



Billing Code: 4910-60-P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

49 CFR Parts 173, 174, 178, 179, and 180

[Docket No. PHMSA-2012-0082 (HM-251)]

RIN 2137-AE91

Hazardous Materials: Rail Petitions and Recommendations to Improve the Safety of Railroad Tank Car Transportation (RRR)

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

ACTION: Advance Notice of Proposed Rulemaking (ANPRM)

SUMMARY: PHMSA is considering revisions to the Hazardous Materials Regulations (HMR) to improve the regulations applicable to the transportation of hazardous materials by rail. The revisions are based on eight petitions received from the regulated community and four National Transportation Safety Board (NTSB) Recommendations which are referenced by a petition. In this ANPRM, we outline the petitions and NTSB recommendations, identify a preliminary estimate of costs and benefits from the petitions, pose several questions, and solicit comments and data from the public. Under Executive Order 13563, Federal agencies were asked to periodically review existing regulations. The questions posed in this ANPRM and responses by commenters will be used in conjunction with a retrospective review of existing requirements aimed to modify, streamline, expand, or repeal existing rules that are outmoded, ineffective, insufficient, or excessively burdensome.

DATES: Comments must be received by [INSERT DATE 60 DAYS FROM PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments identified by the docket number PHMSA-2012-0082 (HM-251) and the relevant petition number by any of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov> Follow the instructions for submitting comments.
- Fax: 1-202-493-2251.
- Mail: Docket Management System; US Department of Transportation, West Building, Ground Floor, Room W12-140, Routing Symbol M-30, 1200 New Jersey Avenue, S.E., Washington, DC 20590.
- Hand Delivery: To the Docket Management System; Room W12-140 on the ground floor of the West Building, 1200 New Jersey Avenue, S.E., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Instructions: All submissions must include the agency name and docket number for this notice at the beginning of the comment. To avoid duplication, please use only one of these four methods. All comments received will be posted without change to <http://www.regulations.gov> and will include any personal information you provide. All comments received will be posted without change to the Federal Docket Management System (FDMS), including any personal information.

Docket: For access to the dockets to read background documents or comments received, go to <http://www.regulations.gov> or DOT's Docket Operations Office located at US Department of Transportation, West Building, Ground Floor, Room W12-140, Routing Symbol M-30, 1200 New Jersey Avenue, S.E., Washington, DC 20590.

Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comments (or signing the

comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (Volume 65, Number 70; Pages 19477-78) which may be viewed at:

<http://www.gpo.gov/fdsys/pkg/FR-2000-04-11/pdf/00-8505.pdf>.

FOR FURTHER INFORMATION CONTACT: Karl Alexy, (202) 493-6245, Office of Safety Assurance and Compliance, Federal Railroad Administration or Ben Supko, (202) 366-8553, Standards and Rulemaking Division, Pipeline and Hazardous Materials Safety Administration, US Department of Transportation, 1200 New Jersey Ave., SE, Washington, DC 20590-0001.

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I. Executive Summary

PHMSA has received eight petitions for rulemaking and four NTSB recommendations proposing amendments to the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the transportation of hazardous materials in commerce by rail. PHMSA is seeking public comments on whether the proposed amendments would enhance safety, revise, and clarify the HMR with regard to rail transport. Specifically, these amendments propose to: (1) relax regulatory requirements to afford the Federal Railroad Administration (FRA) greater discretion to authorize the movement of non-conforming tank cars; (2) impose additional requirements that would correct an unsafe condition associated with pressure relief valves (PRV) on rail cars transporting carbon dioxide, refrigerated liquid; (3) relax regulatory requirements applicable to the repair and maintenance of DOT Specification 110, DOT Specification 106, and ICC 27 tank car tanks (ton tanks); (4) relax regulatory requirement for the removal of rupture discs for

inspection if the removal process would damage, change, or alter the intended operation of the device; and (5) impose additional requirements that would enhance the standards for DOT Specification 111 tank cars used to transport Packing Group (PG) I and II hazardous materials. The NTSB recommendations directly relate to the enhancement of DOT Specification 111 tank cars. PHMSA looks forward to reviewing the public's comments pertaining to the potential economic, environmental, and safety implications of the petitions discussed in this ANPRM. Comments received will be used in our evaluation and development of possible future regulatory actions on issues relating to the transportation of hazardous materials by rail.

Access to the petitions, NTSB Recommendations, and background documents referenced in this ANPRM can be found at <http://www.regulations.gov> under Docket No. PHMSA-2012-0082 or at DOT's Docket Operations Office (see ADDRESSES). PHMSA requests that commenters note the applicable petition number when submitting comments.

II. Background

Federal hazmat law authorizes the Secretary of DOT (Secretary) to “prescribe regulations for the safe transportation, including security, of hazardous material in intrastate, interstate, and foreign commerce.” The Secretary has delegated this authority to PHMSA. 49 CFR § 1.97(b). The HMR, promulgated by PHMSA under the authority provided in Federal hazmat law, are designed to achieve three goals: (1) to ensure that hazardous materials are packaged and handled safely and securely during transportation; (2) to provide effective communication to transportation workers and emergency responders of the hazards of the materials being transported; and (3) to minimize the consequences of an incident should one occur. The hazardous material regulatory system is a risk management system that is prevention-oriented and focused on identifying a safety or security hazard and reducing the probability and quantity

of a hazardous material release.

Under the HMR, hazardous materials are categorized by analysis and experience into hazard classes and packing groups based upon the risks that they present during transportation. The HMR specify appropriate packaging and handling requirements for hazardous materials based on this classification, and require a shipper to communicate the material's hazards through the use of shipping papers, package marking and labeling, and vehicle placarding. The HMR also require shippers to provide emergency response information applicable to the specific hazard or hazards of the material being transported. Finally, the HMR mandate training requirements for persons who prepare hazardous materials for shipment or who transport hazardous materials in commerce.

The HMR also include operational requirements applicable to each mode of transportation. The Secretary has authority over all areas of railroad transportation safety (Federal railroad safety laws, 49 U.S.C. §§ 20101 et seq.), and has delegated this authority to FRA. 49 CFR § 1.89. Pursuant to its statutory authority, FRA promulgates and enforces a comprehensive regulatory program (49 CFR parts 200-244) to address railroad track; signal systems; railroad communications; rolling stock; rear-end marking devices; safety glazing; railroad accident/incident reporting; locational requirements for the dispatch of U.S. rail operations; safety integration plans governing railroad consolidations; merger and acquisitions of control; operating practices; passenger train emergency preparedness; alcohol and drug testing; locomotive engineer certification; and workplace safety. FRA inspects railroads and shippers for compliance with both FRA and PHMSA regulations. FRA also conducts research and development to enhance railroad safety.

As a result of the shared role in the safe and secure transportation of hazardous materials

by rail, PHMSA and FRA work very closely when considering regulatory changes. The issues being considered under this ANPRM are derived from petitions submitted to PHMSA by its stakeholders. The Administrative Procedure Act (APA) requires Federal agencies to give interested persons the right to petition an agency to issue, amend, or repeal a rule. (5 U.S.C. § 553(e)). In accordance with PHMSA's rulemaking procedure regulations, interested persons may ask PHMSA to add, amend, or repeal a regulation by filing a petition for rulemaking along with information and arguments that support the requested action. (49 CFR Part 106). On average, thirty petitions for rulemaking are submitted to PHMSA annually by the regulated community, in accordance with § 106.95. The eight petitions included in this ANPRM are applicable to the transportation of hazardous materials by rail and have been reviewed by PHMSA and FRA representatives.

In this ANPRM, PHMSA is seeking public comment to obtain the views of those who are likely to be impacted in any way by the changes proposed in the petitions, including those who are likely to benefit from, be adversely affected by, or potentially be subject to additional regulation. Additionally, we seek comments on the four NTSB recommendations that are specifically referenced by Petition P-1587. This ANPRM will provide an opportunity for public participation in the development of regulatory amendments, and promote greater exchange of information and perspectives among the various stakeholders. This additional step is intended to lead to more focused and well-developed proposals that reflect the views of all relevant parties.

In addition to this ANPRM, FRA published a notice on July 18, 2013 (78 FR 42998) announcing a PHMSA and FRA public meeting scheduled for August 27-28, 2013, from 8:30 a.m. until 5:00 p.m., in the DOT Conference Center, 1200 New Jersey Avenue SE., Washington, DC 20590. The meeting was focused on operational factors that affect the safe

transportation of hazardous materials by rail. During the meeting, we asked for input from stakeholders and interested parties. The meeting agenda was included in the public docket for this rulemaking. PHMSA requested comments on the relationship between the items identified in the agenda and the petitions, recommendations, and standards addressed in this rulemaking.

III. Review of Amendments Considered

This ANPRM is based on Petitions P-1507, P-1519, P-1547, P-1548, P-1577, P-1587, P-1595, and P-1612 and NTSB Recommendations R-12-5, R-12-6, R-12-7, and R-07-4. Petition P-1587 directly references NTSB Recommendations R-12-5, R-12-6, R-12-7, and R-07-4. Additionally, NTSB Recommendations R-12-5 and R-12-6 directly relate to and reference petition P-1577. The following table provides a brief summary of the petitions and NTSB Recommendations addressed in this ANPRM:

Petition/ Recommendation	Party Submitting Petition	Summary
P-1507	Eastman Chemical Co.	Revise the wording of § 174.50 to afford FRA greater discretion in authorizing car movement.
P-1519	The Compressed Gas Association (CGA)	Revise § 173.314 Note 5 to clearly indicate that the liquid portion of the gas must not completely fill the tank prior to reaching the pressure setting of the regulating valves or the safety relief valve, whichever is lower.
P-1547	Carroll Welding Supply	Revise the ton tank repair, maintenance, and marking regulations for consistency with existing regulations for DOT 3-series cylinders since ton tanks share more in common with these cylinders than tank cars.
P-1548	American Chemistry Council (ACC)	Proposes a change to the wording in § 173.31(d)(1)(vi) intended to prevent damage or loss of effectiveness of rupture discs removed from their initial placement in the relief device by adding language that would except them from removal if the inspection itself would

		damage, change, or alter the intended operation of the device.
P-1577	Association of American Railroads (AAR)	Proposes a new standard for newly-constructed DOT Specification 111 tank cars used to transport PG I and II materials.
P-1587	Village of Barrington, Illinois and The Regional Answer to Canadian Nation	Stresses the importance of adopting P-1577 for newly-constructed and existing DOT Specification 111 tank cars in accordance with NTSB Recommendations R-12-5 and R-12-6. In addition, the petition urges PHMSA to adopt NTSB Recommendation R-07-4.
P-1595	ACC, American Petroleum Institute (API) and The Chlorine Institute, Inc. (CI)	Proposes that PHMSA apply requirements related to top fittings protection, reclosing pressure relief devices, and head and shell thickness requirements as suggested in P-1577 and P-1587 for DOT Specification 111 tank cars used to transport ethanol and crude oil in PG I and II.
P-1612	API, ACC, CI, and The Renewable Fuels Association (RFA)	The Petitioners request that PHMSA separate new tank car regulatory requirements from any potential retrofits for the timely adoption of revised regulatory requirements for the construction of new DOT Specification 111 tank cars used for the transportation of ethanol and crude oil.
R-07-4	NTSB	With the assistance of the FRA, require that railroads immediately provide to emergency responders accurate, real-time information regarding the identity and location of all hazardous materials on a train.
R-12-5	NTSB	Require that all newly-manufactured and existing general service tank cars authorized for transportation of denatured fuel ethanol and crude oil in PGs I and II have enhanced tank head and shell puncture resistance systems and top fittings protection that exceed existing design requirements for DOT Specification 111 tank cars.

R-12-6	NTSB	Require that all bottom outlet valves used on newly-manufactured and existing non-pressure tank cars are designed to remain closed during accidents in which the valve and operating handle are subjected to impact forces.
R-12-7	NTSB	Require that all newly-manufactured and existing tank cars authorized for transportation of hazardous materials have center sill or draft sill attachment designs that conform to the revised Association of American Railroads' design requirements adopted as a result of Safety Recommendation R-12-9.

Each petition is discussed in detail below. Each description includes a summary of the petition, including the regulatory solution proposed by the petition; based on the petition, costs and benefits associated with the granting the action requested by the petitioner; and a request for comments including specific questions regarding each petition. Additionally, the discussion of P-1587 includes a brief summary of the NTSB accident report which resulted in the issuance of Recommendations R-12-5 through R-12-8 to PHMSA and reiterates the reasons for the issuance of Recommendation R-07-4. The petitions and NTSB accident report are included in the public docket for this rulemaking.

A. Petition P-1507:

Summary

In Petition P-1507, the Law Offices of McCarthy, Sweeney & Harkaway, P.C., on behalf of Eastman Chemical Co., propose that the wording of § 174.50 be changed to afford FRA greater discretion in authorizing car movement. Eastman Chemical Co. asserts that adherence to the regulation impedes the flow of commerce because all non-conforming bulk packagings, regardless of the safety risk, require a movement approval. Non-conforming conditions that are

a relatively minor risk require the same approval application and evaluation process as a non-conforming condition that poses a clear and significant risk. For example, many low risk movement approvals are provided for tank cars that have a defective bottom outlet valve, but have been cleaned and purged to remove any potential hazard in transportation. Other common low-risk examples are jacketed tank cars with damage solely to the jacket causing a violation of the requirement for the jacket to be weather tight. An example of a high-risk approval is one that is issued for a hole or crack in the tank car shell or head.

The petitioner suggests revising § 174.50 to provide FRA greater discretion in authorizing car movement.

Currently, § 174.50 provides that:

A leaking non-bulk package may not be forwarded until repaired, reconditioned, or overpacked in accordance with § 173.3 of this subchapter. Except as otherwise provided in this section, a bulk packaging that no longer conforms to [the HMR] may not be forwarded by rail unless repaired or approved for movement by the Associate Administrator for Safety, Federal Railroad Administration.

Eastman Chemical Co. petitions PHMSA to add language that enables FRA to publish guidance on specific elements of non-conformity that would not require a movement approval by the Associate Administrator for Railroad Safety.

Costs and Benefits

PHMSA considers the action requested by this petition to be deregulatory in nature. The petition did not identify specific costs and benefits. However, FRA has recently modified its movement approval process to minimize burdens without decreasing safety. On February 22, 2011, FRA hosted a public meeting and solicited comments on the one-time movement approval (OTMA¹) process to address the increasing number of requests for OTMAs, which slowed

¹ Detailed information regarding FRA's OTMA program is available at the following URL:

processing time.² The basis for the meeting was the increasing volume of approvals issued annually. FRA issued 380 movement approvals in calendar year (CY) 2007, 444 in CY 2008, 645 in CY 2009, and 906 in CY 2010. These approvals covered a broad range of non-conformity, such as service equipment, tank shell, or lining failures; overloaded packagings; jacket, tank car shell, or head damage; stub sill weld cracks; failures of heater coils or thermal protection systems; tank cars overdue for required tests; etc.

Following FRA's public meeting, PHMSA and FRA conducted a peer review panel, which audited FRA's OTMA program. The audit highlighted the range and frequencies of various defective conditions and identified those defects that pose a lesser safety risk. The panel and comments received during the public meeting recommended that FRA focus its resources on serious safety concerns while allowing for more efficient handling of OTMAs.

FRA subsequently revised its OTMA program with the goal of making the system more efficient and allowing better monitoring of non-conformance. Specifically, on January 31, 2012, FRA published Hazardous Materials Guidance (HMG) -127 (77 FR 10799), which provides a standardized procedure developed by FRA to make the OTMA process more consistent and efficient. While an applicant isn't "required" to follow the procedure and provide the needed information to perform a proper safety analysis, failure to do so could cause significant delays in processing time, or may result in a denial of the application. Applicants are highly encouraged to use the procedure to expedite the FRA review and approval process.

Comments and Questions

PHMSA requests comments on P-1507. Please provide comments and data on the costs

<http://www.fra.dot.gov/eLib/Details/L04692>

² To view the meeting notice and transcript go to <http://www.regulations.gov> and search for "FRA-2011-0004."

and benefits, as well as environmental and small businesses impacts, of granting the action requested by the petitioner. PHMSA specifically requests comments on the following questions:

- In what ways has the January 31, 2012, publication of HMG-127 by FRA satisfactorily addressed the petitioner's proposed revisions; and, in what ways is the issuance of HMG-127 inconsistent with regard to the petitioner's proposed revision?
- What evidence would help FRA quantify the benefits and costs of the current approval process? For example, what is the average time an applicant typically waits to obtain a final determination from FRA on a request for approval? What are the economic effects of this waiting period?
- How could FRA increase the benefits of HMG-127 and of the OTMA program in general?
- Has the petitioner's proposed revision been studied to determine reasonably foreseeable environmental and human health effects?
- Are there economic benefits or costs of including certain commonly issued Approvals into the regulations? If so, is there evidence to help FRA quantify those benefits and costs?
- What are some potential alternatives to the current approval process and HMG-127 that could further maximize benefits and minimize costs? What data is available to help quantify the benefits and costs of these alternatives?

Please note the applicable petition number in your submission. A copy of the petition is available in the public docket for this ANPRM, to view go to <http://www.regulations.gov> or DOT's Docket Operations Office (see ADDRESSES section above).

B. Petition P-1519:

Summary

In Petition P-1519, the CGA asserts the current wording of § 173.314 Note 5 permits the operation of tank cars designed and constructed for the transportation of carbon dioxide, refrigerated liquid, in an unsafe condition. This is the second petition submitted by the CGA on this topic. PHMSA rejected the previous petition because of a lack of information supporting the assertion. The focus of the petition is that, if loaded in accordance with § 173.314 Note 5, a tank car transporting carbon dioxide, refrigerated liquid, could become shell full prior to the internal pressure exceeding the actuation pressure of the PRV and/or the regulating valves. This condition may result in clogging of the PRV, leading to lowering of the flow capacity of the valve and possibly extreme hydraulic pressure. CGA petitions PHMSA to revise § 173.314 Note 5 to clearly indicate that the liquid portion of the gas must not completely fill the tank prior to reaching the pressure setting of the regulating valves or the safety relief valve, whichever is lower.

Costs and Benefits

PHMSA believes that the action requested by this petition might have safety benefits, but add additional regulatory burden. However, PHMSA has not conducted an analysis of the possible actions that could result from this petition. The intent of this ANPRM is to gather relevant safety and economic data from the public regarding changes proposed in the petition. PHMSA notes that the petition did not provide data demonstrating manifestation of this potential problem. However, in analyzing the petition from a technical perspective, PHMSA and FRA engineers agree, theoretically, CGA's assertion that a shell full condition may result in clogging of the PRV, leading to lowering of the flow capacity of the valve and possibly extreme hydraulic pressure, is correct. The valve capacity remains the same. However, the capacity is based on the

flow of vapor. In the case of carbon dioxide, refrigerated liquid, three phase flow is possible and the valve does not have the capacity to vent vapor, liquid, and solid. This is a result of adiabatic flash evaporation or auto-refrigeration. Assume a compressed gas that is under pressure and at a temperature above its boiling point. When the pressure is released (returning to atmospheric pressure), the temperature of the compressed gas will drop to its boiling point, in the case of carbon dioxide this is -109°F (sublimation point), which is below the freezing point of water. The water in the atmosphere freezes and clogs the valve. There is also a phase change in which the vapor changes to solid or liquid (depending on the pressure along the flow path). This is a fairly common concern during the unloading process for carbon dioxide, refrigerated liquid.

The cost of incorporating the proposed change will be a slightly lower payload to the affected entities, which include shippers of carbon dioxide. Initial FRA calculations suggest a 1-2 percent decrease in payload, which in turn will require 1-2 additional trips per 100 shipments.³ The anticipated benefit may be additional safety in the transportation of carbon dioxide, refrigerated liquid.

Comments and Questions

PHMSA requests comments on P-1519. Please provide comments and data on the costs and benefits, as well as environmental and small businesses impacts, of granting the action requested by the petitioner. PHMSA specifically requests comments on the following questions:

- Can you provide data on incidents that were a direct result of a clogged PRV that resulted in a lower flow of the PRV and extreme hydraulic pressure involving the transportation of carbon dioxide, refrigerated liquid, or any other refrigerated liquid?
- Is this problem unique to the transportation of carbon dioxide, refrigerated liquid? If not,

³ Assume 20,000 gallon payload. Decrease payload by 2% = 19,600 gallons. Loss of 400 gallons per trip. After 50 trips the total loss in payload is 20,000 (an extra trip will be needed).

what are the additional safety benefits of expanding the scope of the petitioner's recommended revision to transportation of other refrigerated liquids?

- Please comment on the accuracy of the initial calculations listed above, and provide any other potential costs and benefits of the proposed change.
- Is there an estimate of the number of shipments (trips) of carbon dioxide, refrigerated liquid, in rail tank cars, and the number of vehicle-miles and ton-miles transported annually? If so, what is the basis for this estimate? Is there an estimate of the cost per rail car per vehicle mile, per ton-mile for carbon dioxide, refrigerated liquid, via rail annually?
- How many of the rail tank cars identified above are shell full prior to the internal pressure exceeding the actuation pressure of the PRV and/or the regulating valves? What would the annual decrease in payload be if we adopt the petition? How many more trips would be required annually? What is the overall impact?
- Are there existing consensus standards or operating practices that adequately address this potential safety issue? If so, what are they?
- Are any other options available that could provide a similar safety benefit? If so, what are they?

Please note the applicable petition number in your submission. A copy of the petition is available in the public docket for this ANPRM, to view go to <http://www.regulations.gov> or DOT's Docket Operations Office (see ADDRESSES section above).

C. Petition P-1547:

Summary

In petition P-1547, Carroll Welding Supply identifies an area of confusion regarding the

current requirements for the repair and maintenance of ton tanks. Carroll Welding Supply asserts that these tanks are exclusively transported by highway, yet the regulations require them to be repaired and marked in accordance with AAR standards for tank cars. More specifically, Carroll Welding Supply asserts that the regulations in § 180.212 applicable to re-threading damaged tapped holes with oversized threads are different for DOT 3-series cylinders than for ton tanks. The petition indicates that ton tanks are increasingly being requalified and repaired by cylinder requalifiers, and not by railroad tank car repair facilities. Often the cylinder requalifiers are not aware of § 180.513 and Appendix R of the AAR Manual of Standards and Recommended Practices, Section C-Part III, Specifications for Tank Cars, Specification M-1002.⁴ A common practice in the chlorine industry is the use of oversize valves in tapped holes of DOT 3-series cylinders and oversized valves or fusible plugs in ton tanks. Currently, the regulations clearly do not allow any oversized holes in ton tanks. Carroll Welding Supply recommends amending the regulations by revising ton tank repair, maintenance, and marking regulations for consistency with existing regulations for DOT 3-series cylinders since ton tanks share more in common with these cylinders than tank cars.

Costs and Benefits

PHMSA considers the action requested by this petition to be deregulatory in nature. The petition did not identify specific costs and benefits. Affected entities include persons who manufacture, repair, and/or maintain ton tanks. As stated in the petition, these tanks share more in common with DOT 3-series cylinders than tank cars. Therefore, allowing these tanks to be repaired in accordance with the requirements for DOT 3-series cylinders would simplify the

⁴ AAR's Specifications for Tank Cars, Specification M-1002 is incorporated by reference in § 171.1 of the HMR. Appendix R paragraph 24.1 allows damaged tapped holes to be repaired with thread inserts, and paragraph 24.1.4 specifies that the nominal thread size of the insert is to match the existing tapped hole. Further 24.1.4 does not permit oversize holes.

regulations. The intent of this petition is to consolidate, clarify, and update existing regulations to promote the consistent application of long-standing ton tank regulations and guidance while eliminating unnecessary, outdated, or ambiguous regulatory language or references. Affected entities and the general public may see incremental safety benefits through improved regulatory awareness, understanding, and compliance.

Comments and Questions

PHMSA requests comments on P-1547. Please provide comments and data on the costs and benefits, as well as environmental and small businesses impacts, of granting the action requested by the petitioner. PHMSA specifically requests comments on the following questions:

- Would the relocation of the requirements for ton tanks from Part 179 to Part 178 and aligning the requirements accordingly address the concern of the petition?
- Will it be more or less costly to mark and repair ton tanks in accordance with existing regulations for DOT 3-series cylinders as compared to the current requirements?
- Is the use of oversized valves or fusible plugs in ton tanks common practice within the industry?
- How many ton tanks will be impacted by this change?

Please note the applicable petition number in your submission. A copy of the petition is available in the public docket for this ANPRM, to view go to <http://www.regulations.gov> or DOT's Docket Operations Office (see ADDRESSES section above).

D. Petition P-1548:

Summary

In Petition P-1548, ACC asserts that repeated removal of the rupture disc from the housing for inspection, as required by § 173.31(d)(1)(vi), can result in damage and a reduction in

the effectiveness of the rupture disc. ACC contends that PHMSA has acknowledged this concern by issuing Special Permit DOT SP-13219, which allows for the shipment of certain peroxides in tank cars that have been inspected under a modified inspection program prior to transportation. The modified inspection program does not require the shipper to remove the rupture disc for inspection and requires the shipper to subject the tank to a pressure test at 10 psig for 10 minutes to verify the rupture disc shows no sign of leakage. Currently, two companies are parties to this special permit.

The ACC is proposing that PHMSA incorporate Special Permit DOT SP-13219 into the HMR by adding language to § 173.31(d)(1)(vi) that would except rupture discs from removal if the inspection itself would damage, change, or alter the intended operation of the device. While the special permit requires an alternative inspection program and is limited to shipments of only certain peroxides, the ACC petition would broaden the scope of the special permit to include additional materials. The ACC petition does not address the operational controls of the special permit; specifically the requirement for the tank car to be subjected to a pressure test of 10 psi for a minimum of 10 minutes to verify that the rupture disc shows no sign of leakage. PHMSA does not currently mandate a service interval at which rupture discs are required to be changed, but expects that inspections or testing that identifies wear or leaks will lead to rupture disc replacement.

PHMSA has already partially modified the rupture disc inspection requirements in § 173.31(d)(1)(vi), since this petition was filed. That modification addressed related safety implications of not removing rupture discs prior to visual inspections and created a more limited exception than P-1548 requests. PHMSA adopted the provision as proposed in a May 14, 2010 final rule issued under Docket No. PHMSA-2009-0289 (HM-233A; 75 FR 27205). Access to

the HM-233A rulemaking documents and comments can be found at <http://www.regulations.gov> under Docket No. PHMSA-2009-0289 or at DOT's Docket Operations Office (see ADDRESSES).

Costs and Benefits

PHMSA considers the action requested by this petition to be deregulatory in nature. The petition did not identify specific costs, but did indicate that the proposed change would reduce the need for periodic renewal of the special permit and expand its use to others, which decreases time and expense for tank car owners, shippers, and PHMSA. Another potential benefit of the proposal is that it would eliminate the requirement to remove a rupture disc from the safety vent for inspection prior to transportation, thereby saving the time the loading rack operator needed to disassemble the device as well as the cost of new discs.

Based on the petition, inspection of the rupture disc as specified in § 173.31(d)(1)(vi) may cause or contribute to the rupture disc failing. For that reason, incorporating into the HMR an alternate method of inspecting the rupture disc that mirrors the requirements in Special Permit DOT SP-13219 may reduce releases and provide a safety benefit. A preliminary review of hazardous materials incident reports involving all pressure-related releases for the five-year period from January 2007 to January 2011 found that 40 of the 85 recorded incidents related to pressure relief devices involved a failed rupture disc. In addition, available data does not provide a credible estimate of how many incidents were prevented because of the inspections. However, the incident report forms do provide the approximate cost associated with these the incidents, mainly attributable to clean-up, response, and damages. For the 40 incidents identified above, the reported cost is \$300,000.

Comments and Questions

PHMSA requests comments on P-1548. Please provide comments and data on the costs and benefits, as well as environmental and small businesses impacts, of granting the action requested by the petitioner. PHMSA specifically requests comments on the following questions:

- Can commenters provide data indicating the percentage of rupture discs that were found to be defective during the currently required inspection?
- What percentage of the 40 recorded incidents that involved a failed rupture disc would have been prevented had the rupture disc not been removed and inspected in accordance with § 173.31(d)(1)(vi)? What is the basis for this conclusion if the commenter believes any would have been prevented?
- Is there an inspection program with an established history of safety that could be followed in lieu of removal and visual examination of the underside of the rupture disc, such as the procedures in Special Permit DOT SP-13219? If so, what?
- Can commenters provide an explanation of how the rupture disc is damaged or its effectiveness is lost as a result of the required inspection?
- How much time is required to inspect rupture discs in accordance with the existing regulation?
- What are the comparative costs and benefits of Special Permit DOT SP-13219 and ACC's proposal, which expands Special Permit DOT SP-13219 beyond limited shipments of certain peroxides and without the alternative inspection program?
- Under the action requested by the petitioner, what criteria should shippers use to determine if an inspection would damage, change, or alter the operation of the device?

Please note the applicable petition number in your submission. A copy of the petition is available in the public docket for this ANPRM, to view go to <http://www.regulations.gov> or

DOT's Docket Operations Office (see ADDRESSES section above).

E. Petition P-1577:

Summary

In petition P-1577, AAR provides new standards for DOT Specification 111 tank cars based on findings and recommendations created by AAR's Tank Car Committee. The committee reviewed tank car performance under the current standards and investigated the benefits of potential improvements. The new standards AAR proposes are intended to enhance the safety of the existing specification. According to AAR, these new tank car standards would improve the ability of tank cars to survive an accident without the release of hazardous materials. AAR requests that the new standards only be required for newly constructed DOT Specification 111 tank cars that transport PG I and II hazardous materials. Key tank car requirements in the AAR petition include:

- PG I and II material tank cars to be constructed to 286,000 lb. Gross Rail Load (GRL) standards;
- Head and shell thickness must be 1/2 inch for TC-128B non jacketed cars and 7/16 inch for jacketed cars;
- Shells of non-jacketed tank cars constructed of A516-70 must be 9/16 inch thick;
- Shells of jacketed tank cars constructed of A516-70 must be 1/2 inch thick;
- New cars must be equipped with at least a 1/2 inch half-head shields;
- Heads and the shells must be constructed of normalized steel;
- Top fittings must be protected by a protective structure as tall as the tallest fitting; and
- A reclosing pressure relief valve must be installed.

PHMSA notes that in addition to the tank car requirements outlined above, AAR created

the T87.6 Task Force to consider several other enhancements to tank car design and rail carrier operations that would further enhance rail transportation safety. On July 20, 2011, at the summer AAR Tank Car Committee meeting, docket T87.6 was created with a dual charge to develop an industry standard for tank cars used to transport crude oil, denatured alcohol and ethanol/gasoline mixtures as well as consider operating requirements to reduce the risk of derailment of tank cars carrying crude oil classified as PG I and II, and ethanol. The task force recommendations were finalized on March 1, 2012. PHMSA and FRA believe it is important to identify the additional safety enhancements, which may include both rail car design and rail carrier operational changes that were considered by the task force and provide the public an opportunity to comment. Below, we highlight the key considerations of the task force from both a tank car design and operations standpoint.

Tank car design:

- Thermal protection to address breaches attributable to exposure to fire conditions;
- Roll-over protection to prevent damage to top and bottom fittings and limit stresses transferred from the protection device to the tank shell;
- Hinged and bolted manways to address a common cause of leakage during accidents and Non-Accident Releases (NARS);
- Bottom outlet valve elimination; and
- Increasing outage from 1% to 2% to improve puncture resistance.

Rail Carrier Operations:

- Rail integrity (e.g., broken rails or welds, misaligned track, obstructions, track geometry, etc.) to reduce the number and severity of derailments;
- Alternative brake signal propagation systems (electronic controlled pneumatic

brakes (ECP), distributed power (DP), two-way end of train device (EOT) to reduce the number of cars and energy associated with derailments;

- Speed restrictions for key trains containing 20 or more loaded tank cars (On August 5, 2013, AAR issued Circular No. OT-55-N addressing this issue);⁵ and
- Emergency response to mitigate the risks faced by response and salvage personnel, the impact on the environment, and delays to traffic on the line.

For more detailed information, the T87.6 Task Force Summary Report has been provided in its entirety in the public docket for this ANPRM which is accessible at <http://www.regulations.gov> under Docket No. PHMSA-2012-0082 or at DOT's Docket Operations Office (see ADDRESSES).

Costs and Benefits

PHMSA believes that the action requested by this petition might have safety benefits, but add additional regulatory burden. However, PHMSA has not conducted an analysis of the possible actions that could result from this petition. The intent of this ANPRM is to gather relevant safety and economic data from the public regarding changes proposed in the petition. The petition does provide some associated costs and benefits. In the petition, AAR cites a member survey as the source for information on the consequences of derailments involving PG I and II hazardous materials from 2004 to 2008. The petition indicates that the derailment incidents resulted in 1 fatality, 11 injuries, and the release of approximately 925,000 gallons of materials with associated cleanup costs of approximately \$64 million.

⁵ On August 5, 2013, AAR published Circular No. OT-55-N. This document supersedes OT-55-M, issued October 1, 2012. The definition of a "key train" was revised to include "20 car loads or portable tank loads of any combination of hazardous material." Therefore, the maximum speed of these trains is limited to 50 MPH. The document is available in the public docket for this proceeding and at the following URL: <http://www.aar.com/CPC-1258%20OT-55-N%208-5-13.pdf>

The AAR petition does not provide a retrofit solution for the existing fleet of about 77,000 DOT Specification 111 tank cars used to transport PG I or II hazardous materials because of technical difficulties and comparative costs. In the petition, AAR notes that the Railway Supply Institute (RSI) “conservatively estimates the cost of retrofitting existing cars with head shield and jackets [to be more than] \$1 billion over the life of a retrofit program, not including cleaning and out-of-service costs.” By comparison, AAR states that the cost of derailments over the past 5 years was approximately \$64 million.

Additionally, PHMSA has received an estimate of the increased costs associated with the proposed revisions. In 2011, the AAR issued Casualty Prevention Circular (CPC) 1232, which outlines the new requirements for tanks constructed after October 1, 2011, for use in ethanol and crude oil service. The requirements of CPC 1232 are the same as those in this petition. RSI estimates that a new DOT Specification 111 tank car built to CPC 1232 will cost approximately \$18,000 more than a car built to the standard currently required by the HMR. Only 7,000 to 10,000 pounds of the 23,000 pound increase in weight (263,000 pound car to a 286,000 pound car) results from the head shield and added thickness to the head and shell. Therefore, for \$18,000 initial cost, a shipper will be able to transport an additional 13,000 to 16,000 pounds of product. The added weight of the car would also likely result in additional fees established by the rail carrier. We request comments on these costs, and benefits, as well as any fees associated with the action proposed in the petition. PHMSA recognizes that the petition may not have accounted for all economic impacts associated with revising the DOT Specification 111 tank car.

Comments and Questions

PHMSA requests comments on P-1577 and the remaining rail safety enhancements that were considered by the task force for both tank car design and rail carrier. Please provide

comments and data on the costs and benefits, as well as environmental and small businesses impacts, of granting the action requested by the petitioner. PHMSA specifically requests comments on the following questions:

- Would the proposed revisions under P-1577 decrease the release of hazardous materials during derailment? If so, what is the basis for this conclusion?
- Should PHMSA segment the petition and first address requirements for tank cars carrying Class 3 materials (because there is an abundance of work to inform the rulemaking), then the remaining hazard classes within PGs I and II? If so, why?
- The proposed tank car requirements do not include thermal protection and therefore do not address thermal damage specifically. Given that ethanol and crude oil are often shipped in unit trains or large blocks within a train and a pool fire is likely in the event of certain large incidents, should thermal protection requirements, such as those considered by the T87.6 Task Force,⁶ be a consideration? If so, why or why not?
- Under the Docket HM-233A, PHMSA modified § 179.13 to permit the operation of tank cars at a GRL of 286,000 pounds if the tank car owners obtain approval from the FRA. On January 25, 2011, FRA published a notice outlining the specification requirements for tank cars operating at 286,000 pounds GRL (76 FR 4250). As established by the January 25, 2011 notice, the approval requirements for minimum thickness and materials of construction for newly-constructed tank cars must be based on an analysis that considers puncture velocity. Under an ongoing research project conducted in conjunction with both the T87.6 Task Force and the Advance Tank Car Collaborative Research Project, data suggest that the puncture protection benefits of a 1/16 increase in shell thickness, as

⁶ A copy of the report is available in the public docket for this ANPRM. To view, go to <http://www.regulations.gov>.

proposed in P-1577, are marginal. Further, the enhancements proposed by P-1577 may not be of value when considered relative to the risk associated with the increased weight of the tank cars. Will the changes proposed in the petition adequately improve the safety (puncture resistance) of tank cars? What is the overall impact on rail transportation safety and risk associated with the enhancements proposed for DOT Specification 111 tank cars under P-1577?

- The petition addresses some of the tank car design issues raised by T87.6 Task Force. In the P-1577 summary provided above, PHMSA highlights the remaining rail safety enhancements that were considered by the task force for both tank car design and rail carrier. What, if any, design and operations enhancements should PHMSA and FRA consider beyond those identified in P-1577 to improve the safe transportation of PG I and II materials?
- Does AAR Circular No. OT-55-N adequately address speed restrictions for key trains? Should PHMSA incorporate the language contained in AAR Circular No. OT-55-N into the HMR to account for the train speed considerations of the task force? Should PHMSA expand upon AAR Circular No. OT-55-N to include requirements for fewer than 20 cars?
- Are shippers ordering CPC 1232-compliant tank cars voluntarily to address safety concerns and the immediate need for new cars or because compliance with CPC 1232 is required? If so, please provide any relevant data about this.
- How many CPC 1232-compliant tank cars are currently in service?
- PHMSA and FRA estimate that for an \$18,000 initial cost, a shipper will be able to transport an additional 13,000 to 16,000 pounds of product. This would result in fewer cars required to transport the same amount of product. What are the safety and economic

benefits of increasing the product capacity of the tank car?

- Positive train control (PTC) is a system of functional requirements for monitoring and controlling train movements to provide increased safety. PTC is designed to automatically stop or slow to prevent accidents. Specifically, PTC is designed to prevent train-to-train collisions, derailments caused by excessive speed, unauthorized incursions by trains onto sections of track where repairs are being made and movement of a train through a track switch left in the wrong position. Are technologies available, such as PTC, that would prevent derailments? If so, please provide any relevant data—including any projected improvements in safety performance that would reduce current rail transportation risks.
- What, if any, are the additional implementation and operating costs associated with CPC 1232 compliant tank cars (e.g., higher fees charged by rail carriers)? Are there any additional benefits, if so, what are they?
- Would the increased cost of CPC 1232-compliant cars slow the replacement of older cars? How does this impact the current backlog of cars?
- What are the costs associated with re-tooling tank car construction facilities to manufacture CPC 1231-compliant tank cars? How would the costs impact small businesses that build these cars?
- Please comment on the accuracy of the estimated costs indicated by AAR and RSI, and include any additional anticipated costs of complying with the proposed revisions. Are there any additional anticipated benefits if the proposed revisions are adopted?
- If the PHMSA were to adopt the action requested by the petitioner, what is the appropriate timeframe for complying with the new requirements?

Please note the applicable petition number in your submission. A copy of the petition is available in the public docket for this ANPRM, to view go to <http://www.regulations.gov> or DOT's Docket Operations Office (see ADDRESSES section above).

F. Petition P-1587:

Summary

In petition P-1587, the Village of Barrington, Illinois and The Regional Answer to Canadian National request modifications to the HMR. First, they request that PHMSA correct flaws with the DOT Specification 111 tank car by adopting the AAR standards identified in P-1577 for the tank cars. However, in addition to applying these standards to newly-manufactured cars, the petitioners stress the importance of promulgating enhanced standards for existing tank cars used to transport PG I and II materials in accordance with the NTSB Railroad Accident Report – *Derailment of CN Freight Train U70691-18 With Subsequent Hazardous Materials Release and Fire*, Cherry Valley, Illinois, June 19, 2009 (RAR-12-01).

Second, the petitioners request that PHMSA adopt NTSB Recommendation R-07-04 and “require that railroads immediately provide to emergency responders accurate, real-time information regarding the identity and location of all hazardous materials on a train.” While the petitioners recognize that PHMSA has made progress with its hazardous materials automated cargo communications for efficient and safe shipments (HM-ACCESS; a study to identify and eliminate barriers to using electronic hazardous materials (e-HM) shipping documents) initiative, they request that PHMSA move from the fact-finding phase of this initiative to the regulatory action phase. The petition asks that any regulations stemming from the HM-ACCESS initiative be enforceable with a system of random audits to promote compliance. The petitioner urges PHMSA to act expeditiously.

FRA and PHMSA continue to make progress toward electronic communications. FRA and PHMSA have met with AAR and the American Short Line and Regional Railroad Association (ASLRRA) to discuss the available systems and to identify the systemic gaps and measures to close those gaps. In addition, on June 25, 2012 PHMSA, working closely with FRA, published a final rule incorporating a several widely used rail special permits into the HMR (77 FR 37961). In the rule, requirements for electronic shipping papers, electronic data interchange (EDI) standards, and electronic certification for hazardous material rail shipments were codified in the HMR.

NTSB Recommendations Addressed

In published findings from the June 19, 2009, incident in Cherry Valley, Illinois, NTSB indicated that the DOT Specification 111 tank car can almost always be expected to breach in the event of a derailment resulting in car-to-car impacts or pileups (68% failure rate for the Cherry Valley incident). Furthermore, NTSB's findings show that whether or not the bottom outlet valves on DOT Specification 111 tank cars are protected, they are still susceptible to failure. The findings are described in detail below.

As described in detail in NTSB Railroad Accident Report RAR-12-01, available for review in the public docket for this rulemaking, NTSB determined that one of the probable causes of the June 19, 2009 incident in Cherry Valley, Illinois, in which several derailed cars released hazardous materials, was the washout of the track structure at the grade crossing and failure to notify the train crew of the known washout. It also determined that inadequate design features of a DOT Specification 111 rail tank car made it susceptible to damage and catastrophic loss of hazardous material during the derailment, and thus, contributed to the severity of the incident.

The Cherry Valley incident involved the derailment of 19 cars, all of which were tank cars carrying denatured fuel ethanol, a flammable liquid. Thirteen of the derailed tank cars were breached or lost product and caught fire. NTSB's investigation revealed that several motor vehicles were stopped on either side of the grade crossing waiting for the train to pass as the derailment occurred. As a result of the fire that erupted, a passenger in one of the stopped cars was fatally injured, two passengers in the same car received serious injuries, and five occupants of other cars waiting at the highway-rail crossing were injured. Two firefighters also sustained minor injuries. The release of ethanol and fire prompted a mandatory evacuation of about 600 residences within a ½ -mile radius of the accident site. Damages were estimated to total \$7.9 million.

On March 2, 2012, the NTSB issued Safety Recommendations R-12-5 thru R-12-8, which recommend that PHMSA:

- Require that all newly manufactured and existing general service tank cars authorized for transportation of denatured fuel ethanol and crude oil in PGs I and II have enhanced tank head and shell puncture resistance systems and top fittings protection that exceeds existing design requirements for DOT Specification 111 tank cars. (R-12-5)
- Require that all bottom outlet valves used on newly manufactured and existing non-pressure tank cars are designed to remain closed during accidents in which the valve and operating handle are subjected to impact forces. (R-12-6).
- Require that all newly manufactured and existing tank cars authorized for transportation of hazardous materials have center sill or draft sill attachment designs that conform to the revised Association of American Railroads' design requirements adopted as a result of Safety Recommendation R-12-9. (R-12-7).

- Inform pipeline operators about the circumstances of the accident and advise them of the need to inspect pipeline facilities after notification of accidents occurring in railroad rights-of-way. (R-12-8).⁷

In addition, based on its findings in this accident investigation, NTSB reiterated the following previously issued Safety Recommendation to PHMSA:

- With the assistance of the Federal Railroad Administration, require that railroads immediately provide to emergency responders accurate, real-time information regarding the identity and location of all hazardous materials on a train. (R-07-4).

Costs and Benefits

PHMSA believes that the action requested by this petition might have safety benefits, but add additional regulatory burden. However, PHMSA has not conducted an analysis of the possible actions that could result from this petition. The intent of this ANPRM is to gather relevant safety and economic data from the public regarding changes proposed in the petition. The key difference is between P-1577 and the combination of P-1587 and the NTSB recommendations R-12-5 and R-12-6 is that the latter would require retrofitting of existing DOT Specification 111 tank cars. NTSB Recommendations R-12-7 and R-07-4 are currently being addressed by separate initiatives that have been undertaken by PHMSA and FRA. Petition P-1587 references the cost and benefit information contained in petition P-1577 and the NTSB accident report and Recommendations outlined above. However, the petition provides clarifying information regarding the cost of retrofitting existing tank cars with jackets and head shields.

⁷On July 31, 2012, PHMSA published in the Federal Register (77 FR 45417) an advisory bulletin to all pipeline operators alerting them to the circumstances of the Cherry Valley derailment and reminding them of the importance of assuring that pipeline facilities have not been damaged either during a railroad accident or other event occurring in the right-of-way. This recommendation was Closed by NTSB on September 20, 2012. This action is accessible at the following URL: <http://phmsa.dot.gov/pipeline/regs/ntsb/closed>

Petition P-1577 states that the cost of retrofitting existing cars (77,000 with a 40 year life cycle) with head shields and jackets alone would be over \$1 billion. This petition notes that the AAR's Tank Car Committee T87.5 “estimated that the cost of modifying existing tank cars with jackets and head shields alone would be at least \$15,000 per tank car.” The petition further states:

While the AAR claims that the retrofit costs cannot be justified because the cost of derailments was only \$64 million over five years, Petitioners suggest that AAR's reasoning is grossly misleading. In order to determine the impact of the cost of retrofitting the existing fleet, PHMSA should note that the existing fleet has a future life expectancy of at least 32 years. Even if the estimated cost of the recommended retrofit is \$15,000 per car, when amortized over thirty-two (32) years, the cost is less than \$500 per year per tank car

In reviewing the derailment cost chart at Attachment B of AAR's petition, PHMSA should note that there is no apparent accounting for costs associated with civil litigation in the wake of derailments. However, in the Cherry Valley/Rockford derailment, [Canadian National Railway (CN)] paid over \$36 million in October of 2011 to settle a lawsuit brought by the family of only one victim. AAR's chart, however, reflects costs of only \$8 million for that incident.

The petition indicates that based on this information, there is “no rational reason to not require the retrofitting of the existing fleet consistent with NTSB's recommendation.”

Comments and Questions

PHMSA requests comments on P-1587. Please provide comments and data on the costs and benefits, as well as, environmental and small businesses impacts of granting the action requested by the petitioner. PHMSA specifically requests comments on the following questions:

- Petition P-1587 indicates that the new standards should apply to both new construction and retrofitting the existing fleet. Can you provide the safety benefits and costs associated with each retrofit option outlined below:
 - Meets NTSB Recommendation R-12-5 (enhanced tank head and shell puncture resistance and top fitting protection);

- Meets NTSB Recommendation R-12-6 (alternative designs to ensure the bottom outlet valves on the enhanced DOT Specification 111 tank cars will remain closed during accidents.);
 - Provides thermal protection to address breaches attributable to exposure to fire conditions;
 - Provides roll-over protection to prevent damage to top and bottom fittings and limit stresses transferred from the protection device to the tank shell;
 - Requires hinged and bolted manways to address a common cause of leakage during accidents and Non-Accident Releases (NARS);
 - Requires bottom outlet valve elimination; and
 - Increases outage from 1% to 2% to improve puncture resistance.
- RSI estimates the cost of retrofitting existing cars with head shield and jackets to be more than \$1 billion over the life of a retrofit program, not including cleaning and out-of-service costs. Would retrofitting with head shields and jackets sufficiently address the concerns of the petitioner? Please explain.
 - Are commenters aware of any systems currently in use that railroads could use to immediately provide emergency responders accurate, real-time information regarding the identity and location of all hazardous materials on a train? If so, what does the system cost? Are there any additional costs associated with the system? If so, what are they? What are the specific benefits of providing real-time information regarding the identity and location of all hazardous materials on a train to emergency responders?
 - What is the failure rate for DOT Specification 111 tank cars? Is the 68% failure rate for DOT Specification 111 tank cars that occurred during the June 19, 2009, incident in

Cherry Valley, Illinois typical? Please provide relevant data regarding the failure rate for DOT Specification 111 tank cars.

Please note the applicable petition number in your submission. The petition and NTSB Recommendations are available in the public docket for this ANPRM, to view go to <http://www.regulations.gov> or DOT's Docket Operations Office (see ADDRESSES section above).

G. Petition P-1595:

Summary

In petition P-1595, ACC, API, and CI indicate that they are aware of petitions P-1577 and P-1587. According to the ACC, API, and CI petition, many PG I and II materials, with very different hazards and rail transportation risks, have been lumped together in petitions P-1577 and P-1587. In petition P-1595, ACC, API, and CI request that PHMSA institute a separate rulemaking to specifically address new tank car construction standards for ethanol and crude oil in PG I and II. The petition suggests that PHMSA not include the other PG I and II materials because further analysis is required that could delay the rulemaking process. Key tank car requirements identified in the ACC, API, and CI petition include:

- Top fittings must be protected by a protective structure as tall as the tallest fitting;
- A reclosing pressure relief valve must be installed;
- Head and shell thickness must be 1/2 inch for TC-128B non-jacketed cars and 7/16 inch for jacketed cars;
- Shells of non-jacketed tank cars constructed of A516-70 must be 9/16 inch thick; and
- Shells of jacketed tank cars constructed of A516-70 must be 1/2 inch thick.

Costs and Benefits

PHMSA believes that the action requested by this petition would address a safety concern, but add additional regulatory burden. The petition did not identify specific costs and benefits. In the petition ACC, API, and CI indicate that focusing on an expedited rulemaking to address ethanol and crude oil would better address the risks involved. Further, ACC, API and CI indicate that separating the ethanol and crude oil in PG I and II from other PG I and II materials would provide for a tank car design that is tailored to the requirements of the materials being transported. The petitioners acknowledge that “[m]uch more research and analysis would be necessary to justify any significant change in the construction standards for tank cars carrying other PG I and II materials, such as corrosive materials.”

Comments and Questions

PHMSA requests comments on P-1595. Please provide comments and data on the costs and benefits, as well as environmental and small businesses impacts, of granting the action requested by the petitioner. PHMSA specifically requests comments on the following questions:

- Petition P-1595 indicates that new standards should apply to newly constructed DOT Specification 111 tank cars used for ethanol and crude oil in PG I and II. Can you provide the safety benefits and costs associated with each new construction option outlined in the petition and identified below:
 - Requiring top fittings to be protected by a protective structure as tall as the tallest fitting;
 - Requiring that a reclosing pressure relief valve be installed;
 - Requiring head and shell thickness to be 1/2 inch for TC-128B non-jacketed cars and 7/16 inch for jacketed cars;
 - Requiring shells of non-jacketed tank cars constructed of A516-70 to be 9/16 inch

thick; and

- Requiring shells of jacketed tank cars constructed of A516-70 must be 1/2 inch thick.
- What are the costs and benefits of requiring the use of CPC 1232-compliant tank cars for the transportation of ethanol and crude oil in PG I and II? How many cars are currently in this service? What are the implications on public safety of PHMSA considering standards for tank cars used to transport ethanol and crude oil in PG I and II, before considering standards for other PG I and II materials? What are the specific safety risks/vulnerabilities associated with the remaining hazard classes within PG I and II? Please explain how those vulnerabilities are best addressed.
- What will be the price difference between the DOT Specification 111 tank cars for PG I and II ethanol and crude oil vs. DOT Specification 111 tank cars used for other hazardous materials in PG I and II? Please explain the differences.
- Would the increased cost of PG I and II ethanol and crude oil cars slow the replacement of older cars? How does this impact the current backlog of cars?
- What are the costs associated with re-tooling tank car construction facilities to manufacture different DOT Specification 111 tank cars for PG I and II ethanol and crude oil vs. other PG I and II materials? How would the costs impact small businesses that build these cars?

Please note the applicable petition number in your submission. A copy of the petition is available in the public docket for this ANPRM, to view go to <http://www.regulations.gov> or DOT's Docket Operations Office (see ADDRESSES section above).

H. Petition P-1612:

Summary

In petition P-1612, ACC, API, CI, and RFA indicate they stand ready and willing to work with PHMSA and other stakeholders to ensure that the recently increased volumes of crude oil and ethanol that move by rail are transported safely. The petitioners indicate that they support the tank car changes proposed in petition P-1577 and the T87.6 Task Force Summary Report. Further, the petitioners indicate that PHMSA has the authority and responsibility to institute these new requirements for these tank cars to ensure certainty for stakeholders. The petitioners clearly indicate that expediting regulatory requirements for new tank cars transporting crude oil and ethanol will increase rail transportation safety, remove economic uncertainty, and eliminate increasing risks of future economic harm. As such, petition P-1612 requests that PHMSA act expeditiously by issuing a direct final rule to implement the changes P-1577 and the T87.6 Task Force Summary Report for ethanol and crude oil.

Costs and Benefits

PHMSA believes that the action requested by this petition might have safety benefits, but add additional regulatory burden. However, PHMSA has not conducted an analysis of the possible actions that could result from this petition. The intent of this ANPRM is to gather relevant safety and economic data from the public regarding changes proposed in the petition. The petition did not identify specific costs and benefits. In the petition ACC, API, CI, and RFA indicate that focusing on an expedited rulemaking to adopt the changes proposed in petition P-1577 and the T87.6 Task Force Summary Report for new tank cars transporting crude oil and ethanol is appropriate for a number of reasons. First, the petitioners indicate that there has been a significant increase in rail shipment of crude oil, while most other PG I and II materials shipping patterns have been relatively consistent. The petitioners indicate that the increase in

shipments of both ethanol and crude oil and abundance of available information provides an opportunity to significantly increase the safety of these shipments immediately. The petitioners indicate that delaying further, to allow more time to formulate a rule for unrelated tank car retrofits, would unnecessarily increase the risk of a release in the unlikely event that an incident occur.

Second, the petitioners indicate that tank cars for crude oil and ethanol service are currently being manufactured. The petitioners indicate that delays in establishing a new construction standard for these tank cars may result in many tank cars being manufactured that do not meet future requirements. The petitioners indicate that this is impractical and would increase compliance costs significantly. The petitioners indicate that many tank cars may be required to go back to the shop for retrofits which will increase demand for shop space and delay tank cars from being placed back into service.

Finally, petition P-1612 states that “many builders and shippers have made significant capital investments in tank cars built to P-1577 and T87.6 construction standards in good faith, expecting PHMSA’s approval of that standard.” The petitioners indicate that the involvement of the DOT in the T87.6 Task Force and the safety improvements contained in the T87.6 Task Force Summary Report gave industry the impression that the changes would be codified. Petition P-1612 goes on to state, “As a result, those cars should be considered in compliance with any regulatory requirements included in the final rule without being required to undergo retrofits.”

Comments and Questions

- PHMSA requests comments on P-1612. Please provide comments and data on the costs and benefits, as well as environmental and small businesses impacts, of granting the

action requested by the petitioner. PHMSA asks commenters to consider the potential economic and safety implications associated with the petition. In addition, PHMSA specifically requests comments on the following questions:

- What are the implications on public safety of PHMSA addressing standards for new construction of tank cars used to transport ethanol and crude oil without also considering enhancements to the existing fleet?
- Petition P-1612 states that PHMSA should, “initiate an expedited rulemaking on regulatory requirements for new tank car construction standards for cars transporting crude oil and ethanol as a stand-alone rulemaking and address potential retrofits proposals at a later date in a separate rulemaking.” Would such a requirement include ethanol and crude oil in PG I, II, and III?
- What are the costs and benefits of requiring ethanol and crude oil in PG III to be shipped in DOT Specification 111 tank cars that are CPC 1232-compliant?
- Petition P-1612 states that the “Petitioners continue to support P-1577 and the T87.6 Task Force recommendations, which recommend no retrofit requirements for the existing fleet of tank cars carrying crude oil and ethanol.” Please provide the safety benefits and costs associated the following key considerations of P-1577 and the task force from both a tank car design and operations standpoint:
 - Enhancing the tank car by:
 - Constructing tank cars to 286,000 lb. GRL standards;
 - Increasing head and shell thickness to 1/2 inch for TC-128B non-jacketed cars and 7/16 inch for jacketed cars;
 - Requiring shells of non-jacketed tank cars constructed of A516-70 to be

9/16 inch thick;

- Requiring shells of jacketed tank cars constructed of A516-70 to be 1/2 inch thick;
 - Equipping cars with at least a 1/2 inch half-head shields;
 - Requiring heads and the shells to be constructed of normalized steel;
 - Requiring top fittings to be protected by a protective structure as tall as the tallest fitting;
 - Requiring a reclosing pressure relief valve to be installed;
 - Adding thermal protection to address breaches attributable to exposure to fire conditions;
 - Adding roll-over protection to prevent damage to top and bottom fittings and limit stresses transferred from the protection device to the tank shell;
 - Adding hinged and bolted manways to address a common cause of leakage during accidents and NARS;
 - Eliminating bottom outlet valves; and
 - Increasing outage from 1% to 2% to improve puncture resistance.
- Enhancing rail operations in the following areas:
- Rail integrity (e.g., broken rails or welds, buckled track, obstructions, track geometry, etc.) to reduce the number and severity of derailments;
 - Alternative brake signal propagation systems ECP, DP, EOT to reduce the number of cars and energy associated with derailments;
 - Speed restrictions for key trains; and
 - Emergency response to mitigate the risks faced by response and salvage

personnel, the impact on the environment, and delays to traffic on the line.

- Petition P-1612 makes the following statement, “The increase in shipments of these commodities, which should create a sense of urgency to ensure they are moved as safely as possible, combined with PHMSA’s understanding of their properties and a wealth of technical information to draw from, provides an opportunity to significantly increase the safety of these shipments immediately.” Please provide any available technical information and justification that clearly indicates what is meant by the statement “significantly increase the safety of these shipments.”
- Considering the statement from petition P-1612 and the request for more technical information and justification in the bullet above, please provide a quantitative estimate that supports the issuance of a direct final rule as requested by petition P-1612.

Please note the applicable petition number in your submission. A copy of the petition is available in the public docket for this ANPRM, to view go to <http://www.regulations.gov> or DOT’s Docket Operations Office (see ADDRESSES section above).

IV. Regulatory Review and Notices

A. Executive Order 12866, Executive Order 13563, Executive Order 13610 and DOT Regulatory Policies and Procedures

This ANPRM is considered a significant regulatory action under section 3(f) of Executive Order 12866 and was reviewed by the Office of Management and Budget (OMB). The ANPRM is considered a significant regulatory action under the Regulatory Policies and Procedures order issued by the Department of Transportation. 44 FR 11034 (Feb. 26, 1979).

Executive Orders 12866 (“Regulatory Planning and Review”) and 13563 (“Improving

Regulation and Regulatory Review”) require agencies to regulate in the “most cost-effective manner,” to make a “reasoned determination that the benefits of the intended regulation justify its costs,” and to develop regulations that “impose the least burden on society.” Executive Order 13610, issued May 10, 2012, urges agencies to conduct retrospective analyses of existing rules to examine whether they remain justified and whether they should be modified or streamlined in light of changed circumstances, including the rise of new technologies.

Additionally, Executive Orders 12866, 13563, and 13610 require agencies to provide a meaningful opportunity for public participation. Accordingly, PHMSA invites comments on these considerations, including any cost or benefit figures or factors, alternative approaches, and relevant scientific, technical and economic data. These comments, along with the noted petitions and recommendations, will help PHMSA evaluate whether the proposed rulemakings are needed and appropriate.

B. Executive Order 13132

Executive Order 13132 requires agencies to assure meaningful and timely input by state and local officials in the development of regulatory policies that may have “substantial direct effects on the states, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.” We invite state and local governments with an interest in this rulemaking to comment on any effect that revisions to the HMR may cause.

C. Executive Order 13175

Executive Order 13175 requires agencies to assure meaningful and timely input from Indian tribal government representatives in the development of rules that significantly or uniquely affect Indian communities by imposing “substantial direct compliance costs” or

“substantial direct effects” on such communities or the relationship and distribution of power between the Federal Government and Indian tribes. We invite Indian tribal governments to provide comments on the costs and effects the petitions and recommendations could have on them, if adopted.

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

Under the Regulatory Flexibility Act of 1980 (5 U.S.C. §§ 601 *et seq.*), we must consider whether a rulemaking would have a “significant economic impact on a substantial number of small entities.” “Small entities” include small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations under 50,000.

It is possible that if PHMSA proposes to adopt the revisions suggested in the petitions for rulemaking and NTSB Recommendations, there may be a “significant economic impact on a substantial number of small entities.” As such, we would like small entities’ input on the issues presented in this ANPRM. If you believe that revisions to the HMR would have a significant economic impact on a substantial number of small entities, please provide information on such impacts.

Any future proposed rule would be developed in accordance with Executive Order 13272 (“Proper Consideration of Small Entities in Agency Rulemaking”) and DOT’s procedures and policies to promote compliance with the Regulatory Flexibility Act to ensure that potential impacts on small entities of a regulatory action are properly considered.

E. Paperwork Reduction Act

In accordance with the Paperwork Reduction Act (44 U.S.C. §§ 3501 *et seq.*), 5 C.F.R. §

1320.8(d) requires that PHMSA provide interested members of the public and affected agencies an opportunity to comment on information collection and recordkeeping requests. This ANPRM does not impose new information collection requirements. Depending on the results of our request for comments to this ANPRM, a decrease may result in the annual burden and costs under OMB Control Number 2137-0559. This reduction would be based on P-1507.

Specifically, the burden associated with submitting an approval application would be reduced if PHMSA adds language that enables FRA to publish guidance on specific elements of non-conformity that would no longer be subject to approval by the Associate Administrator for Railroad Safety.

PHMSA specifically requests comments on the information collection and recordkeeping burdens associated with this ANPRM.

F. Environmental Assessment

The National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4375, requires that federal agencies analyze proposed actions to determine whether the action will have a significant impact on the human environment. The Council on Environmental Quality (CEQ) regulations require federal agencies to conduct an environmental review considering (1) the need for the proposed action, (2) alternatives to the proposed action, (3) probable environmental impacts of the proposed action and alternatives, and (4) the agencies and persons consulted during the consideration process. 40 C.F.R. § 1508.9(b). PHMSA welcomes any data or information related to environmental impacts that may result if the petitions and recommendations are adopted, as well as possible alternatives and their environmental impacts.

G. Privacy Act

Anyone is able to search the electronic form of any written communications and

comments received into any of our dockets by the name of the individual submitting the document (or signing the document, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement, published in the Federal Register on April 11, 2000 (65 FR 19477) or you may visit <http://www.dot.gov/privacy.html>.

H. Executive Order 13609 and International Trade Analysis

Under Executive Order 13609, agencies must consider whether the impacts associated with significant variations between domestic and international regulatory approaches are unnecessary or may impair the ability of American businesses to export and compete internationally. In meeting shared challenges involving health, safety, labor, security, environmental, and other issues, regulatory approaches developed through international cooperation can provide equivalent protection to standards developed independently while also minimizing unnecessary differences.

Similarly, the Trade Agreements Act of 1979 (Public Law 96-39), as amended by the Uruguay Round Agreements Act (Public Law 103-465), prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. For purposes of these requirements, Federal agencies may participate in the establishment of international standards, so long as the standards have a legitimate domestic objective, such as providing for safety, and do not operate to exclude imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards.

PHMSA participates in the establishment of international standards in order to protect the safety of the American public, and we have assessed the effects of the proposed rule to ensure that it does not cause unnecessary obstacles to foreign trade. Accordingly, this rulemaking is

consistent with E.O. 13609 and PHMSA's obligations under the Trade Agreement Act, as amended.

PHMSA welcomes any data or information related to international impacts that may result if the petitions and recommendations are adopted, as well as possible alternatives and their international impacts. Please describe the impacts and the basis for the comment.

I. Statutory/Legal Authority for this Rulemaking

This ANPRM is published under the authority of 49 U.S.C. 5103(b), which authorizes the Secretary of Transportation to "prescribe regulations for the safe transportation, including security, of hazardous materials in intrastate, interstate, and foreign commerce." The petitions and recommendations addressed in the ANPRM purport to address safety issues with the transportation of hazardous materials in commerce. Our goal in this ANPRM is to gather the necessary information to determine a course of action in a potential Notice of Proposed Rulemaking (NPRM).

J. Regulation Identifier Number (RIN)

A regulation identifier number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

Issued in Washington, DC on August 30, 2013, under authority delegated in 49 CFR § 1.97(b).

William Schoonover
Deputy Associate Administrator for Hazardous Materials Safety
Pipeline and Hazardous Materials Safety Administration

[FR Doc. 2013-21621 Filed 09/05/2013 at 8:45 am; Publication Date: 09/06/2013]