DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

49 CFR Parts 171, 172, 173, 174, 175, 176, 177, 178, 179, and 180

[Docket No. PHMSA–2019–0031 (HM–265A)]

RIN 2137–AF47

Hazardous Materials: Modernizing Regulations To Improve Safety and Efficiency

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

ACTION: Advance notice of proposed rulemaking (ANPRM).

SUMMARY: PHMSA is publishing this ANPRM to solicit stakeholder feedback on initiatives PHMSA is considering that may modernize the Hazardous Materials Regulations and improve efficiencies while maintaining or improving a current high level of safety. To fully engage with stakeholders, this ANPRM solicits comments and input on questions related to 46 distinct topics under consideration. Any comments, data, and information received will be used to evaluate and potentially draft proposed amendments.

DATES: Comments must be received by October 3, 2023. However, PHMSA will consider late-filed comments to the extent possible.

ADDRESSES: You may submit comments identified by the docket number PHMSA–2019–0031 (HM–265A) by any of the following methods:

- *Federal eRulemaking Portal: https://www.regulations.gov.* Follow the online instructions for submitting comments.
- *Fax:* 1–202–493–2251.
- *Mail:* Docket Management System, U.S. Department of Transportation, Dockets Operations, M–30, Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, Ground Floor, Room W12–140 in the West Building, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except federal holidays.

Instructions: All submissions must include the agency name and docket number (PHMSA–2019–0031) or RIN 2137–AF47 for this ANPRM at the beginning of the comment. Note that all comments received will be posted without change to *https://www.regulations.gov* including any personal information provided. If sent by mail, comments must be submitted in duplicate. Persons wishing to receive confirmation of receipt of their comments must include a self-addressed stamped postcard.

Docket: For access to the dockets to read background documents or comments received, go to *https://www.regulations.gov* or DOT's Docket Operations Office; see **ADDRESSES**.

Confidential Business Information: Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this ANPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this ANPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as ''PROPRIETARY.'' Submissions containing CBI should be sent to Eamonn Patrick, Standards and Rulemaking Division, Office of Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 1200 New Jersey Ave. SE, Washington, DC 20590–0001. Any commentary that PHMSA receives that is not specifically designated as CBI will be placed in the public docket for this rulemaking.

FOR FURTHER INFORMATION CONTACT: Eamonn Patrick, Standards and Rulemaking Division, Office of Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue SE, Washington, DC 20590, at 202–366–8553.

SUPPLEMENTARY INFORMATION:

Abbreviations and Terms

A4A Airlines for America
AAR Association of American Railroads
ACA American Coating Association
ACC American Chemistry Council
AEI Automatic Equipment Identification
AFFTAC Analysis of Fire Effects on Tank Cars
AFPM American Fuel and Petrochemical Manufacturers
AHS Association of Hazmat Shippers
ANPRM Advanced Notice of Proposed Rulemaking
ANSI American National Standards Institute
APA American Pyrotechnic Association
API American Petroleum Institute
ASTM American Society for Testing and Materials
ATA Air Transport Association
CA Competent Authority
CSC Convention for Safe Containers
COSTHA Council on the Safe Transportation of Hazardous Articles
CT-number Cargo tank registration number
DCE Design Certifying Engineer
DDR Damaged, Defective or Recalled
DGL Dangerous Goods List
DGTA Dangerous Goods Trainers Association
DOT Department of Transportation
EDI Electronic Data Interchange
E.O. Executive Order
EPA Environmental Protection Agency
ERG Emergency Response Guidebook
ERI Emergency Response Information
EX number Explosives approval number
FC number Consumer fireworks approval number
FMCSA Federal Motor Carrier Safety Administration
FMVSS Federal Motor Vehicle Safety Standards
FRA Federal Railroad Administration
HHFT High Hazard Flammable Train
HMR Hazardous Materials Regulations
HMT Hazardous Materials Table
IBC Intermediate Bulk Container
IBR Incorporation by Reference
ICAO TI International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code International Maritime Dangerous Goods Code
IMO International Maritime Organization
IPANA Industrial Packaging Alliance of North America
ISO International Standards Organization
IT Information Technology
LTD QTY Limited Quantity
IVODGA International Vessel Operators Dangerous Goods Association
MAWP Maximum Authorized Working Pressure
NAAHAC North American Automotive Hazmat Action Committee
NBIC National Board Inspection Code
NEW Net Explosive Weight
NOPIC Notification of Pilot in Command
NOTOC Notification of the Captain
NTSB National Transportation Safety Board
NTTC National Tank Truck Carriers
OMB Office of Management and Budget
ORM–D Other Regulated Material-D
PG Packing Group
PHMSA Pipeline and Hazardous Material Safety Administration
PIH Poisonous by Inhalation
POP Performance Oriented Packagings
PRBA Rechargeable Battery Association
PRD Pressure Relief Device
RCRA Resource Conservation and Recovery Act
RVP Reid Vapor Pressure
RI Registered Inspector
RIPA Reusable Industrial Packaging Association
RP Recommended Practice
RRTF Regulatory Reform Task Force
RSPA Research and Special Programs Administration
SAAMI Sporting Arms and Ammunition Manufacturers Institute

TC TDG Transport Canada Transportation of Dangerous Goods regulations
UN United Nations
USCG United States Coast Guard
USWAG Utilities Solid Waste Activities Group

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I. Executive Summary

PHMSA, in consultation with its modal partners, is publishing this ANPRM to solicit stakeholder input on initiatives PHMSA is considering that may modernize its Hazardous Materials Regulations (HMR; 49 CFR parts 171–180) in order to improve hazardous material transportation efficiency, improve transparency and stakeholder engagement, and better accommodate technological innovations—all while maintaining or improving public safety and environmental impacts.

PHMSA regularly reviews HMR requirements to ensure that the regulations continue to serve a useful safety purpose. In accordance with executive order (E.O.) 12866,[1] PHMSA periodically reviews the HMR, and constantly seeks input from the public in the form of regulatory petitions, to ensure that the regulations improve the health, safety, and well-being of the American public without unreasonable costs on society.

On October 2, 2017, the Office of the Secretary of Transportation, consistent with E.O.s 12866, 13771, 13777, and 13783,[2] published a notice in the **Federal Register**[3] titled ''Notice of Regulatory Review'' inviting the public to provide input on existing rules and other agency actions that are good candidates for repeal, replacement, suspension, or modification. Many of the regulatory reform topics discussed in this ANPRM were originally received as comments to the October 2017 notice (hereinafter referred to as the ''2017 Regulatory Reform Notice'').

PHMSA periodically revises the HMR based on changing economic, technological, and safety conditions. Moreover, PHMSA addresses requests to add, amend, or delete a regulation from diverse stakeholders through our petition process (see §§ 106.95–106.105). PHMSA also regularly reviews special permits (documents that permit activities not otherwise allowed under the HMR provided the applicant is able to demonstrate it will maintain an equivalent level of safety) and adopts the provisions of special permits with broad potential applicability and satisfactory safety records into the HMR for general use. Additionally, PHMSA participates in the development of international standards for the transportation of hazardous materials, including the International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI), the International Maritime Dangerous Goods Code (IMDG Code), and the UN Recommendations on the Transport of Dangerous Goods—Model Regulations. PHMSA updates the HMR biennially to reflect the most recent changes in these and other international regulations to maintain harmonization with international requirements and facilitate international commerce.

PHMSA has addressed many of the comments to the 2017 Regulatory Reform Notice regarding the subject of hazardous materials transportation regulation through completed and proposed rulemaking efforts, including:

- HM–219A, *Hazardous Materials: Response to Petitions from Industry to Modify, Clarify, or Eliminate Regulations,* PHMSA–2015–0102.[4] In this final rule, PHMSA amended the HMR in response to 19 petitions for rulemaking submitted by the regulated community to update, clarify, modernize, or provide relief from miscellaneous regulatory requirements.
- HM–219B, *Hazardous Materials: Response to an Industry Petition to Reduce Regulatory Burden for Cylinder Requalification Requirements,* PHMSA–2017–0083.[5] In this final rule, PHMSA amended the requalification periods for certain Department of Transportation (DOT) 4-series specification cylinders in non-corrosive gas service in response to a petition for rulemaking submitted by the National Propane Gas Association.
- HM–219C, *Hazardous Materials: Adoption of Miscellaneous Petitions to Reduce Regulatory Burdens,* PHMSA–2017–0120.[6] In this final rule, PHMSA

[1] 58 FR 51735.

[2] Please note that E.O.s 13771 (82 FR 9339), 13777 (82 FR 12285), and 13783 (82 FR 16093) were revoked by E.O. 13990 (86 FR 7037) on January 21, 2021.

[3] 82 FR 45750, *https://www.regulations.gov/docket?D=DOT-OST-2017-0069.*

[4] 83 FR 55792 (Nov. 7, 2018). *https://www.govinfo.gov/content/pkg/FR-2018-11-07/pdf/2018-23965.pdf.*

[5] 85 FR 68790 (Oct. 30, 2020). *https://www.govinfo.gov/content/pkg/FR-2020-10-30/pdf/2020-22483.pdf.*

[6] 85 FR 75680 (Nov. 25, 2020). *https://www.govinfo.gov/content/pkg/FR-2020-11-25/pdf/2020-23712.pdf.*

amended the HMR in response to 24 petitions for rulemaking submitted by the regulated community between February 2015 and March 2018 to update, clarify, or provide relief from various regulatory requirements without adversely affecting safety.

- HM–233G, *Hazardous Materials: Continued Conversion of Special Permits,* PHMSA–2017–0121. In this NPRM, PHMSA will be proposing to amend the HMR to adopt provisions contained in certain widely used or longstanding special permits that have an established safety record. The proposed revisions are intended to provide greater flexibility and eliminate the need for numerous special permit renewal requests, thus reducing paperwork burdens for the agency and the regulated community and facilitating commerce while maintaining an equivalent level of safety.
- HM–215O, *Hazardous Materials: Harmonization with International Standards,* PHMSA–2017–0108.[7] In this final rule, PHMSA amended the HMR to maintain alignment with international regulations and standards by incorporating various amendments, including changes to proper shipping names, hazard classes, packing groups, special provisions, packaging authorizations, air transport quantity limitations, and vessel stowage requirements. These revisions were necessary to harmonize the HMR with recent changes made to the IMDG Code, the ICAO TI, and the UN Model Regulations.
- HM–265, *Hazardous Materials: Advancing Safety of Highway, Rail, and Vessel Transportation,* PHMSA–2018–0080. In this NPRM, PHMSA will be proposing to amend the HMR to adopt a number of modal-specific amendments that would enhance the safe transportation of hazardous materials. PHMSA, in consultation with the Federal Motor Carrier Safety Administration (FMCSA), the Federal Railroad Administration (FRA), and the United States Coast Guard (USCG), will propose amendments identified during Departmental review and from stakeholder petitions for rulemaking.

The Department has received additional regulatory modernization topics through petitions and internal review efforts. PHMSA believes these additional topics reflect changing technologies, transportation trends, and economic conditions and therefore deserve our consideration. However, PHMSA understands there is value in obtaining additional information on the potential safety and economic impacts for these topics to inform specific changes to the HMR in the future. Thus, the intent of this ANPRM is to raise awareness about these topics, gather more information, and further evaluate the safety and environmental benefits as well as the feasibility of proposing changes to the HMR. PHMSA will review and evaluate all comments received and late-filed comments to the extent practicable.

II. Objective

Federal Hazardous Materials Transportation law authorizes the Secretary to ''prescribe regulations for the safe transportation, including security, of hazardous materials in intrastate, interstate, and foreign commerce'' (49 U.S.C. 5101 *et seq.*). The Secretary has delegated this authority to PHMSA (49 CFR 1.97(b)). The HMR are designed to achieve three primary goals: (1) ensure that hazardous materials are packaged and handled safely and securely during transportation; (2) provide effective communication to transportation workers, emergency responders, and the general public of the hazards of the materials being transported; and (3) minimize the consequences of an accident or incident should one occur. The hazardous materials regulatory system is a risk management system that is prevention-oriented and focused on identifying safety or security hazards and reducing the probability and consequences of a hazardous material release.

As new technologies are developed, understanding of the risks inherent in the transportation of hazardous materials may change. New technologies can potentially provide new opportunities to improve packaging, hazard communication, and incident minimization. PHMSA recognizes new technologies and techniques can potentially reduce costs and burdens to society but remains focused on our primary mission to protect people and the environment by advancing the safe transportation of hazardous materials, including energy products, that are essential to our daily lives. Any change to the existing safety system in the HMR—*e.g.,* containment, communication, and incident mitigation—must be carefully evaluated when considering cost savings or cost burdens from a regulation.

Therefore, we are publishing this ANPRM to solicit comments on the safety, environmental, and economic impacts of regulatory modernization initiatives suggested by the regulated community and other stakeholders. To assist us in properly compiling information that we receive, when responding to a specific question below, please note the topic letter and question number in your comment. When providing estimates of economic impact or other quantitative information, please describe the basis for estimates, including data sources and calculations. With respect to cost data, both granular (*i.e.,* per unit costs), aggregate, and programmatic (both one-time implementing and recurring) cost data are particularly helpful in PHMSA's evaluation of proposed changes to the HMR. When estimates are approximate or uncertain, consider using a range or specifying the distribution in other ways. For example:

B. Non-Bulk Packaging, Intermediate Bulk Container, and Large Packaging Periodic Retest Extension

9. The total cost of each non-bulk drum design periodic recertification is approximately $XXX. We estimate total spending on package recertifications is $XXXXX for our company annually. If PHMSA were to change those recertification requirements to allow a longer interval between required recertification events as discussed in the ANPRM, we believe this would result in a total additional cost savings to our company of $XXX annually. We also anticipate one-time implementation costs (pertaining to initial training and updating of documentation) of $XXX and recurring costs of $XXX annually.

III. Topics Under Consideration

A. Evaluation of Carrier Maintenance of Emergency Response Information

Carriers that transport hazardous material must maintain emergency response information (ERI) that meets the requirements of § 172.602 onboard their motor vehicle, train, plane, or vessel. In accordance with § 172.602, ERI must be immediately accessible to train crew personnel, drivers of motor vehicles, flight crew members, and bridge personnel on vessels for use in the event of incidents involving hazardous materials as well as emergency responders and representatives of government agencies conducting an investigation.

PHMSA requests comment on the continued utility of this requirement given advancements in technology and greater availability of resources, such as the Emergency Response Guidebook (ERG), to the emergency responder community. Specifically, PHMSA requests comment on the following questions:

[7] 85 FR 27810 (May 11, 2020). *https://www.govinfo.gov/content/pkg/FR-2020-05-11/pdf/2020-06205.pdf.*

1. Should ERI be required to accompany shipments of hazardous materials? If no, what alternatives should be considered that maintain existing levels of safety?

2. How does, if anything, the utility or value of ERI vary under § 172.602 in the different modes of transportation?

a. In highway and rail accidents, is emergency response generally conducted by emergency responders rather than carrier personnel? Explain.

b. How much do emergency responders rely on the ERI provided by the highway or rail carrier, or do they rely on their own?

c. For air and marine vessel incidents, are carrier personnel engaged in response actions? Explain.

d. Does air and vessel incident response depend to a larger degree on ERI maintained by the carrier compared to highway and rail?

3. Provided an equivalent level of safety can be maintained, what are the potential cost savings involved in revising the ERI requirements under § 172.602?

a. Would revisions to § 172.602 in effect ''shift'' the costs of maintaining ERI to entities other than the carrier, such as emergency responders affiliated with tribes, states, counties, or localities?

4. Are there differences in the reliance on the carrier's copy of ERI between different types of emergency responders? Differences to consider include urban and rural organizations, professional and volunteer, and different response branches such as law enforcement officers and firefighters.

B. Non-Bulk Packaging, Intermediate Bulk Container, and Large Packaging Periodic Retest Extension

Packaging standards for UN Performance Oriented Packagings (POP), also referred to as UN specification packagings, Intermediate Bulk Containers (IBCs), and Large Packagings, are performance-based, rather than highly prescriptive. The HMR provide general standards and instructions for the construction of UN specification packagings and IBCs in part 178, subparts L and N, respectively. However, in order to be qualified to bear a UN specification packaging mark, each non-bulk packaging or IBC design must pass qualification tests in part 178, subparts M and O, respectively. After a design has been initially qualified, the HMR require that each non-bulk single packaging design and IBC design must undergo a periodic retest at least every 12 months (see §§ 178.601(e) and 178.801(e)). Each non-bulk combination packaging design and Large Packaging design must undergo periodic retest at least every 24 months (see §§ 178.601(e) and 178.955(e)). These tests are intended to demonstrate that the manufacturer's packagings continue to meet the standards required for the safe transportation of hazardous materials.

The Research and Special Programs Administration (RSPA)—PHMSA's predecessor agency—adopted UN POP standards into the HMR on December 21, 1990, in a rulemaking known as HM–181 (55 FR 52402).[8] The UN POP system replaced the existing system of heavily prescriptive packaging requirements.

Those prescriptive requirements accommodated limited innovation in package design and qualification and contributed to a sizable code of regulations through unnecessary duplication of regulatory text. At the time the UN POP standards were proposed, RSPA received comments stating opposition to periodic packaging testing requirements after initial qualification. Commenters specifically requested that no ''requalification'' testing be required unless a design change was made to the packaging because of the time and expense involved in annually testing packagings. In response to these comments, RSPA stated its understanding that conducting periodic packaging testing every 12 months was not, by itself, sufficient to ensure each packaging produced by a manufacturer would meet the required performance standards. RSPA stated the expectation that manufacturers would need to take additional measures, such as testing an increased number of samples or testing samples to more stringent levels (*e.g.,* higher drops or increased hydrostatic test pressures) and implementing quality control programs to ensure that each packaging they produced met the UN POP standards.

Additionally, RSPA noted that a 12-month periodic retesting requirement was a relaxation of testing requirements for many packaging types, compared to the previous packaging standards in the HMR. However, RSPA acknowledged that this requirement would be particularly onerous for manufacturers of non-bulk combination packagings because of the large number of very similar designs in production, and therefore allowed a number of variations in package design that would not require retesting (see § 178.601(g)) and extended the periodic retest requirement to 24 months for non-bulk combination packagings. See pages 55 FR 52459–52460 of final rule HM–181 for further details on RSPA's response to commenters regarding implementation of UN POP standards.

Several comments related to the periodic retest requirement for UN specification non-bulk packagings and IBCs were submitted to the 2017 Regulatory Reform Notice docket. The Reusable Industrial Packaging Association (RIPA),[9] the Industrial Packaging Alliance of North America (IPANA),[10] and the Sporting Arms and Ammunition Manufacturers Institute (SAAMI) [11] requested that PHMSA extend the periodic retesting interval to up to five years for UN specification non-bulk packagings and IBCs to align with international standards that permit longer retest intervals and to reflect the higher quality manufacturing practices now in place in the packaging industry. After the comment period of the 2017 Regulatory Reform Notice closed, IPANA submitted a petition for rulemaking, P–1713,[12] and SAAMI submitted a petition designated P–1732 [13] re-iterating their request.

PHMSA notes that, unlike many other countries, when the UN POP standards were adopted into the HMR, we did not require that packaging manufacturers send their packagings to an independent third-party laboratory for design qualification and periodic retesting. Rather, we allowed, and continue to allow, non-bulk UN specification packaging and IBC manufacturers to ''self-certify'' their own packagings by conducting the required tests and recording the results. PHMSA is requesting comment on the following questions to evaluate RIPA, IPANA, and SAAMI's requests:

1. Can a package manufacturer or a UN Third-Party Packaging Certification Agency demonstrate through data, modeling, or other means, that a packaging design that is tested every 60 months performs as well as a design tested every 12 to 24 months? Explain.

2. How have manufacturers' quality assurance procedures evolved and improved since the implementation of UN POP system? Please provide specific examples for all packaging types believed to warrant a longer design qualification interval.

[8] *https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/standards-rulemaking/rulemakings/archived-rulemakings/72931/55-fr-52402-final-rulereducedsize.pdf.*

[9] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2634.*

[10] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2667.*

[11] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-1479.*

[12] *https://www.regulations.gov/docket?D=PHMSA-2018-0053.*

[13] *https://www.regulations.gov/docket?D=PHMSA-2019-0069.*

3. For trade associations who represent packaging manufacturers, what percentage of packaging manufacturers in the United States have implemented improved quality assurance procedures for UN POP (non-bulk, Large Packagings, and IBCs) since the current system was adopted in the HMR in 1990?

4. For trade associations and packaging manufacturers, how frequently are internal quality control tests conducted by manufacturers?

a. What types of tests?

b. Does every U.S. IBC and non-bulk specification packaging manufacturer follow the same internal quality control program? If not, are there similarities among these manufacturers' quality control programs? Are there best practices?

c. Is there a voluntary consensus standard (*e.g.,* ISO, ASTM, etc.) used to normalize these internal quality control tests such that the standard could be incorporated by reference into the HMR?

5. Are there similar quality control methods used for all the different types of packagings (*e.g.,* steel drums, fiberboard boxes, composite IBCs, etc.)? If not, how do the quality control methods differ by packaging type?

6. For trade associations who represent packaging manufacturers, or packaging manufacturers, how many how many non-bulk, Large Packaging, and IBC packaging designs are currently in production in the U.S.? Please provide information by type and whether the packagings are single packagings or combination packagings (*e.g.,* 5,000 combination package 4G fiberboard box designs, 1,500 single package 1A1 non-removable head steel drum designs, etc.).

7. Of the current UN POP designs in production in the U.S., what percentage(s) are variations on tested designs produced without further testing under § 178.601(g)?

8. What is the cost of periodic retesting of a packaging for self-certifiers (*i.e.,* manufacturers who certify their own packagings)? Please provide information by type (*e.g.,* $1,000 for a 4G combination package fiberboard box design, $3,500 for a composite IBC design, etc.).

a. For a typical manufacturer, how much does periodic recertification cost on an annual basis?

9. What is the total cost of a non-bulk, Large Packaging, and IBC packaging periodic recertification for manufacturers who use UN Third-Party Packaging Certification Agencies to certify their packagings? Please provide information by type (*e.g.,* $1,000 to recertify a 4G combination packaging fiberboard box design, $3,500 to recertify a composite IBC design, etc.).

a. For a typical manufacturer, how much does periodic recertification cost on an annual basis?

10. Given the variability in packaging types encompassed by non-bulk, Large Packaging, IBC POP standards and the differing capabilities of manufacturers, would it be more effective to consider extension of periodic retest periods on a case-by-case basis through issuance of approvals, as provided by §§ 178.601(e), 178.801(e) and 178.955(e)?

11. Would packaging manufacturers be willing to submit packagings to UN Third-Party Packaging Certification Agencies for testing, in lieu of self-certification, in order to have a longer interval between periodic qualifications? Why or why not?

12. Do the users of non-bulk packagings, IBCs, or Large Packagings support an extension of the periodic qualification interval? Why or why not?

13. How would the extension of the periodic qualification interval impact costs or savings for users of non-bulk packagings, IBCs, or Large Packagings? Please quantify the impact on burden hours for employees using Bureau of Labor Statistics labor categories, if possible.

C. Use of Non-Bulk Package Test Samples for Multiple Tests

The HMR require that all non-bulk UN POP designs, also known as UN specification packagings, be tested in accordance with the requirements in part 178, subpart M. These testing requirements specify the types of tests that must be conducted, and the number of samples of packages that must be subjected to the tests. Generally, the HMR do not allow sample packages to be reused for multiple tests, *i.e.,* a drum that is dropped as part of a drop test cannot be used for the stacking test (see § 178.601(k)(1)).

In 2017, PHMSA issued Letter of Interpretation Reference Number 16–0154,[14] which confirmed that package test samples may not be reused for multiple tests, unless authorized by the terms of an approval (see § 178.601(k)(2)). PHMSA has issued approvals authorizing the reuse of package test samples for different tests to approved UN Third-Party Packaging Certification Agencies and other entities. IPANA submitted a comment [15] to the 2017 Regulatory Reform Notice requesting that PHMSA rescind Letter of Interpretation 16–0154. PHMSA maintains the position that this letter of interpretation is correct based on the current requirements of the HMR. However, we are willing to consider revising the HMR to permit the reuse of packages for different tests for all package designs without approval from the Associate Administrator. To evaluate this potential change to the HMR, PHMSA requests comment on the following questions:

1. How many package designs would benefit from the option to re-use a test sample for another test (*i.e.,* use a sample package from the drop test for the stack test)?

2. How much time would be saved for each design so tested? What type of employee would save time? (Use Bureau of Labor employee category codes, if possible.)

3. How many fewer test samples would be required for each design so tested?

4. What are the cost savings, per design test or design recertification test cycle, by reusing test samples for additional tests?

5. Are there certain combinations of design tests that are most suited for use of one sample across multiple tests? Are there certain tests that should not be allowed to be performed with tests samples subjected to other tests?

6. In practice, would sample reuse be limited to certain packaging designs, types, and packaging materials? Please provide the packaging types and materials.

7. Would permitting package sample reuse increase test failures and associated costs with re-running certification tests? Please explain your reasoning.

8. If sample reuse is permitted, what is the potential impact on safety?

a. Would permitting sample reuse cause packaging designers to create more robust packaging designs? If so, how?

b. Is there any possibility that allowing reuse would degrade safety in packaging designs? If so, how?

c. Is there any concern that it will be more difficult to determine the root cause of a packaging test failure if the sample has been subjected to multiple tests?

D. Aerosol Classification Alignment

Section 171.8 of the HMR define an ''aerosol'' as:

> an article consisting of any non-refillable receptacle containing a gas compressed, liquefied or dissolved under pressure, the sole purpose of which is to expel a nonpoisonous (other than a Division 6.1

[14] *https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretation%20Files/2017/160154.pdf.*

[15] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2667.*

Packing Group III material) liquid, paste, or powder and fitted with a self-closing release device allowing the contents to be ejected by the gas.

Aerosols are limited to 1 L in capacity and are eligible to be shipped as a limited quantity in accordance with § 173.306(a)(3), (a)(5) and (b). These limited quantity exceptions allow for alternative packaging, specifically: non-specification non-refillable containers; DOT-specification DOT 2P, DOT 2P1, DOT 2Q, DOT 2Q1 or DOT 2Q2 non-refillable metal receptacles; or DOT-specification DOT 2S non-refillable plastic receptacles. Eligibility for the different containers (non-specification, DOT 2P, 2Q or 2S) is dependent on the pressure and flammability of the contents (*i.e.,* Division 2.1 aerosols are not permitted in DOT 2S plastic receptacles, and 2Q containers can contain material at higher pressures than 2P containers; see § 173.306(a)(3) for further details). The limited quantity exception also provides hazard communication exceptions that facilitate commerce while maintaining a level of safety corresponding to the level of hazard present for the aerosols.

In the § 172.101 Hazardous Materials Table (HMT), there are five entries for UN1950 aerosols:

- Aerosols, corrosive, *Packing Group II or III,* 2.2 (8)
- Aerosols, flammable, 2.1
- Aerosols, flammable, n.o.s. (*engine starting fluid*), 2.1
- Aerosols, non-flammable, 2.2
- Aerosols, poison, *Packing Group III,* 2.2 (6.1)

These entries do not address other possible combinations of propellants and the liquid, paste, or powder contained in the aerosol (*i.e.,* a Division 2.1 flammable aerosol with a subsidiary hazard of Class 8). The ICAO TI edition currently incorporated by reference in the HMR (the 2021–2022 edition) lists 11 types of UN1950 aerosols authorized for transportation by aircraft:

- Aerosols, *flammable,* 2.1
- Aerosols, *flammable, containing substances in Division 6.1 PG III and substances in Class 8, PG III,* 2.1 (6.1, 8)
- Aerosols, *flammable, corrosive, containing substances in Class 8, PG III,* 2.1 (8)
- Aerosols, *flammable (engine starting fluid),* 2.1
- Aerosols, *flammable, toxic, containing substances in Division 6.1 PG III,* 2.1 (6.1)
- Aerosols, *non-flammable,* 2.2
- Aerosols, *non-flammable, containing substances in Division 6.1 PG III and substances in Class 8, PG III,* 2.2 (6.1, 8)
- Aerosols, *non-flammable, containing substances in Class 8, PG III,* 2.2 (8)
- Aerosols, *non-flammable (tear gas devices),* 2.2 (6.1)
- Aerosols, *non-flammable, toxic, containing substances in Division 6.1, PG III,* 2.2 (6.1)
- Aerosols, *oxidizing* 2.2 (5.1)

The IMDG Code Dangerous Goods List (DGL) lists only one entry for UN1950 aerosols, which is associated with Special Provision (SP) 63. SP 63 directs shippers to classify the primary hazard as Division 2.1 flammable gas or Division 2.2 non-flammable gas, based on the flammability of the contents of the container, and then assign a Class 8 or Division 6.1 subsidiary hazard as necessary based on the nature of the contents to be expelled. The IMDG Code also authorizes Division 6.1, PG II and Class 8, PG II subsidiary hazard materials in aerosols, which the ICAO TI do not. The HMR currently allow Class 8, PG II subsidiary hazard materials in aerosols, but not Division 6.1, PG II. In practice, despite having only a single UN1950 entry for aerosols in the DGL, the IMDG Code acknowledges an even broader list of possible classifications for aerosols than the ICAO TI. The lack of alignment between the HMR and international regulations for aerosol classification creates confusion for shippers and carriers engaged in international shipments.

Matson Navigation submitted petition P–1698 [16] requesting that PHMSA authorize Class 6.1 PG II material in aerosols for highway, rail, and vessel transport, and that we amend the HMR to include additional UN1950 aerosol entries in the HMT to account for Division 2.1 aerosols with subsidiary Division 6.1. The petition also requests that we align with the IMDG Code's 120 mL size restriction for aerosols with a 6.1 subsidiary hazard. PHMSA requests comment on the following questions to evaluate Matson Navigation's petition to allow subsidiary 6.1, PG II materials in aerosols for highway, vessel, and rail transportation, and create new entries in the HMT:

1. How many shipments of Division 2.2 (6.1), PG II and Division 2.1 (6.1), PG II aerosols would move within the U.S. per year if authorized? Please provide estimates for marine vessel, highway, and rail separately, if possible.

2. Are there any known international incidents involving Division 6.1, PG II aerosols, including those shipments that have entered the U.S.? Explain.

3. What would be the cost savings, per shipment, associated with allowing Division 2.2 (6.1) PG II and Division 2.1 (6.1) PG II material to be transported as an aerosol?

a. Would shippers be able to reduce costs by switching to less expensive packaging authorized in § 173.306(a)(3)? How much would shippers save per packaging or shipment?

b. How much time would shippers save due to the reduced hazard communication requirements associated with limited quantity shipments by highway, rail, and vessel? What categories of employees would save time? (Use Bureau of Labor Statistics labor categories, if possible.)

4. Do you support adoption of the IMDG Code 120-mL limit for Division 2.2 and Division 2.1 (6.1) PG II aerosols transported by highway, rail, and marine vessel? Marine vessel only? Why or why not?

a. Do you support adoption of the 120-mL limit for Division 2.2 and Division 2.1 (6.1) PG III aerosols that currently do not have a 120-mL limit when transported under the HMR? Why or why not?

5. How would the creation of additional entries on the § 172.101 HMT for Division 2.1 aerosols with subsidiary hazards decrease confusion and facilitate international commerce?

6. Should aerosols in Division 2.2 and Division 2.1 with a subsidiary hazard of 6.1 PG II be required to bear markings indicating the package is forbidden for transportation aboard aircraft?

a. Would such a marking reduce the risk that a forbidden aerosol would be transported aboard an aircraft? Explain your reasoning.

7. How often are shipments frustrated by the current disharmony between the HMR and international regulations? How many shipments are frustrated on an annual basis?

a. What are the direct and indirect costs of a frustrated shipment? For example, what amount of delay occurs and what are the costs of this delay? Are ''demurrage''—*i.e.,* delayed ship loading or unloading—fees charged because of these delays? If so, how much are these fees on a per-shipment basis?

b. What amount of revenue is forfeited when a shipper or carrier declines to offer or transport a potentially non-compliant aerosol shipment?

E. Residue IBC Exceptions

The HMR generally require that a package that contains a residue of a hazardous material must be transported in the same manner as when it contained a greater quantity of material (*i.e.,* as if it was full, see § 173.29(a)).

[16] *https://www.regulations.gov/docket?D=PHMSA-2017-0021.*

However, § 173.29(c) provides exceptions for non-bulk packages containing the residue materials covered by Table 2 of the § 172.504 placarding table. RIPA submitted petition P–1618 [17] to PHMSA a comment [18] to the 2017 Regulatory Reform Notice, and a revised petition in 2020 [19] requesting that we also provide an exception for IBCs containing the residue of hazardous material (residue IBCs), similar to the existing exception for residue in a non-bulk package. RIPA's request is summarized as follows:

- Create an exception for IBCs containing a residue (not more than 0.3 percent full) of Class 3, 4.1, 5.1, 6.1 PG III, 8, or 9 from subparts C–F (shipping papers, marking, labeling, and placarding, respectively) and subpart G Emergency Response Information (ERI). (Shipments not subject to shipping papers are not subject to ERI, see § 172.600(d)). Although not specifically requested by RIPA, exception from the ERI requirements is implicit with a shipping paper exception, and therefore, we mention it here.
- Require a statement on a shipping document carried onboard any vehicle transporting residue IBCs (*e.g.,* a bill of lading or waybill) reading:''This vehicle is carrying emptied intermediate bulk containers (IBCs) that meet the RCRA empty container rule, 40 CFR 261.7, and may contain up to 0.3% of capacity of residues of hazardous materials in Classes 3, 4.1, 5.1, 6.1 packing group III, 8, and 9. These IBCs do not contain residues of any toxic inhalation hazard or Packing Group I hazardous material.''

To support their petition, RIPA cites a bonfire test they conducted on an IBC containing residue of acetone that demonstrated only fire behavior, with no explosion, fragmentation, or fireballs.

Additionally, PHMSA is aware that Transport Canada has issued an equivalency certificate, SU 11819,[20] which grants a similar exception to all RIPA member companies transporting residues of hazardous materials in IBCs in Canada for all modes except air. The conditions of SU 11819 are not identical to RIPA's request in P–1618, specifically in that SU 11819 requires the display of a ''DANGER'' placard on a vehicle transporting residue IBCs and requires that the shipment be accompanied by a transport document identifying the shipment as residue IBCs, the number of IBCs carried, and the primary hazard classes present. There are some additional differences in that SU 11819 allows the IBCs to remain up to 1 percent full and includes materials that P–1618 does not request authorization to transport (Division 4.2, 5.2, and 6.1 other than PIH material) under the exception.

To evaluate creating an exception for residue IBCs, PHMSA requests comment on the following questions:

1. Please provide supporting information describing how the transportation of residue IBCs in accordance with P–1618 maintains an equivalent level of safety compared to the HMR's current requirements for IBCs that contain a residue of hazardous materials.

a. Does the P–1618 request account for the presence of vapors of hazardous materials in the residue IBCs? Please describe.

b. If placarding the motor vehicle carrying residue IBCs is no longer required—and therefore a hazmat endorsement on a Commercial Driver's License is no longer required—how would a carrier ensure that the driver is aware of the hazards of the material he or she is transporting?

2. Do you support adoption of RIPA's request to have the vehicle display no placards or ID number marks for a shipment of residue IBCs? Why or why not? Alternatively, please propose an alternative form of hazard communication for the vehicle.

3. Do you support adopting RIPA's request to have a statement for all shipments paraphrased as follows: ''This vehicle is carrying emptied intermediate bulk containers that may contain up to 0.3% of capacity of residues of hazardous materials in Classes 3, 8, 9, and Divisions 4.1, 5.1, 6.1 (packing group III). These IBCs do not contain residues of any toxic inhalation hazard or Packing Group I hazardous material.'' Why or why not? Should the statement be revised in any way? How so?

4. Do you support a requirement that vehicles carry ERI for the hazardous materials transported under this proposed exception?

5. Do you support RIPA's request to authorize this proposed exception for Class 3, 8, and 9, and Division 4.1, 5.1, 6.1 (PG III only) materials? Why or why not?

6. Do you support limiting the authorization to highway and rail transport only, as requested in RIPA's petition, or include vessel transport as authorized in SU 11819? Please explain your reasoning.

7. How much material should be allowed to remain in the IBC to take this exception? How would the amount of material left in the IBC be verified? Options to consider include alignment of the exception to apply to containers emptied in accordance with:

a. *The SU 11819 standard:* The IBC has been emptied to the maximum extent possible using the most effective method—*e.g.,* can include pouring, upending, pumping, aspirating, scraping, rinsing—for the type of hazardous material and is less than 1 percent full;

b. *RIPA's request:* The residue does not exceed 0.3 percent of the capacity of the packaging and is so certified by the emptier;

c. *The U.S. EPA ''RCRA empty'' standard from 40 CFR 261.7:* No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner; or

d. *An alternative quantity limit:* If you support an alternative quantity limit, please describe and support the limit with any technical or scientific information available to you.

8. Are there any known incidents or accidents involving residue IBCs shipped under Canadian SU 11819 or the European Agreements Concerning the International Carriage of Dangerous Goods by Road (ADR) exception for residue IBCs? If so, please describe. For reference, ADR regulations provide exceptions for emptied IBCs that are similar to the exceptions provided in Canadian SU 11819.

9. Are there any known incidents or accidents involving residue IBCs in the United States where improper emergency response protocols were implemented, due to the lower hazard posed by the small amount of hazardous material present on the vehicle? Please describe.

10. How would offerors of ''empty'' IBCs determine that they meet the 0.3 percent residue requirement before offering?

a. P–1618 uses the term ''emptier,'' which is not a term defined or generally used in the HMR. Please explain the difference between the offeror of a hazardous material for transportation and the ''emptier.''

11. Do you support restricting the exception to transport for purposes of testing/inspection or delivery to a disposal facility, as provided in Canadian SU 11819? Why or why not?

12. Do you support limiting the exception to IBCs with a capacity less than or equal to 550 gallons (2100 liters)—as RIPA requests—or allowing the exception for IBCs of all sizes?

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[17] *https://www.regulations.gov/document?D=PHMSA-2013-0100-0001.*

[18] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2634.*

[19] *https://www.regulations.gov/document/PHMSA-2013-0100-0004.*

[20] *https://www.phmsa.dot.gov/standards-rulemaking/hazmat/transport-canada-su-11819.*

Please justify your response with technical data, if possible.

13. What cost savings would be achieved by shippers and carriers of residue IBCs if this was adopted as proposed by RIPA? Please explain your calculations including the amount of labor required and the rate of compensation for that labor.

a. Please explain the current industry practice for determining the shipping information for residue IBCs (*i.e.,* explain how the material is classified for transportation), and how RIPA's proposal will reduce burdens on shippers and carriers.

b. What, if any, costs savings would be realized if placarding for the vehicle carrying residue IBCs is no longer required, and a driver without a hazmat endorsement is allowed to operate the vehicle?

14. What cost savings would be achieved by shippers and carriers of residue IBCs if the HMR was modified to align with SU 11819? For example, Transport Canada's SU 11819 requires the use of the ''DANGEROUS'' placard and updated shipping documents. Please explain your calculations, including any additional costs accrued through the additional shipping paper statement.

F. Requirements for Damaged, Defective, or Recalled Lithium Cells and Batteries

The HMR permit the shipment of damaged, defective, or recalled (DDR) lithium cells and batteries in accordance with § 173.185(f). These packaging instructions are more stringent than the normal lithium cell and battery instructions found in § 173.185(b), and do not permit the transportation of DDR lithium batteries and cells aboard aircraft. We received a comment [21] from PRBA regarding two distinct issues related to the requirements for transportation of DDR cells and batteries. First, PRBA requested that PHMSA reconsider our limit of one DDR cell or battery per outer packaging. Second, PRBA requested that PHMSA remove the word ''recalled'' from § 173.185(f).

PRBA explained that the use of the word ''recalled'' in § 173.185(f) creates confusion for shippers and causes shippers to offer batteries and devices containing batteries that have been recalled for non-safety related reasons under the damaged, defective, or recalled provisions in § 173.185(f). It was never PHMSA's intent to subject lithium batteries and lithium battery powered devices to the conditions in § 173.185(f) if they had been recalled for a non-safety related purpose. When PHMSA created § 173.185(f) in final rule HM–224F [22] (79 FR 46011; Aug. 6, 2014), we stated:

> The HMR do not currently contain provisions for transporting batteries subject to a manufacturer's recall or that are damaged and potentially dangerous. Based on previously developed guidance material and competent authority approvals, PHMSA will require lithium batteries that have been damaged, identified as being defective, or are otherwise being returned to the manufacturer for safety reasons [emphasis added], to be packaged in combination packages, surrounded by non-conductive cushioning material, and transported by highway or rail only.

While our intent may have been clear in the HM–224F preamble, we acknowledge that the wording of § 173.185(f) could mislead a cautious shipper to ship lithium batteries and battery powered devices that had been recalled for any reason under the more restrictive requirements of this paragraph. Therefore, PHMSA requests comment on the following questions to evaluate PRBA's comment:

Clarification of ''Defective''

1. PHMSA's concerns with DDR batteries include that damaged or defective batteries have a higher chance of thermal runaway and creating fire and explosion in transportation. PHMSA does not consider devices and batteries recalled for non-safety related purposes to be subject to the ''damaged, defective, or recalled'' packing instruction in § 173.185(f). How should PHMSA define ''damaged, defective, or recalled'' for lithium batteries to clearly communicate this distinction?

2. Given PHMSA's intended meaning of ''damaged, defective, or recalled,'' how frequently do shippers prepare lithium battery shipments under the restrictive requirements of § 173.185(f) when the shipment does not actually involve DDR batteries, but batteries that are recalled for reasons other than safety? How many shipments are involved on an annual basis?

a. How common are shipments of non-safety related recalled batteries compared to those of safety related recalled batteries?

3. How much costlier are shipments of DDR batteries than non-DDR battery shipments? What contributes to higher costs for DDR battery shipments relative to non-DDR battery shipments?

a. Who mostly bears these costs of DDR or non-DDR battery shipments? Shippers, manufacturers, or recyclers?

Packaging Requirements for DDR Batteries

4. What techniques, besides a visual examination of the battery, are in use to identify DDR batteries prior to shipment? Please describe any known to you.

5. Do the current requirements for DDR batteries in § 173.185(f) provide an adequate level of safety during transportation for these higher-risk batteries? If not, please describe the safety deficiencies you are aware of and suggest a means to address the deficiency.

6. Describe any technologies, practices, or procedures known to you that could reduce the risks presented by these batteries in transportation.

G. Sampling and Testing Program for Unrefined Petroleum-Based Products

Proper classification of a hazardous material is a cornerstone of the packaging and hazard communication requirements in the HMR. The person who offers a hazardous material for transportation (*i.e.,* the shipper) is responsible for properly classifying the material into one of the nine hazard classes (see § 173.22). In 2015, PHMSA published HM–251,[23] ''Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains'' (80 FR 26643; May 8, 2015) in response to several rail incidents involving derailment of unit trains transporting millions of gallons of crude oil within the United States and Canada. As part of this rule, PHMSA created a specific requirement in the HMR for the sampling and testing of unrefined petroleum-based products to address the variability of the physical properties of these materials (see 80 FR 26652–26653 for further discussion). These sampling and testing plan requirements, which include a recordkeeping component, are found in § 173.41.

PHMSA received two comments in the 2017 Regulatory Reform Notice related to the sampling and testing plan for unrefined petroleum-based products. American Fuel and Petrochemical Manufacturers (AFPM) submitted a comment [24] requesting that PHMSA repeal § 173.41 because it is an unnecessary duplication of the shipper's responsibility to classify (see § 173.22(a)(1)). The American Petroleum Institute (API) submitted a comment [25] requesting that PHMSA clarify and

[21] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2826.*

[22] *https://www.gpo.gov/fdsys/pkg/FR-2014-08-06/pdf/2014-18146.pdf.*

[23] *https://www.govinfo.gov/content/pkg/FR-2015-05-08/pdf/2015-10670.pdf.*

[24] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2785.*

[25] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2766.*

revise the requirements of § 173.41 to simplify the requirements and encourage compliance.

PHMSA believes that the requirements in § 173.41 serve an important role in ensuring the proper classification of unrefined petroleum-based products, which exhibit more variation than refined or manufactured materials. Therefore, we do not anticipate removing this section at this time. However, clarifications of the requirements in § 173.41 could encourage compliance and efficiency—and in turn reduce environmental burdens. PHMSA requests comment on the following questions:

1. Would the adoption in the HMR or incorporation by reference of ANSI/API RP 3000 [26] or parts of it in § 173.41 help clarify requirements and/or improve efficiency?

2. Are there any specific technical requirements or provisions in ANSI/API RP 3000 or it's technical addendums that should be incorporated into the HMR? If yes, please explain.

3. Should PHMSA adopt any of the DOT Special Permits that have been issued in connection with § 173.41 or the testing requirements of § 173.120 (*e.g.* DOT–SP 20861) [27] into the HMR? Why or why not?

4. What specific provisions of § 173.41 for shippers and carriers may improve compliance and efficiency?

a. Provide suggested regulatory text that would revise the identified provisions.

b. Provide detailed estimated costs for the current requirement and projected cost savings for the suggested revised requirements.

c. Provide detailed safety justifications that demonstrate how the revised requirements will meet an equivalent or greater level of safety to the current sampling and testing plan requirement.

H. Basic Oil Spill Response Plan Applicability

In accordance with § 130.31, any person who transports liquid petroleum oil in a packaging with a capacity of 3,500 gallons or greater must have a basic written plan to respond to an oil spill. RSPA instituted the 3,500-gallon threshold for basic oil spill response plans in HM–214/PC–1 Interim Final Rule 2 (IFR–2) [28] published on June 16, 1993 (58 FR 33302). The 3,500-gallon threshold replaced a requirement that would have imposed oil spill response planning requirements on all bulk packages (capacity greater than 119 gallons), which was deemed too burdensome. Rather than all bulk packagings, packagings with a capacity of 3,500 gallons or more containing oil were chosen as an appropriate threshold for basic oil spill planning. The interim final rule noted that the 3,500-gallon capacity criterion is the same as the HMR's bulk packaging registration requirement (see § 107.601(a)(4)), and the Federal Highway Administration's (now FMCSA's) financial responsibility requirement found in 49 CFR part 387.

The Utilities Solid Waste Activities Group (USWAG) submitted a comment [29] to the 2017 Regulatory Reform Notice requesting that PHMSA change the applicability of the requirement to a packaging that contains 3,500 gallons or more of liquid petroleum oil, rather than a capacity of 3,500 gallons. USWAG described scenarios in which their member utilities are required to develop basic oil spill response plans for the transportation of large electrical transformers with liquid capacities over 3,500 gallons that only contained a small residual amount of oil. Since it is possible that releases of liquid petroleum oils subject to part 130 requirements may not be subject to DOT 5800.1 Hazardous Material Incident Report Form requirements, PHMSA does not have complete data on oil spills in transportation. Additionally, PHMSA does not require that persons submit their basic oil spill response plans for approval, therefore we are uncertain how many persons are currently subject to this requirement. PHMSA requests comment on the following questions:

1. How many companies, utilities, or other entities transport liquid petroleum oil in a packaging with a capacity of 3,500 gallons or greater?

a. What percentage of these shipments result in spills and what potential gaps exist in this data?

b. What are the likely consequences and damages, including worst-case consequences?

c. How much higher would damages be for these spills without a basic oil spill response plan?

2. If we were to change the criterion for applicability of the basic oil spill response plan requirement to a packaging *containing* at least 3,500 gallons of oil, rather than a *capacity* of 3,500 gallons, how many companies, utilities, or other entities would be required to create a basic oil spill response plan? Put another way, how many fewer companies, utilities, or other entities would be required to create a basic oil spill response plan? Should regulated entities be instead responsible for a residual waste disposal plan?

3. If we were to change the criterion for applicability of the basic oil spill response plan requirement to a packaging *containing* at least 3,500 gallons of oil, rather than a *capacity* of 3,500 gallons, how many fewer shipments of oil would be transported with a basic oil spill response plan?

4. What is the cost to develop a basic (non-comprehensive) oil spill response plan ''from scratch?'' While other estimation methods are possible, consider describing the cost in terms of the amount of labor required to develop the plan and the rate of compensation for that labor.

5. Are there alternative thresholds for a basic (non-comprehensive) oil spill response plan that PHMSA should consider; for example, a quantity of oil that is between 0 gallons and 3,500 gallons? Please provide experience or knowledge of oil spills from packages covered by the basic oil spill response plan requirements in the United States.

6. Would exceptions for equipment such as electrical transformers containing residue amounts of oil be a more suitable approach?

a. How would this be implemented?

b. What type of oil is found in electrical transformers?

c. Should all types of oil be eligible for this exception?

d. What quantity of oil is typically found in an electrical transformer that is being transported via highway or rail?

7. If we changed the threshold for the requirement from packaging capacity to actual quantity transported, what would be the appropriate threshold for the quantity transported to require a basic oil spill response plan? (*i.e.,* would 3,500 gallons still be the appropriate threshold or should the threshold be lowered?)

8. How would an offeror determine the amount of oil in the packaging prior to offering it into transportation?

I. Standards Incorporated by Reference Update

The HMR incorporate by reference (IBR) approximately 200 technical standards from industry groups, standard-setting organizations, and international organizations as legally

[26] *https://www.api.org/oil-and-natural-gas/wells-to-consumer/transporting-oil-natural-gas/rail-transportation/api-rp-3000.*

[27] *https://www.phmsa.dot.gov/approvals-and-permits/hazmat/file-serve/offer/SP20861.pdf/offerserver/SP20861.*

[28] *https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/standards-rulemaking/rulemakings/archived-rulemakings/62066/58-fr-33302-interim-final-rule.pdf.*

[29] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-1390.*

binding and enforceable parts of the regulations (see § 171.7). The use of IBR materials provides several advantages for the regulated community and PHMSA. It decreases the size and complexity of the HMR by allowing the technical standards applicable to specific activities (*i.e.,* welding thin-walled steel cylinders) to be referenced and incorporated into the regulations without including the actual standard or its text in the HMR. Incorporation by reference encourages industry groups to collaborate and share knowledge to develop consensus documents reflecting best practices in the industry, with the knowledge that PHMSA is willing to incorporate the standard into the HMR as a binding requirement, when appropriate. IBR also allows PHMSA to focus our research and development efforts more efficiently, with the knowledge that industry groups and non-governmental organizations are also constantly working to develop consensus standards in their particular areas of expertise. IBR encourages standardization that supports international commerce as well, through the use of international standards such as ISO gas cylinder design, construction, and testing standards, and international transportation standards, including the ICAO TI and the IMDG Code.

While PHMSA reviews and updates IBR documents regularly, many IBR standards currently in the HMR do not reflect the most current version and may not reflect the state of the art for a particular area of the transport industry. Please note it may also be purposeful on PHMSA's part to not IBR a more recent version based on concerns with a particular edition or IBR a standard in part. In accordance with the Administrative Procedure Act (see 5 U.S.C. 500 *et seq.*) and the requirements of the Office of the Federal Register (see 1 CFR part 51), PHMSA must IBR a specific edition of a document as part of this process. Therefore, whenever a new edition is developed and published, the prior edition (*i.e.,* the IBR edition) will remain the legally binding standard until the new edition is incorporated through the rulemaking process. This lag between publication of a new edition and incorporation into the HMR can create confusion within industry and create difficulties in enforcement as regulated entities acquire the new standard through their memberships to industry groups or through a desire to conform with newly identified best practices, but are legally required by the HMR to follow the previous edition.

In other cases, some members of the regulated community may prefer the older edition and find technical standards are being updated too frequently, citing high costs to purchase new standards, training costs, and other costs. Additionally, the incorporation of an older industry standard may not necessarily create a conflict as an entity conforming to the incorporated edition in the HMR can also at the same time be conforming to the most current version for purposes of satisfying condition(s) for a standard setting organization.

PHMSA recognizes that many IBR documents in the HMR are not the most current version of the document available. To address this issue, we request comment on the following questions:

1. Which documents incorporated by reference in § 171.7 are outdated and should be updated to reflect today's best practices in the industry?

a. For each IBR document so identified, what is the most current edition of the standard?

b. For each IBR document so identified, is the newest edition readily available? What is the cost of purchasing the newest edition?

c. For each IBR document so identified, describe the relevant changes from the currently incorporated edition to the newest edition.

d. For each identified change from the current IBR document to the newest standard, please provide supporting rationale for the change based on relevant technical and scientific data.

e. Please provide all available information on the:

i. costs imposed;

ii. cost savings created; and

iii. safety benefits of the changes identified from the current IBR standard in the HMR to the most current industry standard.

f. Please indicate the costs, savings, and benefits to any identifiable groups within society, such as specific companies, industries, or the public.

2. Should PHMSA engage IBR organizations through a semi-annual public meeting to discuss changes to the IBR standards, codes, or best practices?

a. Should PHMSA consider individual, modal specific meetings to address individual transportation modes, IBR standards, codes, or best practices?

3. Please provide any comments related to the development of consensus standards, including the ability of the public to participate during the technical development process and barriers to accessing standards (*i.e.,* cost).

J. EX–Number Display Requirements

The HMR require all new explosives to be approved by PHMSA or other authorized government agency before they can be transported to, from, or within the United States (see § 173.56 for further details). An approved explosive is assigned an explosives approval number, commonly referred to as an ''EX number.'' Consumer fireworks certified under the provisions of § 173.65 are assigned a fireworks certification number, commonly referred to as an ''FC number,'' which is treated equivalently to an EX number for hazard communication purposes. Any interested party can search an EX or FC number using the PHMSA website's approvals search tool [30] and find the document that assigns the explosive to a hazard class and division, as well as any potential special packing instructions for the material.

PHMSA requires that the EX or FC number be displayed on the package used to transport the explosive or on the hazardous material shipping paper (see § 172.320). PHMSA received a comment [31] to the 2017 Regulatory Reform Notice from the American Pyrotechnic Association (APA) requesting that PHMSA add another EX number display option and allow the display of an EX number on a document, such as a ''packing slip,'' that accompanies the shipping paper or on the explosive item itself rather than the outer packaging. Many explosives approved in accordance with the requirements in § 173.56 are approved in conjunction with their packaging, and the classification of the material is dependent on the type, size, and strength of the package. Therefore, PHMSA does not agree with APA that displaying the EX number only on the device provides an equivalent level of information, because it may create the incorrect impression that the device can be packaged at the shipper's discretion, rather than in accordance with the EX approval's instructions. The classification of fireworks certified by a Fireworks Certification Agency (FCA) in accordance with the APA 87–1 standard (see §§ 173.64 and 173.65), however, are not packaging dependent. Therefore, PHMSA is willing to consider revising the HMR to permit certain fireworks (UN0336, UN0335, and UN0431) when approved under the provisions of APA 87–1 and certified by an FCA to be transported with the UN ID number on a packing slip, or only displayed on the devices themselves, rather than on the packaging or shipping paper. Please note that UN0336, UN0335, and

[30] *https://www.phmsa.dot.gov/approvals-and-permits/hazmat/approvals-search.*

[31] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2413.*

UN0431 fireworks approved through the § 173.56 EX approval process are not under consideration for this topic because their classification may be packaging dependent.

To evaluate this revision to the HMR, PHMSA requests comment on the following questions:

1. From an emergency response perspective, how does allowing the transportation of fireworks with FC numbers entered on a document other than a hazmat shipping paper, or on the explosive item rather than the outside packaging, impact the risks of hazardous materials in transportation?

a. Would this change impact the ability to respond in accident situations or create confusion during customs examination for import shipments?

b. How will shippers and carriers ensure that the document remains associated with the package at all times and available to inspectors and emergency responders?

2. How much time would a fireworks shipper save per shipment if these additional options were allowed?

3. What labor category (use Bureau of Labor Statistics labor categories, if possible) of employee would save time per shipment? Alternatively, please provide an hourly wage of the type of employee responsible for complying.

4. How many UN0336, UN0335, and UN0431 fireworks shipments would likely take advantage of this option per year? Approximations and ''ballpark'' estimates are acceptable.

a. Do manufacturers or shippers print/apply the packing slips or display on the device at the same time as they print/apply the packaging/shipping paper? Will these different processes/exceptions for different firework categories be more costly?

5. What is the approximate breakdown of the modes of transportation used for UN0336, UN0335, and UN0431 fireworks shipments (*e.g.,* 50 percent highway and rail, 45 percent vessel, 5 percent air)?

a. Would adoption of the marking method discussed in this section create harmonization issues with relevant international transport regulations? Please explain your reasoning.

6. Should recordkeeping requirements apply to the accompanying document displaying the FC numbers (*i.e.,* packing slip) in the same manner as for a shipping paper?

K. Section 173.150 Ethyl Alcohol Exception

Section 173.150(g) provides exceptions from the packaging and shipment requirements of the HMR for limited quantities of beverages, food, cosmetics and medicines, medical screening solutions, and concentrates containing ethyl alcohol (commonly referred to as ethanol or alcohol). Currently, the applicability of the exception in § 173.150(g) is limited to these items when they are ''sold as retail products.'' PHMSA received a comment [32] to the 2017 Regulatory Reform Notice from the Association of Hazmat Shippers (AHS) requesting that the applicability of the exception be modified to include materials ''suitable for retail sale.'' Section 173.150(g) was added to the HMR based on special permit DOT SP–9275 in special permit conversion rulemaking HM–233C [33] (79 FR 15033; Mar. 18, 2014). However, DOT SP–9275, as written at the time of adoption, did not use the phrases ''consumer commodity,'' ''sold as retail products,'' or ''suitable for retail sale.'' When PHMSA adopted DOT SP–9275, the phrase, ''sold as retail products,'' was added to limit the use of the exception to packages that PHMSA was confident would pose minimal risk in transportation.

AHS believes that limiting applicability of § 173.150(g) to items ''sold as retail products'' unnecessarily limits the use of the exception and creates undue burden on shippers of other consumer type products that contain ethyl alcohol. To evaluate this request, PHMSA requests comment on the following questions:

1. How many shipments are offered under the § 173.150(g) exception today on an annual basis? Approximation is acceptable.

a. What is the average volume of ethyl alcohol solution contained in a completed package transported in accordance with § 173.150(g)?

b. What is the average volume of ethyl alcohol solution per inner package transported in accordance with § 173.150(g)?

2. How many more shipments would be offered annually under the provisions of § 173.150(g) if the applicability language was changed to state, ''suitable for retail sale'' rather than ''sold as retail products?''

a. What amount of cost savings would shippers achieve if the applicability of § 173.150(g) was changed to products ''suitable for retail sale?'' Describe this savings amount in any way you can, whether that involves an individual shipper or a collection of shippers that constitute the distribution channel.

b. What form would these savings take? Specifically, § 173.150(g) is a broad exception from the HMR, so it may include exceptions from specification packaging, labeling, marking, shipping papers, and others. Which exceptions would provide the most savings and be most valuable? How much do each of the exceptions contribute to reducing costs for shippers? You may describe the cost reductions in terms of an example shipment.

c. How many U.S. shippers use this ethyl alcohol exception? What proportion are likely to be small businesses? Approximation is acceptable.

3. Describe scenarios in which a material is not ''sold'' as a retail product but is considered ''suitable for retail sale.'' In other words, how does the change in wording from ''sold'' to ''suitable'' make an impact on the eligibility for the exception?

a. What types of shipments would now be eligible? Do these shipments occur at different points in the supply chain? Do they involve different clients or consumers that are not the end users (*i.e.,* consumers)?

b. Might cost savings be passed on generally to consumers (*i.e.,* reduced prices)?

c. Are materials that are ''suitable for retail sale,'' but not actually sold as retail products, packaged in packagings equivalent to those sold as retail products?

d. Are there additional types of commodities or products that would now be eligible? Would new products be introduced into the market due to modifying this exception?

e. In these scenarios, what types of packages could be used when these materials are not shipped ''suitable for retail sale?''

f. What are the costs, additional risks, and impacts associated with adding ''suitable for retail sale'' to § 173.150(g) to first responders, shippers, and others in the transport chain?

4. Regardless of any change to the applicability of the § 173.150(g) exception, have more shipments of consumer products containing ethyl alcohol been offered based on § 173.150(g) *after* the ORM–D reclassification phase out on December 31, 2020?

5. Would shippers of different modes be differentially affected by this exception? Are there different costs or benefits for shipments by rail, air, highway, or vessel?

6. Have increased shipments of ethyl alcohol-based hand sanitizers during the COVID–19 public health emergency changed the risk profile and usage of this exception? If so, how?

[32] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-1700.*

[33] *https://www.gpo.gov/fdsys/pkg/FR-2014-03-18/pdf/2014-05630.pdf.*

L. Limited Quantity Training Exception

The HMR require hazmat employers to properly train and test all hazmat employees (§ 172.702). Hazmat employees are those who directly affect hazardous materials transportation safety by performing hazmat functions, including those who prepare shipments, manufacture packagings represented as qualified for use with hazardous materials, and transport the material (see § 171.8 for the full definition of ''hazmat employee''). The HMR training requirements are intended to ensure that each hazmat employee has familiarity with the general provisions of the HMR, can recognize and identify hazardous materials, has knowledge of specific requirements of the HMR applicable to functions performed by the employee, and has knowledge of emergency response information, self-protection measures, and accident prevention methods and procedures. The requirements for hazmat employee training are found in part 172, subpart H (§§ 172.700–172.704) and include general awareness, function specific, safety, security, and in-depth security training. Part 172 subpart H also requires that the employer maintain records of the employee's hazmat training, including the employee's training certificate, training materials, and instructor information for at least three years (see § 172.704(d)). Hazmat employees must receive recurrent training at least once every three years under § 172.704(c).

While part 172, subpart H training is generally a basic requirement for all hazmat employees, the HMR provide exceptions to Part 172's training and recordkeeping requirements, including but not limited to exceptions for small, excepted, and de minimis quantities (see §§ 173.4, 173.4a and 173.4b, respectively), materials of trade (see § 173.6), combustible liquids (see § 173.150(f)), and small lithium cells and batteries (see § 173.185(c)).

The AHS submitted a comment [34] to the 2017 Regulatory Reform Docket requesting that PHMSA create a training exception for limited quantity (LTD QTY) shipments of hazardous materials by highway, rail, and vessel, similar to the exception found in the Transport Canada Transport of Dangerous Goods (TDG) regulations section 1.17. To evaluate this proposal, PHMSA requests comment on the following questions:

1. How many hazmat shippers have employees who *only* are involved in pre-transportation functions for LTD QTY material by highway, rail, and vessel?

a. How many hazmat employees in the United States are *only* involved in pre-transportation functions for LTD QTY material by highway, rail, and vessel?

b. Approximately, what are employee turnover rates in the hazardous materials shipping industry? Do the costs of training contribute to the overall costs of turnover for these employees?

c. Is hazmat training typically included with other trainings or conducted separately?

2. How many hazardous material carriers have employees who *only* transport LTD QTY material?

a. How many hazmat employees in the United States are *only* involved in transportation functions for LTD QTY material by highway, rail, and vessel?

b. If these carrier employees, who only transport LTD QTY material, were eligible for a training exception, would a carrier reduce the fees that they charge to hazmat shippers? Our understanding is that some carriers may charge a premium on hazmat shipments in the form of fees or higher rates, which may—or may not—apply to LTD QTY shipments.

c. Is hazmat training typically included with other trainings or conducted separately?

3. How would an LTD QTY-only shipper ensure that LTD QTY requirements are met, including quantity limitations and restrictions from air transportation, if part 172, subpart H training is not required?

4. How would an LTD QTY-only carrier ensure that LTD QTY requirements are met if part 172, subpart H training is not required?

5. For shippers, how much time would be saved annually per LTD QTY-only employee if part 172, subpart H training was not required for employees who solely prepare LTD QTY shipments?

a. What categories of employees would save time? (Use Bureau of Labor Statistics labor categories, if possible.)

b. Specifically, how much time is devoted to recordkeeping for hazmat training on a per employee basis? We assume this is a proportion of the overall amount of training time specified in this question.

6. How much time would be saved annually for a carrier if part 172, subpart H training was not required for drivers who only transport LTD QTY material?

a. What categories of employees would save time? (Use Bureau of Labor Statistics labor categories, if possible.)

7. What is the estimated cost for a shipper to provide LTD QTY-only training for an employee?

8. What is the estimated cost for a carrier to provide LTD QTY-only training for an employee? Is hazmat training typically included with other trainings or conducted separately?

9. Would the creation of a training exception for LTD QTY material increase the number of hazmat incidents and accidents involving LTD QTY material?

a. Would a training exception for LTD QTY material increase the probability that a shipment fails to use the LTD QTY mark/marking? Explain.

b. Please provide the risk analysis conducted to support answers to these questions.

10. The IMDG Code does not provide a training exception for LTD QTY material.

a. Would creating an exception from part 172, subpart H training requirements for LTD QTY shippers and carriers conflict with the IMDG Code and create barriers to international vessel commerce?

b. How will shippers and carriers ensure that employees who prepare LTD QTY shipments transported in accordance with the IMDG Code for vessel transportation meet IMDG Code training requirements?

11. Do hazmat shippers and carriers tend to use consultants or contractors to deliver hazmat training for hazmat employees? Or alternatively, do they tend to conduct their own training ''in-house?'' What is the difference in cost between hiring an outside trainer and conducting in-house training? Are there ways to reduce the cost of training when the required training is limited to LTD QTY shipments?

12. Rather than a training exception for all LTD QTY, should PHMSA limit a training exception to only certain LTD QTY materials, *e.g.,* Class 3, Division 4.1 and Class 9? Explain.

13. For shippers and carriers who operate in Canada, please provide any information available to you relevant to your experiences utilizing this exception in Canada.

M. Exceptions for Small Quantities of Division 4.3, PG I Material

Division 4.3 dangerous when wet materials react, sometimes violently, with water. Communication of a material's dangerous when wet characteristics is therefore crucial to preventing inappropriate emergency response (*e.g.,* attempting to suppress a fire involving Division 4.3 materials with water). Due to the hazard these materials present, Division 4.3 materials

[34] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-1700.*

are listed in Table 1 for placarding in § 172.504, meaning that placards are required on a vehicle transporting of any amount of a Division 4.3 material, unless the material is being transported in accordance with an exception, such as small quantity (§ 173.4), excepted quantity (§ 173.4a), de minimis (§ 173.4b), limited quantity (§ 173.151) or materials of trade (§ 173.6). Division 4.3, PG I materials present an especially significant hazard in transportation and are generally not eligible for limited quantity, small quantity, excepted quantity, de minimis, or material of trade exceptions.

However, PHMSA recognizes that some Division 4.3, PG I materials are packaged in such a way and transported in such small quantities that they present limited risk in transportation. Accordingly, PHMSA issued a Competent Authority (CA) approval CA1996100010 [35] to the Dexsil Corporation, in accordance with § 173.4(c), to allow the transportation of test kits containing very small quantities of Division 4.3, PG I material under the provisions of the § 173.4 small quantity exception. This exception provides users of the test kits in unopened packages relief from many HMR requirements, including training, placarding, and security plans. The USWAG submitted a comment [36] to the 2017 Regulatory Reform Notice requesting that PHMSA adopt the provisions of CA1996100010 into the HMR for general use or expand the small quantity exception to include Division 4.3, PG I material.

USWAG additionally requested that PHMSA modify the security plan requirements for Division 4.3 materials. Currently, the HMR security plan requirements found in part 172, subpart I (§§ 172.800–172.822) require that a shipper or carrier who offers or transports an amount of Division 4.3 material that requires placarding must develop a security plan. As discussed above, any quantity of a Division 4.3, PG I material requires placarding and therefore a security plan (see § 172.800(b)(9)). USWAG describes this as unduly burdensome for electrical utilities who may transport very small quantities of Division 4.3, PG I material in test kits that no longer fall under CA1996100010 due to re-packaging. USWAG requests that PHMSA create a threshold amount of Division 4.3 offered or transported at one time for the security plan requirements to apply and suggests one (1) pound as a starting point for discussion. To evaluate USWAG's requests, PHMSA requests comment on the following questions:

Authorization To Transport Division 4.3, PG I Materials in Accordance With § 173.4

1. How many shipments of Division 4.3, PG I material are transported under the provisions of CA1996100010 annually?

2. How many companies transport Division 4.3, PG I material under the provisions of CA1996100010 annually?

3. Do you support adoption of the provisions of CA1996100010 into the HMR? Explain.

a. What specific provisions in CA1996 (inner package quantity, completed package quantity, packaging type, etc.) are appropriate for inclusion in the HMR? What specific provisions are not?

b. What specific safety concerns exist for transporting Division 4.3 PG I material in accordance with the small quantity exception?

4. Do you support a modification of the HMR to transport Division 4.3 PG I material in accordance with the § 173.4 small quantity exception without a Competent Authority Approval?

a. If yes, please provide justification based on relevant technical and scientific data known to you.

b. If yes, please provide any available information related to the costs and benefits of your proposed action in general, and identifiable groups that are impacted in particular.

c. If yes, please describe the effect of your proposed action on the quality of the natural and social environments.

d. If no, please tell us why you are against expanding this small quantity exception.

Creation of a New Threshold for Security Plans for Division 4.3 Materials

5. In general, how much does it cost to create a security plan for highway carriers of Division 4.3 materials? What would be a low-end estimate and a high-end estimate?

a. We understand the cost may depend on a variety of factors—what are the factors that drive the cost?

b. If your knowledge is limited to your company's experience, provide a general estimate relevant to your company's experience.

c. What type of recurring costs do firms incur to maintain, store, or update security plans?

d. Do security plan costs differ by transport mode or by individual material?

6. How many companies are required to create security plans *solely* to offer or transport Division 4.3 materials?

a. Of these companies, how many only transport Division 4.3 material in quantities less than 1 lb. per vehicle?

i. Of these companies, how much time is spent developing and updating a security plan for the <1 lb. of Division 4.3 material?

ii. What type of employees spend time developing and updating security plans? (Use Bureau of Labor Statistics labor categories, if possible.)

iii. Do these companies generally contract for a security plan developed by third party consultants? Is the decision to contract for the security plan due to limited security expertise within these companies?

7. Is 1 lb. a reasonable threshold for security concerns that should be addressed through a security plan for Division 4.3 material?

a. Please provide justification for your support or opposition to a 1 lb. threshold, including a risk analysis that describes the relative hazards presented by 1 lb. of different Division 4.3 materials, including those that generate a flammable gas and those that generate a poisonous gas.

b. If you oppose the creation of a 1 lb. threshold for security plans for Division 4.3 material, provide an alternative and justification for the alternative threshold.

8. How many kits are typically transported in a utility vehicle during day-to-day operations? Rather than a weight threshold, would it be reasonable for PHMSA to develop a security plan threshold based on a specific number of kits?

a. Please provide justification for your support or opposition to a threshold based on number of kits, including a risk analysis that describes the relative hazards presented by your suggested number of kits that would trigger a security plan, including those that generate a flammable gas and those that generate a poisonous gas.

N. Recycling Safety Devices

Section 173.166(c) requires that the EX-number assigned to a Division 1.4G safety device (*e.g.,* air bag inflators and seat belt pretensioners—see definition in § 173.166 for further details) must be entered on the hazmat shipping paper. Section 173.166(d)(4) provides an exception to this requirement when the safety devices are shipped to a recycling or waste disposal facility.

[35] *https://www.phmsa.dot.gov/approvals-and-permits/hazmat/file-serve/approval/0_CA1996100010_2016100114.pdf/4197059.*

[36] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-1390.*

In 2014, PHMSA published Letter of Interpretation 13–0189 [37] that states safety devices shipped for reuse can use the § 173.166(d)(4) exception and may be shipped without the EX-number on the shipping paper. On October 9, 2017, COSTHA and North American Automotive Hazmat Action Committee (NAAHAC) submitted petition P–1708 [38] requesting that PHMSA revise § 173.166(d)(4) by inserting the word ''metal'' in front of the word ''recycling.'' COSTHA and NAAHAC believe that PHMSA's interpretation of the scope of the exception in § 173.166(d)(4), as discussed in Letter of Interpretation 13–0189, is incorrect. Additionally, COSTHA and NAAHAC believe this interpretation indirectly supports reuse of safety devices, which they do not support.

The intent of the change requested by P–1708 would be to limit the exception provided in § 173.166(d)(4) to shipments related to reuse of the metal components, rather than reuse or refurbishment of the entire safety device. COSTHA and NAAHAC believe that allowing transportation of safety devices for reuse without EX numbers entered on the shipping paper will cause several issues. These include breakdowns in automotive manufacturer's traceability databases used during automotive recalls, increase in consumer safety risks, and violations of the Federal Motor Vehicle Safety Standards (FMVSS) if inappropriate or counterfeit safety devices are installed in a vehicle.

Additionally, COSTHA submitted a comment [39] to the 2017 Regulatory Reform Notice requesting that PHMSA act on P–1708. To evaluate this change, PHMSA requests comment on the following questions:

1. Are materials *other than metal* recovered from safety devices through the recycling process? If so, would the insertion of the word ''metal'' into § 173.166(d)(4) limit the ability to recover non-metal materials and the economic value they may have? Would it result in curtailing or even stopping the recovery of non-metal materials? If so, to what extent?

2. How many salvaged, serviceable 1.4G safety devices are shipped each year? How many are for metal recycling, and how many are for reuse?

3. Is it possible to determine the hazard classification (Class 9 vs Division 1.4G) and EX number, if applicable, of a serviceable safety device pulled out of a vehicle?

a. Are there identifying markings on the safety device or module itself (*e.g.,* stock number, product code)?

b. How much time does it take to determine the hazard classification and EX number, if applicable, of serviceable safety device removed of a vehicle? Qualitatively, is this process of determining the hazard classification and EX number, if applicable, burdensome or is it relatively easy?

4. Would a salvage yard or other such business stop transporting or shipping serviceable 1.4G safety devices to consumers for reuse if they were required to determine and enter the EX number on a shipping paper? What percentage of such businesses would continue selling reused serviceable safety devices despite the additional expense of determining and entering the EX number?

5. The FMVSS generally permit serviceable safety devices to be (re-)installed into a motor vehicle, provided the safety device is (re-)installed into a vehicle of the correct make/model and is not subject to any recalls. How will requiring entry of the EX number on a shipping paper for serviceable airbags being shipped for reuse address concerns related to the National Highway Traffic Safety Administration's FMVSS?

6. Are there any technical standards describing best practices or requirements that ensure the safety of reused safety devices?

7. How will consumers be affected by the proposed change to add the word ''metal?'' Is there the potential for higher costs to consumers (*i.e.,* through reduced consumer surplus) if salvaged safety devices are rendered unavailable for reuse? Put another way, are there economic impacts to consumers if replacement safety devices must be purchased as newly manufactured rather than salvaged?

8. What is the extent of possible impacts on consumer safety? For example, to what extent are consumers currently exposed to purchasing incompatible, damaged, or counterfeit safety devices?

9. Are you aware of any academic or other research that approaches these issues from a cost/benefit perspective? Avoided damages from car accidents are accounted for as ''benefits,'' whereas ''costs'' would include the differential between newly manufactured safety devices and salvaged safety devices. Is it possible to quantify and/or monetize these potential impacts?

10. Are there alternative ways to address the issues raised in P–1708 and associated comment? What additional agencies or organizations should be involved in decision-making? What efforts must be coordinated?

11. What impacts would adoption of the COSTHA proposal have on other federal regulation, or state or local regulations?

12. Are EX-numbers used for tracking and tracing these devices through the supply chain?

O. Creation of Basic Description and Shipping Description Definitions

The HMR contain detailed instructions for the information required to appear on a hazardous material shipping paper in part 172, subpart C (§§ 172.200–205). The core requirement of a hazardous material shipping paper is the information referred to as the ''basic description'' (see §§ 172.202(a)(1)–(4) and 172.202(b)). The four elements of the basic description are the UN identification number (UN ID number), proper shipping name, hazard class, and packing group. This information must be entered in this specific order, and no additional information is permitted to be interspersed in between these four elements unless specifically authorized. Although § 172.202(b) describes the information required by § 172.202(a)(1)–(4) as the ''basic description,'' there is no definition for the term ''basic description'' in § 171.8, the main definition section of the HMR.

Beyond the basic description, additional information is required to complete the full shipping paper entry for a hazardous material. This additional information includes the number and type of packages, quantity of material, and special information required by § 172.203, including the ''RQ'' notation for hazardous substances, and identity of radionuclides for Class 7 material, among others.

In 2015, the Dangerous Goods Trainers Association (DGTA) submitted a petition [40] (P–1655) to PHMSA to create definitions in § 171.8 for the ''basic description'' (information required by § 172.202(a)(1)–(4)) and the ''shipping description'' (basic description and all other information required to appear on the hazmat shipping paper). DGTA stated their belief that the creation of these definitions and accompanying editorial revisions to the shipping paper language in §§ 172.201 and 172.202 would

[37] *https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretation%20Files/2013/130189.pdf.*

[38] *https://www.regulations.gov/document?D=PHMSA-2017-0139-0001.*

[39] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2393.*

[40] *https://www.regulations.gov/docket?D=PHMSA-2015-0129.*

increase clarity of the HMR and decrease confusion for shipping paper preparers. Please note that PHMSA is not contemplating changing the requirements for what information appears on a shipping paper; rather, we are evaluating the creation of definitions to clarify the existing requirements. To evaluate this petition, PHMSA requests comment on the following questions:

1. Would the creation of definitions for ''basic description'' and ''shipping description'' in § 171.8 as described above increase the clarity of the HMR? Why or why not?

a. Is there uncertainty or confusion among regulated entities or enforcement officials related to the information required to appear on a hazardous material shipping paper?

b. To what degree would the creation of definitions for these terms *increase* compliance with shipping paper requirements?

c. Should the definitions of ''basic description'' and ''shipping description'' be different that those presented above?

d. Would the creation of the definitions as discussed improve the international harmonization process?

2. Does any identified uncertainty or confusion related to the information required to appear on a hazardous material shipping paper result in ''frustrated'' shipments and delay?

a. Is there an estimate of the costs of delay to the shipper, carrier, freight forwarder, or customer? This may include estimates of the freight value of time, as well as any fees or surcharges related to resolving alleged non-compliance.

3. Should these definitions be added to § 171.8? If not, what section should they be added to?

P. Removal of the 60-Day Renewal Requirement for Approvals and Special Permits

PHMSA issues renewals of special permits and approvals in accordance with the provisions of §§ 107.109 and 107.705, respectively. Sections 107.109(b) and 107.705(c) authorize the continued use of the special permit or approval until final administrative action is taken on the renewal application, provided that the applicant requests renewal at least 60 days before the special permit or approval expires. PHMSA understands that some stakeholders believe that the requirement to apply for renewal at least 60 days before expiration may be too burdensome on the regulated community. PHMSA is considering changing the requirement to authorize continued use of the special permit or approval until final administrative action is taken on the renewal application, provided the applicant applies for renewal before the special permit or approval expires.

1. Do you support authorizing continued use of special permits and approvals until final administrative action is taken on the renewal application, provided the applicant requests renewal prior to the expiration date? Explain.

2. Would this regulatory flexibility provide any quantifiable monetary or other benefits for a holder of a special permit or approval? If so, please provide information related to any known benefits or decreased costs.

3. What safety concerns are there for allowing continued use of a special permit or approval beyond its expiration while a renewal application is being processed?

4. Would such continued use of a special permit or approval cause any potential complications for the enforcement of HMR requirements by state and local partners?

Q. Design Certifying Engineer Experience

Design Certifying Engineers (DCEs) are required to review and approve the design of specification cargo tanks and PHMSA is considering whether to require that a DCE perform a similar role for tank cars. DCEs, as defined in § 171.8, are required to register with the Department and meet education and experience requirements. Specifically, for cargo tanks, a DCE is required to meet one of the following conditions:

(1) Has an engineering degree and one year of work experience in cargo tank structural or mechanical design;

(2) Is currently registered as a professional engineer by appropriate authority of a state of the United States or a province of Canada; or

(3) Has at least three years' experience in performing the duties of a DCE prior to September 1, 1991.

PHMSA would consider an alternate definition for tank car DCEs that mirrors the existing cargo tank definition, except we would not include the clause in (3) that permits individuals who do not meet the criteria in (1) and (2) to work as DCEs based on their historical status.

The current definition of DCE allows professional engineers with no experience in structural or mechanical design to register as a DCE and certify the design of a cargo tank, and PHMSA is considering the same for tank cars to maintain consistency for the definition. PHMSA, FMCSA, and FRA request comment on the following questions to evaluate the current state of the DCE community:

1. Are there any professional engineers who had no previous experience in cargo tank structural or mechanical design currently registered with the Department as a DCE for cargo tanks? Explain.

2. Is a professional engineer with no experience in cargo tank structural or mechanical design capable of adequately reviewing and certifying a cargo tank design?

3. Is a professional engineer with no experience in tank car structural or mechanical design capable of adequately reviewing and certifying a tank car design?

4. Do you support adding a one-year experience requirement for professional engineers seeking to become DCEs? Explain. For example, ''Is currently registered as a professional engineer by appropriate authority of a state of the United States or a province of Canada and has at least one year of work experience in cargo tank/tank car structural or mechanical design.'' Why or why not?

R. Oxidizing Gases by Air

In 2007, PHMSA modified the requirements for the transportation of compressed oxygen and other oxidizing gases by aircraft in rulemaking HM–224B [41] (72 FR 4442; Jan. 31, 2007). This final rule created a requirement to transport oxidizing gas cylinders in a flame-proof, thermally resistant outer packaging, known as a DOT31FP packaging (see §§ 173.302(f)(5) and 173.304(f)(5). When a package containing a compressed gas cylinder is exposed to fire on board an aircraft, the high temperatures cause the pressure inside the cylinder to increase. Eventually, the pressure reaches the ''set-to-discharge'' pressure for the cylinder's pressure relief device (PRD), causing the PRD to activate in order to vent the contents of the cylinder to prevent a catastrophic failure of the cylinder. In an aircraft fire, activation of a PRD for an oxidizing gas cylinder can be counter-productive, because the oxidizing gas released from the cylinder will feed the fire and further endanger the aircraft. Many aircraft cargo compartments do not have an active fire suppression systems installed. The DOT31FP packaging is designed to thermally insulate and protect the oxidizing gas cylinder from the high temperatures and flame impingement of a cargo fire for up to three hours, thereby preventing release of the

[41] *https://www.govinfo.gov/content/pkg/FR-2007-01-31/pdf/E7-1487.pdf.*

oxidizing gas. This three-hour window is intended to allow the plane to land safely, even on a long, over-water flight with no airfields available to divert to nearby. Please refer to HM–224B for additional information on the development of the DOT31FP thermal protection standard.

A4A submitted a comment [42] to the 2017 Regulatory Reform Notice requesting that PHMSA remove the requirement for the DOT31FP packaging and allow the transportation of oxidizing gases on aircraft in the ATA 300 outer packaging commonly used for the transportation of oxidizing gas cylinders prior to 1999, and then required for oxygen cylinders from 1999–2007 (see HM–224A; [43] 64 FR 45388, published Aug. 19, 1999). As discussed in HM–224A (see 64 FR 45392), testing conducted on the ATA 300 outer packaging demonstrated the packaging's ability to prevent a cylinder from reaching a temperature that would activate the PRD for approximately one hour when tested in the 400 °F oven used to simulate aircraft fire conditions.

A4A requests that PHMSA either remove the requirement to use DOT31FP packaging for shipments of oxidizing gas and replace it with an option to use either the DOT31FP package or the ATA 300 packaging for domestic flights within the United States, or flights that are always within one hour of a divert airfield; or remove the requirement to use DOT31FP packaging and replace it with an option to use the DOT31FP package for ATA 300 packaging for all flights. A4A states that the ATA 300 packaging provides an acceptable level of safety while significantly reducing the cost of transporting oxidizing gases on aircraft. PHMSA requests comment on the following questions to evaluate A4A's request:

1. If PHMSA adopted A4A's request to remove the DOT31FP packaging requirements as the only packaging for transporting oxidizing gases on domestic flights or flights with short diversion times, how would airlines prevent oxidizing gas packages from being placed on international/long diversion time flights?

a. What is the likelihood that an ATA 300 packaging would be used unintentionally on international/long division time flights?

b. What actions would an operator take if ATA 300 packaging were used unintentionally on international/long diversion time flights?

2. If PHMSA adopted A4A's request to remove the DOT31FP packaging requirements as the only packaging on transporting oxidizing gases for domestic flights or flights with short diversion times, how many ATA 300 packages containing oxidizing gases would be shipped per year?

3. How many packages containing oxidizing gases have been shipped on aircraft per year since the use of DOT 31FP packaging was required?

4. How many packages containing oxidizing gas were shipped on aircraft from 1996 to 2007?

5. Are commenters aware of any incidents, in the United States or elsewhere in the world, where DOT31FP packages containing cylinders of oxidizing gases were exposed to fire conditions?

6. If PHMSA adopted A4A's request to remove the DOT31FP packaging requirements as the only packaging for transporting oxidizing gases on domestic flights or flights with short diversion times, please provide quantified economic savings and identify which parties would benefit. This estimation should detail the differential in costs between DOT31FP and ATA 300 packaging, as well as the number of packagings that currently are in use and expected to be used in the future.

7. Based on the hour-long resistance of the ATA 300 packaging to fire, how long of a diversion time would be acceptable to ensure a safe landing in event of a cargo fire?

8. PHMSA and FAA are aware that checked passenger baggage often contains hazardous materials for personal use authorized in § 175.10, and potentially may contain hazardous material not authorized for transportation in passenger baggage (*e.g.,* spare lithium batteries).

a. If PHMSA adopted A4A's request to remove the DOT31FP packaging requirements as the only packaging for transporting oxidizing gases on domestic flights or flights with short diversion times, should these packages be segregated from passenger baggage?

b. Should there be other segregation requirements?

c. Would a requirement to segregate an ATA 300 package containing an oxidizing gas from passenger baggage significantly impact the projected economic benefit gained by authorizing ATA 300 packages?

9. Have any air carriers conducted safety management system (SMS) risk assessments related to accepting oxidizing gases in ATA 300 packagings rather than DOT31FP packagings? If so, please provide the completed SMS risk assessment to PHMSA for review.

10. Do airframe manufacturers support A4A's contention that replacing DOT31FP packaging with ATA 300 packaging is equivalent when considering a cargo fire involving a compressed oxygen cylinder?

11. Have any interested parties conducted a package performance technical analysis that compares the ATA 300 packaging design type with the DOT31FP packaging design type in an operations environment? If so, please provide this analysis to PHMSA for review.

a. Would authorization of ATA 300 packaging increase safety risks?

b. Would it increase the probability of a catastrophic event?

c. Can this change in risk be quantified?

d. Are there limitations or operational safeguards that can be implemented to achieve an equivalent level of safety when compared to the DOT31FP standard?

12. What percent of cargo compartments in domestic flights or flights with short diversion times have active fire suppression systems installed?

S. Part 176 Vessel Requirements Update

Part 176 of the HMR contain instructions and requirements for the safe transportation of hazardous materials by vessel. PHMSA received a comment [44] from the SAAMI requesting that PHMSA update part 176. Specifically, SAAMI asserts its belief that part 176 does not sufficiently differentiate between different vessel types, containers versus break bulk, and local offshore work versus long distance voyages. PHMSA requests comment on the following questions related to updating part 176 requirements:

1. What specific changes should be made to part 176? Include suggested revised regulatory text and a detailed explanation for each requested change.

a. Include information and arguments that support your proposed action, including relevant technical and scientific data.

b. Include any specific cases that support or demonstrate the need for your proposed action.

2. Please provide information about the following:

a. The costs, savings, and safety or environmental benefits of your proposed action to society in general

[42] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2750.*

[43] *https://www.govinfo.gov/content/pkg/FR-1999-08-19/pdf/99-21187.pdf.*

[44] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-1479.*

and to identifiable groups such as specific companies or industries affected by your proposal.

b. The regulatory burden of your proposed action on small businesses, small organizations, small governmental jurisdictions, and Indian tribes.

c. The recordkeeping and reporting burdens of your proposed action and whom they would affect.

d. The direct effects, including preemption effects under 49 U.S.C. 5125 of Federal Hazardous Materials Transportation law, of your proposed action on states, on the relationship between the Federal Government and the states, and on the distribution of power and responsibilities among the various levels of government. (See 49 CFR part 107, subpart C, regarding preemption.)

e. The effect of your proposed action on the quality of the natural and social environments.

T. LTD QTY Shipping Paper Exception by Vessel

Limited quantity (LTD QTY) materials are subject to hazardous material shipping paper requirements when transported by vessel. In 2011, PHMSA issued final rule HM–215K (76 FR 3307) that initiated a phase-out of the ORM–D exception in order to harmonize the HMR with international transport standards. The ORM–D classification and exceptions are not accepted internationally. The ORM–D exception has been phased out and after December 31, 2020, is no longer valid for transportation (see § 172.316). ''ORM–D material'' meant a material such as a consumer commodity; cartridges, small arms; cartridges, power devices (used to project fastening devices); cartridges for tools, blank; and cases; and cartridge, empty with primer, which, although otherwise subject to the regulations of the HMR, presented a limited hazard during transportation due to its form, quantity and packaging.

The ORM–D exception had very similar quantity limits and applicability to the LTD QTY exception, except that LTD QTY can encompass materials not in a form intended or suitable for sale through retail sales agencies or instrumentalities for consumption by individuals for purposes of personal care or household use (*i.e.,* the LTD QTY exception is based on the classification and quantity of the material, not the end use of the product like ORM–D). One significant difference between the ORM–D exception and LTD QTY is that the ORM–D exception does not require shipping papers for vessel transportation. The Sporting Arms and Ammunition Manufacturer's Institute (SAAMI) submitted a comment [45] to the 2017 Regulatory Reform Notice requesting that PHMSA remove the requirement for shipping papers for LTD QTY materials transported by vessel. SAAMI states that this would reduce the burden of compliance with the HMR for domestic vessel transportation. In order to evaluate this request, PHMSA requests comment on the following questions:

1. How many ORM–D shipments are offered for domestic vessel transportation annually?

2. How many LTD QTY shipments are offered for domestic vessel transportation annually?

3. How much time would be saved by offerors and carriers per shipment if the HMR no longer required shipping papers for domestic vessel transportation of LTD QTY material? What categories of employees would save time? (Use Bureau of Labor Statistics labor categories, if possible.)

4. The IMDG Code does not offer a shipping paper exception for LTD QTY material. Would the creation of a shipping paper exception in the HMR for LTD QTY shipments via vessel create additional confusion and frustration because of a lack of alignment with international standards?

5. Please describe the number of packages, hazardous materials involved, number of shipments per year, and origin/destination pairs for domestic vessel shipments projected to use this exception.

6. Do LTD QTY shipments that are offered for domestic vessel transportation differ significantly by vessel type? Is this relevant for the transmission of shipping papers?

7. Do the recipients of LTD QTY shipments rely on shipping papers for tracking and tracing purposes?

U. Convention for Safe Containers Data Plate and Inspection Requirements

The USCG requires safety approvals, periodic inspections, and markings for shipping containers used in international commerce (see 49 CFR parts 450–453). Compliance with these requirements is indicated by the presence of a Convention for Safe Containers (CSC) safety approval data plate on the freight container.

Shipping containers used exclusively in domestic commerce are not subject to this requirement. USCG has identified this as a potential safety issue for hazardous materials transported domestically. Hazardous materials carried in structurally deficient shipping containers increase the risk of unintentional release of the material to the environment during all modes of transportation. The HMR currently require that all shipping containers used to transport Class 1 (except Division 1.4) explosive material by vessel must be structurally serviceable and bear a current CSC safety approval data plate (see § 176.172). To address USCG's concern regarding structurally deficient shipping containers used in domestic commerce, PHMSA is considering expanding the requirement in § 176.172 to all hazardous materials transported by vessel. Although this requirement is applicable specifically to vessel transportation, freight containers are commonly transported by highway and rail as well, so an improvement in container integrity will benefit multiple modes of transportation. In order to evaluate this potential revision to the HMR, PHMSA requests comment on the following questions:

1. How many shipping containers are in use in domestic-only transportation?

2. How many domestic-only shipping containers do not have a current CSC safety approval data plate?

3. Do you support requiring all domestic-only shipping containers used to transport hazardous materials to maintain a current CSC safety approval data plate? Explain. If this should not apply to all hazardous materials, which materials should be covered by expanded applicability of the data plate requirement for shipping containers?

4. What is the annual cost for an inspection and certification of a container for safety approval and display of a CSC data plate?

5. What are the most frequented domestic-only commerce routes where shipping containers without current CSC safety data plates are used to transport hazardous materials? Are any of these routes in close proximity to vulnerable communities where release or incidents would have potentially disproportionate impacts?

6. Are shipping containers swapped between domestic-only and international shipping? If so, how do shippers prepare these containers for inspection and marking differently than containers used only for international shipping?

7. Is the shipper or transporter responsible for affixing the CSC safety approval data plate on the container?

V. Identification of Freight Containers in Rail Transportation

Proper emergency response to a hazardous materials incident begins with identification of the types and quantities of the hazardous material

[45] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-1479.*

involved in the incident. The HMR require several types of hazard communication intended to communicate the hazards present in a shipment, including hazard class labels and placards that communicate the general type of hazard present, and UN identification number (UN ID) markings that communicate the specific material in the packaging, vehicle, or freight container. A shipping document that identifies the materials carried onboard must also be available for use in emergencies or inspection scenarios.

Rail transportation presents unique challenges for emergency response based on the length of a train and the potential for chaotic accident scenes after a derailment or collision. Emergency response efforts for rail incidents typically involve the Notice to Train Crew, also known as a train consist, a document carried by the train crew (see § 174.26). This document identifies the current position in the train of each rail car containing a hazardous material and provides the hazardous material shipping paper information and emergency response information required under part 172 of the HMR. Emergency responders can use this train consist information to identify the contents of a rail car based on its position in the train and unique identifier markings on the rail car, even if the placards and UN ID markings are obscured or destroyed during the accident.

Use of train consist information in this way depends on the ability of the emergency responder to accurately identify rail cars after an accident, which may involve the scattering of the rail cars and the freight containers carried by flatcars over a wide geographical area. It is PHMSA and FRA's understanding that current industry practice is to mark each freight container with a unique identification number to track the freight container through the shipping process. The HMR require that this unique identification number be entered on the hazmat shipping paper when such a mark is present on a freight container (see § 172.203(g)(1)). However, the HMR do not require that this marking appear on the freight container in a specific location, nor does the HMR prescribe any requirements for the durability, legibility, or size of this freight car identification marking. This can hinder emergency response efforts in an accident, as emergency responders lack a consistent way to identify freight containers that have been thrown free of the rail cars that carried them. PHMSA requests comment on the following questions related to marking a unique identifier on freight containers transported by rail:

1. Do you support creating requirements for the specific location, size, durability, and legibility of a freight container's unique identifier markings in rail transportation? Why or why not?

a. In what location(s) should freight container identification marks be required to appear to maximize visibility and awareness in accident and inspection scenarios?

b. What minimum size should the markings be?

c. Are the durability requirements in § 172.304 adequate for this marking?

d. Should there be requirements for a specific background color for the marking or a requirement to have the marking clearly contrast from the background?

2. Do you support adoption of the IMO Convention on Safe Containers (CSC) marking requirements for freight containers transported by rail?

a. Would these IMO requirements, if applied to rail transport, allow adequate visibility and consistency in accident and inspection scenarios?

3. Would adoption of requirements for location, size, durability, and legibility for unique identifier markings on freight containers impose costs on the regulated community?

a. Please identify any costs and additional time burdens that would be created by such a requirement. If this requirement creates additional time burdens on employees, please identify the labor category (use Bureau of Labor Statistics labor categories, if possible) of the employees involved and the amount of time spent complying with the new requirement would take.

4. Would this adoption produce quantifiable or monetizable safety benefits for communities? Would it produce quantifiable or monetizable environmental benefits? Explain.

5. Would this adoption reduce the number of needed ''response hours'' and the associated public burden and costs of response for local police, firefighters, or hazmat response units? Explain.

6. What is the paperwork burden to include unique identifiers for freight containers on shipping papers? To what degree are freight containers used in rail transportation already marked with these unique identifiers?

7. How consistent are existing marking standards? How significant of a change in marking standards would it be for all offerors and carriers to adopt more rigorous identification marking requirements?

8. Describe the record-keeping technology and protocols rail carriers use currently to track and trace the identifier markings they currently use and place on rail cars.

W. Exceptions for Rail Transport of Lithium Batteries for Purposes of Recycling and Disposal

The HMR provide exceptions for the transportation of lithium cells and batteries to recycling and disposal facilities in § 173.185(d). To date, the exceptions for transport of lithium cells and batteries for purposes of recycling or disposal have been limited to motor vehicle transport. The exceptions in § 173.185(d) provide relief from the testing and recordkeeping requirements in § 173.185(a), and the UN POP packaging requirements in § 173.185(b). Cells and batteries transported in accordance with § 173.185(d) must be placed in packages meeting the general packaging requirements of §§ 173.24 and 173.24a, and the cells and batteries must be protected from shifting, damage, and short circuits in accordance with §§ 173.185(b)(2) and 173.185(b)(3)(i). Damaged, defective, or recalled (DDR) cells and batteries are not eligible for this exception. Currently, lithium batteries shipped for the purposes of recycling or disposal may be transported by any mode when fully regulated; however, exceptions found in § 173.185(d) are only allowed for highway transportation.

The Rechargeable Battery Association (PRBA) submitted a comment [46] to the 2017 Regulatory Reform Notice requesting that PHMSA review this requirement and expand the applicability of the exception to rail transportation to accommodate larger shipments of batteries destined for recycling and disposal facilities. PHMSA also recognizes that it is possible for damaged or defective batteries to enter the transportation stream through a manufacturer's recall or recycling program that might not be directly related to a battery safety issue (*e.g.,* a consumer electronic device has a flawed screen and is recalled, but some of the recalled devices also have a damaged battery due to exposure to heat, water, impacts, or an inherent flaw in the battery). PHMSA is requesting comments on the following questions to evaluate PRBA's comment and additional concerns related to the transportation of lithium batteries for disposal and recycling:

[46] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2826.*

Rail Transportation of Used Lithium Batteries

1. How many shipments of lithium batteries destined for recycling or disposal are made by rail annually?

2. How many shipments of lithium batteries for recycling or disposal would be made by rail annually if we expanded the exception in § 173.185(d) to include rail transportation?

3. Would more lithium batteries be shipped by rail if the exception was expanded to include rail transportation? Or would modifying the exception mainly result in existing rail shipments of lithium batteries for recycling or disposal shifting to non-UN POP packaging?

4. What are the cost savings, if any, of a rail shipment of lithium batteries for recycling or disposal compared to a motor vehicle shipment?

5. Do existing lithium battery hazard communication requirements (including for batteries granted exceptions in § 173.185(c)) adequately convey the risk inherent to the transportation of container loads of used lithium batteries?

6. Should a packaging size limit or shipment weight limit be implemented for transportation of lithium batteries in accordance with § 173.185(d)? If so, what should the limit be?

7. Are safety risks to the public and railroad employees elevated when shipping large volumes of used lithium batteries in containers by rail in accordance with this exception? If so, to what extent/magnitude?

8. Are there unique risks associated with shipping large volumes of lithium batteries by rail, including in containers that are not well ventilated? If so, should PHMSA consider additional safety measures and hazard communication requirements to reflect those risks, even when moving under packaging exceptions in § 173.185?

9. Would an exception to the provision on specification packaging requirements—but not testing and recordkeeping requirements—in § 173.185(a) enhance the transportation of larger volumes of lithium batteries for disposal and recycling while maintaining safety protocols? Please explain.

10. What are the safety benefits, if any, of shipping damaged, defective, and recalled (DDR) batteries by rail rather than by motor vehicle? Would there be a material impact on the number of incidents or the severity of incidents?

General Damaged, Defective, and Recalled Issues

11. What steps do shippers take to screen devices and batteries collected at a retail store or other collection point for DDR batteries?

12. What steps are retailers and device/battery manufacturers taking to inform customers about the dangers of DDR batteries?

X. Tank Car Manway Inspections

Tank cars designed for the transportation of hazardous liquids are constructed with an opening large enough to permit the access of a person to the inside of the tank, known as a manway. Such openings are necessary to permit the entry of a person inside the tank car to conduct periodic inspections, repairs, and other operations requiring access to the inside of the tank. The manway opening is closed with a manway cover, and a gasket is placed between the manway nozzle and the manway cover to create a seal that prevents the release of the hazardous contents of the tank either in liquid or gaseous form and prevents the entry of air or moisture into the tank during transportation. Manways are often used (*i.e.,* opened) during the loading and unloading of tank cars either to relieve vacuum during unloading, or to permit the placement of a hose through which product is pumped into the tank during loading.

The HMR require the person who offers the tank car into transportation (*i.e.,* the offeror) to externally visually inspect the tank car's gasket(s) to detect any damage or other condition (*e.g.,* deterioration) that could make the tank car unsafe for transportation (see § 173.31(d)(1)(ii)) as part of the broader process of examining the tank car to make sure it is in proper condition and safe for transportation prior to shipment (*i.e.,* pre-trip inspection). PHMSA understands § 173.31(d)(1)(ii) to require that the manway gasket must be visually inspected whenever the tank car is offered into transportation regardless of whether the manway was opened or not during a loading or unloading operation. On November 14, 2016, PHMSA, in consultation with FRA, issued revised Letter of Interpretation Reference Number (Ref. No.) 15–0031R,[47] which states, in part,

> . . . without opening a hinged and bolted manway and observing the condition of the manway's gasket, there is no way an offeror can reasonably perform a visual inspection of the gasket to meet the minimum inspection requirement of § 173.31(d)(1)(ii) or know that the gasket meets the performance requirements of either §§ 173.31(d)(2) or 173.24. This rationale applies generally to other tank car fittings designed to be opened/removed for the purposes of loading or unloading and serve as primary or secondary closures (including, for example, plugs or caps on top valves, etc.). In order to ensure compliance with these requirements, an offeror must remove the bottom outlet cap and open the manway cover and inspect the condition of the gasket, regardless of whether the offeror used the fitting during a particular loading/unloading event.

Dow Chemical [48] and the American Chemistry Council [49] (ACC) both submitted public comments to the Department of Transportation requesting that PHMSA rescind this letter. Dow Chemical and ACC state that requiring visual inspection of manway gaskets at the time the tank car is offered for transportation may create unanticipated negative consequences, including degradation of product purity, formation of a flammable atmosphere, increased wear on the manway structure, and increased opportunity for human error during closure after inspection.

PHMSA, in consultation with FRA, does not plan to rescind Letter of Interpretation Ref. No. 15–0031R at this time. Our position remains that a direct external visual inspection of the gasket is the only way for an offeror to meet the inspection requirements as written in § 173.31(d)(1)(ii) to ensure the tank car is safe for transportation. However, we also recognize that new technologies and development of new practices may allow for more passive means of inspection such that opening of the manway to allow for visual inspection of the gasket may not be necessary to ensure that the tank car is safe for transportation. Since 2017, PHMSA has issued several special permits related to the issue of a tank manway gasket inspection to several entities, specifically, Phillips 66, Dow Chemical, and Kraton.[50] A special permit is a document issued by the Associate Administrator permitting a person to perform a function that is not otherwise permitted under the HMR. These special permits authorize replacement of the external visual inspection of the manway gasket by periodic external inspections (Phillips 66) or by a pressure test and leak detection equipment (Dow Chemical and Kraton). For the benefit of the reader, copies of

[47] *https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretation%20Files/2016/150031R.pdf.*

[48] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2701.*

[49] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2706.*

[50] See DOT–SP 11771, DOT–SP 21098, and DOT–SP 21007, respectively.

the special permits have been posted to the docket for this notice.

PHMSA believes that it is likely that additional companies besides Phillips 66, Dow Chemical, and Kraton are capable of loading and unloading tank cars without opening the manway, and therefore may be interested in seeking similar special permits or party status to existing special permits. PHMSA anticipates evaluating future special permit requests and potential regulatory changes to § 173.31(d)(1) that would authorize pre-trip inspections of manway gaskets via a method other than external visual inspection. We seek a greater understanding of the state of the art tank car loading and unloading to evaluate options to replace visual tank car manway gasket inspections.

Based on data collected by FRA, from 2018–2020, 29 percent [51] of non-accident releases (NARs) occur at the manway. The root cause for a significant number of these NARs is traced to human error during manway closure, improper tool use, or another issue that could be avoided if the manway was not opened during loading or unloading. Therefore, PHMSA recognizes that it may be in the interest of safety as well as reduction of regulatory burden to encourage tank car shippers to keep manways closed during loading and unloading, and accordingly allow for an alternate method of inspecting the integrity of the manway gasket.

PHMSA requests comment on the following questions to assist our evaluation of special permit requests and potential regulatory revisions. PHMSA plans to use this information to better inform its evaluation of requests for Special Permits on this topic and, as appropriate and in keeping with its standard procedures, in its future review of special permits for suitability of their potential inclusion in the HMR:

1. Please present specific alternative methods for verifying the manway gasket condition, besides an external visual examination of the manway gasket during the pre-trip inspection.

a. For each method provided, how much does it cost to implement per shipment relative to the current method of visual inspection?

b. Provide any information available to you indicating how this method for verifying the manway gasket condition would maintain a level of safety at least equivalent to a visual inspection of the gasket during the pre-trip inspection.

c. Are there gasket materials known to remain leak tight over multiple trips for specific ladings? If so, describe the gasket material/hazardous material lading combination, and the method by which multi-trip leak tightness has been validated.

d. Are there gasket materials known not to remain leak tight over multiple trips with specific ladings? If so, describe the gasket material/hazardous material lading combination and how usage of such gaskets could be eliminated from service in tank cars used in an alternate leak tight inspection program.

2. Are you aware of any accidents or near-miss incidents that could have led to fire, explosion, or other hazardous incidents related to opening the manway cover as part of the pre-trip inspection? If so, please provide all available information relating to the incidents to PHMSA.

3. Please quantify the cost burden associated with product degradation caused by introduction of ambient air or moisture into the tank during the manway gasket inspection.

4. How many tank car shipments are made annually that require opening the manway *solely* for the purpose of inspecting the manway gasket (*i.e.,* the manway is not involved in any other inspection, loading, or unloading purpose)?

5. How much time is spent, per shipment, opening a manway and visually inspecting the gasket? What labor category of employee conducts this inspection? (Use Bureau of Labor Statistics labor categories, if possible.)

6. What additional costs are associated with a visual inspection of a manway gasket besides the employee's time (*e.g.,* tools, equipment, replenishing of inert atmosphere)?

a. For example, does the manway gasket inspection requirement contribute to wear and tear on the tank car components? If yes, please describe to what extent this has a material impact.

b. Does the manway gasket inspection requirement adversely affect the quality of the hazardous material commodity (*e.g.,* purity, concentrations)? If yes, please elaborate with specific examples.

7. Given the reliability issues that arise with hinged and bolted manway covers, should PHMSA consider phasing out hinged and bolted manway covers altogether?

a. If hinged and bolted manways were no longer authorized on general purpose tank cars, how would loading operations need to be altered? What would be the costs of altering those loading operations?

b. Several hazardous materials authorized in general purpose tank cars are loaded through the hinged and bolted manway cover. Are there materials that can only be loaded using the hinged and bolted manway cover?

c. A fittings plate is an option for loading a tank car without operating the hinged and bolted manway cover. Is there other technology that would be utilized in place of hinged and bolted manway covers? If yes, please describe.

d. What would be the associated costs of replacing hinged and bolted manway covers with a fittings plate or an alternative closure?

e. What length of transition time would be needed to completely remove all hinged and bolted manway covers from tank cars?

8. A tank car requires a qualification and maintenance program per part 180, subpart F. With respect to questions presented in item #7, what would be the impact on the tank car's qualification and maintenance program if implemented?

9. How many hazardous material non-accident releases would likely be prevented if hinged and bolted manway covers were replaced by a more permanent closure?

10. Could eliminating hinged and bolted manway cover designs remove the need to open manways and inspect the gaskets? What are the cost savings in terms of time and equipment reliability that might be recognized by tank car offerors?

Y. Acid Resistant Manways for DOT 111A100W5 Tank Cars

Section 179.201–6(b) requires that the top, bottom, and edge of a manway cover for a DOT–111A100W5 tank car must be covered by an acid resistant material, unless the metal manway cover is made from material that is not affected by the lading. In the time since this requirement was created, DOT–111A100W5 tank cars have entered service for non-acidic materials, including sodium hypochlorite. PHMSA received a comment [52] from the 2017 Regulatory Reform Notice from the Olin Corporation requesting that PHMSA revise § 179.201–6(b) to require that DOT–111A100W5 tank car manway covers instead be covered with a material appropriate for the commodity or product, which could include non-acidic materials. PHMSA requests comment on the following questions to evaluate this comment:

1. Do companies besides Olin Corporation use DOT–111A100W5 tank cars to transport materials other than acids? How many other companies?

[51] FRA NAR data indicates 338 out of 1164 total NARs in 2018, 2019, and 2020 occurred at the manway.

[52] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-1444.*

2. How many DOT–111A100W5 tank cars are impacted by this issue?

3. If this proposal is adopted, what methods could the owner of a DOT–111A100W5 tank car use to inform potential future owners and users that the manway lining is not resistant to acids as outlined in § 179.201–6(b)? Should a new marking or delimiter be adopted to account for tank cars with manways that are not made of acid resistant material?

4. What benefits would adopting this proposal provide to DOT–111A100W5 owners and users? Would this provide a safety benefit by requiring the manway lining be resistant to the lading carried in the tank car?

5. Would there be cost savings for manufacturers or purchasers of these tank cars due to using less expensive materials for the manway covers?

6. Would it be best to specify the requirements for non-acidic DOT–111A100W5 tank cars in a special permit rather than the HMR? Explain.

7. Should a new specification delimiter be created to segregate these tank cars from original DOT–111A100W5?

8. How frequently are these tank cars used for acidic materials? For non-acidic materials?

9. Are these tank cars used for both? Do the manway covers need to be re-covered prior to each use, appropriate for the commodity or product?

Z. Tank Car Thermal Protection Standard

DOT–117 tank cars used to transport flammable liquids, including crude oil and ethanol, must be constructed with thermal protection systems designed to protect the tank car from fire and heat (see §§ 179.18 and 179.202–6). The thermal protection standard establishes the performance requirement of a tank car and thermal protection system when exposed to a 1,600 °F pool fire for 100 minutes, and a 2,200 °F torch fire for 30 minutes (see Appendix B to part 179—Procedures for Simulated Pool and Torch-Fire Testing). To pass the Part 179, Appendix B tests, the thermal protection systems must prevent a rise in temperature above 800 °F on the non-exposed side of the test plate. This standard is designed to reduce the potential harm to human health and the environment caused from exposure to a fire resulting from an accident.

Norfolk Southern Railway Company (Norfolk Southern) submitted a comment [53] to the 2017 Regulatory Reform Notice, requesting modifications to this thermal protection testing. Specifically, Norfolk Southern describes research conducted by the Association of American Railroads Thermal Blanket Task Force that suggests that doubling the pool fire survivability standard is possible using currently available thermal protection systems. Norfolk Southern also states that the majority of ''DOT–11[7]'' tank cars are being equipped with thermal protection systems that do not meet the new Thermal Blanket Task Force proposed standard. Norfolk Southern requests that PHMSA adopt a new, more stringent thermal protection standard for DOT–117 tank cars that would replace the long-standing performance requirements. To evaluate this request, PHMSA requests comment on the following questions:

1. What specific change to the HMR is requested to address the issue identified by Norfolk Southern?

2. Task Force Activities

a. Has the Thermal Blanket Task Force developed a new consensus standard for thermal protection? If so, please provide a copy of the standard if possible.

b. Has the Task Force addressed DOT–113 tank cars carrying flammable cryogenic material (*i.e.,* Liquified Natural Gas)?

c. What is the status of any proposed standard currently? What is the timeline for finalization?

3. In general, should PHMSA consider increasing the minimum 100-minute pool fire standard to 200-minutes or longer in § 179.18(a)? Explain.

a. Should the new standard apply only to new manufacture? Explain. If yes, what would be the appropriate timeframe to mandate compliance with the 200-minute standard for new manufacture?

b. Should it apply retroactively? Explain. If yes, what would be the appropriate timeframe to retrofit existing tank cars that do not meet 200-minute standard?

c. How does the implementation of the HM–251C ''FAST Act Requirements for Flammable Liquids and Rail Tank Cars'' final rule (81 FR 53935, August 15, 2016) [54] factor into whether the 200-minute standard should be reserved for new manufacture or apply retroactively to include retrofitting existing tank cars?

4. Should PHMSA consider reducing the part 179, Appendix B back-plate temperature acceptance criteria from 800 °F to a new lower temperature? Explain.

a. If so, what should the temperature be? What scientific data supports the new acceptance criteria? Please provide the data supporting any new acceptance criteria.

5. Newly constructed DOT–117 tank cars require a ½ inch thermal protection blanket per § 179.202–6(b). Norfolk Southern claims new DOT–117 tank cars are being equipped with thermal protection material that would *not* achieve their new minimum safety standard. Please provide detailed information and justification of this claim.

a. How many DOT–117 tank cars have been or are being equipped with this allegedly insufficient thermal protection material?

b. What is the insufficient thermal protection material and what makes it insufficient or underperform relative to the 200-minute standard?

6. If Norfolk Southern is proposing a new performance standard of 200 minutes for all tank cars carrying flammable liquid commodities that require a § 179.18-compliant thermal protection system, are all existing thermally-protected tank cars (*e.g.,* DOT–105s, DOT–112s and DOT–117s with approved ½ inch thermal blankets) capable of achieving the new standard?

a. Should the new thermal protection performance standard apply to all tank cars requiring thermal protection? Explain.

b. Is there a subset of higher-risk flammable liquid tank cars for which the 200-minute standard would be most appropriate?

7. Norfolk Southern references a ''recently published AFFTAC'' model showing the thermal protection performance can be doubled with currently available materials. PHMSA requests the AFFTAC study referenced in this comment as well as a summary of the underlying assumptions/inputs to those models. PHMSA also requests any additional information that will support the Norfolk Southern proposal and the AFFTAC study.

a. Does the thermal model address every currently authorized thermal protection material?

b. Does the thermal model address the various types of steel/thickness that is authorized by the HMR?

c. Were Class 2 flammable gases modeled in addition to Class 3 flammable liquids?

8. How many tank cars would need to be retrofitted if PHMSA and FRA implemented a new thermal protection standard that applied retroactively? Please provide separate estimates for flammable liquids and other commodities.

a. How many existing DOT–105, DOT–112, and DOT–117 tank cars

[53] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2689.*

[54] *https://www.govinfo.gov/content/pkg/FR-2016-08-15/pdf/2016-19406.pdf.*

would be affected by the proposed change?

9. What is the cost of a thermal blanket that meets the proposed standard, compared to thermal blankets that meet the current standard? In other words, please express the unit cost of each technology and the resulting cost differential.

10. How much would it cost to manufacture a new tank car to the new standard? How much would it cost to retrofit a tank car to meet the new standard? Please consider additional labor costs in the case of new manufacture vs. retrofit. Please also describe other categories of costs and the amount that may be relevant.

11. If the new 200-minute standard were adopted, what additional amount of incident damages could be avoided relative to the current 100-minute standard? If possible, please express this in qualitative as well as quantitative terms, including estimates of the monetary value of avoided damages. Please note, avoided damages may include avoided damages to property (both public and private), the environment, and human health and safety. Related, it could include avoided costs to society on the basis that incidents may be more severe, and the emergency response more difficult or dangerous, with the baseline standard (100 minutes) versus the proposed standard (200 minutes).

12. Are there specific rail incidents that would have been less severe if the 200-minute proposed standard were already achieved? Is there a documentation of challenges and impacts to the emergency response that resulted from the current 100-minute standard?

13. Is the proposed 200-minute standard appropriate for all hazardous materials that require thermal protection systems, or is there a specific reason to apply this standard only to flammable liquids?

AA. Unoccupied Locomotive Train Placement

The HMR require separation between locomotives, occupied cabooses, and placarded rail cars (including tank cars) containing hazardous materials (see § 174.85) in rail transportation. This separation is accomplished by placing non-placarded rail cars, known as ''buffer cars,'' between the placarded rail car and the locomotive (also known as the engine or power unit) or occupied caboose. The intent of this requirement is used to protect the train crew in the engine or caboose from hazardous materials released during an accident.

On January 29, 2020, PHMSA received a petition for rulemaking from the Association of American Railroads (AAR), requesting that PHMSA amend the requirements in § 174.85.[55] PHMSA accepted this petition for rulemaking and assigned it the identifier P–1741. Specifically, AAR requests that PHMSA amend § 174.85 to no longer require the use of buffer cars to separate placarded rail cars from unoccupied locomotives, also known as unoccupied head end locomotives, distributed power units or dead in tow locomotives.

In order to evaluate AAR's request, PHMSA seeks comment on the following questions:

1. Do railroads use distributed power units to transport employees? If so, how will railroads ensure that an occupied distributed power unit is provided the required buffer cars?

2. Do you support the creation of operational controls beyond the requested revision in P–1741? Why or why not?

a. Should a distinction for buffer car requirements be drawn between unoccupied head-end locomotives, distributed power units, and dead-in-tow locomotives?

b. What operational controls (*e.g.,* locked doors, door tags with a message prohibiting entry), if any, are appropriate to identify a locomotive as an unoccupied distributed power unit?

c. Are there any hazard class or divisions that should still require compliance with buffer car requirements, even from unoccupied distributed power units? If so, how many buffer cars?

d. If operational controls (*e.g.,* locked doors, door tags), and maintenance of buffer car requirements for unoccupied distributed power units for certain high hazard materials are proposed, would that impact the estimated cost savings projected in the petition? To what extent?

3. Does removing the requirement for buffer cars around distributed power units create any additional risks to railroad employees or the general public? Explain.

4. Across all railroads, how many switching moves occur annually?

a. If unoccupied locomotives are no longer required to be separated from placarded rail cars, how many fewer switching moves would be required across all railroads?

b. If unoccupied locomotives are no longer required to be separated from placarded rail cars, how many fewer switching moves would be required for Class I, II, and III railroads?

5. Would other benefits (*i.e.,* increased number of cars in revenue service) accrue to railroads if buffer cars are no longer required around distributed power units?

6. Is the estimate of annual savings of $180,000–$450,000 per railroad accurate for Class I railroads? Explain.

a. What are the estimated savings for Class II and Class III railroads?

b. What other costs, if any, are associated with this requirement, or is the only quantifiable financial impact the cost savings described above? Please describe all other sources of cost savings or costs.

7. How do railroads acquire buffer cars?

a. What commodities or materials do buffer cars typically contain? Would eliminating the buffer car requirement disproportionally affect customers/related entities?

b. How can the market for buffer cars be described? Who would be most affected by eliminating the demand for buffer cars?

BB. Offering a Tank Car After Qualification Expiration

The HMR require that tank cars used to transport hazardous material by rail must be qualified to remain in hazardous material in accordance with part 180, subpart F. The maximum intervals for the required inspections and tests are listed in § 180.509(c)(3); however, a tank car owner may specify shorter test and inspection intervals in their tank car test and inspection plan. FRA, based on a high volume of requests for guidance, is aware of confusion among the tank car community about whether a tank car filled with a hazardous material before the expiration of a test or inspection can be offered into transportation after the test or inspection's expiration date.

Section 173.31(a)(3) states: ''No person may fill a tank car overdue for periodic inspection with a hazardous material and then offer it for transportation.'' This language is similar to that used for other packages that require periodic requalification, including cylinders (see § 180.205(c)), cargo tanks (see §§ 173.33(a)(3) and 180.407(a)(1)), portable tanks (see § 173.32(a)(2)), and IBCs (see § 173.35(a)).

Based on § 173.31(a)(3), PHMSA and FRA have provided the guidance that a tank car may be filled prior to expiration of its qualification and offered after the qualification interval has expired. Historically, FRA has only cited violations of the HMR if an offeror loaded a car after its test date has passed and then offered that car into

[55] *https://www.regulations.gov/document?D=PHMSA-2020-0023-0001.*

transportation. However, FRA still receives numerous calls and emails seeking guidance on moving a tank car that is loaded prior to the requalification date and offered after, which indicates that the current language does not adequately address this particular scenario. Additionally, PHMSA and FRA are aware that our historical guidance on this issue conflicts with current industry practice, which does not permit the transportation of a car offered to the railroad after the expiration of qualification without a One Time Movement Approval.

We are seeking comments on whether the language in this paragraph should be amended to further clarify how it applies to the scenario where tank cars are loaded prior to their requalification date and offered after the requalification date has expired. Therefore, PHMSA, in consultation with FRA, seeks comment on the following questions:

1. Is the current language in § 173.31(a)(3) sufficient to address the scenario of loading a tank car prior to the next required requalification date and offering it after it is overdue for requalification?

2. Should § 173.31(a)(3) be clarified so that it more clearly permits the movement of a car that was loaded prior to its required requalification date but is now overdue for requalification?

3. Permitting cars to be loaded prior to expiration of the requalification interval and offered after could allow an indefinite period of time to pass before the expired car is actually offered into transportation, particularly if it was stored on private track for months or years. Does this create a potential safety issue?

4. Should PHMSA consider placing a deadline on the amount of time an offeror has to transport a loaded hazmat tank car that is overdue for qualification? If so, what should that time limit be? Potential time limits to consider are three months, six months, one year, or two years. Please provide any safety data or reliability information to support the proposed deadline.

5. Should PHMSA forbid the offering of any loaded tank car that is overdue for requalification, regardless of when it was loaded?

6. Is the practice of filling tank cars prior to expiration of the qualification date and then offering the tank car after expiration of the qualification date more prevalent in certain industries? If so, please describe.

CC. Non-Destructive Examination

Non-destructive examination (NDE), also known as non-destructive testing (NDT), of hazardous materials packaging is a core requirement of the HMR for the manufacture and continuing qualification of many hazmat packagings, including non-bulk Performance Oriented Packagings, compressed gas cylinders, IBCs, cargo tanks, tank cars, and portable tanks. However, the HMR does not define the term ''non-destructive examination'' and does not have consistent standards for the development of NDE plans or qualification for NDE practitioners across all packaging types. For example, PHMSA and FRA are aware of confusion related to NDE plan development, training, and certification requirements for NDE conducted in accordance with the tank car qualification requirements found in § 180.509. In order to evaluate the creation of a standardized definition and requirements for NDE, PHMSA requests comment on the following questions:

1. Should PHMSA create a definition for non-destructive examination? Explain why you support or oppose the creation of a definition for NDE.

2. If you support the creation of a definition for NDE, please provide a suggested definition.

a. What tests should be included in the definition?

b. Are there commonly accepted definitions for NDE contained in widely recognized industry standards? Are there differences between NDE definitions in different industries?

c. Should the definition be package or mode-specific, *i.e.,* should the definition apply to all packagings, or only cargo tanks, or tank cars, or compressed gas cylinders? Explain your reasoning.

3. Do you support the creation of a standardized system of NDE plan development, employee training, and qualification that would apply to all NDE conducted in accordance with the HMR? Why or why not?

a. Are there existing industry standards and publications that could be incorporated by reference into the HMR to create a standardized NDE system?

b. Do you support the incorporation of a particular industry standard over others? If so, why?

DD. Updating Requirements for Transporting Hazardous Materials on Passenger Carrying Motor Vehicles

PHMSA is considering updating the requirements of the HMR related to transportation of hazardous materials on board commercial passenger-carrying motor vehicles (*e.g.,* buses, taxis, ride-sharing vehicles) to account for new challenges and opportunities in modern transportation. Examples of the types of issues PHMSA and FMCSA are aware of in this space include the transportation of fireworks and patient medical samples in ridesharing vehicles, and transportation of medical oxygen cylinders on buses. To begin the process of addressing and updating the provisions in § 177.870, PHMSA requests comment on the following questions:

1. What provisions in § 177.870 should be updated or revised for clarity? What provisions need to be added? What provisions can be removed?

2. In some cases, transport of hazardous material on passenger-carrying motor vehicles may be prohibited or regulated by state or local governments, or as a matter of corporate policy. Is there a need for additional regulation in this area specifically at the federal level? Why or why not?

3. What types and quantities of hazardous materials should be authorized for transportation on board passenger-carrying motor vehicles?

4. What types and quantities of hazardous materials should not be authorized for transportation on board passenger-carrying vehicles? Should PHMSA develop restrictions based on types of packaging, in addition to or instead of classification-based restrictions?

5. Do current hazard communication requirements (marking, labeling, placarding, etc.) meet the needs of emergency responders and carriers in scenarios where hazardous materials are transported on board passenger-carrying vehicles?

6. What locations on the vehicles should the hazardous material be stowed? Options for consideration are on one's person; carried on and placed on or near a seat; on the floor; and/or in a storage bin or area. Other options for consideration include the distinction between the stowage of hazardous materials being transported as cargo and hazardous materials being brought on board by passengers or carrier employees.

7. Incidents involving hazardous material on board passenger-carrying motor vehicles may be underreported. Please share examples of incidents fitting this description.

a. What sort of requirement or regulation would have most likely prevented these incidents?

8. What are appropriate training requirements for drivers of passenger-carrying vehicles that transport hazardous materials? What would this training cost to implement? How many drivers are likely to be affected and need training? In what manner are drivers already being trained on awareness and

handling of hazardous materials carried by passengers or offered as cargo?

9. Are hazardous materials, other than those carried by passengers for their personal (non-commercial) use, currently transported on board passenger-carrying vehicles?

a. If so, what are some common scenarios? What types and quantities of hazmat?

10. Should there be exceptions applicable to certain types and quantities of hazardous materials being carried by passengers or carrier employees (*i.e.,* medical devices) and if so, what should those exceptions include?

11. Do you support adoption of provisions similar to the air transportation requirements in § 175.10 to address hazardous materials carried on board by passengers for their personal use separate from those carried as cargo on board passenger-carrying vehicles?

12. What are the appropriate training requirements for employees, other than the driver, of passenger-carrying vehicles that transport hazardous materials?

13. Are passenger-carrying motor vehicle drivers and/or other employees trained to recognize hazardous materials that may be transported by passengers?

14. Should the number of people transported on board a motor vehicle be considered when determining the types and quantities of hazardous materials that are allowed to be carried on board? Explain.

EE. EPA 27 Test Method for Cargo Tanks

The HMR require annual leakage tests for all MC and DOT specification cargo tanks (see § 180.407(c)). The leakage test is generally conducted at 80 percent of the tank's maximum authorized working pressure (MAWP) (see § 180.407(h)). Section 180.407(h)(2) provides an exception to this normal leak test regime for cargo tanks used to transport petroleum distillate fuels that are equipped with vapor collection equipment. These cargo tanks may be tested in accordance with the Environmental Protection Agency's Test Method 27—Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure-Vacuum Test (EPA Test Method 27). EPA Test Method 27 is conducted at a significantly lower pressure (0.6 psig) than would normally be required to leak test a DOT 406 cargo tank (2.1–3.2 psig), the type of cargo tank most commonly used in gasoline service.

In 2016, PHMSA issued Letter of Interpretation 16–0048 [56] on the applicability of the exception in § 180.407(h)(2). In this letter, PHMSA clarified that the test was restricted to cargo tanks exclusively used to transport petroleum distillate fuels (defined in EPA Test Method 27 as a petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure (RVP) of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines). Concurrently, the FMCSA issued a safety bulletin [57] to raise awareness of the applicability of EPA Test Method 27, rather than the normal leakage test. Some common petroleum distillate fuels have an RVP significantly below 27.6 kilopascals, including diesel fuel.

National Tank Truck Carriers (NTTC) submitted a comment to the 2017 Regulatory Reform Notice requesting that PHMSA and FMCSA rescind this guidance and allow cargo tanks equipped with vapor collection equipment and transporting any petroleum distillate fuel, regardless of the fuel's RVP, to utilize EPA Test Method 27. PHMSA believes the interpretation provided in 2016 is correct based on the requirements in the HMR; however, we are willing to consider revisions to the applicability of EPA Test Method 27. To evaluate this topic, PHMSA requests comment on the following questions:

1. Is a test pressure of 0.6 psig, when conducted in accordance with EPA Test Method 27, sufficient to detect any leak(s) in a cargo tank? Please provide all information available to you that supports your position.

2. Prior to the publication of PHMSA's 2016 interpretation and related FMCSA safety advisory, what commodities other than gasoline were carried in DOT or MC specification cargo tanks that were tested via the EPA Test Method 27, rather than the standard § 180.407(h) leak test? What percentage of cargo tanks in petroleum distillate fuel service are not utilizing § 180.407(h)(2) based on the PHMSA interpretation and FMCSA guidance?

3. What are the cost savings for a cargo tank operator in conducting the EPA Test Method 27 instead of a standard § 180.407(h) leakage test? Please describe all sources of cost savings (time savings, tank wear, etc.).

4. How many DOT or MC specification cargo tanks equipped with vapor collection equipment are in use?

a. Are these tanks used in any service other than dedicated gasoline transportation? If yes, what materials are commonly transported in these low-pressure cargo tanks?

b. How many cargo tanks in dedicated gasoline service are in use?

5. Based on your experience as a Registered Inspector and the number of cargo tanks that have undergone the EPA Test Method 27 test per calendar year, what is the failure rate for EPA Test Method 27?

a. What, if any, problems have you observed with the EPA Test Method 27? Please explain.

b. Should a leakage test be performed in accordance with 49 CFR 180.407(h) in conjunction with EPA Test Method 27? Explain why or why not. Please provide information related to increased cost and employee time burdens created if a § 180.407(h)(1) leakage test was required in addition to the EPA Test Method 27 test.

c. Does your facility experience any issues of temperature stabilization when performing EPA Test Method 27? If yes, please explain the nature of the problems observed.

6. Should the U.S. Department of Transportation formally define ''petroleum distillate fuels'' for the purpose of determining the applicability of the exception in § 180.407(h)? If so, what definition should be used?

FF. Mounting Pads for Cargo Tank Damage Protection Devices

DOT and MC specification cargo tank motor vehicles are required to be manufactured with accident damage protection devices that are intended to protect valves, piping, and other vulnerable areas of the tank from damage in accidents (see §§ 178.337–10, 178.338–10 and 178.345–8). Accident damage protection devices meet the definition of ''appurtenance'' (see § 178.320) when applied directly to the cargo tank wall because when attached to the cargo tank wall, they have no lading retention or containment function and provide no structural support to the cargo tank. Appurtenances are required to be attached to the cargo tank wall in a specific manner to protect the integrity of the tank.

In 2015, PHMSA issued Letter of Interpretation 15–0049 [58] to Thompson Tank, Inc., in which we confirmed that

[56] *https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretation%20Files/2016/160048.pdf.*

[57] *https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/Use%20of%20EPA%20Method%2027%20Test_Final_11302016.pdf.*

[58] *https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretation%20Files/2015/150049.pdf.*

accident damage protection devices are considered appurtenances for the purposes of cargo tank construction. In 2016, the Truck Trailer Manufacturer's Association (TTMA) submitted an interpretation request, asking that PHMSA re-evaluate our response in 15–0049. Specifically, TTMA noted that virtually none of the cargo tanks currently in service utilize mounting pads for damage protection devices that meet the 2-inch setback required for appurtenances. PHMSA issued Letter of Interpretation 16–0042 [59] to TTMA, in which we re-affirmed our interpretation that accident damage protection devices attached to the cargo tank wall are considered appurtenances.

TTMA submitted a comment [60] to the 2017 Regulatory Reform Notice requesting that PHMSA rescind 15–0049 and 16–0042. TTMA again noted that many cargo tanks currently in service do not have mounting pads that meet appurtenance mounting requirements.

PHMSA received a related comment [61] on cargo tank attachment pads from Container Technology Inc. Container Technology states that requiring the attachment pad to extend two inches beyond the attached structural support or appurtenance is arbitrary and overly conservative, especially in scenarios where the weight of the attachment is less than the weight of the pad itself. To evaluate TTMA and Container Technology Inc.'s comments, PHMSA requests comment on the following questions:

Accident Damage Protection

1. If accident damage protection devices should not be considered under the definition of ''appurtenance'' (see § 178.320), how should they be characterized? Please provide justification for your response.

2. How would the cargo tank manufacturing and design industry account for the stresses imposed on the cargo tank wall if the accident damage protection devices are allowed to be mounted directly to the cargo tank wall?

3. What data is available in support of the practice of attaching accident damage protection devices to the cargo tank wall without the use of pads? Does this data show that it offers an equivalent level of safety to using pads?

4. What performance standard should apply to the size of attachment pads for appurtenances and structural support members for cargo tank motor vehicles?

a. Please supply all structural analysis and scientific data available to support a new performance standard.

Mounting Pad 2-Inch Setback Requirement

5. For a single cargo tank, what is the cost of ensuring that the cargo tank attachment pads meet the 2-inch setback requirement? You may describe these costs in terms of the needed labor and equipment.

6. Aggregated to all affected cargo tanks, what is the cost to the industry to comply with the 2-inch setback requirement?

7. Does complying with the 2-inch setback requirement require any other design or manufacturing changes to the cargo tanks or mounting pads?

8. What data is available in support of the practice of attaching appurtenances, including accident damage protection devices to the cargo tank wall without a 2-inch setback? Does this data show that it offers an equivalent level of safety to using 2-inch setback?

GG. Cargo Tank Hydrostatic Test Medium

When hydrostatic pressure tests for cargo tanks are required in part 180, subpart H, the HMR require that water or other similar viscosity liquid be used as the test medium (see § 180.407(g)(viii)). PHMSA understands that some stakeholders believe that the requirement to use water—or other similar viscosity liquid—may be unduly restrictive. PHMSA has authorized the use of alternate test mediums for portable tank testing (*e.g.,* DOT SP–20294, 20308, and 16163),[62] but has not authorized this for cargo tanks. PHMSA requests comment on the following questions to evaluate authorizing additional liquids for hydrostatic testing cargo tanks:

1. Are there other liquids that may be safely and effectively used to hydrostatically test cargo tanks? Explain.

2. For any liquid(s) identified, what advantages does the material provide compared to water or a similar viscosity liquid? Discuss at least the economic, environmental, and safety advantages of the alternative material.

3. Do you support authorization to use a material other than water or a similar viscosity liquid for cargo tank hydrostatic tests? Explain.

4. Are there situations where the use of water was not suitable for a CTMV pressure test? If so, why?

5. Is it cost effective or beneficial to authorize alternative liquids to be used in limited applications for testing and inspecting of DOT specification cargo tanks used to transport specific types of hazardous material?

HH. Cargo Tank Thickness and Corrosion Inspection Requirements

Section 180.407(d)(2)(viii) requires all major appurtenances and structural attachments on a cargo tank motor vehicle—and those elements of the upper coupler assembly that can be inspected without dismantling the upper coupler—must be inspected for any corrosion or damage that might prevent safe operation. There are currently no standards in the HMR to guide this determination for evaluating corrosion or damage to major appurtenances, structural attachments, and visible upper coupler elements.

PHMSA and FMCSA request comment on the following questions to evaluate the requirements in § 180.407(d)(2)(viii):

1. Do you support the creation of corrosion standards for visual examination, for example: ''The thickness in the corroded areas must not be less than 10 percent below the calculated thickness, if available, or 10 percent of the nominal thickness of the structural attachment, whichever is less, but in no case less than 0.177 inches. In addition, the corroded area can be no greater than 10 percent of the area of the item being evaluated. King pin wear must be inspected in accordance with the manufacturer's inspection procedures.'' Explain.

a. How frequently would a deficiency or failure be found at the 10 percent standard mentioned above?

b. Are the above criteria stricter or less strict than common visual inspection practices today? Explain.

2. When repair is necessary, how long is the cargo tank motor vehicle out of use?

3. How much time does a visual inspection take?

a. If an inspection is done to a quantified standard, what would be the difference in time needed to perform it?

b. Would additional diagnostic tools or methods be necessary? Please describe.

II. Remove Exceptions for Cargo Tank Inspections

Sections 180.409(b)–(d) provide exceptions from the Registered

[59] *https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/standards-rulemaking/hazmat/interpretations/58476/160042.pdf.*

[60] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-1398.*

[61] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2698* (see attachment 5).

[62] *https://www.phmsa.dot.gov/approvals-and-permits/hazmat/file-serve/offer/SP20294.pdf/2018115089/SP20294;https://www.phmsa.dot.gov/approvals-and-permits/hazmat/file-serve/offer/SP20308.pdf/2019044410/SP20308;https://www.phmsa.dot.gov/approvals-and-permits/hazmat/file-serve/offer/SP16163.pdf/2016086118/SP16163.*

Inspector qualification requirements for cargo tank motor vehicles. It is PHMSA and FMCSA's understanding that very few cargo tank motor vehicle inspections are conducted under the provisions of § 180.409(b), (c), and (d). We are concerned these provisions do not enhance public safety and may allow unqualified persons to perform tests and inspections. We request comment on the following questions to evaluate the continued inclusion of the exceptions provided in § 180.409(b)–(d) in the HMR:

1. How many cargo tank inspections are conducted annually by persons not registered with the Department or not meeting the education and/or experience requirements of a ''Registered Inspector'' under the provisions of § 180.409(b)–(d)?

2. Would the removal of the exceptions in § 180.409(b)–(d) from the HMR impose any additional costs on cargo tank motor vehicle users? Please identify any costs and additional time burdens that would be created by such a requirement. If this requirement creates additional time burdens on employees, please identify the labor category (use Bureau of Labor Statistics labor categories, if possible) of the employees involved and the amount of time spent complying with the new requirement would take.

3. Are inspections conducted by those not registered more common for cargo tank users/owners in particular geographic or rural areas? More common for smaller carriers or firms? If so, please explain.

JJ. Segregation of Detonating Explosives for Highway Transportation

In the HMR, explosives are required to be segregated from each other based on the hazards and likelihood of initiation of different explosive types. The intention of these segregation requirements is to reduce the overall risk in transportation. The risk factors are encoded in the hazard classification of each explosive in the hazard division (Division 1.1, 1.2, etc.), and compatibility group (A, B, C, etc.), which are assigned to each explosive in its EX-approval. See §§ 173.50 and 173.52 for the definition of each explosive hazard class and compatibility group.

While the HMR's segregation requirements for explosives are usually based on hazard class and compatibility group, initiating or primary explosives present a particular hazard in transportation due to the risk of unintended initiation and must be further segregated from less sensitive explosives to avoid accidental explosive propagation in transportation. The general segregation requirements for explosives in highway transportation are found in the Compatibility Table for Class 1 (Explosive) Materials under § 177.848(f), and additional segregation requirements specific for detonator assemblies, boosters with detonators, and detonators are found in § 177.835(g). In § 177.835(g), the HMR has more conservative, separate requirements for detonator assemblies and boosters with detonators compared to the requirements for detonators.

Prior to harmonization with the UN Model Regulations in final rule HM–181[63] (Dec. 20, 1990, 55 FR 52402), the HMR used non-performance-based definitions to differentiate between article types. Prior to the publication of HM–181, the HMR defined blasting initiators with <10g Net Explosive Weight (NEW) (excluding delay and ignition charges) as ''detonators'' and those with >10g NEW (excluding delay and ignition charges) as ''Detonating Primers.'' The term ''Detonating primers'' was editorially updated to ''detonating assemblies'' in final rule HM–189M (October 1, 1996; 61 FR 51334). Further revisions of section § 177.835(g) to change energetic classifications from Class A/B/C to Divisions 1.1–1.4S, along with other editorial changes, have led to confusion about the intent of the section. With the loss of the 10g NEW delineation between detonators and detonating primers (now detonator assemblies) after the publication of HM–181, and the shift toward performance-based classifications, the original regulatory intent has been lost and has led to confusion in the regulated community.

Detonator assemblies and boosters with detonators are prohibited from transportation in the same motor vehicle with Division 1.1, 1.2, or 1.3 explosive material (except other detonator assemblies, boosters with detonators or detonators), Division 1.4 detonating cord material, or Division 1.5 material. Detonators are prohibited from transportation in the same motor vehicle with Division 1.1, 1.2, or 1.3 material (except other detonators, detonator assemblies or boosters with detonators), and Division 1.4 detonating cord material, or Division 1.5 material, unless the detonators are packed in accordance with one of the exceptions in § 177.835(g)(1)–(3).

PHMSA is considering revising the segregation requirements for detonator assemblies to bring them in line with the additional flexibility offered to detonators in § 177.835(g)(1)–(3). Additionally, PHMSA is considering amending segregation requirements for Division 1.4S detonators and developing segregation requirements commensurate with the risk presented by articles similar to detonators, including ''fuzes, detonating.'' As stated in Letter of Interpretation 10–0107,[64] PHMSA currently requires that ''fuzes, detonating'' be segregated in the same manner as detonators, due to the similar risks of the materials. PHMSA is considering research to develop the necessary data to make these revisions, as well as seeking comments from stakeholders.

PHMSA requests comment on the following questions to gather information related to potential amendments of segregation requirements for primary initiating explosives:

1. Should detonator assemblies be eligible for the same segregation relief as detonators when transported by highway (*i.e.,* the exceptions in § 177.835(g)(1)–(3))?

a. Why or why not?

b. Should distinctions be drawn between detonator assemblies based upon the hazard division (*e.g.,* should we allow Division 1.4 detonator assemblies to be eligible for the same segregation relief available to detonators, but not Division 1.1 detonator assemblies)? Please explain your reasoning.

c. Do you have any specific safety concerns with allowing detonator assemblies to be transported on the same motor vehicle with Division 1.1, 1.2, or 1.3 material detonating cord Division 1.4 material or Division 1.5 material if they are packaged in accordance with the requirements in § 177.835(g)(1)–(3)?

2. Are the packaging options in § 177.835(g)(1)–(3) appropriate for detonator assemblies? Explain.

3. If detonator assemblies were eligible for the same segregation relief as detonators, how many shipments of detonator assemblies per year would be conducted in motor vehicles containing Division 1.1, 1.2, or 1.3 explosive material (except other detonator assemblies, boosters with detonators, or detonators), detonating cord Division 1.4 material, or Division 1.5 material?

4. If detonator assemblies were eligible for the same segregation relief as detonators, would this create quantifiable cost savings or other benefits? If yes, please describe the cost savings or other benefits in detail.

[63] *https://www.govinfo.gov/content/pkg/FR-1990-12-21/pdf/FR-1990-12-21.pdf#page=138.*

[64] *https://www7.phmsa.dot.gov/sites/phmsa.dot.gov/files/legacy/interpretations/Interpretations/2010/100107.pdf.*

5. Should PHMSA develop specific segregation requirements for articles that are similar to detonators, such as ''fuzes, detonating,'' including both those that do and do not incorporate protective features (*e.g.,* ''fuzes, detonating'' of compatibility group B vs. D)? Explain.

a. Approximately how many shipments of ''fuzes, detonating'' are transported by highway annually in the United States?

b. If PHMSA developed a less restrictive segregation requirement for ''fuzes, detonating,'' would it create cost savings or other benefits to explosives shippers or carriers? If so, please describe the cost savings or benefits in detail.

6. PHMSA is considering whether the risks associated with primary detonating explosives, when meeting UN 6(d) unconfined single package test criteria and classed as Division 1.4S, justifies further relief from segregation requirements.

a. Do you support creating segregation exceptions for primary detonating explosives classified as Division 1.4S? Explain.

b. If PHMSA developed a less restrictive segregation requirement for Division 1.4S detonating explosives, would it create cost savings or other benefits to explosives shippers or carriers? If so, please describe the cost savings or benefits in detail.

7. Are the manufacturers and shippers of both non-detonating/initiating explosives and detonators/initiating explosives typically the same firms?

KK. Cargo Tank Reflectivity

MC–331 cargo tank motor vehicles, typically used to transport compressed gases, are required to be painted a white, aluminum, or similar reflecting color on the upper two-thirds of the area of the cargo tank, unless insulated or covered by a jacket made of aluminum, stainless steel, or other bright non-tarnishing metal (see § 178.337–1(d)). This requirement has been in place since the creation of the MC–331 specification in final rule Order 59–B [65] (Jan 16, 1965, 30 FR 579). Cargo tank coating technology has progressed significantly over the years, and now includes alternatives such as vinyl wraps and paint. PHMSA has issued several Letters of Interpretation on this issue, (see Letters of Interpretation Ref. Nos. 11–0067, 14–0180, 15–0242, and 19–0107) in which we stated that wraps or covers that met the reflectivity requirements of the section would be acceptable for use on MC–331 cargo tank motor vehicles.

PHMSA is considering revising the requirement that the tank must be ''painted,'' and also whether a reflective covering could be used instead of paint. PHMSA and FMCSA are also aware, based on the volume of requests for letters of interpretations on this topic received in recent years, that there is significant confusion in the industry related to determining whether a particular color of wrap or paint meets the reflectivity requirement of this section. However, PHMSA and FMCSA have not received enough data to propose a specific reflectivity requirement to replace the current ''white, aluminum, or similar reflecting color'' standard. To address this issue, PHMSA seeks comment on the following questions:

1. Do you support the creation of a reflectivity performance standard for wrapped or painted MC–331 cargo tank motor vehicles to replace or in addition to the current requirement for the tank to be a ''white, aluminum, or similar reflecting color?'' Explain.

2. Please provide any relevant technical and scientific data or other information available to you to support the creation of a reflectivity performance standard for wraps or paint other than the existing regulatory requirement.

a. How often do cargo tank owner/operators repaint or recoat the tank motor vehicles to meet the specification requirements? Would this performance standard require re-painting or re-coating more or less often?

LL. Cargo Tank Registered Inspector Training and Qualification

DOT and MC specification cargo tanks must be tested and inspected in accordance with the requirements of part 180, subpart E. Unless excepted in § 180.409, tests and inspections required to continue to operate a specification cargo tank in hazardous materials service must be conducted by an inspector who meets the following requirements:

- Is registered with the FMCSA in accordance with part 107, subpart F of the HMR;
- Is familiar with DOT-specification cargo tanks, and trained and experienced in use of the inspection and testing equipment needed; and
- Has the training and experience required to meet the definition of ''Registered Inspector'' in § 171.8 of the HMR.

PHMSA received a comment [66] to the 2017 Regulatory Reform Docket from Container Technology requesting that we develop a checklist of best practices for cargo tank Registered Inspectors. As described by Container Technology, this would allow cargo tank owners to more accurately determine whether the Registered Inspector was performing high quality inspections and tests. FMCSA, who administers the cargo tank registration program, and PHMSA acknowledge that there are challenges associated with ensuring cargo tank Registered Inspectors have the proper training, education, and experience to properly inspect cargo tanks in accordance with all the test and inspection requirements in part 180, subpart E.

PHMSA and FMCSA have received several safety recommendations from the National Transportation Safety Board (NTSB) related to the training and qualification of cargo tank Registered Inspectors. The NTSB issued Recommendations H–18–001 through H–18–006 [67] to FMCSA, PHMSA, and a private company as a result of findings from an investigation [68] conducted into a cargo tank motor vehicle accident that occurred in Stroud, Alabama on March 11, 2016. PHMSA is uncertain whether the development of a voluntary checklist for use by cargo tank owners will address the issues that have been identified in the NTSB report and recommendations. Further, PHMSA is concerned that developing such a checklist may set an untenable precedent for other situations. Alternatively, PHMSA believes that incorporation by reference of an industry standard for cargo tank inspection (*e.g.,* National Boiler Inspection Code [NBIC], ASME, Truck Trailer Manufacturer's Association) may help address these issues. PHMSA requests comment on the following questions:

1. The NTSB has recommended that PHMSA and FMCSA incorporate by reference the training and qualification requirements of the NBIC into the HMR for cargo tank inspectors (see Accident Summary Report NTSB/HAR–18/01/SUM PB2018–100361 and NTSB Safety Recommendation H–18–004). Do you support the incorporation of these training and qualification requirements for cargo tank Registered Inspectors into the HMR? Explain.

[65] *https://www.govinfo.gov/content/pkg/FR-1965-01-16/pdf/FR-1965-01-16.pdf#page=19.*

[66] *https://www.regulations.gov/document?D=DOT-OST-2017-0069-2698.*

[67] *https://www.ntsb.gov/safety/safety-recs/recletters/H-18-001-006.pdf.*

[68] *https://www.ntsb.gov/investigations/AccidentReports/Reports/HAR1801SUM.pdf.*

a. Will incorporation of the NBIC impose any additional costs on the cargo tank inspection community? If so, please identify specific provisions in the NBIC that will create additional cost burdens.

2. Are there other generally accepted industry standards that describe training requirements, recommendations, and best practices for cargo tank Registered Inspectors?

a. If yes, what are the alternative standards?

i. What is their cost to purchase (if any)?

ii. Are they available in electronic format?

iii. Are they primarily used in an international or domestic context?

b. How would you describe the equivalency of these alternative standards to the existing Registered Inspector requirements? Explain why you believe the alternative standards are equivalent to or superior to the existing Registered Inspector requirements.

3. Will the IBR of the NBIC or similar industry publications for the training and qualification of cargo tank Registered Inspectors ensure that all persons certified to inspect cargo tanks have the necessary knowledge, skills, and abilities to adequately perform inspections of cargo tanks to verify their safety?

a. If you support methods other than IBR of the NBIC to ensure that all persons certified to inspect cargo tanks have the necessary knowledge, skills, and abilities to adequately perform, please describe them, along with detailed justifications and descriptions of any additional cost burdens for the industry.

4. Should PHMSA revise the current education and experience requirements in the definition of ''Registered Inspector'' in § 171.8? Why or why not? If a new qualification or experience is suggested, please explain the reasoning behind your proposal. Current qualifications are listed below:

(1) Has an engineering degree and one year of work experience relating to the testing and inspection of cargo tanks;

(2) Has an associate degree in engineering and two years of work experience relating to the testing and inspection of cargo tanks;

(3) Has a high school diploma (or General Equivalency Diploma) and three years of work experience relating to the testing and inspection of cargo tanks; or

(4) Has at least three years' experience performing the duties of a Registered Inspector prior to September 1, 1991.

5. Do you support the creation of an additional option to meet the § 171.8 definition of ''Registered Inspector'' based on attending a training course on the test and inspection or assembly of cargo tank motor vehicles? Why or why not? For example, the proposed language would be as follows:

''Registered Inspector means a person registered with the Department in accordance with subpart F of part 107 of this chapter who has the knowledge and ability to determine whether a cargo tank motor vehicle conforms to the applicable observable and verifiable DOT specification and to perform the tests and inspections and/or perform assembly as prescribed in part 180, subpart E. A Registered Inspector meets the knowledge and ability requirements of this section by meeting any one of the following requirements:

(1–4) * * *; or

(5) Has successfully completed a course in the testing and inspection or assembly of cargo tank motor vehicles specific to part 180, subpart E, and the applicable sections of parts 171, 172, 173, and 178, including:

(A) The course must include written and performance evaluations, including actual inspection and testing or assembly of cargo tank motor vehicles specific to the person's certification;

(B) The training certification must document the specific tests and inspections; the cargo tank motor vehicle specifications; non-specification cargo tank motor vehicles requiring testing; and/or cargo tank motor vehicle special permits the person has been certified to inspect and test; and

(C) The certificate, a copy of the course training materials, and inspection documentation must be retained as long as the person performs Registered Inspector functions, and for one year thereafter.''

6. Do you support a provision that would indicate that a person may only gain the requisite experience to operate as a Registered Inspector by working under the direct supervision of another qualified Registered Inspector? Why or why not?

7. Do you support adding a specific requirement that Registered Inspectors must receive and document additional function-specific training (see § 172.704) prior to testing a different tank specification (*e.g.,* a DOT 406 vs a DOT 407) or conducting a different type of test (*e.g.,* leakage pressure test vs. hydrostatic pressure test)? Why or why not?

8. Should PHMSA create a requirement for initial certification of Registered Inspectors by a separate, 3rd party organization?

a. Who should assume the responsibility of ensuring that a Registered Inspectors has mastered the ability to perform the tasks outlined in the HM regulations?

b. What training/experience/qualifications/credentials would be needed for the person(s) who assume(s) the responsibility of ensuring that a Registered Inspectors is fully trained and qualified?

c. What should be the qualification standards for the 3rd party organization to create an initial certification of Registered Inspectors?

d. Please estimate any costs likely to be created by the adoption of a 3rd party certification system for Registered Inspectors.

MM. Cargo Tank Design Certifying Engineer Training and Qualification

PHMSA and FMCSA believe that the training and qualification of persons meeting the definition of a ''Design Certifying Engineer'' in § 171.8 needs to be updated to address issues that have been identified by FMCSA among DCE personnel. An individual must meet the definition of a DCE, and be registered with FMCSA (see part 107, subpart F), in order to approve the design of a DOT or MC specification cargo tank as specified in part 178, subpart J. Generally, a combination of work experience and education is necessary to ensure the person performing the function of the DCE can perform the tasks outlined in the HMR. PHMSA and FMCSA request comment on the following questions to evaluate the training and qualification of cargo tank DCEs:

1. Should PHMSA revise the current education and experience requirements in the definition of DCE in § 171.8 (current qualifications are listed below):

(1) Has an engineering degree and one year of work experience in cargo tank structural or mechanical design;

(2) Is currently registered as a professional engineer by appropriate authority of a state of the United States or a province of Canada; or

(3) Has at least three years' experience in performing the duties of a Design Certifying Engineer prior to September 1, 1991.

Why or why not? If a new qualification or experience is suggested, please explain the reasoning behind your proposal.

2. Should PHMSA create a requirement for initial certification of DCEs by a separate, 3rd party organization?

a. Who should assume the responsibility of ensuring that a DCE has mastered the ability to perform the tasks outlined in the HMR?

b. What training/experience/qualifications/credentials would be

needed for the person(s) who assume(s) the responsibility of ensuring that a DCE is fully trained/qualified?

c. What should be the qualification standards for the 3rd party organization to create an initial certification of DCEs?

NN. Cargo Tank Registered Inspector Verification and Documentation

PHMSA and FMCSA have encountered issues in verifying that cargo tank Registered Inspectors meet the required education and experience requirements, as defined in § 171.8. Lack of, or improper, documentation can indicate that the Registered Inspector lacks the experience and education to properly perform the functions of a Registered Inspector. PHMSA, in conjunction with FMCSA, request comment on the following questions to evaluate creating record retention requirements for Registered Inspectors:

1. Do you support requiring that Registered Inspectors and their employers be required to maintain documentation proving that the Registered Inspector meets the education and experience requirements of the § 171.8 definition for as long as they are employed as a Registered Inspector and for one year thereafter? Why or why not?

2. What additional burdens would the creation of this requirement impose on Registered Inspectors and their employers?

a. Please estimate the number of records (physical or digital) that would be created and maintained by Registered Inspectors and their employers, and the number of hours required to generate and maintain each record.

b. What categories of employees would be responsible for creating and maintaining these records? (Use Bureau of Labor Statistics labor categories, if possible.)

3. Who are the typical employers of Registered Inspectors? Self-employed or inspection firms?

OO. Cargo Tank Design Certifying Engineer Verification and Documentation

PHMSA and FMCSA have encountered difficulties in verifying that cargo tank Design Certifying Engineers meet the required education and experience requirements, as defined in § 171.8. Lack of or improper documentation can indicate that the DCE lacks the experience and education to properly perform the functions that are required of a DCE. PHMSA, in conjunction with FMCSA, requests comment on the following questions to evaluate creating record retention requirements for DCEs:

1. Do you support requiring that DCEs and their employers be required to maintain documentation proving that the DCE meets the education and experience requirements of the § 171.8 definition for as long as they are employed as a DCE and for one year thereafter? Why or why not?

2. What additional burdens would the creation of this requirement impose on DCEs and their employers?

a. Please estimate the type and number of records (physical or digital) that would be created and maintained by DCEs and their employers, and the number of hours required to generate and maintain each record.

b. What categories of employees would be responsible for creating and maintaining these records? (Use Bureau of Labor Statistics labor categories, if possible.)

3. Who are the typical employers of Design Certifying Engineers? Self-employed or engineering firms?

PP. Cargo Tank Registered Inspector Revised Definition

PHMSA and FMCSA believe that the definition of ''Registered Inspector'' in § 171.8 needs to be updated to address issues that have been identified by FMCSA. An individual must meet the definition of Registered Inspector, with some exceptions provided in § 180.409, in order to conduct the tests and inspections required for continued service of cargo tank motor vehicles in part 180, subpart E. PHMSA and FMCSA are concerned that the current definition of ''Registered Inspector'' is insufficiently clear, creates confusion for new inspectors entering the field related to the type of experience required before beginning work as a Registered Inspector, and can also allow unqualified inspectors to continue to test and inspect cargo tanks. In particular, the phrase, ''work experience relating to the testing and inspection of cargo tanks'' has generated numerous questions and is insufficiently clear.

PHMSA, in conjunction with FMCSA, request comment on the following questions to evaluate potential modifications to the definition of ''Registered Inspector:''

1. Should the phrase ''relating to the testing and inspection of cargo tanks'' be replaced with a phrase that more clearly communicates our expectation that the Registered Inspector's work experience directly relates to the continuing qualification of cargo tanks? Why or why not?

a. For example, ''A Registered Inspector meets the knowledge and ability requirements of this section by meeting any one of the following requirements: (1) Has an engineering degree and at least one year of work experience *engaging in the continuing qualification, maintenance, or periodic testing and inspecting of DOT specification cargo tanks, cargo tank motor vehicles and/or cargo tank equipment used in hazardous materials transportation, and is responsible, qualified, and competent to demonstrate the skills and abilities to ensure compliance, qualification, and maintenance of cargo tanks*?''

b. If you do not agree with the above example, please provide a suggested definition and explain the intended application of your revised definition.

2. Would this proposed revised definition have any impact on third-party groups that offer training courses for Registered Inspectors?

3. Does this proposed revised definition align with any industry standard definitions?

QQ. Cargo Tank Design Certifying Engineer Revised Definition

PHMSA and FMCSA believe that the definition of ''Design Certifying Engineer'' in § 171.8 needs to be updated to address issues that have been identified by FMCSA in cargo tank DCE personnel. An individual must meet the definition of DCE in order to approve the design of a DOT or MC specification cargo tank as specified in part 178, subpart J. PHMSA and FMCSA are concerned that the current definition of ''Design Certifying Engineer'' is insufficiently clear, creates unnecessary confusion for new engineers entering the field related to the type of experience required before beginning work as a DCE, and can also allow unqualified engineers to approve the design of cargo tanks. In particular, the phrase, ''work experience in cargo tank structural or mechanical design'' has generated numerous questions and is insufficiently clear.

PHMSA, in conjunction with FMCSA, request comment on the following questions to evaluate potential modifications to the definition of ''Design Certifying Engineer:''

1. Should the phrase ''in cargo tank structural or mechanical design'' be replaced with a phrase that more clearly communicates our expectation that the DCE's work experience directly relates to the design of cargo tanks?

a. For example, ''A Design Certifying Engineer meets the knowledge and ability requirements of this section by meeting any one of the following requirements: (1) Has an engineering degree and at least one year of work

experience engaging *in performance of the stress analysis of pressure vessels and certification of cargo tank or cargo tank motor vehicle designs, including its required accident damage protection devices, in conformance to the specification requirements of this subchapter.*''

b. If you do not agree with the above example, please provide a suggested definition and explain the intended application of your revised definition.

2. Would this proposed revised definition have any impact on 3rd party groups that offer training courses for Design Certifying Engineers?

3. Does this proposed revised definition align with any industry standard definitions?

RR. NTSB Safety Recommendations R–20–1 to R–20–4

On February 14, 2020, the National Transportation Safety Board (NTSB) issued four related safety recommendations to PHMSA and FRA.[69] Safety Recommendations R–20–1 to R–20–4 were issued after the investigation of a release of ethanol from a DOT–111A100W1 tank car in Fredericksburg, VA on November 2, 2016. The NTSB determined that the probable cause of the ethanol release was undetected cracks that resulted from overspeed high-energy coupling events, which caused tank shell deformation that led to the initiation of two fatigue cracks at the terminations of the cradle pad fillet welds. Based on the findings of the investigation, NTSB issued the following safety recommendations to PHMSA and FRA:

- R–20–1—Work together to develop maximum coupling speed thresholds and impact mass limits for hazardous materials railcars.
- R–20–2—Require that tank cars involved in high-energy coupling-force events undergo a structural integrity inspection by a qualified technician before returning to service.
- R–20–3—Develop methods to identify tank cars that have sustained overspeed and high-energy coupling force events.
- R–20–4—After the successful development of methods to identify tank cars that have sustained overspeed and high-energy coupling force events, require that rail carriers have monitoring processes in place to promptly remove damaged tank cars from hazardous materials service.

The intent of this collection of safety recommendations is to prevent releases of hazardous materials from occurring due to damage to cars from overspeed or high-energy coupling events by: (1) minimizing the opportunity for these events; and (2) discovering damage in a timely manner so that corrective measures can be taken. PHMSA and FRA concur with the NTSB's conclusion that reducing overspeed and high-energy coupling-force events, inspecting the structural integrity of tank cars that have experienced these events, and identifying and removing tank cars damaged by these events is in the interest of improving tank car safety. In this ANPRM, we describe existing regulatory standards designed to address overspeed coupling, and seek comment from railroads, tank car shippers, tank car manufacturers, tank car owners, and any other interested parties on the best means to address this issue.

The HMR address tank car coupling speed in § 174.83(b) for certain materials:

- Division 1.1 and 1.2 explosives;
- Division 2.3 Hazard Zone A gas;
- Division 6.1 PG I Hazard Zone A material;
- Class DOT 113 tank car displaying a Division 2.1 (flammable gas) placard, including a Class DOT 113 tank car containing only a residue of a Division 2.1 material.

Section 174.83(b) requires that tank cars containing these materials may not be cut off while in motion, coupled into with more force than is necessary to complete the coupling, or struck by any car moving under its own momentum. Section 174.83(e) addresses flatcar coupling as follows: ''No placarded flatcar or any flatcar carrying a placarded transport vehicle, freight container, or bulk packaging may be coupled into with more force than is necessary to complete the coupling.''

Voluntary rail industry standards also address tank car coupling speeds. AAR Circular OT–55–Q states, ''Maximum reasonable efforts will be made to achieve coupling of loaded placarded tank cars at speeds not to exceed 4 mph.'' [70] The United States Hazardous Materials Instructions for Rail (US–1) states, ''When rail cars are cut off in motion, the coupling speed must not exceed 4 mph.'' [71] As noted in the NTSB report, the existing regulatory requirements and voluntary industry standards did not prevent the hard-coupling event that led to the ethanol release in Fredericksburg, VA on November 2, 2016.

Transport Canada has implemented coupling speed standards and inspection requirements for tank cars that experience overspeed coupling events in Section 10.7 of the Transportation of Dangerous Goods (TDG) Regulations.[72] The TDG Regulations' coupling speed standards consist of a general limit of 6 mph for coupling, with allowance for 7.5 mph for a single railway vehicle moving under its own momentum at temperatures above −25 °C. Additionally, the TDG Regulations require a visual inspection of the underframe, and coupling and cushioning components of the tank car before the tank car travels 2 kilometers after one of the following overspeed coupling events occurs, as follows:

Item	Combined coupling mass: tank car and other railway vehicle, and their contents	Ambient temperature	Relative coupling speed
1	>150,000 kg (330,700 lb)	≤−25 °C (−13 °F)	>9.6 kph (6.0 mph).
2	>150,000 kg (330,700 lb)	≤−25 °C (−13 °F)	>12 kph (7.5 mph).
3	≤150,000 kg (330,700 lb)	≤−25 °C (−13 °F)	>12.9 kph (8.0 mph).
4	≤150,000 kg (330,700 lb)	>−25 °C (−13 °F)	>15.3 kph (9.5 mph).

Additionally, the person in possession of the tank car when the overspeed coupling event occurs must submit a written report to the tank car's owner within 10 days, informing the owner of the overspeed coupling event. The tank car owner must then ensure the tank car is not used in hazardous materials service, other than the lading

[69] *https://www.ntsb.gov/investigations/AccidentReports/Reports/HZM2001.pdf.*

[70] Recommended Railroad Operating Practices for Transportation of Hazardous Materials. Circular No. OT 55–Q. (CPC–1337). *https://www.aar.org/wp-content/uploads/2018/09/CPC-1337-OT-55-Q-w-AskRail-9-6-18.pdf.*

[71] United States Hazardous Materials Instructions for Rail. *https://www.aar.org/wp-content/uploads/2018/10/US-HMI-for-Rail-2015-FINAL.pdf.*

[72] Transportation of Dangerous Goods Regulations. ''Coupling of Railway Vehicles,'' Section 10.7. SOR/2019–101. *https://tc.canada.ca/en/dangerous-goods/part-10.*

contained in the tank car at time of coupling, until a detailed structural integrity inspection can be conducted by a tank car facility.

FRA and PHMSA note that the standards adopted by Transport Canada in the TDG Regulations align with the intent of NTSB Safety Recommendations R–20–1 and R–20–2, in that they address coupling speed thresholds and impact mass limits, as well as require a detailed structural integrity inspection for tank cars that experience coupling events beyond the coupling speed and mass thresholds. However, Safety Recommendations R–20–3 and R–20–4, for identification of cars that experience overspeed coupling events, and rail carrier monitoring procedures to remove a tank car damaged in an overspeed coupling event from service, do not currently have a direct precedent in American, Canadian, or voluntary industry standards. While there are technologies in use to monitor coupling speeds, neither PHMSA nor FRA believe that a systematic, industry-wide process has been implemented to monitor overspeed coupling. Since no systematic overspeed coupling monitoring system exists, a system for carrier identification of tank cars that have experienced overspeed coupling events would also need to be developed. With consideration of the existing coupling speed standards, and recognition of the need to gather more information to develop monitoring system standards, PHMSA and FRA request comment on the following questions:

1. Do you support adoption of the Transport Canada coupling speed and impact mass standards, described above, into the HMR? Why or why not? Please support your position with any data or information available to you.

2. Do you support requiring a visual inspection of the tank car underframe, and coupling and cushioning components immediately (within 2 km, or 1.25 miles) after an overspeed coupling event that exceeds certain speed and impact mass standards? Why or why not? Please support your position with any data or information available to you.

a. Is requiring an immediate visual inspection of the tank car before the train moves 2 km (1.25 miles) miles a reasonable standard? What alternatives should be considered? Explain.

b. If this requirement was adopted, who would/should conduct the inspection? Are railroad personnel trained/qualified to perform the inspection?

c. How much time would each visual inspection require?

d. What costs would be associated with the adoption of this requirement? Provide a quantified estimate, if possible.

3. Do you support requiring a detailed structural integrity inspection, conducted at a certified tank car facility, for a tank car subjected to a coupling that exceeds certain speed and impact mass standards? Why or why not? Please support your position with any data or information available to you.

a. If this requirement was adopted, how much would inspection services cost a tank car owner? Please include estimates for time out of service, inspection labor, recordkeeping, and all other costs associated with a structural integrity inspection.

4. What methods or procedures are currently in use to measure tank car coupling speeds and avoid high-energy, overspeed coupling events?

5. What methods or procedures are currently in use to identify tank cars that have experienced high-energy, overspeed coupling events?

6. Describe a system that could be used to measure all tank car coupling events and identify tank cars that have experienced a high-energy, overspeed coupling event. The system should use existing methods, procedures, and available technologies to the extent practical.

a. How much would it cost to develop and implement such a system? Estimates are acceptable. Please provide as detailed a cost breakdown as possible addressing research and development (if required), capital expenditures, employee wages, etc. associated with your estimate.

b. How much would it cost to maintain such a system? Estimates are acceptable. Please provide as detailed a cost breakdown as possible addressing capital expenditures, employee wages, etc. associated with your estimate.

c. Who would bear the costs for the development, implementation, and maintenance of the system you describe?

d. If such a system was implemented, would you support a requirement that the person in possession of a tank car that experiences a high-energy, overspeed coupling event must report all such events to the tank car owner and/or the Department of Transportation, regardless of whether the event results in the release of hazardous materials? Why or why not? In your estimation, how many such reports would be filed nationwide annually, if such a requirement was adopted?

7. Please provide any information available to you on the rate of high-energy or overspeed coupling events that occur without causing an immediate release of hazardous materials. How often do high-energy or overspeed coupling events occur with no immediate release of hazardous materials?

8. In consideration of the intent of the safety recommendations, rather than imposing a speed or impact mass standard and associated procedures, what alternative measures could be implemented to arrive at the same goal of preventing incidents that result in the release of a hazardous material because of damage to a tank car from overspeed and high energy coupling events?

SS. Placard Display on Intermediate Bulk Containers

Section 172.516 details the visibility and display of placards. Paragraph (a) specifies that each placard on a motor vehicle or rail car must be ''clearly visible from the direction it faces, except from the direction of another transport vehicle or rail car to which the motor vehicle or rail car is coupled.'' Furthermore, this paragraph indicates that placards displayed on a freight container or portable tank can be used to meet this visibility requirement.

PHMSA has received several requests for letters of interpretation on whether placards displayed on IBCs or shrink-wrapped pallets containing multiple non-bulk packages of hazardous materials may be used to meet the § 172.516 visibility requirement, in addition to those placards displayed on a freight container or portable tank. Examples of these letters include 20–0025 [73] and 10–0075.[74] PHMSA has provided the guidance that such placard display is permissible, and would meet the requirements of § 172.516, provided the placards are clearly visible from the direction the placard faces. To encourage a uniform understanding of placard display requirements, PHMSA is considering a revision to § 172.516 to clearly authorize motor vehicle placard display on IBCs, shrink-wrapped pallets containing non-bulk packages, or other arrangements that permit adequate visibility of placards for each direction they face.

To evaluate the feasibility revising the placard visibility requirements in the HMR to allow motor vehicle placard display to be accomplished by displaying placards on IBCs, shrink-wrapped pallets, or other arrangements besides freight containers or portable

[73] *https://www7.phmsa.dot.gov/regulations/title49/interp/20-0025.*

[74] *https://www7.phmsa.dot.gov/regulations/title49/interp/10-0075.*

tanks, PHSMA seeks comments on the following questions:

1. In your opinion, should PHMSA revise § 172.516 to clearly authorize motor vehicle placard display on IBCs, shrink-wrapped pallets containing non-bulk packages, or other arrangements that permit adequate visibility of placards for each direction they face? Why or why not?

2. Would placards displayed on IBCs or shrink-wrapped pallets containing non-bulk packages be as visible and recognizable in normal transportation scenarios and accident scenarios compared to placards displayed on a freight container or portable tank?

3. Would a revision to § 172.516 to clearly authorize motor vehicle placard display on IBCs, shrink-wrapped pallets containing non-bulk packages, or other arrangements that permit adequate visibility of placards for each direction they face create any cost savings for hazardous material shippers or transporters? Please provide a cost-savings estimate per shipment, including time savings, if applicable.

TT. Emerging Technologies

Emerging energy storage, transportation, and carbon sequestration technologies are at the forefront of efforts to meet Executive Order 14008 (''Tackling the Climate Crisis at Home and Abroad'').[75] These technologies include new battery chemistries, increased transportation of clean energy products including hydrogen, and the capture, purification, and sequestration of carbon dioxide. PHMSA is committed to ensuring that the HMR do not become a barrier to the development, use, and prevalence of such technologies, and facilitates the integration of these new technologies in the economy, by adding, revising, or deleting certain provisions as necessary. Accordingly, PHMSA requests comment on the following questions:

1. Please identify any revisions in the HMR required to facilitate the adoption of new and emerging technologies.

a. Include information and arguments that support your proposed action, including relevant technical and scientific data.

b. Include any specific cases that support or demonstrate the need for your proposed action.

2. Please provide information about the following:

a. The costs, savings, and safety or environmental benefits of your proposed action to society in general and to identifiable groups such as specific companies or industries affected by your proposal.

b. The regulatory burden of your proposed action on small businesses, small organizations, small governmental jurisdictions, and Indian tribes.

c. The recordkeeping and reporting burdens of your proposed action and whom they would affect.

d. The direct effects, including preemption effects under 49 U.S.C. 5125 of federal hazardous materials transportation law, of your proposed action on states, on the relationship between the Federal Government and the states, and on the distribution of power and responsibilities among the various levels of government. (See 49 CFR part 107, subpart C, regarding preemption.)

e. The effect of your proposed action on the quality of the natural and social environments.

Issued in Washington, DC, on June 26, 2023, under the authority delegated in 49 CFR 1.97.

William S. Schoonover,

Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration.

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[75] *https://www.federalregister.gov/citation/86-FR-7619.*