted.

<sup>3</sup> Ordinarily, one important area for sensitivity analysis is the discount rate used for converting future values into present values; OMB’s guidance

is to use a 3-percent rate as a sensitivity case to the standard 7-percent rate. In this case, costs and benefits accrue evenly across time (*i.e.*, at the same

levels for each year in the 20-year analysis period) and thus the choice of discount rate does not affect the nature of the results.

### III. Analysis of the Problem

#### A. Review of Incident Data

In an effort to develop data to help identify and target risks associated with bulk loading and unloading of hazardous materials transported by highway and rail, PHMSA reviewed incident data submitted in accordance with the reporting criteria specified in § 171.16 of the HMR. A report, "A Summary Evaluation of Risk Associated with Bulk Loading/Unloading of Hazmat" (February 8, 2007), is available in the docket for this rulemaking. PHMSA conducted a detailed review of hazardous materials transportation incidents occurring over a three-year period (2004–06). An overarching conclusion of the review is that addressing risks associated with bulk loading and unloading operations for highway and rail transport provides an opportunity to enhance the safety of such operations and reduce the overall risk of serious incidents.

Based on indications from the initial review of incident data, and following a review of comments received in response to our January 4, 2008 notice, PHMSA conducted an additional review of serious incident data involving bulk loading and unloading of hazardous materials transported by highway and rail occurring over a five-year period (2003–07) (PHMSA has since updated the review to include incident data through 2009).<sup>4</sup> PHMSA reviewed serious incidents involving hazardous materials in quantities of 3,000 liters or greater to identify the causes of the incidents and to identify common issues or problems that should be addressed. The analysis of the incident data suggests that human error is the greatest single primary cause of incidents during loading and unloading operations, accounting for 33% of serious incidents that reported a failure cause (26% of all incident reports reviewed). [Note that the analysis reflects failure causes reported on incident reports. Not all incident reports reported a failure cause and PHMSA did not make an assumption on the failure cause for those incidents where a failure cause was not indicated on the report; approximately 39% of the incident reports did not include a failure cause] During our review of incident data we noted that human error generally was a

result of inattention to detail when performing a loading or unloading function; examples include failure to attend or monitor the operation, leaving valves in the wrong position, or improperly connecting hoses and other equipment. Overfilling of packagings or receiving tanks accounted for 25% of the incidents. Defective or deteriorating devices or components (e.g., valve failure, gasket leak) as the primary cause accounted for approximately 16% of serious incidents, and a variety of other causes (e.g., freezing temperatures, lading plugs in piping, lading/vessel incompatibility) accounted for the remainder. Further, a comparison of the serious incidents shows that the overwhelming majority involved CTMVs by highway; approximately 90% (615 of 680) of the serious incidents occurred during highway loading or unloading operations, and approximately 75% of those incidents involved CTMVs.

The general conclusion of the review is that the safety of bulk loading and unloading operations can be enhanced through targeted requirements such as more comprehensive training for hazmat employees performing a bulk loading or unloading function or more detailed procedures for conducting such operations. (See Section V *Section-by-Section Review* for detailed descriptions of the proposed amendments in this notice). PHMSA seeks comments or data relevant to the accuracy of the conclusion that human error is the leading causal factor in CTMV loading and unloading incidents.

PHMSA is proposing additional training and qualification requirements as a means to increase hazmat employee awareness and accountability while reducing on-the-job complacency. As a result, PHMSA expects a reduction in the number of loading and unloading incidents caused by human error. Significant reductions to human error have been recognized using similar methods in the transportation and medicine fields. A discussion of these findings is available in the Preliminary Regulatory Impact Assessment, which is available in the docket for this rulemaking. Further, the incident analysis suggests that specific safety regulations targeting the loading and unloading of CTMVs used for highway transportation would address the majority of serious loading and unloading incidents. All data used for the report and our additional review are available from the Hazardous Materials Information System (HMIS; <http://phmsa.dot.gov/hazmat/library/data-stats/incidents>). PHMSA is seeking comments on whether the estimated

costs and benefits, detailed in the Preliminary Regulatory Impact Assessment for these proposals, provide an accurate representation of the expected costs and benefits of the proposed regulations. Further, do commenters agree that documentation of operational procedures along with additional hazmat employee training and qualification is the best way to reduce the overall number of loading and unloading incidents caused by human error? If not, what are some more effective approaches, both regulatory and non-regulatory, to reduce the overall number of loading and unloading incidents caused by human error?

#### B. NTSB Accident Investigations

NTSB has investigated several serious accidents related to bulk loading and unloading operations:

On July 14, 2001, in Riverview, Michigan, methyl mercaptan was released from a rail tank car during unloading, when a pipe attached to a fitting on the unloading line fractured and separated. The methyl mercaptan ignited, engulfing the tank car in flames. Fire damage to cargo transfer hoses on an adjacent tank car resulted in the release of chlorine. Three plant employees were killed in the accident, and about 2,000 people in the surrounding neighborhood were evacuated from their homes. The fractured piping used for the unloading operation exhibited significant corrosion damage. As a result of this investigation, NTSB issued the following recommendations to DOT:

- I-02-1: Develop, with the assistance of the Environmental Protection Agency and Occupational Safety and Health Administration, safety requirements that apply to the loading and unloading of railroad tank cars, highway cargo tanks, and other bulk containers that address the inspection and maintenance of cargo transfer equipment, emergency shutdown measures, and personal protection requirements.
- I-02-2: Implement, after the adoption of safety requirements developed in response to Safety Recommendation I-02-1, an oversight program to ensure compliance with these requirements.

On September 13, 2002, in Freeport, Texas, a tank car containing about 6,500 gallons of hazardous waste ruptured at a transfer station. The car had been steam-heated to permit the transfer of the waste to a CTMV for subsequent disposal. As a result of the accident, 28 people received minor injuries, and residents living within one mile of the

<sup>4</sup> PHMSA analyzed incident report data contained in the Hazardous Materials Information System (HMIS; <http://phmsa.dot.gov/hazmat/incident-report>). An excel spreadsheet containing the data used for this analysis and a PowerPoint presentation that summarizes the results of the review are available in the docket for this rulemaking.

accident site had to shelter-in-place for 5½ hours. The tank car, highway cargo tank, and transfer station were destroyed. The force of the explosion propelled a 300-pound tank car dome housing about ⅓ mile away from the tank car. Two storage tanks near the transfer station were damaged; they released about 660 gallons of the hazardous material oleum (fuming sulfuric acid and sulfur trioxide). As a result of its investigation, NTSB issued the following recommendation to PHMSA:

○ R-04-10: In cooperation with the Occupational Safety and Health Administration and the Environmental Protection Agency, develop regulations that require safe operating procedures to be established before hazardous materials are heated in a railroad tank car for unloading; at a minimum, the procedures should include the monitoring of internal tank pressure and cargo temperature.

#### C. CSB Accident Investigations

CSB has investigated two incidents in which chlorine was released during rail tank car unloading operations:

On August 14, 2002, in Festus, Missouri, approximately 24 tons of chlorine were released during a three-hour period following the rupture of an unloading hose. The magnitude of the incident was exacerbated because the emergency shutdown system failed to operate properly. Three residents were admitted to the hospital, and hundreds of residents were evacuated or asked to shelter-in-place.

On August 11, 2005, in Baton Rouge, Louisiana, a chlorine transfer hose ruptured. However, the emergency shutdown system operated properly, and the release ended in under a minute. The successful activation of the emergency shutdown system prevented a major release and off-site impact. As a result of its investigations, CSB issued recommendation 2006-06-I-LA-RI to DOT to:

Expand the scope of DOT regulatory coverage to include chlorine rail car unloading operations. Ensure the regulations specifically require remotely operated emergency isolation devices that will quickly isolate a leak in any of the flexible hoses (or piping components) used to unload a chlorine rail car. The shutdown system must be capable of stopping a chlorine release from both the rail car and the facility chlorine receiving equipment. Require the emergency isolation system be periodically maintained and operationally tested to ensure it will function in the event of an unloading system chlorine leak.

Other accidents illustrate that loading and unloading operations involving

CTMVs can also have catastrophic consequences. For example, on October 6, 2007, at a foundry in Tacoma, Washington, a delivery driver took an improperly repaired fill hose and began to unload the gas from his 8,000-gallon tanker truck. In less than a minute, the hose detached from its connection to the truck's tank, which allowed propane gas to rapidly flow from the open valve and fill the air with the explosive gas; the liquefied petroleum (LP) gas ignited and the first explosion engulfed the truck and fill area. Eight minutes later, the heated tanker truck exploded in a huge fireball witnessed by hundreds of people in the area and heard up to a mile away. The truck driver was fatally injured. The accident investigation found that workers had improperly repaired the foundry's damaged LP-gas fill hose, attaching the fill nozzle using fasteners that were not designed to withstand pressurized gas. The Washington State Department of Labor and Industries cited the company for three serious violations of workplace safety and health regulations that contributed to the explosion.

#### IV. Comments on January 2008 Notice and Measures Being Considered for Adoption

In response to PHMSA's January 4, 2008 notice, PHMSA received comments from the following organizations and individuals:

- ACCU CHEM Conversion, Inc. (Accu Chem)
- American Chemistry Council (ACC)
- American Gas Association (AGA)
- American Petroleum Institute (API)
- American Trucking Associations (ATA)
- Arkema, Inc.
- Association of American Railroads (AAR)
- Daniel Roe
- Dangerous Goods Advisory Council (DGAC)
- DISTRIGAS of Massachusetts LLC (DISTRIGAS)
- DuPont Global Logistics (DuPont)
- Independent Liquid Terminals Association (ILTA)
- Institute of Makers of Explosives (IME)
- National Association of SARA Title III Program Officials (NASTTPO)
- National Association of Chemical Distributors (NACD)
- National Association of State Fire Marshals (NASFM)
- National Grid
- National Propane Gas Association (NPGA)
- National Tank Truck Carriers, Inc. (NTTC)
- National Transportation Safety Board (NTSB)

- New York State Department of Environmental Conservation (NYSDEC)
- Oklahoma Hazardous Materials Emergency Response Commission (OHMERC)
- The Chlorine Institute, Inc. (CI)
- The Dow Chemical Company (Dow)
- U.S. Chemical Safety and Hazard Investigation Board (CSB)
- Utility Solid Waste Activities Group (USWAG)

Some of the comments are discussed as they relate to the measures PHMSA is considering in this NPRM to enhance the safety of loading and unloading bulk packagings.

#### A. Operating Procedures

Most commenters support adoption in the HMR of procedures governing loading and unloading of bulk packagings as the best way to enhance the safety of such operations. ACC states, "[s]uccessfully enhancing safety depends on there being an enforceable Federal rule on the loading and unloading of bulk hazmat shipments in the truck and rail modes." NTSB supports incorporation of the recommended practices into the HMR:

[T]he proposed recommended practices for the bulk loading and unloading of hazardous materials are comprehensive and satisfactorily address [safety deficiencies]. Implementation of and compliance with the proposed recommended practices by carriers, shippers, and consignees of hazardous materials transported in tank cars, cargo tanks, and other bulk containers will significantly improve the safety of loading and unloading of hazardous materials transported in bulk.

ACC, Arkema, DGAC, DuPont, and IME support regulatory requirements governing loading and unloading of bulk packagings, but recommend the adoption of a set of operating procedures proposed by the Interested Parties for Hazardous Materials Transportation (Interested Parties) and submitted to PHMSA as a petition for rulemaking by DGAC. IME states, "[w]e do not believe that the 'recommended practices' published in the [January 4, 2008 notice] are as comprehensive as those developed by the Interested Parties \* \* \* PHMSA's recommended practices do not address, for example, incidental storage or security."

PHMSA agrees with commenters on the need to implement regulations governing the loading and unloading of bulk transport tanks. PHMSA's review of incident data involving tanks with a capacity of 3,000 liters or greater revealed that 90% of the incidents occur by highway, and nearly all of those incidents involve cargo tank motor

vehicles. PHMSA also notes that there are unique operational differences between loading and unloading operations conducted by highway and rail (types of equipment, operating environments, techniques, access, training, *etc.*). Therefore, PHMSA is limiting the scope of the proposals in this rulemaking to CTMVs. Safety issues related to loading and unloading by rail continue to be evaluated and may be addressed in a future rulemaking action. PHMSA believes a regulatory approach that targets the primary causes of loading and unloading incidents involving cargo tank motor vehicles is the most cost beneficial approach. Security and incidental storage of bulk transport tanks are beyond the scope of this rulemaking action.

Two commenters oppose adoption of regulations governing loading and unloading of bulk packagings. ILTA suggests that "it is unnecessary to either proceed with issuing the proposal as a recommended practice or to move forward with a rulemaking. Our position is based on: (1) Existing regulations that presently address each [recommended practice]; (2) jurisdictional conflict \* \* \* ; and (3) cost-benefit considerations." ILTA suggests that other Federal agencies, particularly EPA, currently regulate loading and unloading operations and that adoption by PHMSA of its proposed recommended practices would result in "redundancy of enforcement authority with regard to loading operations that is neither necessary nor warranted." ILTA also suggests that "the benefits of implementing [the recommended practices] would be minimal." Accu Chem states that most hazardous materials facilities have implemented procedures governing loading and unloading operations and that the real problem is inadequate training. "It is [Accu Chem's] opinion that the best way to minimize complacency in the work place is by constant bombardment of wide[ly] accepted industry practices. By this [we] mean new hire training, monthly safety meetings, and yearly refresher training."

PHMSA disagrees with the commenter's assertion that rulemaking is unnecessary. PHMSA's incident analysis indicates that there are loading and unloading safety risks that could be reduced by implementing additional loading and unloading regulations.

PHMSA does agree with the commenter that additional training is necessary to reduce the safety risks associated with CTMV loading and unloading. PHMSA has modified its approach to addressing loading and unloading safety issues. In this NPRM,

PHMSA is proposing targeted requirements to address safety issues identified through the incident analysis discussed earlier in this notice. PHMSA is proposing additional training and qualification requirements for hazmat employees who engage in CTMV loading and unloading operations. The proposal includes a requirement for annual qualification for hazmat employees who perform CTMV loading and unloading operations. PHMSA coordinated this proposal with EPA and does not believe that any of the proposals in this notice would create redundant enforcement authority or conflict with existing EPA regulations.

API, NACD, and NPGA express concern that both the recommended practices set forth in our January 4, 2008 notice and the operational procedures proposed by the Interested Parties may be too prescriptive. These commenters recommend that PHMSA develop a broad performance standard that accommodates existing standards and regulations already in widespread use by the regulated community. NACD suggests the adoption of a rule that establishes hazard level-based performance standards rather than prescriptive requirements. For example, NACD expresses concern that the elements outlined in the DGAC November 17, 2007 petition for rulemaking "are too prescriptive and would not be appropriate for all situations. In addition, requirements that are too prescriptive might not recognize that many elements are already covered by other existing laws and regulations."

PHMSA has modified its approach to addressing loading and unloading safety issues in this rulemaking action. The proposals in this notice are intended to be performance based and flexible to allow persons to develop operational procedures unique to their industry and operating environment. Further, PHMSA recognizes that existing industry standards may address many of the proposals in this notice. Therefore, existing standards and procedures may be used to comply with the regulations proposed in this notice.

ATA and NTTCC contend that the adoption of regulations governing loading and unloading of bulk packagings "has the potential to create additional liability for motor carriers and to erode the regulatory uniformity necessary for carrier[s] to operate in compliance with the HMR." These commenters note that a typical truck driver serves dozens or even hundreds of facilities each year, and requiring motor carriers to train drivers on each facility's loading and unloading

practices is impractical. ATA states that, "[i]t is critically important that PHMSA not choose a path forward that allows each facility to enact unique operating requirements *and* simultaneously holds motor carriers legally responsible for mastering the nuances contained in each facility's operating procedures." (Emphasis in original.)

PHMSA understands the concerns presented by the commenters. In this notice, PHMSA is proposing requirements that would apply to operators of facilities that actively engage in loading and unloading operations (*e.g.*, provide equipment such as hoses to the carrier for loading or unloading) in addition to the motor carriers. Further, PHMSA recognizes that many carriers may not be trained in the operational procedures unique to certain facilities. Therefore, PHMSA is proposing that the facility operators take on responsibility for communicating any unique operating requirements to the carrier prior to loading or unloading. In addition, if the facility operator provides employees or equipment to the carrier for loading or unloading operations, then it is PHMSA's intent that the facility operator share responsibility for the safety of the loading or unloading operation.

#### *B. Procedures Recommended by the Interested Parties*

ACC, DGAC, DuPont, IME, and NACD advocate incorporating into the HMR operating procedures proposed by the Interested Parties, an informal association of shippers, carriers, and industrial package organizations. DGAC submitted a petition, on behalf of the Interested Parties, to incorporate the procedures into the HMR. Their procedures address the loading, unloading, and incidental storage of hazardous materials in bulk packagings having a capacity greater than 3,000 liters. The scope of their procedures is limited to bulk packagings with capacities greater than 3,000 liters on the basis that: (1) PHMSA already uses this capacity as an upper limit for intermediate bulk containers; (2) packagings up to 3,000 liters are handled very much like non-bulk packagings in that they are not loaded or unloaded in the same manner or locations as rail tank cars and CTMVs; and (3) the 3,000 liter capacity threshold is sufficient to ensure that the bulk packagings of primary concern to PHMSA and NTSB (*e.g.*, rail tank cars, CTMVs, portable tanks) are covered.

The operating procedures developed and proposed by the Interested Parties specify information and processes that offerors, consignees, or transloading

facility operators must address. Some key elements include procedures applicable to pre-transfer operations (e.g., securement of the transport vehicle against movement), transfer operations (e.g., monitoring the temperature of the lading), post-transfer operations (e.g., evacuation of the transfer system and depressurization of the containment vessel), storage incidental to movement (e.g., monitoring for leaks and releases), and emergency procedures (e.g., use of emergency shutdown systems). However, other commenters, including NACD, suggest that the operating procedures proposed by the Interested Parties “are too prescriptive and would not be appropriate for all situations.” These commenters support adoption of risk-based performance standards rather than prescriptive requirements.

PHMSA commends the Interested Parties for their efforts to develop consensus-based loading and unloading procedures. However, at present, PHMSA finds more persuasive the view of those commenters who suggest that those procedures may not be appropriate for all companies and all situations. Accordingly, PHMSA’s approach is to consider measures that are mode-specific to account for operating differences in the highway and rail modes. Safety of rail loading and unloading operations may be addressed in a separate future rulemaking action. In addition, in this notice, PHMSA is considering a more flexible regulatory regime than that proposed by the interested parties to permit companies to adapt operating procedures to site-specific and material-specific safety concerns. Note that PHMSA used the operating procedures proposed by the Interested Parties as a baseline in developing the amendments proposed in this NPRM. These proposed amendments cover most of the areas specified in their proposal. However, PHMSA has modified the proposal to target specific loading and unloading safety risks identified through the incident analysis discussed earlier in this notice.

## V. Proposal

Based on comments received in response to the January 2008 notice and analysis of the safety risks posed by bulk loading and unloading operations involving CTMVs, in this NPRM, PHMSA proposes to require persons who load or unload cargo tanks to develop and implement operating procedures governing these operations. PHMSA agrees with those commenters who suggest that a regulatory requirement for the development and implementation of operating procedures

will be more effective in reducing risks than issuance of a set of recommended practices or procedures. PHMSA believes that a regulatory approach would establish a uniform safety standard that ensures safety and accountability of all persons who engage in CTMV loading and unloading operations. As a result, PHMSA expects a reduction in the overall number of loading and unloading incidents, particularly for those companies who do not already implement the safety practices proposed in this notice. PHMSA is seeking comments on whether there are better alternatives, regulatory or non-regulatory, that would adequately address the loading and unloading safety issues identified in this notice.

Currently, the HMR require each hazmat employee to receive function-specific training at least once every three years. Function-specific training includes training in the specific job functions that the hazmat employee is responsible for performing, including regulations applicable to loading and unloading. In this NPRM, PHMSA proposes to require each hazmat employer who loads or unloads hazardous materials from a cargo tank to ensure that the hazmat employees conducting such operations are trained and qualified. PHMSA is proposing to require operators to develop and implement a qualification program that provides ongoing year-round training, including practice sessions, drills, supervisor observation, and other mechanisms to identify and correct problems or errors that could lead to an incident. Under this proposal, at minimum, persons who engage in loading and unloading operations would have to be qualified by their employer at least once each year. Hazmat employers would be required to document that each hazmat employee has been trained and qualified on an annual basis. The costs and benefits of this proposed requirement are discussed in detail in the Preliminary Regulatory Impact Assessment, which is available in the docket for this rulemaking. PHMSA is seeking comment on the accuracy of the estimated costs and benefits of such a training and qualification program, and whether commenters agree that this type of qualification program would effectively reduce the overall number of loading and unloading incidents caused by human error.

## VI. Section-by-Section Review

### Part 172

#### Training and Qualification

The proposed recommended practices in PHMSA’s January 2008 notice included a section on training, emphasizing that personnel involved in loading and unloading and emergency response operations need to know and understand their specific responsibilities during loading and unloading operations, including attendance or monitoring responsibilities. Several commenters (NPGA, IME, DGAC) suggest that the recommended training requirements are unnecessary because training for hazardous materials employees is already addressed in Subpart H of Part 172 of the HMR. Two commenters (Dow, Accu Chem) support the training provisions. “It only makes sense to make DOT refresher training a yearly requirement in step with EPA and OSHA \* \* \* [T]he best way to minimize complacency in the workplace is by constant bombardment of widely excepted [sic] industry practices.” (Accu Chem)

As discussed in detail above, PHMSA’s analysis of loading and unloading accidents suggests that human error is a significant causal factor. PHMSA agrees with Accu Chem that “constant bombardment” may help to change the safety culture and eliminate complacency in a way that periodic training requirements cannot. Therefore, in this NPRM, PHMSA proposes a new approach to training and qualification. PHMSA is proposing to require companies subject to the requirements in this NPRM to develop a training plan and a qualification program that provide ongoing training, reinforcement of that training, and periodic evaluation of employees who perform loading and unloading tasks. The training and qualification program should include routine practice sessions, drills, supervisor observation, quality control groups, and other mechanisms to identify and correct problems or errors that could lead to incidents. In particular, such programs should include mandatory refresher training and evaluation after releases or “close-calls”—events that could have led to a release of a hazardous material. Under the proposed amendments, the employer would be responsible for developing and implementing the training and qualification program. The employer would be required to maintain training records and provide recurrent training for each of its employees, at least once every three years, in

accordance with the training requirements in Part 172, Subpart H. In addition, the employer must annually evaluate and certify that employees who engage in loading, unloading, or transloading operations are satisfactorily qualified to do so. An employer may not certify that an employee is qualified until that person demonstrates that they can successfully perform the loading or unloading operation in accordance with the employer's operational procedures. Certification must be documented in the employee's training record along with the date of certification. PHMSA is seeking comment on the additional training and qualification requirements proposed herein. More specifically, PHMSA is asking commenters to provide input as to what should be included in the additional training and qualification requirements, and the associated costs and benefits of the proposed training and qualification requirements. In addition, PHMSA is seeking information on how many hazmat employers are currently practicing annual qualification programs that include similar elements to those proposed in this notice.

The use of formalized and documented procedures, safety checklists, and additional training will reduce loading/unloading errors, resulting in a reduction in the number and severity of incidents of these types. The magnitude of the impact will vary from industry to industry and from firm to firm. An example from Great Britain is the public-private Safer Port Initiative, which achieved a 22 percent overall reduction in serious accidents at maritime freight facilities through the use of standardized guidance and safety audits.<sup>5</sup> (Other fields, such as medicine, have seen even more dramatic results, with relatively simple interventions such as written checklists leading to reductions in human error of 66 percent or more.)<sup>6</sup> Numerous industry associations in the U.S. have also promoted the use of standardized procedures and checklists in hazardous materials transportation. For example, the Chlorine Institute requires its member companies to use a standardized checklist for bulk handling of chlorine.<sup>7</sup> Although these practices are believed to yield safety benefits, no

quantitative estimates of their effects in the cargo tank loading/unloading context are available. PHMSA is seeking comments on the overall effectiveness of safety training and employee qualification programs in the hazardous materials transportation industry. More specifically, PHMSA is seeking data and information that could be used to better estimate the amount of human error reduction that could be expected from implementing the additional training and qualification requirements proposed in this notice.

#### Section 177.831

##### A. General Applicability

In this NPRM, PHMSA proposes to add a new section (§ 177.831) to Subpart B of Part 177 to address loading and unloading procedures for cargo tanks. Based on comments received in response to PHMSA's January 4, 2008, notice and analysis of the safety risks associated with loading and unloading of bulk packagings, PHMSA is proposing requirements for each person (facility or carrier) who loads or unloads cargo tanks to perform a risk assessment and develop and implement operating procedures, based upon the results of the risk assessment, governing these operations. Due to distinct differences in loading and unloading operations conducted by rail and highway, PHMSA is planning to address rail loading and unloading operations in a separate rulemaking.

The proposed cargo tank loading and unloading procedures are based on the proposed recommended practices published in PHMSA's January 2008 notice. PHMSA's intention is to establish a performance standard for assessing safety risks and implementing measures to address those risks, allowing sufficient flexibility to accommodate unique or site-specific operating conditions.

The proposed requirements in the new § 173.831 would apply to facilities that conduct loading operations or provide transfer equipment to the motor carrier for loading and unloading, and motor carriers who conduct loading and unloading operations. As one commenter suggests, "Unlike an employee at a fixed facility that can be trained on the detailed operations of that facility, the typical truck driver services dozens or even hundreds of different facilities each year. \* \* \* [F]or non-standardized chemical deliveries, the facility operator must play an active role in helping to ensure that the facility's operating procedures are followed." (ATA) PHMSA agrees. To address the issues highlighted in the

ATA and NTTC comments, PHMSA is proposing adoption of operating procedures that would differentiate between operating procedures for the loading and unloading of CTMVs conducted at facilities and assisted by facility personnel and those conducted by motor carrier personnel. The proposed regulations in this notice would require facilities that have unique operating procedures to communicate those procedures to the motor carrier through direct supervision, written instruction, or training programs designed to provide the motor carrier with sufficient knowledge and experience to perform the loading or unloading operation in accordance with the facility's operating procedures. PHMSA notes that, in many cases, motor carriers and facilities share responsibility for loading or unloading hazardous materials (e.g., a motor carrier uses a hose provided by a facility to unload the contents of a cargo tank into the facility's storage tanks). Therefore, motor carriers and facility operators should work together to ensure that loading or unloading procedures and equipment are safe and compatible.

The proposed requirements in the new § 172.831 also address cargo tank loading and unloading operations conducted solely by motor carrier personnel. As indicated above, for loading and unloading operations conducted at facilities, the facility operator has primary responsibility for compliance with the operating procedure requirements proposed in this NPRM. Frequently, however, a motor carrier will deliver and unload hazardous materials at a residence, business, or other venue where primary responsibility for the safety of the transfer operation belongs to the motor carrier. Examples include deliveries of fuel oil or propane to residences or businesses, or gasoline to local gas stations. As proposed in this NPRM, a motor carrier's responsibility for developing loading and unloading procedures extends to the CTMV and associated equipment, attachments, and appurtenances. Thus, for a loading or unloading operation that takes place at a facility and is supervised by facility personnel, the motor carrier must conduct a risk assessment and develop operating procedures that are specific to the cargo tank involved in the transfer operation. A similar proposal in this notice applies for loading or unloading operations at locations where the motor carrier is primarily responsible for the safety of the transfer operation, such as at a business or residence. For example,

<sup>5</sup> Safer Ports Initiative, [http://www.saferports.org.uk/spi\\_1](http://www.saferports.org.uk/spi_1).

<sup>6</sup> Pronovost, Peter, Dale Needham, Sean Berenholtz, David Sinopoli, Haitao Chu, Sara Cosgrove, Bryan Sexton, Robert Hyzy, Gary Roth, Joseph Bander, John Kepros, and Christine Goeschel. "An Intervention to Decrease Catheter-Related Bloodstream Infections in the ICU." *New England Journal of Medicine* 355.26 (2006): 2725.

<sup>7</sup> Chlorine Institute, Inc., "Dear Chlorine User" letter, July 22, 2008.

a motor carrier that delivers and unloads propane at a residence must conduct a risk assessment for such operations. The motor carrier need not conduct a separate risk assessment of each residence or retail outlet (*i.e.*, gas station) to which it delivers propane or gasoline, but may instead assess the overall risk of such operations and develop operating procedures that apply generally to such operations.

PHMSA is not proposing requirements for other bulk packagings such as portable tanks or intermediate bulk containers (IBCs) in this rulemaking. PHMSA agrees with the comment submitted by NACD, which states, “[t]he data on the most serious loading and unloading incidents seems to implicate packagings over 3,000 liters. \* \* \* The Hazardous Materials Interested Parties Working Group chose a limit of 3,000 liters based upon the fact that most packagings smaller than that are not loaded and unloaded using pumping equipment and are not loaded while on the transport vehicle.” The agency’s assessment of the safety risks associated with loading and unloading operations suggests that loading and unloading operations involving large-capacity containers (*e.g.*, cargo tanks) pose more significant risks, based on the quantity of material being handled and the potential consequences of a release, than smaller packages and containers.

#### B. Risk Assessment and Operating Procedures

PHMSA agrees with commenters who suggest that a regulatory requirement for the development and implementation of operating procedures will be more effective in reducing risks than the issuance of a set of recommended practices or procedures. A regulatory approach provides a uniform set of safety requirements, provides a mechanism for accountability through compliance inspections, and levels the competitive playing field by requiring all companies engaged in hazmat loading and unloading operations to meet the same minimum set of safety regulations.

The operating procedures would be based on a systematic assessment of the risks associated with the specific loading or unloading procedure and would, at a minimum, consider: the characteristics and hazards of the material to be loaded or unloaded; measures necessary to ensure safe handling of the material; and conditions that could affect the safety of the operation, including access control, lighting, ignition sources, physical obstructions, and weather conditions. The operating procedures would

address pre-loading or pre-unloading procedures, loading or unloading procedures, emergency management, post-loading or post-unloading procedures, and maintenance and testing of equipment. These measures would include general requirements for an operating procedure’s components, rather than a prescriptive list of specific items that should be included, resulting in a performance standard that would provide operators with the flexibility necessary to develop operating procedures addressing their individual situations and operations. Accordingly, each operating procedure would be different because it would be based on an operator’s individualized assessment of the safety risks associated with the specific hazardous materials it ships or transports and its own circumstances and operational environment. PHMSA is seeking comments on whether the general components of an operational procedure proposed in this notice would adequately address safety risks while providing enough flexibility to address individual situations and environments.

PHMSA is proposing to require facilities that perform loading or unloading operations or provide transfer equipment to the motor carrier for loading or unloading operations to ensure that the carrier is either (a) supervised or assisted by a facility employee who is trained on the operating procedures, or (b) provided with written instructions on how to conduct the loading or unloading operation in accordance with the facility’s unique operating procedures. To provide flexibility, a facility need not provide supervision or written instructions if the motor carrier has sufficient knowledge to perform the loading or unloading operation in accordance with the facility’s operating procedures. “Sufficient knowledge” may include formal or on-the-job training in the operating procedures of a particular facility, or significant experience performing loading or unloading operations in accordance with the operating procedures of a particular facility. The term “transfer equipment” includes any device in the loading and unloading system that is designed specifically to transfer product between the internal valve on the cargo tank and the first permanent valve on the supply or receiving equipment (*e.g.*, pumps, piping, hoses, connections, *etc.*). As proposed in this notice, by providing “transfer equipment” for a loading or unloading operation, the facility would share responsibility with the carrier for ensuring the integrity of the equipment,

that it is compatible with the tank and the material, and that the carrier has sufficient knowledge to perform the loading or unloading operation in accordance with facility operating procedures. PHMSA is seeking comment on whether this requirement would facilitate better communication between facility operators and carrier personnel, thus reducing the overall risk of an incident during loading or unloading operations. Further, PHMSA is seeking comments and information on the overall number of facilities that actually provide equipment, such as hoses, personnel, or instruction to carriers for loading or unloading operations performed at those facilities. Should PHMSA implement regulations applicable to facility operators that provide transfer equipment, or actively engage in CTMV loading or unloading operations?

PHMSA is proposing to require the risk assessment and operating procedures to be in writing and a copy maintained on the motor vehicle, or for facilities the principal place of business (*i.e.*, office at the facility where loading and unloading operations are conducted), for as long as the operating procedures remain in effect.

The operating procedures must be accessible at or through the principal place of business and must be made available, upon request, to an authorized official of a Federal, state, or local government agency at reasonable times and locations. At a minimum, the proposed operating procedures must cover:

- (1) Pre-loading or -unloading procedures to ensure the integrity of the cargo tank and associated transfer equipment, prepare the cargo tank and equipment for the transfer operation, and verify the vessel into which the material is to be transferred;
- (2) Loading or unloading procedures for monitoring the transfer operation;
- (3) Procedures for handling emergencies;
- (4) Post-loading or -unloading procedures to ensure that all transfer equipment is disconnected and all valves and closures are secured;
- (5) Facility oversight of carrier personnel; and
- (6) Design, maintenance, and testing of equipment.

PHMSA is soliciting comments on the proposed documentation requirements for the operational procedures. Should facilities be required to document their loading and unloading operating procedures? If so, are the minimum requirements for documenting risk assessments and operational procedures appropriate and flexible enough to

apply to all types of loading and unloading operations? Would documented loading and unloading procedures ensure compliance and improve the overall safety of loading and unloading operations? Would regulated entities incur documentation costs to develop and maintain risk assessments and operational procedures? If so, what is a fair estimate of the potential costs?

For each component of the operating procedures, PHMSA is proposing that the procedures include measures to address particular risks to safety. For example, pre-loading and -unloading procedures must include measures to ensure that the cargo tank and transfer equipment are free of defects, leaks, or other unsafe conditions; secure the tank; and verify that the material is being transferred into the appropriate packagings or containment vessels. Similarly, loading and unloading procedures must include measures to initiate and control lading flow; monitor the temperature of the material being transferred and the pressures of the vessels involved in the process; monitor filling limits; and terminate lading flow.

PHMSA has a particular concern for cargo tank loading and unloading operations that utilize a hose provided by the facility at which the operation takes place rather than the hose that is carried on a cargo tank motor vehicle. The HMR require operators of MC 330, MC 331, and non-specification cargo tanks used for the transportation of liquefied compressed gases to implement a comprehensive hose maintenance program that includes monthly visual inspections, annual leakage tests, and pressure testing of new and repaired hose assemblies (*see* § 180.416). Further, the HMR require the operator to visually inspect the hose prior to initiating the unloading operation and after the operation is complete. The operator may not use a hose found to have any of the following conditions: (1) Damage to the hose cover that exposes the reinforcement; (2) wire braid reinforcement that has been kinked or flattened so as to permanently deform the wire braid; (3) soft spots when not under pressure, bulging under pressure, or loose outer covering; (4) damaged, slipping, or excessively worn hose couplings; or (5) loose or missing bolts or fastenings on bolted hose coupling assemblies.

PHMSA is concerned that facility hoses may not be maintained to the standard established under the HMR (*see* piping and hose requirements in §§ 173.345–9, 178.337–9, and 180.416). The 2007 accident in Tacoma, Washington, described above,

demonstrates the serious safety problems that can result from the use of a damaged or improperly repaired hose for unloading operations. Therefore, in this NPRM, PHMSA is proposing to require facilities that provide transfer equipment that is connected directly to CTMVs and used to load or unload product from the tank, to implement maintenance and inspection programs consistent with existing standards for hoses carried aboard CTMVs. At a minimum, the operational procedure must include a hose maintenance program. Further, PHMSA is proposing to require the operator of the CTMV to conduct a visual examination of the facility equipment being used for the loading or unloading operation to identify any obvious defects that could substantially impact the safety of the loading or unloading operation, because the vehicle operator must not commence a loading or unloading operation using equipment that is found to have any readily apparent defect. Note that the operator of the motor vehicle is not expected to use instruments or take extraordinary actions to check components not readily visible. The operator of the transport vehicle may rely on information provided by the facility to determine that the transfer equipment meets the appropriate specifications, is of sound quality, has been properly tested and maintained, and is compatible with the material.

#### C. Relationship to Other Federal, State, or Industry Standards

PHMSA is proposing a paragraph § 177.831(c) to address the relationship of the proposed requirements for loading and unloading risk assessments and operating procedures to other Federal or state regulatory requirements. As discussed above, both OSHA and EPA regulate operations involving the handling of hazardous materials at fixed facilities.

For example, OSHA's Process Safety Management (PSM) standard (29 CFR 1910.119) contains requirements for processes that use, store, manufacture, handle, or transport particular chemicals on-site. Bulk loading and unloading operations involving PSM-covered chemicals are subject to the requirements of the PSM standard. The PSM standard requires employers to compile process safety information (PSI) to enable employers and employees to identify and understand the hazards of the process. The PSI must include: (1) Physical and reactivity data of the highly hazardous chemicals in the process; (2) safe upper and lower limits of the process such as temperatures,

pressures, flows and compositions; and (3) an evaluation of the consequences of deviation. Using the PSI, employers must perform a process hazard analysis to systematically identify, evaluate, and control the hazards of the process. After an employer completes a process hazard analysis, the employer must develop and implement written operating procedures providing clear, written instructions for safe operations of a process, including loading and unloading operations to or from bulk containers (*see* 29 CFR 1910.119(f)). After the procedures are developed, each employee (including contract employees) involved in loading and off-loading operations must be trained in accordance with 29 CFR 1910.119(g) in an overview of the process and the procedures required.

The OSHA standards also include requirements for the handling and storage of specific hazardous materials, such as compressed gases, flammable and combustible liquids, explosives and blasting agents, liquefied petroleum gases, and anhydrous ammonia. For example, the OSHA standard at 29 CFR 1910.106, Flammable and combustible liquids, contains requirements for storage of these liquids, including among others, requirements for grounding and bonding during transfer operations and controlling ignition sources, such as static electricity. Specifically, 29 CFR 1910.106(f), Bulk plants, contains requirements for workplaces that receive flammable and combustible liquids by rail tank car and cargo tank motor vehicle. These bulk plants store or blend the flammable and combustible liquids for subsequent distribution by various modes of transportation, including rail tank cars. The standard at 29 CFR 1910.106(f) also contains specific provisions for loading and unloading facilities. Additionally, the OSHA standard at 29 CFR 1910.120, Hazardous waste operations and emergency response, establishes requirements for emergency response operations. When there is a release of a hazardous substance, or a substantial threat of a release, then emergency response operations must comply with 29 CFR 1910.120(q).

In situations where an operation or a material is not covered by the PSM standard or the other OSHA standards, employers are obligated under Section 5(a)(1)—“the General Duty Clause”—of the Occupational Safety and Health Act of 1970 to protect employees from serious “recognized” hazards.

EPA regulations also establish a general duty for facility owners or operators to identify hazards associated with the accidental releases of

extremely hazardous substances, design and maintain a safe facility as needed to prevent such releases, and minimize the consequences of releases. In addition, stationary sources with more than a threshold quantity of a regulated substance in a process are subject to EPA's accident prevention regulations, including the requirement to develop risk management plans (40 CFR part 68). EPA's risk management plan requirements are virtually identical to the OSHA PSM standards. Facilities must develop and implement risk management plans that contain three main elements: (1) A hazard assessment; (2) a prevention program; and (3) an emergency response program.

EPA's Spill Prevention, Control, and Countermeasure (SPCC) program (40 CFR part 112) for non-transportation-related facilities is designed to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or onto the navigable waters of the United States or adjoining shorelines." SPCC regulations apply to the following facilities: (1) Oil storage facilities, including all related equipment and appurtenances and bulk plant storage; (2) terminal oil storage; (3) pumps and drainage systems used in the storage of oil, except for in-line or breakout tanks needed for the continuous operation of a pipeline system; and (4) any terminal facility, unit, or process integrally associated with the transfer of oil in bulk to or from a vessel. The SPCC regulations include several requirements for facility rail tank car and cargo tank motor vehicle loading and unloading racks, such as a secondary containment system and lights or barriers to prevent the vehicle from departing the facility prior to disconnecting transfer lines. Loading racks, transfer hoses, loading arms, and other equipment that is appurtenant to a non-transportation-related facility or terminal and that is used to transfer oil in bulk to or from highway vehicles or rail cars are also subject to regulation under the SPCC program. Facility owners and operators should be aware that the regulation of equipment or operations by PHMSA does not preclude EPA from regulating the same equipment or operations. Additionally, DOT jurisdiction does not define the limits of EPA jurisdiction and in certain cases there may be overlapping regulations. However, today's action may allow compliance with the SPCC rule to satisfy the new PHMSA requirements. Further, the proposals in this NPRM do not affect the scope of EPA's authority or regulations

promulgated under CAA Section 112(r) or the Oil Pollution Act.

States may also have adopted standards or regulations applicable to the handling, including loading and unloading, of hazardous materials at fixed facilities. For example, all states have adopted the National Fire Protection Association (NFPA) Standard 58, LP-Gas Code. NFPA 58 is a nationally recognized consensus document used throughout the United States as the primary standard for installing systems used to store, handle, transport, and use liquefied petroleum gases. NFPA 58 requires written operating procedures for loading and unloading that address, among other items, transfer hoses, chocks, fire extinguishers, sources of ignition, personnel, containers, signage, security and access, and fire response. The standard also requires written maintenance procedures that address corrosion control, physical protection, hoses, piping, appurtenances, containers, and fire protection equipment.

In addition, as noted in the January 2008 notice, PHMSA is aware of a variety of existing national consensus standards that address bulk loading and unloading operations. For example, the American Petroleum Institute (API) has issued Recommended Practices for Loading and Unloading MC 306/DOT 406 cargo tank motor vehicles (RP # 1007). The American Chemistry Council has developed the Responsible Care<sup>®</sup> management system, which establishes an integrated, structured approach to drive results in seven key areas: (1) Community awareness and emergency response; (2) security; (3) distribution; (4) employee health and safety; (5) pollution prevention; (6) process safety; and (7) product stewardship.

Several commenters (API, ILTA) express concern that the adoption of PHMSA regulations applicable to loading and unloading operations would complicate jurisdictional boundaries between DOT and EPA. "Implementation of the [recommended practices] would result in redundancy of enforcement authority with regard to loading operations that is neither necessary nor warranted. Further simplification of these jurisdictional boundaries should be an objective for future action rather than confusion through the implementation of competing or duplicative regulation." (ILTA) Commenters suggest that it "would be appropriate for PHMSA to acknowledge that [proposed requirements for loading and unloading procedures] would not apply to facilities already covered by SPCC, or to

state that other Federal agency regulations provide sufficient documentation for the [PHMSA regulations]." (API)

Similarly, one commenter is concerned "over the potential for confusion or conflict for those who already comply with the requirements of NFPA 58 if the proposed recommended practices were to be adopted as regulation by PHMSA." (NPGA) This commenter recommends that "for any action PHMSA chooses to take with regard to the proposed recommended practices, the agency should defer to any industry consensus standards pertaining to the loading and unloading process that are already adopted as regulation."

PHMSA agrees with commenters that HMR requirements applicable to loading and unloading operations should not conflict with regulations or standards already in widespread use by hazardous materials shippers, carriers, and consignees. Therefore, PHMSA is proposing that regulations, protocols, guidelines, or standards developed by other Federal agencies, state agencies, international organizations, or industry may be used to satisfy the requirements in the NPRM provided such regulations or guidelines cover the risk assessment and operating procedure components specified in the NPRM.

## VII. Regulatory Analyses and Notices

### A. Executive Order 12866, Executive Order 13563, and DOT Regulatory Policies and Procedures

This notice of proposed rulemaking is considered a significant regulatory action under Executive Order 12866 and the Regulatory Policies and Procedures of the Department of Transportation (44 FR 11034) because of significant public interest. A regulatory evaluation is available for review in the public docket for this rulemaking, and PHMSA seeks comments on the methodology, assumptions, and calculations contained within it.

Executive Orders 12866 and 13563 require agencies to regulate in the "most cost-effective manner," to make a "reasoned determination that the benefits of the intended regulation justify its costs," and to develop regulations that "impose the least burden on society." In this NPRM we propose to amend the Hazardous Materials Regulations to require each person (*i.e.*, carrier or facility) who engages in cargo tank loading or unloading operations to perform a risk assessment of the loading and unloading operation and develop and implement safe operating procedures based upon

the results of the risk assessment. Many firms are part of industry associations with voluntary codes of safe practice, and these practices may be sufficient for compliance with the rule as long as all of the relevant safety areas are addressed and documented. PHMSA assumes that for firms in these categories, the proposed rule requires little or no change to existing practice or behavior and incremental compliance costs will thus be close to zero. At the same time, the potential for additional safety benefits is also very limited in these cases, as existing practice and operations are already minimizing the number of incidents. Therefore, the benefit and cost figures discussed below should be viewed as *upper bounds*, both of which will be reduced by the extent of current practice. Although comments in the docket provided some information on current practices, the share of firms for which the changes will be minimal cannot be estimated. As such, this evaluation uses a breakeven analysis to assess the cost-effectiveness

of the rule at *any given level* of current practice. PHMSA asks that commenters provide data, information, or professional estimates on how many companies are currently performing the safety elements proposed in this notice.

PHMSA estimates the upper bound of total compliance costs for documentation and training is \$3.5 million per year. This reflects the total costs that would be incurred if none of the relevant hazmat carriers were currently subject to voluntary practices or non-DOT regulations that are similar to the proposed rule. There were 3,501 relevant incidents during the ten-year study period, including those that related to errors in loading or unloading and those that occurred during transportation but that were ultimately caused by errors in loading. Together, these incidents resulted in four hazmat-related fatalities, 157 hazmat-related injuries, and a total societal cost of \$69.2 million over ten years, or an annual average of \$6.9 million.

Based on the assumptions and estimates described above, the

breakeven point for this rule—that is, the point at which benefits and costs are approximately equal—occurs at an incident-reduction effectiveness level of approximately 40 percent for affected firms. For this analysis, based on available literature and expert judgment, we believe that an effectiveness level of 40 percent is a reasonable assumption for this group of safety interventions, particularly since the subject incidents have been defined narrowly as those in which (largely preventable) human error occurs during the loading or unloading phase, such as overfilling, over-pressurizing, or loading incompatible materials. The table below summarizes the annual benefits and costs of the proposed rule. (See the Regulatory Impact Assessment, which is available in the docket for this rulemaking). The benefit-cost ratio is roughly 1.0. These benefit and cost figures depend on the assumptions that have been made, particularly on the extent of current compliance and the effectiveness of the interventions.

BASE CASE BENEFITS AND COSTS

Year	Annual benefit	Discount factor (7%)	PV benefit (7%)	Annual cost	PV cost (7%)
2012	\$1,729,971	1.07	\$1,616,795	\$1,744,861	\$1,630,711
2013	1,729,971	1.14	1,511,023	1,744,861	1,524,029
2014	1,729,971	1.23	1,412,171	1,744,861	1,424,326
2015	1,729,971	1.31	1,319,786	1,744,861	1,331,146
2016	1,729,971	1.40	1,233,445	1,744,861	1,244,061
2017	1,729,971	1.50	1,152,752	1,744,861	1,162,674
2018	1,729,971	1.61	1,077,339	1,744,861	1,086,611
2019	1,729,971	1.72	1,006,859	1,744,861	1,015,525
2020	1,729,971	1.84	940,989	1,744,861	949,089
2021	1,729,971	1.97	879,429	1,744,861	886,999
2022	1,729,971	2.10	821,897	1,744,861	828,971
2023	1,729,971	2.25	768,128	1,744,861	774,739
2024	1,729,971	2.41	717,876	1,744,861	724,055
2025	1,729,971	2.58	670,912	1,744,861	676,687
2026	1,729,971	2.76	627,021	1,744,861	632,418
2027	1,729,971	2.95	586,001	1,744,861	591,045
2028	1,729,971	3.16	547,664	1,744,861	552,378
2029	1,729,971	3.38	511,836	1,744,861	516,241
2030	1,729,971	3.62	478,351	1,744,861	482,468
2031	1,729,971	3.87	447,057	1,744,861	450,905
			18,327,332		18,485,077

B. Executive Order 13132

This notice has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 (“Federalism”). This notice would preempt state, local, and Indian tribe requirements but does not propose any regulation with substantial direct effects on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. Therefore, the

consultation and funding requirements of Executive Order 13132 do not apply.

The Federal hazardous materials transportation law, 49 U.S.C. 5101 *et seq.*, contains an express preemption provision (49 U.S.C. 5125(b)) preempting State, local, and Indian tribe requirements on the following subjects:

- (1) The designation, description, and classification of hazardous materials;
- (2) The packing, repacking, handling, labeling, marking, and placarding of hazardous materials;

(3) The preparation, execution, and use of shipping documents related to hazardous materials and requirements related to the number, contents, and placement of those documents;

(4) The written notification, recording, and reporting of the unintentional release in transportation of hazardous material; or

(5) The design, manufacture, fabrication, marking, maintenance, recondition, repair, or testing of a packaging or container represented, marked, certified, or sold as qualified

for use in transporting hazardous material.

This proposed rule addresses subject area (2), above. If adopted as final, this rule would preempt any state, local, or Indian tribe requirements concerning these subjects unless the non-Federal requirements are “substantively the same” as the Federal requirements.

Federal hazardous materials transportation law provides at 49 U.S.C. 5125(b)(2) that, if DOT issues a regulation concerning any of the covered subjects, DOT must determine and publish in the **Federal Register** the effective date of Federal preemption. The effective date may not be earlier than the 90th day following the date of issuance of the final rule and not later than two years after the date of issuance. PHMSA proposes that the effective date of Federal preemption will be 90 days from publication of a final rule in this matter in the **Federal Register**.

#### C. Executive Order 13175

This NPRM has been analyzed in accordance with the principles and criteria contained in Executive Order 13175 (“Consultation and Coordination with Indian Tribal Governments”). Because this NPRM does not have tribal implications and does not impose substantial direct compliance costs, the funding and consultation requirements of Executive Order 13175 do not apply.

#### D. Regulatory Flexibility Act, Executive Order 13272, and DOT Procedures and Policies

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires an agency to review regulations to assess their impact on small entities unless the agency determines that a rule is not expected to have a significant impact on a substantial number of small entities. The primary costs to small entities include developing and updating a risk assessment, developing and updating operating procedures, and additional training for hazmat employees who perform loading and unloading operations.

PHMSA expects the impacts of this rule will be quite limited for many small entities due to their compliance with other, existing Federal regulations or their participation in industry-wide initiatives. For example, many hazmat shippers and carriers already document their loading/unloading safety practices to comply with Occupational Safety and Health Administration (OSHA) rules on workplace safety, Environmental Protection Agency (EPA) regulations on environmental protection, or state and local requirements. PHMSA’s proposed rule also explicitly acknowledges that

many firms are part of industry associations with voluntary codes of safe practice, and that these may be sufficient for compliance with the rule as long as all of the relevant safety areas are addressed and documented. For firms in these categories, the proposed rule requires little or no change to existing practice or behavior and incremental compliance costs will thus be close to zero. Therefore, the benefit and cost figures discussed below should be viewed as *upper bounds*, both of which will be reduced by the extent of current practice.

PHMSA estimates that there are 5,427 potentially affected small entities. The annualized documentation cost for developing and updating the risk assessment and the operating procedures is estimated to be \$250/small entity. The annualized cost of additional training for affected employees, primarily drivers of cargo tank motor vehicles, is estimated to be approximately \$22/employee. Further, PHMSA estimates that approximately 50% of small businesses are already implementing procedures which would be compliant with the proposals in this notice. Based upon the above estimates and assumptions, PHMSA certifies that the proposals in this NPRM would not have a significant economic impact on a substantial number of small entities. Further information on the estimates and assumptions used to evaluate the potential impacts to small entities is available in the Regulatory Impact Assessment that has been placed in the public docket for this rulemaking. In this notice, PHMSA is soliciting comments on the preliminary conclusion that the proposals in this NPRM would not cause a significant economic impact on a substantial number of small entities.

#### E. Paperwork Reduction Act

PHMSA currently has an approved information collection under OMB Control No. 2137-0034, “Hazardous Materials Shipping Papers and Emergency Response Information,” expiring on May 31, 2011. We estimate an additional increase in burden as a result of this proposed rulemaking.

Section 1320.8(d), Title 5, Code of Federal Regulations requires PHMSA to provide interested members of the public and affected agencies an opportunity to comment on information collection and recordkeeping requests. This notice identifies proposed new requirements regarding cargo tank motor vehicles to the current information collections under OMB Control No. 2137-0034. Under OMB Control No. 2137-0034, we anticipate an increase in

burden resulting from proposals to require persons who engage in cargo tank loading or unloading operations to perform a risk assessment of their loading and unloading operation, and to develop and implement safe operating procedures based upon the results of the risk assessment. In addition, PHMSA is proposing to require persons who engage in cargo tank loading or unloading operations to develop and implement a training and qualification program for employees who perform loading or unloading functions. PHMSA will submit revised information collections to the Office of Management and Budget (OMB) for approval based on the requirements in this proposed rule. We estimate that the additional information collection burden as proposed under this rulemaking is as follows:

*OMB Control No. 2137-0034:*  
Hazardous Materials Shipping Papers and Emergency Response Information.  
*Additional Annual Number of Respondents:* 6,538.  
*Additional Annual Responses:* 6,538.  
*Additional Annual Burden Hours:* 65,380.  
*Additional Annual Burden Cost:* \$1,438,360.

PHMSA specifically requests comments on the information collection and recordkeeping burden associated with developing, implementing, and maintaining these requirements for approval under this proposed rule.

Address written comments to the Dockets Unit as identified in the **ADDRESSES** section of this rulemaking. We must receive your comments prior to the close of the comment period identified in the **DATES** section of this rulemaking. Under the Paperwork Reduction Act of 1995, no person is required to respond to an information collection unless it displays a valid OMB control number. If these proposed requirements are adopted in a final rule with any revisions, PHMSA will resubmit any revised information collection and recordkeeping requirements to the OMB for re-approval.

Please direct your requests for a copy of this proposed revised information collection to Steven Andrews or T. Glenn Foster, Office of Hazardous Materials Standards (PHH-12), Pipeline and Hazardous Materials Safety Administration, 1200 New Jersey Avenue, SE., 2nd Floor, Washington, DC 20590-0001.

#### F. Regulation Identifier Number (RIN)

A regulation identifier number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal

Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

#### G. Unfunded Mandates Reform Act

This notice does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It will not result in costs of \$140.8 million or more, in the aggregate, to any of the following: State, local, or Native American tribal governments, or the private sector.

#### H. Environmental Assessment

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to consider the consequences of major Federal actions and prepare a detailed statement on actions significantly affecting the quality of the human environment. PHMSA has preliminarily concluded that there are no significant environmental impacts associated with this NPRM. In fact, PHMSA believes that the proposed regulations will have a positive impact on the environment by reducing the number of incidents involving the release of a hazardous material; and, in the case of a release, minimizing the quantity of hazardous material released to the environment.

As discussed in Section II of this document, PHMSA performed an analysis of incident data to identify and target risks associated with bulk loading and unloading of hazardous materials transported by highway and rail. PHMSA's review of transportation incident data and the findings of several NTSB and CSB accident investigations involving bulk hazardous material loading and unloading operations suggest there may be opportunities to enhance the safety of such operations, thereby reducing the overall impact to the environment of hazardous material releases during CTMV loading and unloading.

PHMSA considered three separate alternatives for addressing the identified loading and unloading safety problem: (1) Do nothing; (2) propose operating procedures developed by the Interested Parties working group for the loading and unloading of both highway and rail transport tanks with a capacity of more than 3,000 liters; and (3) propose performance-based loading and unloading requirements specifically involving CTMVs, using the Interested Parties proposal as a baseline. Alternative (1) was not chosen because it would neglect a safety problem

identified by PHMSA, NTSB, CSB, and the Interested Parties. Alternative (2) was not chosen because some of the requirements proposed by the Interested Parties may not be appropriate for all companies and all situations. In particular, PHMSA believes that operational differences between the highway and rail modes should be handled separately. Alternative (3) was selected because PHMSA believes that a risk-based performance standard provides the necessary flexibility for affected persons to develop operating procedures that are appropriate for their unique operating conditions. In addition, it minimizes the overall compliance burden to companies who have already implemented operating procedures in accordance with existing industry standards or with other Federal or state requirements.

In this NPRM, PHMSA is proposing to require persons who load or unload CTMVs to perform a "risk assessment" of the CTMV transfer operations and to develop "operating procedures" based upon the risk assessment. The operating procedures must include mechanisms to ensure that transfer equipment is appropriate for the material being transferred and has been properly maintained and tested. Further, the operating procedures must address "emergency management," including mechanisms to monitor for leaks and releases, and to immediately stop the flow of product when a release is detected. PHMSA is also proposing additional training and qualification requirements for persons who load and unload CTMVs. The proposed regulations are intended to improve safety by significantly reducing human error and minimizing the number of equipment failures during loading and unloading operations. As a result, PHMSA expects that the proposed regulations could significantly reduce the number of incidents involving a release of a hazardous material to the environment during CTMV loading and unloading.

PHMSA is soliciting comments on the preliminary conclusion that the proposals in this NPRM would not cause significant impacts to the environment.

#### List of Subjects

##### 49 CFR Part 177

Hazardous materials transportation, Hazardous waste, Labeling, Packaging and containers, Reporting and recordkeeping requirements, Training.

##### 49 CFR Part 177

Hazardous materials transportation, Motor Carriers, Radioactive Materials, Reporting and recordkeeping requirements.

In consideration of the foregoing, PHMSA is proposing to amend Title 49, Subtitle B, Chapter I as follows:

#### **PART 172—HAZARDOUS MATERIALS TABLE, SPECIAL PROVISIONS, HAZARDOUS MATERIALS COMMUNICATIONS, EMERGENCY RESPONSE INFORMATION, TRAINING REQUIREMENTS, AND SECURITY PLANS**

1. The authority citation for part 172 continues to read as follows:

**Authority:** 49 U.S.C. 5101–5128, 44701; 49 CFR 1.53.

2. In § 172.704, paragraphs (a)(2)(iii) and (d)(6) are added to read as follows:

##### **§ 172.704 Training requirements.**

(a) \* \* \*

(2) \* \* \*

(iii) Function-specific training for hazmat employees who perform duties related to loading, unloading, or transloading of hazardous materials to or from a cargo tank motor vehicle must be designed to ensure that the employees understand and implement the training they have received in accordance with this paragraph and are capable of performing the activities necessary to complete their assigned duties safely. Evaluation of the employee's qualifications must be performed at least annually for each covered employee and must include observation and feedback by the hazmat employer of the hazmat employee's performance of covered functions. Mechanisms to evaluate hazmat employees include, but are not limited to, regular and routine performance of covered duties or specific practice sessions and drills designed to assess employee performance. At a minimum, the qualification program must include provisions to:

(A) Identify covered tasks and employees;

(B) Observe and evaluate each covered employee's performance of covered tasks;

(C) Provide feedback to covered employees regarding performance of covered tasks;

(D) Establish a performance improvement process for employees;

(E) Initiate an employee evaluation under the program if the hazmat employer has reason to believe that the employee is no longer qualified to safely perform a covered task or if an

employee's performance contributed to an unintentional release of a hazardous material.

\* \* \* \* \*

(d) \* \* \*

(6) Certification, including the date, that the employee is qualified to perform loading, unloading, or transloading operations in accordance with the qualification program developed by the hazmat employer in accordance with paragraph (a)(2)(iii) of this section, as applicable. The hazmat employer may not certify that the employee is qualified until the employee successfully performs the job function in accordance with the documented operating procedures.

\* \* \* \* \*

## PART 177—CARRIAGE BY PUBLIC HIGHWAY

3. The authority citation for part 177 continues to read as follows:

**Authority:** 49 U.S.C. 5101–5128; 49 CFR 1.53.

4. In Subpart B, § 172.831 is added to read as follows:

### § 177.831 Cargo tank loading and unloading.

(a) *Risk assessment.* Each person who loads, unloads, or provides transfer equipment to load or unload a hazardous material to or from a cargo tank motor vehicle (including any device in the loading and unloading system that is designed specifically to transfer product between the internal valve on the cargo tank and the first permanent valve on the supply or receiving equipment (e.g., pumps, piping, hoses, connections, etc.) must conduct a systematic analysis to identify and evaluate the hazards associated with the specific loading or unloading operation. This analysis must:

(1) Clearly identify the loading or unloading activities for which the facility personnel or the operator of a cargo tank motor vehicle is responsible.

(2) Assess current procedures utilized to ensure the safety of loading or unloading operations and identify any areas where those procedures could be improved. The analysis must be appropriate to the complexity of the process and the materials involved in the operation, including—

(i) The characteristics and hazards of the material to be loaded or unloaded;

(ii) Measures necessary to ensure safe handling of the material, such as temperature or pressure controls; and

(iii) Conditions that could affect the safety of the loading or unloading operation, including access control,

lighting, ignition sources, and physical obstructions.

(3) The analysis must be in writing and must be retained with the operating procedures specified in paragraph (b) of this section.

(b) *Operating procedures.* Each person required to prepare a risk assessment in accordance with paragraph (a) of this section must develop, maintain, and adhere to an operating procedure for the specific loading or unloading operation based on the completed risk assessment. At a minimum, the operating procedure must include the following elements:

(1) *Pre-loading/pre-unloading.* Procedures to ensure the integrity of the cargo tank and associated transfer equipment, secure the cargo tank against movement, prepare the cargo tank and transfer equipment for the loading or unloading operation, and verify the vessel into which the material is to be transferred. The procedures must include measures to—

(i) Identify the piping path, equipment lineups, and operational sequencing and procedures for connecting piping, hoses, or other transfer connections;

(ii) Verify that the material is being transferred into the appropriate containment vessel and that the vessel is compatible with the lading and has sufficient capacity to retain the quantity of material to be transferred;

(iii) Check components of the transfer system, including transfer equipment such as delivery hose assemblies, piping, and connections that are readily observed, to ensure that they are of sound quality, without obvious defects detected through visual observation and audio awareness, and that connections are secure. This check must be made after the pressure in the transfer system has reached at least equilibrium with the pressure in the cargo tank. Operators need not use instruments or take extraordinary actions to check components not readily visible. Pumps, piping, hoses, and connections supplied by a facility or the motor carrier and used to load into or unload from a cargo tank must be compatible with the lading and meet performance, maintenance, and testing requirements in part 178, subpart J, and § 180.416 of this subchapter, as appropriate for the cargo tank specification. The driver of the cargo tank motor vehicle may rely on information provided by the facility operator to confirm that transfer equipment provided by the facility meets appropriate requirements. No person may load into or unload a cargo tank motor vehicle using components of the transfer system that could result in an unsafe condition, including delivery

hose assemblies found to have any condition identified in § 180.416(g)(1) of this subchapter or piping systems found to have any condition identified in § 180.416(g)(2) of this subchapter.

(2) *Loading/unloading.* Procedures for monitoring the transfer operation, including measures to—

(i) Initiate and control the lading flow;

(ii) Monitor the temperature of the material being transferred and the pressures of the cargo tank into which the material is being transferred;

(iii) For materials that must be heated prior to being loaded or unloaded, ascertain and monitor the heat input to be applied and the rate at which the heat will be applied and monitor the pressure inside the vessel being heated to ensure that the heating process does not result in over-pressurization or an uncontrolled exothermic reaction;

(iv) Monitor filling limits and ensure that the quantity of hazardous material to be transferred is appropriate for the cargo tank or containment vessel;

(v) Terminate lading flow; and

(vi) Ensure that the cargo tank is attended by a qualified person at all times when it is being loaded or unloaded.

(A) Except for unloading operations subject to §§ 177.837(d), 177.840(p), 177.840(q), and 177.840(r)(2) of this subchapter, a qualified person “attends” the loading or unloading of a cargo tank if, throughout the process, the person is alert and is within 7.6 m (25 feet) of the cargo tank. The qualified person attending the cargo tank must have an unobstructed view of the cargo tank and delivery hose to the maximum extent practicable during the unloading operation.

(B) A person is “qualified” if he has been trained and satisfactorily evaluated in accordance with subpart H of part 172 of this subchapter.

(3) *Emergency management.* Procedures for handling emergencies, including —

(i) Instrumentation to monitor for leaks and releases;

(ii) Equipment to isolate leaks and releases and to take other appropriate emergency shutdown measures;

(iii) Training in the use of emergency response equipment;

(iv) Emergency shutdown systems and the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner;

(v) Emergency communication and spill reporting; and

(vi) Safe startup after an emergency shutdown.

(4) *Post-loading/post-unloading.* Procedures for securing the transfer

equipment, transport vehicle or packaging, and vessel into which the material is transferred, including—

(i) Measures to evacuate the transfer system and depressurize the containment vessel;

(ii) Measures to safely disconnect the transfer equipment; and

(iii) Measures to secure fittings, valves, and closures.

(5) *Design, maintenance, and testing of transfer equipment.* Transfer equipment, used to unload cargo tanks must be compatible with the lading and meet the performance requirements in part 178, subpart J of this subchapter, as appropriate for the cargo tank specification. Transfer equipment and systems, including pumps, piping, hoses, and connections, must be properly maintained and tested (see § 180.416 for liquefied compressed gases). Each person who conducts these operations must develop and implement a periodic maintenance schedule to prevent deterioration of equipment and conduct periodic operational tests to ensure that the equipment functions as intended. Equipment and system repairs must be completed promptly and prior to any subsequent loading or unloading operation. The procedures developed in accordance with this paragraph must include a hose maintenance program.

(6) *Facility oversight of carrier personnel.* An operator of a facility required to perform a risk assessment in accordance with paragraph (a) of this section must ensure that any carrier who loads or unloads a cargo tank motor vehicle at that facility—

(i) Is supervised by trained facility personnel who are trained on the facility's loading and unloading operating procedures;

(ii) Is provided with written instructions on how to conduct the transfer operation in accordance with the facility's procedures; or

(iii) Has sufficient information to conduct the transfer operation in accordance with the facility's procedures.

(7) *Recordkeeping.* The operating procedures must be in writing and must be retained for as long as the procedures remain in effect. The operating procedures must be clearly written and easy to understand and must be reviewed annually and updated as necessary to ensure that they reflect current operating practices, materials, technology, personnel responsibilities, and equipment. Facility operating procedures must be available at the loading or unloading facility. Motor carrier operating procedures must be carried in the transport vehicle. Operating procedures must be made

available, upon request, to an authorized official of a Federal, State, or local government agency at reasonable times and locations.

(c) *Exceptions:* To avoid unnecessary duplication, risk assessments, and operating procedures that conform to regulations, standards, protocols, or guidelines issued by other Federal agencies, state agencies, international organizations, or industry organizations may be used to satisfy the requirements in this part, or portions thereof, provided such operating procedures address the requirements specified in this part. Examples include the Occupational Safety and Health Administration's Process Safety Management Standards at 29 CFR 1910.119 and the Environmental Protection Agency's Risk Management Program regulations at 40 CFR part 68 and Spill Prevention, Control and Countermeasures Program at 40 CFR part 112; state regulations or standards, such as state incorporation of National Fire Protection Association Standard 58, LP-Gas Code; or standards, protocols, or guidelines issued by industry organizations or consensus-standards organizations.

5. In § 177.834, the section heading is revised to read as follows, and paragraph (i) is removed and reserved:

**§ 177.834 Additional general requirements.**

\* \* \* \* \*

Issued in Washington, DC, on March 1, 2011, under authority delegated in 49 CFR part 106.

**Magdy El-Sibaie,**

*Associate Administrator for Hazardous Materials Safety.*

[FR Doc. 2011-5335 Filed 3-10-11; 8:45 am]

**BILLING CODE 4910-60-P**

**DEPARTMENT OF DEFENSE**

**Defense Acquisition Regulations System**

**48 CFR Parts 203 and 252**

**RIN 0750-AG98**

**Defense Federal Acquisition Regulation Supplement; Display of DoD Inspector General Fraud Hotline Posters (DFARS Case 2010-D026)**

**AGENCY:** Defense Acquisition Regulations System, Department of Defense (DoD).

**ACTION:** Proposed rule.

**SUMMARY:** DoD is proposing to issue a rule amending the Defense Federal Acquisition Regulation Supplement (DFARS) to require contractors to

display the DoD fraud hotline poster in common work areas.

**DATES:** Comments on the proposed rule should be submitted in writing to the address shown below on or before May 10, 2011, to be considered in the formation of the final rule.

**ADDRESSES:** Submit comments identified by DFARS Case 2010-D026, using any of the following methods:

- *Regulations.gov:* <http://www.regulations.gov>.

Submit comments via the Federal eRulemaking portal by inputting "DFARS Case 2010-D026" under the heading "Enter keyword or ID" and selecting "Search." Select the link "Submit a Comment" that corresponds with "DFARS Case 2010-D026." Follow the instructions provided at the "Submit a Comment" screen. Please include your name, company name (if any), and "DFARS Case 2010-D026" on your attached document.

- *E-mail:* [dfars@osd.mil](mailto:dfars@osd.mil). Include DFARS Case 2010-D026 in the subject line of the message.

- *Fax:* 703-602-0350.

- *Mail:* Defense Acquisition Regulations System, Attn: Ms. Clare Zebrowski, OUSD (AT&L) DPAP/DARS, Room 3B855, 3060 Defense Pentagon, Washington, DC 20301-3060.

Comments received generally will be posted without change to <http://www.regulations.gov>, including any personal information provided. To confirm receipt of your comment(s), please check [www.regulations.gov](http://www.regulations.gov) approximately two to three days after submission to verify posting (except allow 30 days for posting of comments submitted by mail).

**FOR FURTHER INFORMATION CONTACT:** Ms. Clare Zebrowski, Defense Acquisition Regulations System, OUSD (AT&L) DPAP (DARS), Room 3B855, 3060 Defense Pentagon, Washington, DC 20301-3060. Telephone 703-602-0289; facsimile 703-602-0350. Please cite DFARS Case 2010-D026.

**SUPPLEMENTARY INFORMATION:**

**I. Background**

This rule proposes to implement the recommendations of the DoD Inspector General (IG), by providing a DFARS clause to use in lieu of the FAR clause 52.203-14, Display of Hotline Poster(s).

GAO Report GAO-09-591, Regarding the Display of DoD Inspector General Fraud Hotline Posters by DoD Contractors, recommended that the DoD IG determine the need for defense contractors' display of the DoD IG's fraud hotline poster, including directing a contractor to display the DoD IG hotline poster in common work areas for performance of DoD contracts.