

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 173, 177, 178, 180

[Docket No. RSPA-97-2718 (HM-225A)]

RIN 2137-AD07

Hazardous Materials: Safety Standards for Unloading Cargo Tank Motor Vehicles in Liquefied Compressed Gas Service; Advance Notice of Proposed Rulemaking

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Advance notice of proposed rulemaking and notice of public meeting.

SUMMARY: In this advance notice of proposed rulemaking, RSPA requests comments concerning the need, if any, for amending the Hazardous Materials Regulations with regard to emergency discharge control features required on cargo tank motor vehicles in liquefied compressed gas service; the ability of industry to meet a possible 1-, 2- or 3-year retrofit schedule; standards for the qualification, testing and use of hoses used in unloading; safety procedures for persons performing unloading operations; and, whether the Federal government should continue to regulate in this area. This advance notice of proposed rulemaking addresses specification MC 330, MC 331, and certain non-specification cargo tank motor vehicles which are used to deliver propane, anhydrous ammonia, and other liquefied compressed gases. It responds to recently discovered deficiencies which affect the safety of unloading liquefied compressed gases from many of these cargo tank motor vehicles. The intended effect of this action is to obtain information concerning the need for regulatory changes to ensure an acceptable level of safety for delivery of liquefied compressed gases, the costs and benefits associated with such changes, and ways to minimize impacts on small entities affected by them.

RSPA also is announcing a public meeting to solicit comments on issues identified in this docket.

DATES: *Written comments.* Comments must be received by October 17, 1997.

Public meeting. A public meeting will be held from 9:00 a.m. to 4:00 p.m. on Tuesday, September 30, 1997, in Washington, DC.

ADDRESSES: *Comments.* Address comments to the Dockets Management System, U.S. Department of

Transportation, 400 Seventh Street, SW, Washington, D.C. 20590-0001. Comments should identify the docket number and be submitted in two copies. Persons wishing to receive confirmation of receipt of their written comments should include a self-addressed, stamped postcard. Comments may also be submitted by e-mail to the following address: "rules@rspa.dot.gov". The Dockets Management System is located on the Plaza level of the Nassif Building at the Department of Transportation at the above address. Public dockets may be reviewed there between the hours of 10:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays.

Public meeting. The public meeting will be held at room 2230 of the Department of Transportation Headquarters building, 400 Seventh Street, SW, Washington, DC. Any person wishing to attend and/or participate at the public meeting should notify Jennifer Karim, by telephone or in writing at the phone number and address shown below, by September 26, 1997.

FOR FURTHER INFORMATION CONTACT: Jennifer Karim, Office of Hazardous Materials Standards, Research and Special Programs Administration, telephone (202) 366-8553, or Nancy Machado, Office of the Chief Counsel, Research and Special Programs Administration, telephone (202) 366-4400, U.S. Department of Transportation, 400 Seventh Street, SW, Washington, DC 20590-0001.

SUPPLEMENTARY INFORMATION:**I. Background**

Elsewhere in today's **Federal Register**, RSPA published a final rule which revises and extends requirements published in an interim final rule (IFR) on February 19, 1997, in docket RSPA-97-2133. The rule adopts temporary requirements for cargo tank motor vehicles in certain liquefied compressed gas service. It requires a specific marking on affected cargo tank motor vehicles and requires motor carriers to comply with additional operational controls intended to compensate for the inability of passive emergency discharge control systems to function as required by the Hazardous Materials Regulations (HMR; 49 CFR parts 171-180). The interim operational controls specified in that rule are intended to ensure an acceptable level of safety while the industry and government continue to work to develop a system that effectively stops the discharge of hazardous materials from a cargo tank if there is a failure of piping or a transfer hose. Interested persons should read the

preamble to the final rule in RSPA-97-2133 for background information on the problems RSPA is addressing in this rulemaking.

II. Request for Comments

RSPA intends to publish a notice of proposed rulemaking addressing the need, if any, for changes to the HMR which go beyond the scope of today's final rule under docket RSPA-97-2133, including new or revised provisions for operator attendance, hose management, and emergency discharge controls. RSPA requests comments responding to the questions listed below to facilitate decisions on the potential need for additional changes to the HMR with regard to emergency discharge control features required on cargo tank motor vehicles in liquefied compressed gas service; standards for the manufacture, testing and continuing qualification of hoses used in unloading; safety procedures for persons performing unloading operations; and the need for continued Federal regulation in this area. Note that some of these questions were asked in the February 19, 1997 IFR in docket RSPA-97-2133 (62 FR 7638). RSPA also invites comments on any aspect of this rulemaking action not specifically addressed by the questions.

A. Jurisdiction

OSHA has worker health and safety standards, e.g., Storage and Handling of Liquefied Petroleum Gases at 29 CFR 1910.110; Process Safety Management of Highly Hazardous Chemicals, at 29 CFR 1910.119, and EPA has environmental protection standards, e.g., EPA's Risk Management Program, at 40 CFR part 68, which, respectively, provide more protection for worker health and safety, and the environment, than RSPA's limited cargo tank motor vehicle unloading requirements.

A1. Are there any Federal rules that duplicate, overlap or conflict with the HMR requirements?

A2. Should RSPA continue to regulate highway carrier unloading of liquefied compressed gases in cargo tank motor vehicles or should RSPA relinquish regulatory control of this area to other Federal, state, local and Indian tribe authorities?

A3. Do fire service personnel and other emergency responders agree with comments from representatives of the propane and anhydrous ammonia transportation sector that suggest emergency discharge control features are overrated and, therefore, should be eliminated from the HMR? What data, if any, are there to support or rebut those claims made by some members of the affected industries (e.g., information

regarding interstate and intrastate incidents where emergency control systems on cargo tanks authorized to transport liquefied compressed gases functioned or failed to function as required)?

B. Emergency Discharge Controls

The seriousness of the problem with emergency discharge controls currently installed on most specification MC-330 and MC-331 cargo tank motor vehicles has been well recognized since the Sanford, NC, incident of nearly one year ago. Since then, the industry has studied the problem and developed new systems that may conform to the performance standards specified in § 178.337-11. Given the progress made thus far, RSPA believes it is not unreasonable to expect the industry to install new, or re-engineered, passive emergency discharge controls on the affected cargo tank motor vehicles by September 1, 2000, at the latest.

B1. Is it feasible to remove pumps and compensate for decreased discharge flow by either enlarging piping, fittings and hose downstream of existing internal valves, retaining their excess flow features, or by increasing pressure in the vapor space of the cargo tank, e.g., with a nitrogen pad?

B2. Historically, excess flow valves have been used to meet the emergency discharge system requirements in § 178.337-11(a)(1)(i). What other types of devices can provide the passive automatic shutdown function required by that section of the HMR?

B3. Can a passive emergency discharge control system be developed to function in the event of only partial failure of piping and hoses? What criteria should be used to establish a minimum amount of leakage for detection and control of lower level leaks?

B4. Automobiles are commonly equipped with remote transmitter devices that fit on key rings to unlock doors or open trunk lids from 50 feet away. What role can these devices play in the safe unloading of cargo tanks? Should this type of device be required in addition to passive system requirements? Describe the most promising of features of such a system (e.g., a deadman feature) and the advantages and disadvantages of each feature.

B5. Do system designers, parts manufacturers, cargo tank manufacturers and assemblers have the capacity to develop, produce, and install improved emergency discharge control equipment necessary to bring the nationwide fleet of 25,000 cargo tank motor vehicles into compliance

with this critical safety regulation over a 12-, 24- or 36-month period? Should retrofit priorities be based on the type of vehicle, i.e., highway transport vs. bobtail cargo tank motor vehicles used in local delivery operations, or on the basis of the material normally transported?

B6. What is an acceptable level of system reliability? Has a statistical design been established for determining reliability?

B7. What in-service field tests are needed to validate the serviceability of new passive emergency discharge control systems? How much time is necessary to conduct those tests?

B8. At what rate would effective passive discharge control systems likely be made available by particular developers (e.g., numbers of installations per month, starting date) under the hypothetical circumstance that for a fixed introductory period all devices produced could be sold? If the developer is a cargo tank operator in this industry, distinguish between the availability of equipment for the operator's own vehicles versus availability to other affected operators. Also, of interest is the size of the operator's fleet and how long it would take to acquire enough new devices to equip this fleet in its entirety.

B9. Preliminary assessments of the cost to install improved emergency discharge controls are nominally estimated at \$2,500 per cargo tank motor vehicle. This relatively low cost tends to support RSPA's belief that a retrofit of affected cargo tank motor vehicles may be economically feasible in as little as 12 to 36 months. Are there other cost factors that RSPA should consider before requiring carriers to quickly achieve an acceptable level of safety in emergency discharge controls?

B10. A 12-month period for motor carriers to bring all cargo tank motor vehicles into compliance with the rule pertaining to emergency discharge controls allows for the retrofit or installation of new equipment on approximately 20% of the fleet to take place during their scheduled pressure retest once each five years—a 24-month period allows for approximately 40% and a 36-month period allows for approximately 60%. Is RSPA correct to assume that the cost to retrofit these cargo tank motor vehicles may be substantially less than that for the rest of the fleet, since these tanks are already required to undergo heavy testing and repairs at a maintenance facility that should also be qualified to perform the required retrofit? What is the difference in cost if cargo tanks are taken out of service for retrofit outside of the five-

year retest cycle versus being taken out of service as scheduled within the five-year cycle?

B11. How would these costs differ between bobtails and transporters, between installation on new tanks and retrofits?

B12. What is the maximum rate of retrofit that could be effected without a substantial reduction in the capacity of the overall fleet to deliver the expected volumes of propane and anhydrous ammonia in the near future?

B13. What test procedures are appropriate at the time of manufacture or assembly and at the time of requalification to ensure that the product discharge system will close as required by § 178.337-11(a)(1)(i)?

B14. RSPA is concerned that the problem with cargo tank emergency discharge control systems may highlight a deficiency in the training programs for Design Certifying Engineers and those persons certifying cargo tanks as meeting the requirements of the HMR. In addition, carrier function-specific training programs also may not be providing sufficient training in the specification requirements for these cargo tanks. Should RSPA adopt additional training requirements in these areas?

C. Qualification and Use of Delivery Hoses

Some commenters to docket RSPA-97-2133 believe that a hose management program, along with other procedures, is sufficient to provide an equivalent level of safety to a fully passive emergency discharge control system. They propose a hose management program that assures that delivery lines and hoses meet high standards for quality, strength, and durability, and that requires periodic examination and testing to ensure continued suitability for use in the transfer of high risk hazardous materials. The HMR do not currently contain hose management requirements.

C1. RSPA is aware that some facilities require cargo tank motor vehicle operators to use facility hose during loading and unloading operations rather than the hose carried onboard the cargo tank motor vehicle. What hose management standard do these facilities apply to their hoses and should those standards be incorporated into the HMR?

C2. In the final rule published today in docket RSPA-97-2133, RSPA makes reference to the "Manual for Maintenance, Testing and Inspection of Hose" published by the Rubber Manufacturers Association. However, that standard is written specifically to

address hoses used for the transfer of anhydrous ammonia. Are there other standards published by industry, government, or independent safety organizations that RSPA may find acceptable for other liquefied compressed gases?

C3. If there are no other written standards, should RSPA develop specific hose qualification, testing and use requirements for adoption in the HMR? If not, should industry and RSPA work together to develop a standard through one of the existing consensus standards setting organizations, e.g., American Society for Testing and Materials?

C4. Considering that the development of Federal regulations or a consensus standard may take a long period, should RSPA adopt an interim measure that prohibits use of a transfer hose that has been in service for more than one or two years?

C5. In hose assembly testing, should the procedure include a "pull" test? Describe the procedure and the formula for determining the amount of "pull"?

C6. What are the advantages and disadvantages of using stainless steel reinforced hose for product delivery? What would be the cost? Do the advantages—or disadvantages—outweigh the cost?

D. Attendance Requirements

Section 177.834(i)(2) of the HMR states that "a motor carrier who transports hazardous materials by cargo tank must ensure that the cargo tank is attended by a qualified person at all times during unloading." Section 177.834(i)(3) states that "a person 'attends' the loading or unloading of a cargo tank if, throughout the process, he is awake, has an unobstructed view of the cargo tank, and is within 7.62 meters (25 feet) of the cargo tank." In the final rule in docket RSPA-97-2133, RSPA rejected an industry interpretation of this long-standing operator attendance requirement—specifically, that a single operator satisfies requirements for an unobstructed view of the cargo tank, and is within 25 feet of the cargo tank, merely by being in proximity to, and having an unobstructed view of, any part of the delivery hose, which may be 100 feet or more away from the cargo tank motor vehicle, during the unloading (transfer) operation.

The rule clearly requires an operator be in a position from which the earliest signs of problems that may occur during the unloading operation are readily detectable, thereby permitting an operator to promptly take corrective measures, including actuating the remote means of automatic closure of

the internal self-closing stop valve, shutting down the motor vehicle engine and other sources of ignition, or other action, as appropriate. The rule requires that an operator always be within 25 feet of the cargo tank. Simply being within 25 feet of any one of the cargo tank motor vehicle's appurtenances or auxiliary equipment does not constitute compliance.

D1. What percentage of bobtail deliveries occur in locations where a single attendant cannot maintain an unobstructed view of the cargo tank motor vehicle during unloading?

D2. In the docket RSPA-97-2133 final rule, RSPA states that where a remote control system is used as a means to stop the transfer of lading, the 25-foot requirement in § 177.834(i)(3) is satisfied when a qualified person is carrying a radio transmitter that can activate the closure of the internal self-closing stop valve, remains within the operating range of the transmitter, and has an unobstructed view of the cargo tank motor vehicle at anytime its internal stop-valve is open. Should RSPA extend this provision beyond the 18-month life of the docket RSPA-97-2133 final rule? Should the provision be amended in any way?

D3. Is it feasible for bobtail operators to organize delivery routes based on whether they can maintain an unobstructed view of the cargo tank motor vehicle at each unloading location during the unloading process?

E. Impacts on Small Businesses

The Regulatory Flexibility Act (Act), as amended, 5 U.S.C. 601-612, directs agencies to consider the potential impact of regulations on small business and other small entities. A small entity includes a small business, small organization or small governmental jurisdiction. For purposes of this discussion, a small business is deemed to be one which is independently owned and operated and which is not dominant in its field of operation. RSPA believes that the impacts of any further rule change would be primarily addressed to businesses involving the distribution of liquefied petroleum gas and anhydrous ammonia, and to manufacturers and assemblers of cargo tanks used for the distribution of these products. Under the Small Business Administration's size standard definitions (13 CFR Part 121), liquefied petroleum gas distributors with \$5 million or less in annual receipts, and manufacturers of truck or bus bodies or truck trailers that employ 500 or less individuals are small businesses. Based on available information, RSPA estimates that at least 90% of the

businesses impacted by today's final rule in docket RSPA-97-2133 are small businesses. RSPA further estimates there are at least 6,800 businesses affected by this rule.

In order for RSPA to determine the potential impacts on small entities of any additional changes to the HMR, commenters are requested to submit comments addressed to the following questions. In considering potential economic impacts of any changes in the regulations under study here, RSPA is using a rough estimate of some 25,000 existing cargo-tank vehicles in the U.S. as a whole being subject to these regulations, 18,000 of which being bobtails in retail propane delivery service (except for fewer than 50 used to deliver anhydrous ammonia at restricted customer locations), an additional 6,000 transports principally in propane service and the final 1,000 transports operated by for-hire carriers. It is understood that the same transports are often used for both propane and anhydrous ammonia during the complementary delivery seasons for those commodities.

E1. How many new cargo tanks are being produced or reassembled annually?

E2. Is it reasonable to assume that the originally-installed excess flow valve on a cargo tank would not normally be replaced during the tank's lifetime?

E3. Are RSPA's estimates as to number of businesses affected by its rules for unloading liquefied compressed gases from cargo tank motor vehicles, and the percentage of these which are small businesses, consistent with industry estimates?

E4. In what manner could differing compliance or reporting requirements be implemented for small businesses to take into account the resources available to small businesses?

E5. In what manner could compliance or reporting requirements be clarified, consolidated or simplified for such small businesses?

E6. What is the effect of the final rule in docket RSPA-97-2133, if any, on the competitive position of small entities in relation to larger entities?

E7. What is the availability and cost to the small entity for professional assistance to meet regulatory requirements?

III. Rulemaking Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

This advance notice of proposed rulemaking is considered a significant regulatory action under section 3(f) of Executive Order 12866 and was

reviewed by the Office of Management and Budget. The rule is considered significant under the Regulatory Policies and Procedures of the Department of Transportation (44 FR 11034).

B. Regulatory Flexibility Act

The Regulatory Flexibility Act (Act), as amended, 5 U.S.C. 601-612, directs agencies to consider the potential impact of regulations on small business and other small entities. RSPA will evaluate any proposed rule to determine whether it would have a significant economic impact on a substantial number of small entities.

C. Executive Order 12612

RSPA will evaluate any proposed rule in accordance with the principles and criteria contained in Executive Order 12612 ("Federalism").

D. Paperwork Reduction Act

There are no information collection requirements in this advance notice of proposed rulemaking.

E. 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 number contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

Issued in Washington, DC, on August 13, 1997, under authority delegated in 49 CFR part 1.

Alan I. Roberts,

Associate Administrator for Hazardous Materials Safety.

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