

DEPARTMENT OF TRANSPORTATION**Research and Special Programs Administration****49 CFR Part 171**

[Docket No. RSPA-97-2133 (HM-225)]

RIN 2137-AC97

Hazardous Materials: Cargo Tank Motor Vehicles in Liquefied Compressed Gas Service; Interim Final Rule**AGENCY:** Research and Special Programs Administration (RSPA), DOT.**ACTION:** Emergency interim final rule and announcement of a public meeting.

SUMMARY: In this interim final rule, RSPA is amending the Hazardous Materials Regulations (HMR) to specify the conditions under which certain cargo tank motor vehicles may continue to be used on an interim basis, even if they are equipped with emergency discharge control systems which may not function as required by the regulations under all operating conditions. This rule addresses specification MC 330, MC 331, and certain non-specification cargo tank motor vehicles which are used to deliver propane and other liquefied compressed gases. It responds to a recently discovered safety deficiency which may affect many of these cargo tank motor vehicles. The intended effect of this action is to ensure, on an interim basis, an acceptable level of safety for delivery of liquefied compressed gases while a permanent solution to the problem is developed and implemented.

During the term of this interim rule, RSPA is seeking comments and data on the costs and effectiveness of alternative means of achieving a level of safety for the long term comparable to that provided by its long-standing regulation. At the same time, the Agency is also seeking comments on the costs and benefits of the interim measures adopted in this rule.

A public meeting is scheduled for March 20, 1997, to receive comments and recommendations in regard to the measures adopted in this interim final rule and to solicit recommendations for a permanent solution. Additionally, two workshops have been scheduled for March 4-5, 1997 and April 8-9, 1997. All interested persons, including trade organizations, cargo tank producers, individual wholesale and retail entities involved in the distribution of liquefied compressed gases and representatives of public protection organizations, are encouraged to participate.

DATES: Effective date: This interim final rule is effective February 19, 1997 through August 15, 1997.

Comment date: Comments must be received by April 21, 1997.

Public meeting: A public meeting will be held on Wednesday, March 20, 1997, from 9:00 a.m. to 5:00 p.m. in Washington, D.C.

Workshops: Workshops will be held on—March 4-5, 1997, and April 8-9, 1997, 9:00 a.m. to 5:00 p.m. in Washington, D.C.

Oral presentations: Any person wishing to present an oral statement at the public meeting should notify Jennifer Karim by telephone or in writing, on or before March 12, 1997.

ADDRESSES: Written comments: Address comments to the Dockets Office, U.S. Department of Transportation, Room PL-401, 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 comments should include a self-addressed, stamped postcard. The Dockets Office 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 the Federal Aviation Administration (FAA) Auditorium, 800 Independence Avenue, SW, Washington, D.C. 20591.

Workshops: (1) March 4-5, 1997, U.S. Department of Transportation (Room 6244, Nassif Building), 400 Seventh Street, SW, Washington, D.C. 20590; (2) April 8-9, 1997, U.S. Department of Transportation (Room 6200, Nassif Building), 400 Seventh Street, SW, Washington, D.C. 20590.

Oral presentations: Submit written text of oral statement to Jennifer Karim, U.S. Department of Transportation, Room 8100, 400 Seventh Street, S.W., Washington, D.C. 20590. Five copies of written text of oral statements should be presented to RSPA staff immediately prior to the oral presentation.

FOR FURTHER INFORMATION CONTACT: Ronald Kirkpatrick, Office of Hazardous Materials Technology, Research and Special Programs Administration, telephone (202) 366-4545, or Stephen Keppler, Office of Motor Carrier Safety and Technology, Safety and Hazardous Materials Division, Federal Highway Administration, telephone (202) 366-2978, U.S. Department of Transportation, 400 Seventh Street, SW, telephones 20590-0001.

SUPPLEMENTARY INFORMATION:**I. Background**

On September 8, 1996, more than 35,000 gallons of propane were released during a delivery at a bulk storage facility in Sanford, North Carolina. During the unloading of a specification MC 331 cargo tank motor vehicle into two 30,000-gallon storage tanks, the discharge hose from the cargo tank separated at its hose coupling at the storage tank inlet connection. Most of the cargo tank's 9,800 gallons and more than 30,000 gallons from the storage tanks were released during this incident. If this large quantity of propane had reached an ignition source, 125 people (workers, residents and emergency responders) could have been killed.

The hazards associated with transportation of liquefied petroleum gas have been demonstrated repeatedly on U.S. highways. In fact, propane releases are the second leading cause of death in hazardous materials transportation. Between 1990 and 1991, five reported deaths and 695 injuries resulted from propane incidents in highway transportation. For example, when liquid propane is released into the atmosphere, it quickly vaporizes into its normal non-pressurized gaseous form. This happens very rapidly, and in the process, the propane combines readily with air to form fuel-air mixtures which are ignitable over a range of 2.2 to 9.5 percent by volume. If an ignition source is present in the vicinity of such highly flammable mixtures, the vapor cloud ignites and burns very rapidly (characterized by some experts as "explosively"). This has occurred a number of times over the years, and even though the incidents described below were not caused by spills during lading transfer, they illustrate the grave consequences of a large propane release when ignition occurs:

- On July 25, 1962 in Berlin, NY, an MC 330 bulk transport ruptured releasing about 6,900 gallons of liquid propane. Ignition occurred. Ten persons were killed, and 17 others were injured. Property damage included total destruction of 18 buildings and 11 vehicles.

- On March 9, 1972 near Lynchburg, VA, an MC 331 bulk transport overturned and slid into a rock embankment. The impact ruptured the tank's shell releasing about 4,000 gallons of liquid propane. Ignition occurred. Two persons were killed and five others were injured. Property damage included a farmhouse, outbuildings and about 12 acres of woodland.

- On April 29, 1975, near Eagle Pass, Texas, an MC-330 bulk transport struck a concrete headwall and ruptured releasing more than 8,000 gallons of liquefied petroleum gas. The ensuing fire and explosion killed 16 persons, injured 51, and destroyed 51 vehicles.

- On February 22, 1973, 23 tank cars derailed in Waverly, Tennessee. During wreck-clearing operations, a 30,000-gallon tank car containing liquefied petroleum gas ruptured. The ensuing fire and explosion killed 16 persons, injured 43, and caused \$1.8 million in property damage.

- On December 23, 1988, in Memphis, Tennessee, an MC-330 bulk transport struck a bridge abutment and ruptured releasing 9388 gallons of liquefied petroleum gas. The ensuing fire and explosion killed eight persons and injured eight.

- On July 27, 1994, in White Plains, New York, an MC-331 bulk transport struck a column of an overpass and ruptured, releasing 9,200 gallons of propane. Ignition occurred. The driver was killed, 23 people were injured, and an area within a radius of approximately 400 feet was engulfed in fire.

In the Sanford incident, the driver became aware of the system failure when the hose began to violently oscillate while releasing liquid propane. He immediately shut down the engine, stopping the discharge pump, but he could not access the remote closure control to close the internal stop valve. The excess flow feature of the emergency discharge control system did not function, and propane continued to be released from the system. Additionally, the back flow check valve on the storage tank system did not function and propane was released from the storage tanks. In light of the large quantity of propane released, this incident could have resulted in a catastrophic loss of life and extensive property damage if the gas had reached an ignition source. Fortunately, there was no fire.

Based on the preliminary information from the Sanford incident, RSPA published an advisory notice in the Federal Register on December 13, 1996 (61 FR 65480). This notice alerted persons involved in the design, manufacture, assembly, maintenance or transportation of hazardous materials in MC 330 and MC 331 cargo tank motor vehicles of this problem with the excess flow feature of the emergency discharge control systems and reminded them that these tanks and their components must conform to the Hazardous Materials Regulations (49 CFR Parts 171-180; HMR). Since that time, RSPA has received applications for emergency

exemptions from both the National Propane Gas Association (NPGA) and the Mississippi Tank Company that indicate the problem is more extensive than originally believed. Additionally, The Fertilizer Institute (TFI) and National Tank Truck Carriers, Inc. (NTTC) have submitted applications to become party to these exemptions. In support of its exemption application the Mississippi Tank Company, a manufacturer of specification MC 331 cargo tank motor vehicles, has provided preliminary information that there is reason to suspect the problem may be common to nearly all cargo tank motor vehicles used in liquefied compressed gas service within the United States. This problem may exist also in the non-specification cargo tanks authorized in § 173.315(k). Both applications for exemption are reprinted in their entirety and discussed in detail below.

II. National Propane Gas Association Application for Emergency Exemption

The body of NPGA's application for exemption is reproduced as follows (numbers in brackets have been added for ease of reference in the following discussion):

[1] The National Propane Gas Association (NPGA), acting as an agent for its members, presents here an application for a DOT Exemption to the Hazardous Materials Regulations (HMR) to permit the continued operation of certain cargo tank motor vehicles in propane service pending development and installation of equipment intended to overcome an operational difficulty identified recently. The Association also requests that this application be handled as an emergency exemption under the procedures outlined in 49 CFR 107.113. Upon issuance of this emergency exemption, NPGA will submit a second request to convert the emergency exemption to a conventional exemption.

[2] NPGA is the national trade association of the LP-gas (principally propane) industry with a membership of about 3,500 companies, including 37 affiliated state and regional associations, representing members in all 50 states. Although the single largest group of NPGA members are retail marketers of propane gas, the membership also includes propane producers, transporters and wholesalers, as well as manufacturers and distributors of associated equipment, containers and appliances. Propane gas is used in over 18 million installations nationwide for home and commercial heating and cooking, in agriculture, in industrial processing, and as a clean air alternative engine fuel for both over-the-road vehicles and industrial lift trucks.

[3] On September 8, 1996, a cargo tank motor vehicle, of the type in the industry known as a highway transport—a large cargo tank semi-trailer pulled by a highway truck tractor—was unloading a cargo of propane into permanent storage tanks at a propane

marketing facility in Sanford, North Carolina. Shortly after the transfer operation began, the transfer hose separated from the transfer connection at its juncture with the plant piping and began discharging liquid propane to the atmosphere. The vehicle driver heard sounds unusual for a transfer operation and shut off the vehicle engine. According to the report of the Federal Highway Administration inspector, the driver was not able to get to the remote controls to close the internal stop flow valve. The driver then ran to an adjacent residential area to warn residents to immediately evacuate the area. As will be discussed later in this letter, the excess flow protection in the cargo tank did not activate and the entire propane cargo was discharged to the atmosphere.

[4] Likewise, emergency flow protection in the plant piping did not activate automatically as designed and intended. As a result, the entire contents of the storage facility—something in excess of 35,000 gallons of propane—was also discharged to the atmosphere. While the emergency flow control system on the transport is subject to the HMR, the storage tank system is subject to regulations of the State of North Carolina. Investigation of that segment of the incident is being handled as a separate matter. The purpose of this letter is to discuss the transport system, applicable regulations and what can be done to prevent such an incident from recurring.

[5] Mr. Samuel E. McTier, NPGA President, has appointed a special task force to work directly under the NPGA Executive Committee to determine the extent and nature of the underlying causes of this incident. The task force was directed to study this incident and develop two plans of action: First, how to provide for continued safe operation of existing propane cargo tanks while necessary changes are developed and put into place [including those cargo tanks to be built during this transition period], and second, how to correct safety and operational problems for the long term through changes to the MC-331 specification, if necessary, and to industry recommended safety and operating practices to preclude such an incident from happening again. This task force first met December 12-13, 1996 in Atlanta, Georgia. The enclosed recommendations and accompanying comments are based on their deliberations.

[6] NPGA understands that Mississippi Tank Company has already submitted an application for an emergency exemption and supports the technical discussions in that application as a succinct presentation of the overall problem. In the time that has passed since that application was filed with DOT, however, additional information has become available. As a consequence, while much of the Mississippi Tank information has been incorporated into this application, there are certain significant differences between the NPGA application and the Mississippi tank document.

[7] It is important to recognize that the situation described in the Mississippi Tank application is not unique to that company. Rather, that situation can reasonably be expected to occur with propane transports from other assemblers.

[8] In the smaller propane cargo tank motor vehicles (typically smaller than 3,500 gallons water capacity, called bobtails), the cargo tank is mounted directly on the vehicle chassis. These vehicles have a somewhat different piping arrangement than that used on transports. Consequently, on preliminary review, bobtails do not appear to have the same operating characteristics as transports. As a result, the first priority of this NPGA special task force has been directed at the transports; once the situation with the transports has been brought under control for the short term, the task force will immediately make similar investigations and studies of the bobtail vehicles.

[9] NPGA is gravely concerned about the underlying causes of the North Carolina incident and is committed to identifying and implementing appropriate changes to industry recommended safety and operating practices and to the HMR requirements to preclude such an incident occurring again.

[10] The propane industry transports between 7 and 10 billion gallons annually in these highway transports; that same volume is transported again in these local delivery bobtail tank trucks. In the past 10 years, there has not been a similar reported incident during the unloading of a transport. According to DOT's information, some 8 or 10 events have occurred unloading bobtails. That incident rate works out to be less than one per year.

[11] The propane industry is committed to prompt correction of any problems or concerns that are identified with DOT by this special task force as part of our continuing desire and goal to continue that safety record. We also believe that the current incident experience record is testimony to the validity and effectiveness of the safety and operating systems presently in use for transportation of propane, both in the Hazardous Materials Regulations and in industry safety and operating practices.

The Difficulty

[12] 49 CFR 178.337-11(a)(1)(i) requires each internal self-closing stop valve and excess flow valve to automatically close if any of its attachments are sheared off or if any attached hose or piping is separated. 49 CFR 178.337-11(a)(1)(v) expands on the requirements for properly sizing excess flow valves regarding branching or other restrictions and the addition of additional smaller capacity excess flow valves, where required.

[13] Mississippi Tank Company recently conducted tests in an effort to determine why the excess flow feature of the internal valve in the transport cargo tank outlet flange in the Sanford, North Carolina incident did not function as intended by the MC-331 specification requirements. The Mississippi Tank tests clearly show that the internal stop flow valves available for use with flange mounted pumps will not always close automatically under conditions simulating the situation where the hoses or piping might be sheared off or separated from the pump. Mississippi Tank has also determined that there are no such internal valves presently available that will provide the protection required by §§ 178.337-11 (a)(1)(i) and (a)(1)(v).

[14] Principal among the conclusions reached from the Mississippi Tank tests is that the internal valve equipped with the 400 gpm spring (which operates the excess flow feature to provide automatic closure) would close dependably with tank pressures as low as 65 psig but that the excess flow feature would not operate at tank pressures lower than 65 psig.

Rather than repeat the discussion of the test results in the Mississippi Tank application, in the interests of brevity, we refer you to that application.

Solutions to the Situation—Long Term

[15] From the Mississippi Tank tests and from discussions with the manufacturers of the cargo tank pumps and the internal valves, NPGA has concluded that the second and third sentences of § 178.337-11(a)(1)(v) are self-conflicting and mutually exclusive. Based on present technology and equipment, it simply is not possible to comply with *both* provisions.

[16] When this provision was reworded in the HM-183 amendments, industry review of the new provisions indicated that there would be no problem in complying with the requirement. The revised wording was accepted at face value merely as a rewording of the provisions that existed at that time in the MC-331 specification prior to the amendments. At the time, all of the vehicle assemblers believed that their individual practices for compliance with the specification requirements were appropriate and adequate to the need. However, the studies and discussions undertaken as a consequence of this North Carolina incident have demonstrated, and have been confirmed by the Mississippi Tank tests, that there is a basic conflict in the provisions contained in these two sentences in § 178.337-11(a)(1)(v).

[17] It is now clear that excess flow protection, whether when incorporated into the discharge internal valve or as an in-line device, will not function under all climatic conditions nor under other low flow rate conditions. In recognition of the preliminary conclusion that excess flow devices will not always operate as intended or desired, the NPGA special task force has concluded that new control and operating systems must be developed to provide the desired level of reliability and emergency flow control during unloading operations. Devising these new systems is the next priority for the special task force appointed by President McTier.

[18] The task force will also review control systems and operating procedures for loading operations to be sure that the desired level of emergency flow control will also be available in that operation as well. The loading operations aspect of this project, has been assigned a second level of priority, since there have not been any reported incidents during those operations.

[19] The special task force already has identified several possible alternatives for emergency flow control during transport unloading for consideration as permanent changes to industry recommended safety and operation practices or for adoption as regulatory provisions. These possible solutions include:

- A pneumatic deadman device interlocked with the internal stop flow valve

and the tank truck brakes, possibly combined with a lanyard for remote activation. Possibly applicable to bobtails as well.

Note: The term "deadman" is used to identify a system that must be in place and operable in order for the unloading system to operate. If the shut-down mechanism of the system is activated for any reason, the unloading operation is discontinued and the internal stop flow valve closes.

- A mechanical deadman device, possibly combined with a lanyard for remote activation. Possibly applicable to bobtails as well.

- A differential valve downstream of the pump. If the engine is shut down, the set-pressure differential is detected and stops the flow of propane. This system would only protect piping downstream of the differential valve. Applicable to bobtails as well.

[20] Amendment of § 173.33 will also be needed to apply this improved level of safety on a permanent basis to the continued operation of existing MC-330 and MC-331 propane tank trucks and the non-specification cargo tanks operated under § 173.315(k).

[21] The special task force will also study provisions for allowance of the physical and chemical properties of the lading in designing the emergency flow protection system required by the MC-331 specification. Such provisions are not presently a directly-mentioned provision in the specification. The preliminary analyses conducted by the special NPGA task force indicate that such considerations are of primary importance. As an example, while NPGA has every confidence in the results of the excess flow valve capacity tests conducted by Mississippi Tank Company, which used water under pneumatic tank pressure as the test medium, we also now know that those tests only approximate the performance of the same equipment when handling propane in a general manner. Sufficient data and other information is not presently available to satisfactorily model the performance of that equipment in water flow to satisfactorily predict the manner in which the same equipment would perform when handling propane, or any other liquefied compressed gas, for that matter.

Solutions to the Situation—Short Term

[22] Responding to the long term need for a new control system is the ultimate goal for the NPGA special task force. Part of that mission includes presentation of appropriate recommendations to DOT for further consideration and adoption as amendments to the MC-331 specification for new construction and to § 173.33 to provide for the continued operation of existing cargo tanks.

[23] However, the immediate problem is how to provide for the continued operation of (1) existing MC-330 and MC-331 cargo tank motor vehicles in propane service, (2) the non-specification vehicles authorized under § 173.315(k) of the HMR, and (3) any new vehicles built in the interim period pending formal amendment of the HMR. Also, provisions must be made in this continued operation aspect for the annual leakage test and external inspection and for

the five-year requalification requirements of the HMR for these vehicles.

[24] As an agent for the members of the Association, NPGA now submits an application for a DOT Exemption. For reasons set forth below, NPGA also recommends that this application be handled under the provisions for emergency exemptions (Ref: § 107.113). Following DOT's approval of such an exemption, NPGA will promptly submit an application to convert that emergency exemption to a conventional exemption. Such a combination of Exemptions would provide two things:

(1) authorization for the continued operation of existing cargo tank motor vehicles in propane service in the interim to the adoption of appropriate regulatory provisions to correct these technical and operational difficulties and (2) for the conditional operation (including annual tests and inspections and the five-year requalification) of any cargo tank motor vehicles built under the present regulations pending adoption of said amendments. Given the exceptional safety record discussed earlier for both transports and bobtails, NPGA believes that the following provisions for the proposed Exemption will continue this safety record while the relevant changes to industry safety and operating practices and any changes to the Hazardous Materials Regulations are developed and put into place.

[25] NPGA is not advocating removal of §§ 178.337–11(a)(1)(i) and (a)(1)(v) at the present time. Rather, we believe that further information is needed as to the nature and extent of changes to be considered for the MC–331 specification before any proposed changes are considered for the Hazardous Materials Regulations.

[26] NPGA recognizes the importance of prompt and expedient action in developing recommended changes to industry safety and operating practices and provisions of the Hazardous Materials Regulations to improve present the respective provisions for emergency flow control. To that end, NPGA will present a time plan with respective completion points for identification, development, testing and implementation of retrofits and the presentation of proposed changes to the Hazardous Materials Regulations to DOT by February 17, 1997. Furthermore, NPGA representatives will be in frequent contact with RSPA/Office of Hazardous Materials Safety and FHWA/Office of Motor Carrier Safety staff in a liaison capacity regarding the deliberation so this NPGA special task force and will present formal quarterly progress reports at appropriate liaison meetings.

[27] *Provisions of the Exemption:*

1. Compliance with applicable provisions of the Hazardous Materials Regulations, with the exception of §§ 173.315(n), 178.337–11(a)(1)(i) and (a)(1)(v).

2. NPGA will contact all of its members operating or assembling propane cargo tank motor vehicles and will work with industry trade press and other resources to reach affected non-member companies. The purpose of this outreach effort will be to bring the North Carolina incident and related, identified concerns to the attention

of companies operating or assembling propane cargo tank motor vehicles.

3. Transfer hose used under the terms of the exemption (1) will be inspected before continued use, with particular attention to the condition and suitability of the hose end couplings for service and (2) otherwise comply with applicable provisions of NFPA 58, 1995 edition. New transfer hose assemblies will be tested as required by § 180.407(h)(1)(ii) before the hose assembly is placed in service.

NFPA 58, 1995 edition designates NFPA 58 *Storage and Handling of Liquefied Petroleum Gases*, published by the National Fire Protection Association, Quincy, Massachusetts. In its capacity as an American National Standard, NFPA 58 has been used as the basis of regulation by virtually all of the 50 states. A copy of the 1995 edition (the current edition) is enclosed for your information and consideration.

4. The vehicle driver will be continually in attendance and control of the loading and unloading operations.

5. Drivers will be advised of the events leading to the December 8, 1996 incident at Sanford, North Carolina and trained against the potential of that incident occurring again. Such training will include the inspection of delivery hose and connections to be used for the transfer operation to determine, among other things, that the hose is suitable for continued service and that the hose-end fittings and related connections to plant piping and tank truck valves are suitable for service. Driver training as required by §§ 172.702 and 172.704 will include recognition of the potential severity of equipment failure or malfunction during product transfer and appropriate actions to be taken should such an event occur. Records of this training will be included in records required by § 172.704(d). During the term of this exemption, a statement signed by the driver acknowledging such training and operating instructions will be filed by the employer in the files required by § 172.704.

6. The proposed exemption would apply to two types of vehicles: (1) The continued operation of those cargo tanks already in service—MC–330 and MC–331 cargo tank motor vehicles in propane service and non-specification propane cargo tanks authorized for continued operation under the provisions of § 173.315(k) and (2) the entrance into service of new or remounted vehicles that will be built or assembled in the interim period to the adoption of formal regulatory provisions providing new approaches to emergency flow control as an alternative to excess flow valves.

7. The proposed Exemption will authorize continued assembler and design certification of new MC–331 cargo tank motor vehicles and required annual inspection and 5-year requalification certifications that the subject vehicle complies with the Hazardous Materials Regulations, with the exception of §§ 173.315(n) and 178.337–11(a)(1)(i) and (a)(1)(v).

Treatment as an Emergency Exemption

[28] In recognition of the provisions of HMR/§ 107.113(a), a copy of this request for Emergency Exemption is being filed

concurrently with the Chief, Hazardous Materials and Safety Division, Office of Safety and Technology, Federal Highway Administration, U.S. Department of Transportation, Washington, D.C. 20590–0001.

[29] The propane industry is in the midst of the winter heating season. Over 80 percent of the 7–9 billion gallons of propane referenced at the beginning of this letter is used as a residential heating fuel in rural locations where natural gas service is not available. Virtually all of these cargo tank motor vehicles—highway transports and bobtails alike—are needed to provide timely and adequate delivery of this heating fuel. In addition to residential heating fuel, the industry also provides heating fuel to dairy barns, chicken and hog brooders, peak shaving for natural gas utilities. In addition, propane is also widely used as an alternative engine fuel.

[30] There is another aspect of the need for expedient action in the approval and implementation of this exemption—financial impact on the propane marketers, propane producers, common carriers, vehicle assemblers and equipment manufacturers.

- *propane marketers*—Unless they are able to deliver fuel, these companies literally will not be able to continue in business. Of our 3,500 member companies, some 3,200 are small, independent businesses operating about 3,400 bulk plants (local retail facilities). There are another 3,400 bulk plants operated by 17 multistate marketer companies. Our members sell over 85% of the propane used as a residential heating fuel. Once the propane has been delivered to a bulk plant by a highway transport, it is transported *again* by bobtail cargo tank vehicles to the ultimate consumer.

- *propane producers*—Propane heating fuel has two sources: a co-product of natural gas production and a by-product of crude petroleum cracking and refining operations.

- *common carriers*—Over 90 percent of the propane used as a heating fuel is transported first by pipeline and then by highway transport to the local propane bulk plant. While some propane marketers have their own fleet of transport tank trucks, many of these companies rely on motor common carriers to deliver their propane supply. While many of these carriers carry other materials as well (hazardous as well as non-hazardous), for many carriers, propane transportation is a very significant part of their business.

- *vehicle assemblers*—For some of the vehicle assemblers, propane cargo tank motor vehicles (especially bobtails) are a very major part of their business. The companies building propane highway transports typically produce semi-trailer cargo tank motor vehicles for the transportation of other hazardous materials as well.

- *equipment manufacturers*—The manufacturers of pumps, valves, hose and the other equipment from which a tank truck is assembled obviously service other industries than just propane; at the same time, supplying the propane industry has become a rather significant part of their business.

[31] The ability to be able to operate propane bobtails and highway transports has

so many impacts and is so pervasive as be almost incalculable from an economic impact viewpoint. On the one hand, we believe the extremely large volume of propane handled annually (9,000,000,000 gallons) by transport and then a second time by the bobtails in local deliveries and the demonstrated safety record over the history of the industry is clear testimony to the commitment of this industry to safety and employee training. On the other hand, we are committed to correction of the provisions of § 178.337-11 regarding emergency flow control to address the problems that have been identified in the subject incident.

[32] The NPGA special task force believes it can identify alternative emergency flow control systems in the very near future. While several systems are already under study, no preferences have been established, nor do we know currently what present or new equipment will be necessary to implement any changes. Also, we want to be reasonably sure that these "new" systems will indeed operate as intended to provide the desired level of safety and operation control under emergency conditions, thus, actual service tests will be conducted before widespread installation is undertaken.

[33] Consequently, there is an extreme and vital need to keep the present cargo tank motor vehicles in service, albeit under closer scrutiny and control than has previously been the case, until these retrofit devices and systems can be developed and placed into operation.

[34] For many years, the propane industry has demonstrated its dedication to safety and compliance with standards and regulations. Issuance of this exemption will in no way reduce the safe transportation of propane. On the contrary, identification of the hazard illustrated by the Sanford, North Carolina incident will prompt utmost caution during the period of the proposed Exemption.

Conclusion

[35] Therefore, NPGA believes that a true emergency exists for handling this Exemption request in an expedited manner and thus pledges that this exemption will be continued in use no longer than absolutely necessary during the retrofit of any propane cargo tanks requiring the authorization for operation, recertification or requalification provided by the Exemption.

III. Mississippi Tank Company Application for Exemption

The body of the Mississippi Tank Company application for exemption is reproduced as follows:

The purpose of this letter is to make application for an emergency exemption of the Hazardous Materials Regulations stated above. We urgently need an expedited response to our request and offer the information required by part 107.3 as follows:

1. CFR 178.337-11 Ali requires that each internal self-closing stop valve and excess flow valve must automatically close if any of its attachments are sheared off or if any attached hose or piping is separated. Paragraph 178.337-11(a)(1)(v) expands on requirements for properly sizing excess flow

valves while considering branching or other restrictions and, the addition of additional smaller capacity excess flow valves, where required.

We learned during recent evaluation and testing of internal self closing stop-valves on cargo tank trailers that the flange mounted internal valves available for use with pumps will not automatically close under conditions simulating the situation where the hoses or piping might be sheared off or separated from the pump. Upon further research and consideration, it has become apparent that there are no internal valves available that will provide protection as required by the above paragraphs.

Some considerations of the complex series of problems that are facing us considering these requirements are listed as follows:

A. The most commonly used internal self-closing stop valve is a Fisher C404-M32-600 flanged internal valve whose 600 at the end of the model number indicates the flow rating of 600 GPM (propane). Testing at our facility under simulated conditions using air pressure and water indicates that this internal valve with this 600 GPM spring will not close with tank pressures up to 125 psig. Other flow rates available (which is determined by the type of internal spring that is furnished in the internal valve) are 340 GPM, 400 GPM, 800 GPM and 1000 GPM. Both the 340 GPM and 400 GPM springs were tested to determine their behavior, with most of the testing performed using the 400 GPM springs.

It was determined that the internal valve with the 400 GPM spring would close dependably with pressures down to 65 psig but not at all at lower pressures. This testing was performed while allowing the pump to "free-wheel", which would allow the pump to pass more product than if it were not allowed to free-wheel. Obviously, a pump shaft held stationary would prevent the pump from allowing as much product to pass, thereby preventing the sufficient flow of product through the pump and discharge piping to trigger the self-closing mechanism of the internal valve.

B. Internal valves (which are excess flow valves when open) have springs with manufacturing tolerances of $-20\%/+10\%$, thereby allowing a broad range of performance in a given flow-rated internal valve. Example: a 400 GPM spring can allow a flow between 320 GPM to 440 GPM.

In order to insure proper operation of a pumping system on cargo tanks, various sources in the industry have indicated that internal valve flow rating have been sized with a minimum flow rating of 1.5 times the discharge capacity of the pump. This would indicate that under the greatest flow conditions that the piping system and pump can offer, the self-closing criteria for the internal valve would have been exceeded by a minimum of 50%.

D. Flow rates through internal valves, and the associated piping, is mostly determined by the internal pressure that exists in the cargo tank. The greater the pressure, the more flow rate you will have through a given piping system and the lower the pressure, the lower flow rate through that same piping system. As an example, a cargo tank that was

in dedicated propane service might have internal valves and excess flow valves that work dependably at pressures of 125 psig or higher in warm temperatures but as the temperature gets colder, for instance 20 °F, a tank pressure of only about 41 psig would be present and it is predictable that the internal valves and excess flow valves would no longer close due to the reduced flow associated with lower pressures in the tank. This problem becomes worse if a tank designed to carry products with vapor pressures approaching 250 psig is hauling low vapor pressure products, such as butanes, whose vapor pressures at warm temperatures are very low and at very cold temperatures can be practically nothing, insuring that the internal valves would not function at these low pressures.

E. It appears obvious that if you size an internal valve to be used with a pump that has a sufficiently low rating to insure that the internal valve would automatically close in the event of the separation of the discharge piping or hoses, the internal valve would never remain open during the pumping operation. After further study, it appears that due to the consistent volumetric displacement of a pump, the internal valve would never close if it were sized to allow the pump to dependably unload a product.

F. Consideration was given to the use of a lesser flow rate excess flow valve at the pump discharge connection, but it was determined after considerable deliberation that an excess flow valve that was sized so as to allow the pump to discharge product dependably might never close in the event the piping or hoses became separated, as the flow rating must be sufficient to allow pumping without causing the internal valve to close. If separation occurred, the pump would still be turning at the same RPMs, thereby producing roughly the same amount of flow rate as it was while the piping was still connected. Again it becomes apparent that the downstream excess protection appears not to be a viable solution either.

G. One internal valve manufacturer offers internal valves that open and close using pump differential pressure, but due to the nature of the way the pump must create differential pressure to allow the internal valve to stay open, it has been determined during discussions with the internal valve manufacturer that this internal valve might not close in all conditions as it should.

2. The problem meeting this requirement applies to all compressed gas cargo tanks of the MC331 classification (and possibly the MC338 classification) that utilize internal self-closing stop valves and excess flow valves in conjunction with pumps and in some cases simply in conjunction with discharge piping. This problem is not specific to any one class of product and would include all products that require the use of these type cargo tanks.

3. Using the internal valves presently available, our company has been producing between 40-200 cargo tanks a year for more than 35 years. Our company has no knowledge of any problems or safety related issues resulting from the use of these valves. Although all the cargo tanks in operation today apparently do not comply with the

above requirements, the compressed gas industry does not appear to have a record of major problems in this area.

If an emergency exemption were granted to allow the continued use and certification of these cargo tanks, a warning statement and/or special operating instructions could be a new requirement as part of the conditions allowing for the exemption. This would provide for increased safety compared to what is presently available.

4. We feel that a special exemption is required for duration of 18–24 months minimum to allow all of the assemblers, equipment manufacturers and owners to help work out a solution to this problem.

Equipment manufacturers advise that it takes a minimum of 12–15 months to design, test and make available new designs of valving. If it is determined that this will be part of the solution, the addition of “dead-man” type devices that cause the internal valves to close when the operator is not present may be incorporated as part of the solution as well.

We urgently request that you act upon our application for an emergency exemption for the reasons explained above. This exemption is needed to allow the continued use of existing equipment and to allow badly needed new equipment to continue to be made available to the industry.

Your expedited response on a priority basis is appreciated in advance.

IV. RSPA'S and FHWA's Review

From the four emergency exemption applications, discussion with the applicants, information developed from the Federal Highway Administration (FHWA) investigation of the Sanford incident, the regulatory history related to these issues and knowledge of the liquefied compressed gas industry, RSPA and FHWA have developed the following information and opinions related to the situation associated with the failure of the excess flow feature with the emergency discharge control system on cargo tanks used to transport liquefied compressed gases.

Emergency discharge control systems on cargo tanks used to transport liquefied gases provide two basic safety features. First, an excess flow feature is designed to automatically stop the flow of gas when piping, fittings or hoses rupture or separate. The second feature is a remotely controlled internal self-closing stop valve designed to stop the flow of product from a cargo tank. Cargo tanks having capacities over 3500 gallons must have remote means of automatic closure, both mechanical and thermal, of the internal self-closing stop valve; the remote operators must be installed at the ends of the tank in at least two, diagonally opposite locations. Cargo tanks of 3500 gallons capacity or less must have at least one remote means of closure, which may be mechanical, installed on the end of the cargo tank farther away from the

loading/unloading connection area. The HMR require the excess flow feature to function in the event of a complete failure (separation) of any attached hoses or piping. The HMR do not require the excess flow feature to function in response to leaks or partial failure of a pipe, fitting or hose. Manual activation of the self-closing valve is the primary safety feature for pipe, fitting or hose failures during product transfer. RSPA does not agree with the NPGA statement (paragraph 15) that the second and third sentences of § 178.337–11(a)(1)(v) are “self-conflicting and mutually exclusive.”

When the equipment and regulations for excess flow features on cargo tanks transporting liquefied gases were first developed, cargo tank motor vehicles were unloaded using internal pressure, by pressurizing them, or by use of pumps installed at unloading facilities. With such unloading systems, an excess flow feature properly designed for a cargo tank and the products the tank is designed to transport would reliably function in the event of a total pipe, fitting, or hose failure. Over time, in response to customer demand, most cargo tank motor vehicles delivering liquefied gases to customer bulk storage facilities have been equipped with pumps to speed product transfer. The tests performed by Mississippi Tank Company following the Sanford incident demonstrated that a pump in the discharge system functions as a product flow regulator that restricts excess flow, thereby preventing functioning of the excess flow feature. Thus, excess flow valves or features will not function when pumps are used in a cargo tank's discharge system. NPGA addresses this issue in its discussion on “Solutions to the Situation-Long Term” (paragraphs 15 through 21).

RSPA and FHWA do not agree with the position of the NPGA task force, expressed in paragraph 8, that transport vehicles should be given first priority in addressing this situation. While the capacity of bobtail cargo tanks is lower than that of transports, far more bobtails are in use and many more local deliveries are made each day than are deliveries to bulk storage facilities. Thus, the risk of an accidental discharge of product is much higher for bobtails than for transports. Because bobtail cargo tank motor vehicles are fitted with pumps and discharge systems very similar to transports, RSPA and FHWA believe that the excess flow features of these smaller vehicles also may not function when a pipe, fitting or hose ruptures or separates. This conclusion is supported by nine instances reported to RSPA over the last ten years of propane

releases involving the failure of the excess flow system on bobtails.

As previously stated, RSPA and FHWA believe that manual activation of the internal self-closing stop valve is the primary means of stopping the flow of product from a cargo tank motor vehicle in the event of pipe, fitting or hose failure during transfer operations. The vehicle operator is the individual responsible for the manual activation of the internal stop valve in the event of pipe, fitting or hose failure. Under the present circumstances, where the excess flow feature of the emergency discharge control system may not function, RSPA and FHWA believe that special operator attendance requirements are necessary to ensure that a qualified person will always be in a position to immediately activate the internal stop valve in the event of a release. In addition to the requirements of § 177.834(i), RSPA and FHWA believe that the operator must have an unobstructed view of the cargo delivery lines, and be within an arm's reach of a means for closure of the internal self-closing stop valve or other device that will stop the discharge of product from the cargo tank. Until an automatic flow control system is developed, this may require two operator attendants on a cargo tank motor vehicle or the use of a lanyard, electro-mechanical, or other device or system to remotely stop the flow of product. If a lanyard or other device or system is used, it must meet the performance standard in the regulation (“will immediately stop the discharge of product from the cargo tank”). For example, there must be adequate space for use of, and appropriate tautness in, a lanyard being used to meet this requirement.

A number of other measures can be taken to mitigate the problem experienced in Sanford. Among these are the following:

- Remove pumps and compensate for decreased discharge flow by means of:
 - enlarging piping, fittings and hose downstream of existing internal valves, retaining their excess flow features.
 - increase pressure in the vapor space of the cargo tank, e.g., with a nitrogen pad.
- Relocate pumps to the receiving end of the unloading system.
- Transmit readout from storage tank filling instrumentation back to the cargo tank so that operator/attendant can remain in close proximity to internal valve closure devices.
- Increase frequency and thoroughness of maintenance actions; for example, systems for remote closure

of internal valves demand regular inspection, test and adjustment.

It has been reported that the propane release in the Sanford incident was from the hose used for delivery and that the hose was new and had not been pressure tested prior to attachment. Also, it was reported that the hose coupling on the storage tank end had not been firmly attached to the hose by means of the two machine bolts provided for this type coupling.

On large MC 330/331 transport vehicles, hoses typically are not attached to the cargo tank piping during transit, while on small local delivery cargo tanks, hoses typically remain attached to the piping and are under pressure during transit. Technically, hoses attached to piping and under pressure during transit form part of the cargo tank wall as defined in § 178.320(a)(1). This means that they should be tested in accordance with § 180.407(g) at the test pressure required for MC 330/331 cargo tanks in § 180.407(g)(1)(iv), i.e., at 1.5 times either the maximum allowable working pressure (MAWP) or the re-rated pressure, whichever is applicable. However, because of the difficulties that may be encountered at these high pressures, and due to the potential for over-stressing hose reinforcement fibers during such a test, RSPA and FHWA believe the test should be conducted at no less than 80 percent of the design pressure or maximum allowable working pressure (MAWP) marked on the cargo tank. This pressure test requirement includes couplings or other fittings which are part of the assembled hose as used. It must be repeated after any repair or modification of the assembled hose before it is re-used.

Non-specification cargo tanks. Potential difficulties with excess flow protection are not well defined for the group of non-specification cargo tanks which are authorized for transportation of liquefied petroleum gas by § 173.315(k). These cargo tanks were manufactured before January 1, 1981, in conformance with the editions of the ASME Code and NFPA Standard 58 which were in effect at the time of manufacture. They must conform with applicable laws of the states in which they operate; and they must be tested and inspected periodically in accordance with subpart E of part 180, as specified for MC 331 cargo tank motor vehicles.

RSPA and FHWA recognize that the situation described for MC 330 and 331 cargo tanks is no less severe for these non-specification vessels. RSPA and FHWA encourage responsible authorities in every jurisdiction to give

special attention to NFPA provisions for vapor and liquid withdrawal requirements for internal valves with integral excess-flow valves or excess-flow protection.

V. RSPA's and FHWA's Evaluation of the Applications for Exemption

As a frame of reference for evaluation of the applications for exemption, the specification requirements for emergency discharge control can be achieved by means of either an internal self-closing stop valve or an excess flow valve. The most important performance standard relevant to this issue is that "Each internal self-closing stop valve and excess flow valve must automatically close if any of its attachments are sheared off or if any attached hoses or piping are separated." [See § 178.337-11(a)(1)(i)]. Provisions of § 178.337-11(a)(1)(v) come into play only if and when excess flow valves are used anywhere in the system.

After evaluating the situation and the NPGA and Mississippi Tank Company emergency exemption applications, RSPA finds that this situation constitutes an emergency with broad applicability to many persons and far reaching safety and economic impacts. RSPA also is not aware of readily available, off-the-shelf equipment that can provide a functioning automatic excess flow feature on cargo tanks without removal of pumps and other restrictions. The applicants propose an outreach effort to inform tank users of the Sanford incident and the safety issues related to product transfer operations and a research and development program to design a system which will provide greater safety in product transfer operations.

During evaluation of the Sanford incident, it has become evident that the level of safety provided by the HMR is not being achieved on equipment currently being produced and certified by manufacturers of these cargo tanks. Specifically, these tanks do not meet the requirement for automatic closure of internal self-closing stop valves and excess flow valves in the event of separation of hoses or piping. The regulatory language is intended to ensure a certain level of safety in these vehicles. However, the level of safety provided by the immediate steps proposed by NPGA is not equivalent to the level of safety provided by § 178.337-11(a)(1)(i). The NPGA proposes requirements regarding driver training, testing and inspection of equipment, and driver attendance during unloading operations (see paragraph 27 of the NPGA application). These proposed requirements are

effectively the same as those already set forth in 49 CFR. In the Mississippi Tank application, it was suggested that "a warning statement and/or special operating instructions" could be required, but no details were offered on how that would achieve a level of safety equivalent to that provided by the existing regulatory requirements in § 178.337-11(a)(1)(i). Thus, neither application proposes procedures that would compensate for the absence of excess flow features that function reliably and in a passive manner.

Because the applications do not provide for an equivalent level of safety, as required by § 107.113(f)(2)(ii), of the HMR, they have been denied by the Associate Administrator for Hazardous Materials Safety. Also, the issues addressed in the applications have significant safety and economic implications for a broad range of persons; consequently, RSPA believes the issues are better addressed through the rulemaking process. Thus, RSPA is issuing this interim final rule.

VI. Provisions of the Interim Final Rule

RSPA is publishing this interim final rule to enhance the safety of product transfer operations as they are currently conducted, in most cases, while allowing the continued delivery of liquefied compressed gases (principally propane, other liquefied petroleum gases and anhydrous ammonia). RSPA and FHWA believe that, without the authorization for continued operation provided by this rule, the public, industry, and cargo tank motor vehicle operators and manufacturers would be severely impacted. The liquefied compressed gases authorized for highway transportation under this rule are used for home heating, support of industrial and agricultural operations, and as fertilizer. Because there are no alternative means for distribution of these materials in most areas served by the cargo tank motor vehicles authorized by this rule, RSPA and FHWA believe this rule is necessary to prevent severe shortages of liquefied compressed gases in the areas where they are consumed.

This emergency interim final rule authorizes, under specific conditions, the continued manufacture, assembly, certification, use and recertification of cargo tanks that may not meet the excess flow feature requirements for cargo tanks authorized for the transportation of liquefied compressed gases. This rule is effective through August 15, 1997. This will allow time for implementation of changes to equipment that will automatically shut down product transfer as required in § 178.337-11,

when a pipe or hose ruptures or separates.

In the next several months, RSPA and FHWA will actively pursue technical improvements to product delivery systems, as well as other feasible operational controls, that may be applied to minimize threats to public safety inherent in the transportation of liquefied compressed gases. RSPA has developed an action plan that includes the two public workshops scheduled for March 4-5, and April 8-9, 1997. In addition, working through its Volpe National Transportation System Center, RSPA will examine the availability and feasibility of systems that can achieve the purpose of the regulations; identify facilities where automatic shut-down systems may be safely tested, and seek out other sources of technical expertise in government, industry and academia.

The August 15, 1997 compliance date was chosen in part because it falls between the end of the summer 1997 planting season and the beginning of the winter 1997-1998 heating season. This date gives industry approximately six months to bring cargo tanks into compliance with the current (i.e., pre-IFR) regulatory requirement.

Alternatively, industry may be able to demonstrate that regulatory compliance is not feasible, and recommend timetables for achieving compliance or implementing alternative technology to achieve the safety objective of a passive, automatic shut off system for emergency discharge control.

By the expiration of the interim final rule, RSPA and FHWA could announce their intent to strictly enforce the current regulatory requirement, unless the industry convinces us that they are making a good faith effort to develop a properly operating system that meets the requirements of the HMR.

Alternatively, depending on the information developed during the comment period, RSPA would implement rulemaking either to modify the current regulatory requirement, providing a different means of passive shut-off, or extending the provisions of the IFR (with modification, if warranted) based on an industry-developed timetable for implementing technological change. The rule addresses the concerns expressed in the exemption applications of the NPGA, Mississippi Tank Company, TFI, and NTTCC.

In order to enhance the level of safety during transfer operations using current equipment, the rule specifies special conditions for continued operations. The following provisions are adopted in § 171.5 to provide a set of alternative safety controls for the carriage of

liquefied gases in cargo tanks that cannot be demonstrated to conform with existing excess flow feature requirements.

Paragraph (a)(1) specifies use provisions under which MC 330, MC 331 or non-specification cargo tank motor vehicles authorized under § 173.315(k) may be operated and unloaded.

Paragraph (a)(1)(i) prescribes that before transfer from a cargo tank motor vehicle the integrity of components making up the discharge system must be verified. Paragraph (a)(1)(ii) prescribes that prior to using a new or repaired transfer hose or a modified hose assembly, the hose must be pressure tested at no less than 80 percent of the design pressure or maximum allowable working pressure (MAWP) marked on the cargo tank. Paragraph (a)(1)(iii) specifies that a qualified person in attendance of transfer from a cargo tank must have the capability for emergency shut-down. Paragraph (a)(1)(iv) specifies that when there is an unintentional release of lading, the internal self-closing stop valve must be activated and all motive and auxiliary power equipment must be shut down. Paragraph (a)(1)(v) prescribes the development of comprehensive emergency operating procedures for all transfer operations. Paragraph (a)(1)(vi) specifies that each manufacturer, assembler, retester, motor carrier and other hazmat employer must provide training to its hazmat employees so that they can properly perform the new function-specific requirements in this section.

Paragraph (a)(2) prescribes conditions for continued qualification of existing in-service cargo tank motor vehicles.

Paragraph (a)(3) addresses new vehicles, including a special entry on the certification required by § 178.337-18.

Paragraph (b) specifies the marking to be displayed on a cargo tank motor vehicle operating under this section.

Paragraph (c) establishes August 15, 1997, as the expiration date for this temporary regulation.

VII. Request for Comments

To facilitate decisions on the need for this interim final rule as a short term response to an emergency and the potential need for a permanent change in the rule, RSPA requests comments responding to the questions listed below. RSPA also invites comments on any aspect of this rulemaking action not specifically addressed by the questions. RSPA and FHWA encourage interested persons to participate in this rulemaking by submitting written views, data, and

information concerning this interim final rule. Commenters are requested to provide a reason or basis for each comment.

Additionally, RSPA and FHWA are seeking information pertaining to research and development related to the issues contained in this rule. This information may be presented at the public meeting.

1. NPGA has suggested the development of a "deadman" or a remote valve actuation system, possibly using a lanyard. Automobiles are commonly equipped with remote transmitter devices that fit on key rings to unlock doors or open trunk lids from 50 feet away. If such a manually activated device were used to close internal self-closing stop valves, would it provide a level of safety equivalent to the requirement for a passive automatic shut-down system required by § 178.337-11(a)(1)(i)?

2. What types of devices can provide the passive automatic shut-down function required by § 178.337-11(a)(1)(i)?

3. What tests 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)?

4. In view of the fact that specification MC 330 and MC 331 cargo tank motor vehicles are authorized for a broad range of hazardous materials, is it possible to design an emergency discharge control system that functions effectively with all liquefied compressed gases under all conditions normal to transportation? If not, should the manufacturer's certification required under § 178.337-18 specify the materials and conditions that are acceptable for carriage in, or unloading of, the cargo tank?

5. Do manufacturers and assemblers of cargo tank motor vehicles provide operational and maintenance instructions to operators on the use of the cargo tank motor vehicles they supply? If so, provide examples of such information to RSPA.

6. Provide any information available on other interstate or intrastate incidents involving the failure of emergency control systems on cargo tanks authorized to transport liquefied compressed gases.

7. Are hoses used to transfer product from large transport cargo tank motor vehicles permanently attached or carried on the vehicles or supplied by the customer at the point of delivery?

8. RSPA is concerned that this problem 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. What training is provided to those individuals who are responsible for certifying, operating, testing and repairing these cargo tank motor vehicles?

VIII. Rulemaking Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

This final rule 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).

Because of the emergency nature of this rule, RSPA is not required to prepare a regulatory evaluation. Nevertheless, in an effort to minimize the burden of this rule, RSPA prepared a preliminary regulatory evaluation which is available in the public docket.

Because of the potential safety risk posed by continued transportation of liquefied compressed gases in specification MC 330 and MC 331 cargo tank motor vehicles that do not conform to the performance criteria for emergency discharge controls, RSPA has determined that good cause exists for making this rule effective less than 30 days from its issuance and that prior notice and opportunity to comment is impractical and contrary to public interest.

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. The Act, however, applies only to rules for which an agency is required to publish a notice of proposed rulemaking pursuant to section 553 of the Administrative Procedure Act (APA), 5 U.S.C. 553. See 5 U.S.C. 603(a) and 604(a). Because of the emergency nature of this rule, RSPA is authorized under section 553(b)(B) and section 553 (d)(3) of the APA to forego notice and comment and to issue this rule as an interim final rule with an immediate effective date. Consequently, RSPA is not required under the Act to do a regulatory flexibility analysis in this rulemaking.

Specifically, section 553(b)(B) and section 553(d)(3) of the APA authorize agencies to dispense with certain

procedures for rules, including notice and comment, when they find “good cause” to do so. “Good cause” includes a finding that following notice-and-comment procedures would be “impracticable, unnecessary, or contrary to the public interest.” Section 553(d)(3) allows an agency, upon a finding of good cause, to make a rule effective immediately. “Good cause” has been held to include situations where immediate action is necessary to reduce or avoid health hazards or other imminent harm to persons or property, or where inaction would lead to serious dislocation in government programs or the marketplace.

Nevertheless, RSPA is concerned with the effect this rule may have on small business. Consequently, in preparing a preliminary regulatory evaluation under Executive Order 12866, RSPA has analyzed, based on information currently available to the agency, the impact of this rule on all affected parties, including small businesses. The preliminary regulatory evaluation is available for review in the public docket. In that preliminary evaluation, RSPA estimates that where an operator of bobtails chooses to comply with the arms-reach attendance requirement by use of a lanyard—as suggested by NPGA in its application for emergency exemption—the average annual cost per operator will be \$1,324. In addition, in this interim final rule RSPA is asking commenters to provide information to the agency regarding the economic, safety and other impacts of this rule so that the agency can make any necessary changes to the rule.

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 this rule are 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 this rule are small businesses. RSPA further estimates there are at least 6,800

businesses and at least 25,000 cargo tank motor vehicles (7,000 “transports” and 18,000 “bobtails”) affected by this rule.

In order for RSPA to determine the potential impacts of this rule on small entities, small businesses affected by this final rule are requested to submit comments addressed to the impacts of this rule and other significant alternatives on small entities. Some of the considerations envisioned in assessing these impacts include the following:

1. Are RSPA’s estimates as to number of businesses affected by this rule, and the percentage of these which are small businesses, consistent with industry estimates? Are other estimates available as to the numbers of businesses and small businesses in each sector of business addressed by this rule (i.e., gas distributor, cargo tank manufacturer, cargo tank assembler) and numbers of cargo tank motor vehicles? Are there other business sectors affected? Are some geographic areas affected more than others (please identify)?
2. Are there alternatives to this rule which accomplish RSPA’s objectives, while imposing less of an impact on small businesses? What are those alternatives?
3. In what manner could differing compliance or reporting requirements be implemented for small businesses to take into account the resources available to small businesses? In what manner could compliance or reporting requirements be clarified, consolidated or simplified for such small businesses?
4. What are the direct and indirect costs of compliance with the rule, calculated both as absolute costs and as a percentage of revenue of the regulated small business?
5. What are the direct and indirect costs of completing paperwork or recordkeeping requirements, again both as absolute costs and as a percentage of revenue?
6. What is the effect of this rule, if any, on the competitive position of small entities in relation to larger entities?
7. What is the effect of this rule on the small entity’s cash flow and liquidity?
8. What is the effect of this rule on the ability of a small entity to remain in the market?
9. What is the availability and cost to the small entity for professional assistance to meet regulatory requirements?
10. Are there any Federal rules that duplicate, overlap or conflict with this rule?

C. Executive Order 12612

This final rule has been analyzed in accordance with the principles and criteria contained in Executive Order 12612 ("Federalism"). The Federal hazardous materials transportation law, 49 U.S.C. 5101–5127, contains an express preemption provision (49 U.S.C. 5125(b)) that preempts State, local, and Indian tribe requirements on certain covered subjects. Covered subjects are:

(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 interim final rule addresses covered subject item (5) above and preempts State, local, and Indian tribe requirements not meeting the "substantively the same" standard. Federal hazardous materials transportation law provides at § 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. RSPA has determined that the effective date of Federal preemption for these requirements will be May 20, 1997. Thus, RSPA lacks discretion in this area, and preparation of a federalism assessment is not warranted.

D. Paperwork Reduction Act

The information collection and recordkeeping requirements contained in this final rule have been submitted for emergency approval to the Office of Management and Budget under the provisions of the Paperwork Reduction Act of 1995. Section 1320.8(d), Title 5, Code of Federal Regulations requires that RSPA provide interested members of the public and affected agencies an opportunity to comment on information collection and recordkeeping requests.

RSPA estimates that the total information collection and recordkeeping burden in this interim final rule is 17,575 hours, at a cost of \$376,875, for the development and maintenance of the comprehensive emergency operating procedure. These figures are based in RSPA's belief that standardized emergency operating procedures can be developed for use by a majority of industry members, thus reducing substantially the burden hours and cost to individual industry members of compliance with the emergency operating procedures requirement. Requests for a copy of this information collection should be directed to Deborah Boothe, Office of Hazardous Materials Standards (DHM-10), Research and Special Programs Administration, Room 8102, 400 Seventh Street, SW, Washington, DC 20590-0001. Telephone (202) 366-8553. Written comments should be received by the close of the comment period identified elsewhere in this rulemaking and should be addressed to the Dockets Unit as identified in the Addresses 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. RSPA will publish a notice advising interested parties of the OMB control number for this information collection when assigned by OMB.

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.

F. Executive Order 12778

Any interested person may petition RSPA's Administrator for reconsideration of this final rule within 30 days of publication of this rule in the Federal Register, in accordance with the procedures set forth at 49 CFR 106.35. Neither the filing of a petition for reconsideration nor any other administrative proceeding is required before the filing of a suit in court for review of this rule.

List of Subjects in 49 CFR Part 171

Exports, Hazardous materials transportation, Hazardous waste, Imports, Reporting and recordkeeping requirements.

In consideration of the foregoing, 49 CFR part 171 is amended as follows:

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

1. The authority citation for Part 171 is revised to read as follows:

Authority: 49 U.S.C. 5101–5127, 44701; Sec. 4, Pub. L. 101–410, 104 Stat. 890 (28 U.S.C. 2461 note); Sec. 31001, Pub. L. 104–134, 110 Stat. 1321; 49 CFR 1.45 and 1.53.

2. Section 171.5 is added to read as follows:

§ 171.5 Temporary regulation; liquefied compressed gases in cargo tank motor vehicles.

(a) Section 178.337–11 of this subchapter requires an excess flow feature as a part of the emergency discharge control system installed in a cargo tank motor vehicle used to transport certain liquefied compressed gases. Other regulations in Parts 173 and 180 of this subchapter reference this requirement or similar requirements in effect at the time of manufacture of a cargo tank. Notwithstanding this requirement, a DOT MC 330 or MC 331 specification cargo tank motor vehicle, or a non-specification cargo tank motor vehicle conforming to the requirements of § 173.315(k) of this subchapter, may, without certification and demonstrated performance of the excess flow feature of its emergency discharge control system, be represented for use and used to transport liquefied compressed gases under the following conditions:

(1) *Use.* The cargo tank motor vehicle must otherwise be operated, unloaded and attended in full conformance with all applicable requirements of this subchapter and the following additional requirements:

(i) Before initiating any transfer from the cargo tank motor vehicle, the person performing the function shall verify that each component of the discharge system is of sound quality, is free of leaks, and that connections are secure.

(ii) Prior to commencing transfer using a new or repaired transfer hose or a modified hose assembly, it must be pressure tested at no less than 80 percent of the design pressure or maximum allowable working pressure (MAWP) marked on the cargo tank. This test must include all hose and hose fittings and equipment arranged in the configuration to be employed during transfer operations. A hose or associated equipment that shows signs of leakage, significant bulging, or other defects, is not acceptable for use.

(iii) In addition to attendance requirements in § 177.834(i) of this subchapter, the person who attends the

unloading of a cargo tank motor vehicle must have an unobstructed view of the discharge system and be within arm's reach of a means for closure (emergency shut-down device) of the internal self-closing stop valve or other device that will immediately stop the discharge of product from the cargo tank.

(iv) If there is an unintentional release of lading to the environment during transfer, the qualified person attending the cargo tank shall immediately activate the internal self-closing stop valve and shut down all motive and auxiliary power equipment.

(v) A comprehensive emergency operating procedure must be developed for all transfer operations and hazmat employees who perform unloading functions must be thoroughly trained in its provisions. The emergency operating procedure must be prominently

displayed in or on the cargo tank motor vehicle.

(vi) As required by § 172.704 of this subchapter, each manufacturer, assembler, retester, motor carrier and other hazmat employer subject to the requirements of this section shall ensure that its hazmat employees are trained to properly perform these new function-specific requirements including the meaning of the marking specified in paragraph (b) of this section. The hazmat employer shall ensure that a record of the training is created, certified, and maintained as specified in § 172.704(d) of this subchapter.

(2) *Continuing qualification.* An existing in-service cargo tank motor vehicle may continue to be marked and documented as required by Part 180 of this subchapter if the following statement is added to the current

inspection report required by § 180.417(b) of this subchapter: "Emergency excess flow control performance not established for this unit."

(3) *New vehicles.* A new (unused) cargo tank motor vehicle manufactured, marked and certified prior to August 16, 1997, may be marked and certified as conforming to specification MC 331 if it otherwise meets all requirements of the specification and the following statement is added to the certification document required by § 178.337-18 of this subchapter: "Emergency excess flow control performance not established for this unit."

(b) *Marking.* The following marking must be displayed on a cargo tank used in or represented for use under this section:

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- (1) The letters must be white and the background black.
- (2) The letters must be at least 1.5cm in height.
- (3) The marking must be 6cm x 15cm.

(c) *Expiration date.* This section is effective February 19, 1997 through August 15, 1997.

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

D.K. Sharma,
Administrator, Research and Special Programs Administration.

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