

## DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials  
Safety Administration49 CFR Parts 171, 172, 173, 176, 178,  
and 180

[Docket No. PHMSA–2015–0102 (HM–219A)]

RIN 2137–AF09

Hazardous Materials: Response to  
Petitions From Industry To Modify,  
Clarify, or Eliminate RegulationsAGENCY: Pipeline and Hazardous  
Materials Safety Administration  
(PHMSA), DOT.

ACTION: Final rule.

**SUMMARY:** In this rulemaking, PHMSA is amending the Hazardous Materials Regulations in response to 19 petitions for rulemaking submitted by the regulated community to update, clarify, streamline, or provide relief from miscellaneous regulatory requirements. By adopting these deregulatory amendments, PHMSA is allowing more efficient and effective ways of transporting hazardous materials in commerce while maintaining an equivalent level of safety.

**DATES:**

*Effective date:* This rule is effective December 7, 2018.

*Incorporation by reference date:* The incorporation by reference of certain publications listed in this final rule is approved by the Director of the Federal Register as of December 7, 2018.

*Voluntary compliance date:* November 7, 2018.

*Delayed compliance date:* Unless otherwise specified, compliance with the amendments adopted in this final rule is required beginning November 7, 2019.

**FOR FURTHER INFORMATION CONTACT:**

Steven Andrews, (202) 366–8553, [steven.andrews@dot.gov](mailto:steven.andrews@dot.gov), Office of Hazardous Materials Standards, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue SE, Washington, DC 20590–0001.

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**I. Executive Summary**

In response to petitions for rulemaking submitted by the regulated community, PHMSA is amending the Hazardous Materials Regulations (HMR; 49 CFR parts 171–180) to update, clarify, streamline, or provide relief from miscellaneous regulatory requirements. Specifically, PHMSA is:

- Incorporating by Reference (IBR) multiple publications from the Compressed Gas Association (CGA), the Chlorine Institute, and the Department of Defense (DoD).
- Revising the table in § 180.407(g)(1)(iv) to make this section

consistent with the applicable packaging specification (e.g., § 178.347).

- Addressing inconsistencies with domestic and international labels and placards.
- Revising § 173.150(g) include the use of the International System of Units (SI).
- Excepting limited quantities of “UN1942, Ammonium nitrate” from requiring permission from the Captain of the Port (COTP) before being loaded or unloaded from a vessel at a waterfront facility.
- Allowing for combination non-bulk packagings that are tested and marked for a liquid hazardous material to be filled with a solid hazardous material.
- Including an additional hazardous material description for transport in roadway striping vehicles.
- Extending the service life of interim compliant toxic inhalation hazard (TIH) tank cars to the full service life of all other tank cars.
- Allowing the use of plastic, metal, or composite pallets to transport materials classed and marked as limited quantities.
- No longer mandating that excepted quantities comply with the emergency response telephone requirement.
- Harmonizing the recordkeeping requirements for portable tanks.
- Allowing for printing tolerances for labels and placards.
- Allowing electronic signatures for Environmental Protection Agency (EPA) manifest forms.
- No longer requiring the service pressure to be marked on Department of Transportation (DOT) 8 and 8L cylinders.
- Acknowledging that the marked date of manufacture on a composite intermediate bulk container (IBC) may differ from the marked date of manufacture on the inner receptacle of that IBC.
- Revising the basis weight tolerance for fiberboard boxes from  $\pm 5\%$  to  $\pm 10\%$  from the nominal basis weight reported in the initial design qualification test report.

**II. Background***A. Notice of Proposed Rulemaking*

On June 30, 2016, PHMSA (also “we” or “us”) published in the **Federal Register** a notice of proposed rulemaking (NPRM) titled, “Hazardous Materials: Miscellaneous Petitions for Rulemaking (RRR)” under Docket No. PHMSA–2016–0102 (HM–219A). This deregulatory rulemaking action is part of PHMSA’s retrospective review efforts that are designed to identify ways to improve the HMR.

The Administrative Procedure Act (APA) requires Federal agencies to give interested persons the right to petition an agency to issue, amend, or repeal a rule. *See* 5 U.S.C. 553(e). PHMSA's rulemaking procedure regulations in 49 CFR 106.95 establish a process for persons to ask PHMSA to add, amend, or delete a regulation by filing a petition for rulemaking containing adequate support for the requested action. The HM-219A NPRM responded to 19 petitions for rulemaking submitted to PHMSA by various stakeholders. In the

NPRM, we proposed to amend the HMR to update, clarify, or provide relief from miscellaneous regulatory requirements at the request of the regulated community.

PHMSA received 26 public comments in response to the above amendments proposed in the June 30, 2016 NPRM. These comments are discussed in further detail in this final rule.

#### B. Commenters

The comment period for the June 30, 2016, NPRM closed on August 29, 2016.

PHMSA received a total of 26 comments from 25 separate entities, seven of which submitted petitions discussed in the NPRM. PHMSA developed this final rule in consideration of the comments received to the public docket. The comments submitted to this docket may be accessed via <http://www.regulations.gov>. The following persons, companies, and associations submitted comments to the HM-219A NPRM:

Aaron Adamczyk .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0011">https://www.regulations.gov/document?D=PHMSA-2015-0102-0011</a> .
Alaska Airlines .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0010">https://www.regulations.gov/document?D=PHMSA-2015-0102-0010</a> .
American Chemistry Council (ACC) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0016">https://www.regulations.gov/document?D=PHMSA-2015-0102-0016</a> .
Association of American Railroads (AAR) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0022">https://www.regulations.gov/document?D=PHMSA-2015-0102-0022</a> .
Association of Hazmat Shippers, Inc. (AHS) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0024">https://www.regulations.gov/document?D=PHMSA-2015-0102-0024</a> .
Clifford Bartley .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0026">https://www.regulations.gov/document?D=PHMSA-2015-0102-0026</a> .
Council on Safe Transportation of Hazardous Articles (COSTHA) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0023">https://www.regulations.gov/document?D=PHMSA-2015-0102-0023</a> .
Dangerous Goods Advisory Council (DGAC) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0025">https://www.regulations.gov/document?D=PHMSA-2015-0102-0025</a> .
Daniel Shelton .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0004">https://www.regulations.gov/document?D=PHMSA-2015-0102-0004</a> .
Donald Hausmann .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0007">https://www.regulations.gov/document?D=PHMSA-2015-0102-0007</a> .
Dow Chemical Company (Dow) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0015">https://www.regulations.gov/document?D=PHMSA-2015-0102-0015</a> .
Fibre Box Association .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0006">https://www.regulations.gov/document?D=PHMSA-2015-0102-0006</a> .
Healthcare Distribution Alliance (HDA) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0018">https://www.regulations.gov/document?D=PHMSA-2015-0102-0018</a> .
Institute of Makers of Explosives (IME) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0013">https://www.regulations.gov/document?D=PHMSA-2015-0102-0013</a> .
International Vessel Operators Dangerous Goods Association (IVODGA) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0020">https://www.regulations.gov/document?D=PHMSA-2015-0102-0020</a> .
Mark Borth .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0027">https://www.regulations.gov/document?D=PHMSA-2015-0102-0027</a> .
National Propane Gas Association (NPGA) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0021">https://www.regulations.gov/document?D=PHMSA-2015-0102-0021</a> .
Norris Cylinder .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0002">https://www.regulations.gov/document?D=PHMSA-2015-0102-0002</a> .
Norris Cylinder .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0003">https://www.regulations.gov/document?D=PHMSA-2015-0102-0003</a> .
Railway Supply Institute (RSI)—Railway Supply Institute Committee on Tank Cars (RSICTC) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0014">https://www.regulations.gov/document?D=PHMSA-2015-0102-0014</a> .
Reusable Industrial Packaging Association (RIPA) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0028">https://www.regulations.gov/document?D=PHMSA-2015-0102-0028</a> .
The Chlorine Institute .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0019">https://www.regulations.gov/document?D=PHMSA-2015-0102-0019</a> .
The Fertilizer Institute (TFI) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0017">https://www.regulations.gov/document?D=PHMSA-2015-0102-0017</a> .
Truck Trailer Manufacturers Association (TTMA) .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0012">https://www.regulations.gov/document?D=PHMSA-2015-0102-0012</a> .
VWR International, LLC .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0005">https://www.regulations.gov/document?D=PHMSA-2015-0102-0005</a> .
William Briner .....	<a href="https://www.regulations.gov/document?D=PHMSA-2015-0102-0008">https://www.regulations.gov/document?D=PHMSA-2015-0102-0008</a> .

### III. Discussion of Amendments and Applicable Comments

Section III discusses the proposals that are being adopted, as well as those not being adopted, into the HMR as part of this rulemaking.

#### A. General Comments

This final rule, and the NPRM that preceded it, are part of PHMSA's retrospective regulatory review efforts, and is in response to petitions for rulemaking by the regulated community. Its intent is to update, clarify, or provide relief from miscellaneous regulatory requirements. The NPRM provided an opportunity for further public participation in the development of the regulatory amendments and promoted exchange of information and perspectives among the various stakeholders.

PHMSA received comments from 25 entities. The comments were comprehensive and raised important

issues to be addressed. PHMSA fully considered all comments in the development of this final rule. This final rule preamble contains a detailed description of the original proposals in the June 30, 2016 NPRM, a summary of the comments received, a response to those comments, and an explanation of PHMSA's decisions for each petition proposed in the NPRM.

#### B. Comments Beyond the Scope of This Rulemaking

This section discusses the comments to the HM-219A NPRM that provided suggestions for additional revisions that were not specifically addressed in the NPRM. Based on an assessment of the proposed changes and the comments received, PHMSA identified two comments as beyond the scope of this rulemaking action.

PHMSA received a comment from the Association of American Railroads (AAR) related to petition P-1646 and the phase out of tank cars constructed

of non-normalized steel. While PHMSA has accepted this petition for a future rulemaking, it is not being addressed in this final rule. PHMSA will use AAR's comments if a future NPRM is developed on the referenced petition P-1646.

PHMSA also received a comment from Mr. Adam Adamczyk, who suggested that PHMSA incorporate by reference numerous standards from the American National Standards Institute (ANSI), American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE), American Society for Testing and Materials (ASTM), and the American Welding Society (AWS). PHMSA did not propose the incorporation of these standards in the NPRM and thus is not incorporating the standards in this final rule. However, PHMSA suggests the commenter submit a petition in accordance with § 106.95 of the HMR for any IBR standards the

commenter would suggest including in a future rulemaking.

#### *C. Provisions Not Adopted in This Final Rule and Discussion of Comments*

This section discusses the changes proposed in the NPRM that are not being adopted in this final rule. In the preamble to the NPRM, PHMSA inadvertently included a section on petition P-1655 from the Dangerous Goods Trainers Association (DGTA). PHMSA did not propose any regulatory text and is therefore not addressing this petition at this time. PHMSA anticipates addressing this petition in a future rulemaking.

#### *D. Provisions Adopted in This Final Rule and Discussion of Comments*

This section discusses the changes proposed in the NPRM and the comments received in response. Based on an assessment of the proposed changes and the comments received, PHMSA is adopting the following provisions in this final rule. Also, to clearly identify the issues addressed in this rule, PHMSA provides the following list of adopted amendments discussed in this section:

##### 1. Cargo Tank Specification

In petition P-1615, The Walker Group requested revisions to the table in § 180.407(g)(1)(iv) to make this section consistent with the applicable packaging specification (*e.g.*, § 178.347). A cargo tank manufactured to the requirements of the applicable DOT specifications has to be tested in accordance with the HMR. Currently, the design specifications for cargo tanks in § 178.320 contain general requirements applicable to all cargo tanks. The design specifications, including the test pressures for older cargo tanks that are no longer authorized for manufacture but still authorized for use, were last found in the 1985 edition of the HMR (*e.g.*, MC 306—§ 178.341–7; MC 307—§ 178.342–7; MC 312—§ 178.343–7).

This petition seeks to eliminate confusion by changing the regulations to allow the use of the marked test pressure on the cargo tank nameplate as the requalification test pressure and to amend every entry in the § 180.407(g)(1)(iv) test pressure table by beginning the entries with the phrase, “[t]he test pressure on the nameplate (specification plate).” PHMSA conducted a technical and policy review of the petition. Instead of modifying every test pressure entry as suggested by the petitioner, PHMSA proposed in the NPRM that revisions should only apply to certain cargo tank specifications

(DOT 407, MC 304, and MC 307) to harmonize the periodic hydrostatic testing required by part 180 with the initial testing for the applicable packaging specification prescribed in part 178. The proposed revisions aimed to further clarify that test pressures (in case of periodic pneumatic testing required by part 180) are already consistent with the initial testing for the applicable packaging specification prescribed in part 178.

In response to the proposal, PHMSA received comments from Daniel Shelton, Truck Trailer Manufacturers Association (TTMA), and National Propane Gas Association (NPGA). NPGA noted a discrepancy in the preamble text and proposed regulatory text. Specifically, NPGA referenced the preamble text that identifies revisions to certain cargo tank specifications for hydrostatic testing of DOT 407, MC 304, and MC 307. However, NPGA noted that the proposed regulatory text adds the increased test pressure for all cargo tanks, rather than just those specifications identified in the preamble. NPGA requested that PHMSA resolve the discrepancy to ensure it is consistent with both the administration and the petitioner’s intent. PHMSA agrees with the commenter and is adding to each entry the phrase, “The test pressure on the name plate or specification plate, or 1.5 times the MAWP, whichever is greater.”

Daniel Shelton requested PHMSA adopt the increased test pressure requirements for MC 306 cargo tanks in addition to the proposed language. Specifically, the suggestion stemmed from industry confusion on the appropriate test pressure that should be used for cargo tanks. PHMSA agrees and, as stated above, is adding the revised language to all entries in § 180.407(g)(1)(iv).

TTMA supported the petition and the proposed amendment but noted a minor error in the table for the DOT 412 entry. TTMA believed this note should read: “[t]he test pressure on the name plate or specification plate, or 1.5 times the MAWP, whichever is greater.” PHMSA agrees with TTMA and is adding “or” as appropriate to the table in § 180.407(g)(1)(iv).

##### 2. Chlorine Institute Publications

In petition P-1619, the Chlorine Institute requested that updates to publications currently listed in § 171.7(l)—specifically § 171.7(l)(1), (2), (5), and (12)—and referenced in various sections of the HMR be incorporated by reference. PHMSA conducted a review of these publications and found them suitable to propose incorporation into

the HMR. In the NPRM, PHMSA proposed to include the following updated documents in the referenced material:

- Chlorine Institute Emergency Kit “A” for 100-lb. & 150-lb. Chlorine Cylinders, Edition 12, Revision 2, July 2014. Emergency Kit “A” is designed for use with the standard DOT 3A480 and 3AA480 100 and 150-pound capacity cylinders in chlorine service only. Emergency Kit “A” contains devices and tools to contain leaks in and around the cylinder valve and in the side wall of chlorine cylinders. The Chlorine Institute Emergency Kit “A” is the only chlorine emergency kit for chlorine cylinders that is manufactured to the design specifications of the Chlorine Institute. Under certain circumstances U.S. DOT regulations permit transportation of a chlorine cylinder with an Emergency Kit “A”. See 49 CFR 173.3(e).

- Chlorine Institute Emergency Kit “B” for Chlorine Ton Containers, Edition 11, Revision 1, July 2014. Emergency Kit “B” is designed for use with the standard DOT 106A500X chlorine ton container and can also be used with 110A500W in chlorine service. Emergency Kit “B” contains devices and tools to contain leaks in and around the ton container valves and in the side wall of ton containers. The Chlorine Institute Emergency Kit “B” is the only chlorine emergency kit for ton containers that is manufactured to the design specifications of The Chlorine Institute. Under certain circumstances U.S. DOT regulations permit transportation of a chlorine ton container with an Emergency Kit “B”. See 49 CFR 173.3(e).

- Pamphlet 57, Emergency Shut-Off Systems for Bulk Transfer of Chlorine, Edition 6, June 2015. This pamphlet covers the recommended practices for emergency shut-off protection during chlorine transfers involving bulk containers.

- Pamphlet 168, Guidelines for Dual Valve Systems for Bulk Chlorine Transport, Edition 2, July 2015. The purpose of this pamphlet is to set forth performance/selection criteria that should be utilized in identifying dual valve systems for bulk chlorine transportation applications (*i.e.*, tank cars, cargo tanks and barges). These configurations are intended to meet U.S. Department of Transportation (DOT) and Transport Canada (TC) performance requirements. This pamphlet contains information pertaining to standardizations, performance/design criteria, operational considerations and installation considerations, as well as an

appendix that includes valve manufacturer information.

PHMSA received comments from the Chlorine Institute in relation to this petition. The Chlorine Institute supported PHMSA's incorporation of the IBR documents. The Chlorine Institute further believed that this would eliminate the need for certain special permits (specifically SP-16102, which allows transportation of equipment designed in accordance with Edition 11, Revision 1, of the Emergency Kit "B" (B-Kit) instruction booklet). PHMSA agrees and is therefore adopting the changes in § 171.7(l) to incorporate the most recent Chlorine Institute publications as proposed.

### 3. International Label and Placard Consistency

In petition P-1620, Labelmaster Services requested revisions to the HMR to address inconsistencies between international and domestic labels and placards. Specifically, the petition requested revisions to §§ 172.519(f) and 172.407(f) of the HMR to allow for the use of labels and placards conforming to the specifications in the United Nations Recommendations on the Transport of Dangerous Goods (UN Recommendations), the International Civil Aviation Organization Technical Instructions on the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions), the International Maritime Dangerous Goods (IMDG) Code, or the Transport Canada Transportation of Dangerous Goods (TDG) Regulations.

Upon reviewing the petition, PHMSA found that the requested changes are likely to clarify some regulatory requirements and provisions that exist for the transportation of hazardous materials internationally, and are not likely to be onerous or costly for the regulated community. In the NPRM, PHMSA proposed revisions to §§ 172.519(f) and 172.407(f) of the HMR to allow for the use of labels and placards conforming to the specifications in the UN Recommendations, ICAO Technical Instructions, IMDG Code, or TDG Regulations.

In response to the proposed changes in the NPRM, PHMSA received comments from Clifford Bartley, Council on the Safe Transport of Hazardous Articles (COSTHA), and International Vessel Operators Dangerous Goods Association (IVODGA). All commenters expressed support for PHMSA adopting these provisions as written. Additionally, COSTHA added that the proposed changes would not increase the burden

on shippers. PHMSA agrees with the commenters and is therefore incorporating the changes in §§ 172.519(f) and 172.407(f) of the HMR as proposed.

### 4. Limited Quantities of Ammonium Nitrate by Vessel

In petition P-1624, Horizon Lines, LLC requested that § 176.415(b) be revised to except limited quantities of "UN1942, Ammonium nitrate" from requiring permission from the Captain of the Port (COTP) before being loaded or unloaded from a vessel at a waterfront facility. This petition for rulemaking is in response to previous changes to the HMR that will eliminate the Other Regulated Materials Domestic (ORM-D) classification.

Specifically, Horizon Lines expressed concern that while the change from ORM-D to limited quantities is good for harmonization and the industry overall, the change has had some unintended negative consequences for shippers and vessel operators. Specifically, Horizon Lines identified having to reclassify "UN1942, Ammonium nitrate" products that would have previously shipped as ORM-D as being shipped under the limited quantities exception. Horizon Lines believes the HMR requires that "UN1942, Ammonium nitrate, 5.1" be moved under a United States Coast Guard (USCG) permit regardless of the quantity shipped.

Upon review of the petition, PHMSA found that shipping "UN1942, Ammonium nitrate, 5.1" as a limited quantity instead of ORM-D will put a higher burden of cost on both the shipper and the vessel operator, without increasing safety, because they must continue to abide by the requirements in § 176.415(c)(4) to obtain a permit. Section 176.415(b) already provides exceptions for "UN1942, Ammonium nitrate" when shipped in a rigid packaging with a noncombustible inside packaging and "UN2067, Ammonium nitrate fertilizer" when the nearest COTP is notified at least 24 hours in advance of any loading or unloading in excess of 454 kg (1,000 pounds). In the NPRM, PHMSA proposed an exception for "UN1942, Ammonium nitrate" when shipped as a limited quantity to require written notification to the USCG at least 24 hours prior to loading this type of cargo.

In response to the proposed changes in the NPRM, PHMSA received comments from Clifford Bartley, Institute of Makers of Explosives (IME), COSTHA, and IVODGA. All commenters expressed support for PHMSA adopting these provisions. However, IME disagreed that the

proposed exception should only apply to "limited quantities" of "UN1942, Ammonium nitrate fertilizer." IME recommended that PHMSA extend the proposed exception to any amount of UN1942, not just limited quantities.

IME's comment is outside the scope of the petition. One of the main justifications for supporting P-1624 was limiting the scope of the exception to "limited quantities," as these materials were previously classed ORM-D at the same quantity limits and therefore were exempt from § 176.11(e). It is also unclear from the comment what IME is proposing or why any exemptions should apply regardless of whether or not they are limited quantities.

### 5. Use of Combination Packages Tested With a Liquid

In petition P-1625, HAZMATPAC requested the allowance of the shipment of solid materials in a package when that package has been tested with a liquid material. Currently, § 173.24a(b)(3) allows a single or composite non-bulk packaging that is tested and marked for a liquid hazardous material to be filled with a solid hazardous material up to a gross mass in kilograms not exceeding the rated capacity of the packaging in liters, multiplied by the specific gravity of the packaging, or 1.2 if not marked. In addition, paragraphs (i), (ii), and (iii) allow a packaging rated for a liquid Packing Group (PG) I to be filled with a solid PG II hazardous material, a packaging rated for a liquid PG I to be filled with a solid PG III hazardous material, and a packaging rated for a liquid PG II to be filled with a solid PG III hazardous material.

In the NPRM, PHMSA proposed to revise § 173.24a(b)(3) to allow combination packages tested with liquids to transport solid materials. In response to the proposed changes in the NPRM, PHMSA received comments from COSTHA, Dangerous Goods Advisory Council (DGAC), Reusable Industrial Packaging Association (RIPA), and Donald Hausmann. Mr. Hausmann supported the proposed requirement, stating that these revisions would improve shipping options for solid material shippers without hindering safety concerns. In its comments, COSTHA stated it cannot support or oppose the proposed revision, as further clarification is needed on PHMSA's intentions for revising § 173.24a(b)(1) and (3). Specifically, COSTHA indicated that the proposed regulatory language erroneously compares specific gravity to the gross mass of the package and vice versa. COSTHA provided the following language, which they believe PHMSA

intended to incorporate in this section: “A Packing Group I packaging may be used for a Packing Group II material with a specific gravity not exceeding the greater of 1.8, or 1.5 times the specific gravity marked on the packaging, or with the gross mass of the package not exceeding 1.5 times the gross mass marked on the packaging, provided all the performance criteria can still be met with the higher specific gravity material.” RIPA also noted that the proposed language to § 173.24a as “or gross mass of the package” is inexact and confusing. RIPA commented that in most cases “gross mass” is not marked on package tested for a liquid. RIPA believed PHMSA should ensure that the upper limit of 400 kg net mass for the definition of non-bulk packages would not be exceeded when using this section. RIPA also noted that PHMSA specified in the preamble that the adoption of P-1625 was for combination packages; however, combination packages are not referenced in the proposed regulatory text of § 173.24a. RIPA indicated their belief that combination packages were not eligible for filling provisions of solids in liquid rated packages because of safety concerns and that the exclusion of combination packages is correct if safety can be shown as a risk.

PHMSA agrees with COSTHA’s proposed language with respect to the gross mass of the package and is updating the language in this final rule to accurately reflect the intention of the NPRM. PHMSA is also adding a statement stating that “packages shall not exceed 400 kg” to ensure only non-bulk packages could be used in this section. PHMSA is also removing the text for single and composite (thus encompassing all non-bulk packages) to clarify that it was PHMSA’s intent in the NPRM to allow for single, combination, and composite packages to be able to use this section. While RIPA did note some safety concerns with including combination packages in this section, PHMSA believes the concerns are unfounded. PHMSA believes the factors used to convert between the different packing groups correspond with the multiples between the drop test heights, accounting for the change in testing needed to certify a package for a greater weight at a lower packing group.

#### 6. Shipping Names for Roadway Striping Vehicles

In petition P-1634, 3M Company requested an amendment to the table in § 173.5a(c)(1) to include an additional hazardous material description for transport in roadway striping vehicles. Specifically, 3M requested the addition

of UN2735 “Amines, Liquid, Corrosive, n.o.s., 8, III” or “Polyamines, Liquid, Corrosive, n.o.s., 8, III” when used as a catalyst.

The table in § 173.5a(c)(1) currently lists “UN3267, Corrosive liquid basic, organic, n.o.s.” as a catchall for corrosive liquids, while at the same time § 172.101(c)(10)(iii) reads, “[a] mixture or solution meeting the definition of one or more hazard class that is not identified in the Table specifically by name, comprised of two or more hazardous materials in the same hazard class, must be described using an appropriate shipping description (e.g., ‘Flammable liquid, n.o.s.’).” Further, commodities that can be described explicitly (not comprised of two or more hazardous materials) should be listed by “the name that most appropriately describes the material,” with the example being an alcohol not listed by its technical name in the table being described as “Alcohol, n.o.s.” rather than “Flammable liquid, n.o.s.” Because an amine compound is the single hazardous corrosive component in 3M’s pavement marking liquid, PHMSA believes this change will not result in measurable economic or safety impacts. In the NPRM, PHMSA proposed to add proper shipping names to the list of authorized materials in § 173.5a(c)(1).

PHMSA received no comments either supporting or opposing this proposal. Therefore, PHMSA is incorporating the changes to § 173.5a(c)(1) as proposed to allow the shipping descriptions “UN2735, Amines, Liquid, Corrosive, n.o.s., 8, III” or “Polyamines, Liquid, Corrosive, n.o.s., 8, III” when used as a catalyst.

#### 7. Toxic by Inhalation Tank Car Lifespan

In petition P-1636, the Chlorine Institute requested that PHMSA extend the service life of interim compliant toxic inhalation hazard (TIH) tank cars to the full service life of all other tank cars as allowed in § 215.203 of the Federal Railroad Administration (FRA) regulations. Specifically, the Chlorine Institute requested a revision to paragraph § 173.31(e)(2)(iii), which specifies a 20-year allowable service life for tank cars transporting TIH materials that were built to specifications contemplated in the HM-246 rulemaking because of an expected delay of at least 8 to 10 years before a permanent TIH design standard and specification would be available from the Advanced Tank Car Collaborative Research Program (ATCCRP).

Although the plain language of § 173.31(e)(2)(iii) limits the authorized service life of tank cars meeting the

relevant specifications to 20 years from the date of the cars’ construction, the final rule in which PHMSA adopted this 20-year service life made clear that tank cars built to these specifications were intended as an interim solution to then-existing market conditions. (74 FR 1770; Jan. 13, 2009). These interim tank car specifications were intended to make immediate safety improvements in tank car construction and to ensure the ongoing availability of tank cars for the transportation of TIH materials while the Department moved forward with the development and validation of an enhanced performance standard for TIH tank cars and the incorporation of such an enhanced standard into the HMR. With the understanding of the interim nature of these cars, PHMSA intended the 20-year authorized service life to guarantee tank car owners a reasonable service life for the cars, even if the Department were to issue a new tank car standard in the years immediately following the 2009 final rule [74 FR 1770]. The Department is still working towards developing and implementing an enhanced performance standard for TIH materials tank cars. PHMSA’s review of the petition found that there is likely economic merit in undertaking a rulemaking as requested. In the NPRM, PHMSA proposed to revise § 173.31(e)(2)(iii) to remove the 20-year service life, which will allow continued use of the interim compliant TIH tank cars to the full service life of all other tank cars, as allowed in § 215.203.

In response to the proposed changes in the NPRM, PHMSA received comments from American Chemistry Council (ACC), Railway Supply Institute (RSI), Dow Chemical, Railway Supply Institute Committee on Tank Cars (RSICTC), and DGAC. All commenters expressed support to extend the service life of TIH tank cars as proposed. RSICTC added that extending the service life of the TIH tank cars would provide an economic incentive for further investment in tank cars with at least a 50 percent improvement in crashworthiness. PHMSA agrees with the commenters and is therefore incorporating the changes in § 173.31(e)(2)(iii) to remove the 20-year service life, which will extend the use of the interim compliant TIH tank cars to the full service life of all other tank cars as allowed in § 215.203.

PHMSA received a petition for rulemaking (P-1691) from the American Association of Railroads (AAR)/The Chlorine Institute/American Chemistry Council (ACC)/The Fertilizer Institute/Railway Supply Institute (RSI) on December 16, 2016, requesting that PHMSA revise the HMR to make the

“interim” tank car specifications issued as part of the HM–246 final rule be considered the “final” specifications. On September 18, 2017, PHMSA accepted the petition, and if a future NPRM is developed PHMSA will address the issue in that rulemaking. Please see the docket for P–1691<sup>1</sup> for additional information.

#### 8. Limited Quantity Pallets

In petition P–1638, Labelmaster Services requested a revision to the HMR that would allow the use of plastic or metal pallets to transport materials classed and marked as limited quantities. The petition specifically requested that PHMSA revise § 173.156(b)(2)(iii), which specifies these materials be secured to a wooden pallet, to also specify that they could be secured to a plastic or metal pallet.

PHMSA’s review of the petition found that there is likely economic merit in undertaking a rulemaking as requested. In addition, a technical review of the petition found there should be no decrease in safety due to the proposed change. The changes suggested by this petition would allow transporters greater flexibility in their choice of pallets, with possible accompanying cost savings. In the NPRM, PHMSA proposed to revise § 173.156(b)(2)(iii) to allow for the use of metal, plastic, or composite pallets used to ship limited quantities of hazardous materials.

In response to the proposed changes in the NPRM, PHMSA received comments from Healthcare Distribution Alliance (HDA), COSTHA, and DGAC. All commenters expressed support for the proposal. In addition, COSTHA specified that it should be reiterated that the hazardous materials should be compatible with the pallet material. PHMSA agrees and is revising § 173.156(b)(2)(iii) to allow for the use of metal, plastic, or composite pallets to ship limited quantities of hazardous materials, provided the hazardous materials will not react with the pallet material.

#### 9. Emergency Response Numbers

In petition P–1639, Horizon Lines, LLC requested an exception to the requirement in § 172.604(d)(1) to provide an emergency response telephone number, suggesting that an emergency response telephone number no longer be required on a shipping paper for excepted quantities of hazardous materials. This change would be consistent with how PHMSA treats limited quantities of hazardous

materials. Specifically, the petitioner asked PHMSA to revise § 172.604(d)(1) so that it may be applicable to limited quantities and excepted quantities.

This modification is justified because excepted quantity weights are less than the already exempted limited quantity weights. In addition, this revision will harmonize the emergency response number requirements with the IMDG Code, which does not require an emergency response telephone number on the dangerous goods documentation (or anywhere else) for any excepted material; however, all hazardous materials, including those in excepted quantities, must comply with Section 5.4.3.2 of the IMDG Code, which requires emergency response information to be communicated in ways other than a phone number, such as a Safety Data Sheet (SDS). PHMSA’s review of the petition found that there is likely economic merit in undertaking a rulemaking as requested without any decrease to safety. In the NPRM, PHMSA proposed to revise § 172.604(d)(1) to no longer require an emergency response telephone number on a shipping paper be provided for excepted quantities of hazardous materials.

In response to the proposed changes in the NPRM, PHMSA received comments from AAR, COSTHA, IVODGA, DGAC, Clifford Bartley, the Fertilizer Institute (TFI), HAD, and the Chlorine Institute. All commenters expressed support for the proposal. Therefore, PHMSA is incorporating the changes to § 172.604(d)(1) as proposed to no longer require an emergency response telephone number be provided on a shipping paper for excepted quantities of hazardous materials.

#### 10. Units of Measurement for Limited Quantities of Ethyl Alcohol

In petition P–1640, the Association of HAZMAT Shippers (AHS) requested that the units of measure included in § 173.150(g), which addresses limited quantities of retail products containing ethyl alcohol, be converted to the International System of Units (SI units) because SI units are used elsewhere in the HMR. SI units are typically used in the manufacturing of inner receptacles. PHMSA’s review of the petition found that there is likely economic merit in undertaking a rulemaking as requested without any decrease to safety. In the NPRM, PHMSA proposed to revise § 173.150(g) to convert measurements to SI units.

In response to the proposed changes in the NPRM, PHMSA received comments from AHS, VWR International, LLC, and COSTHA. AHS

expressed appreciation for incorporation of its petition, which addressed the lack of metric units in § 173.150(g). However, AHS noted that the NPRM did not fully address the original petition, which further requested incorporation of the original scope of Special Permit 9275 into § 173.150(g) that included language allowing “items suitable for retail sale” to be included in the exception. PHMSA notes that in our response to AHS’s petition, we denied the portion requesting the incorporation of the term “suitable for retail” sale in § 173.150(g). Therefore, PHMSA did not propose in the NPRM to include the terms “suitable for retail sale” and as such we are not incorporating the term “suitable for retail sale” in this final rule.

AHS also commented that there are inconsistencies with the incorporation of SI units in § 173.150(g). Specifically, AHS noted that as specified in § 171.10, when SI units are displayed, they are the controlling standard, and when U.S. units appear in parentheses, they are for additional information. AHS noted that their petition originally requested that PHMSA incorporate SI units as the controlling standard and U.S. units in parentheses, which is opposite to the proposed language in the NPRM. Therefore, AHS requested that the intent of the original petition be incorporated. Furthermore, AHS, VWR International, LLC, and COSTHA provided conversions between SI and U.S. units, which they ask to be changed. PHMSA agrees with the commenters and is correcting the regulatory text in § 173.150(g) to show the SI unit as the controlling units in this final rule.

#### 11. Cylinder Valves and Protection Caps

In petition P–1641, CGA proposed to add new paragraphs § 173.301(a)(11) and (12). The proposed changes concern valve requirements for cylinders as outlined in “CGA V–9–2012, Compressed Gas Association Standard for Compressed Gas Cylinder Valves, Seventh Edition.” Specifically, CGA requested that cylinder valves and cylinder valve protection caps manufactured on or after May 4, 2019, be required to conform to the requirements in “CGA V–9–2012, Compressed Gas Association Standard for Compressed Gas Cylinder Valves, Seventh Edition.” Justifications for this request include ensuring standardization of cylinder valve designs and providing guidance to users on proper selection of valves. PHMSA’s review of the petition found that there is likely economic merit in undertaking a rulemaking as requested without any decrease to safety. In the NPRM,

<sup>1</sup> <https://www.regulations.gov/docket?D=PHMSA-2016-0164>.

PHMSA proposed to add new paragraphs to § 173.301(a)(11) and (12) to the HMR to conform to the new standards for cylinder valves and caps as outlined in “CGA V–9–2012, Compressed Gas Association Standard for Compressed Gas Cylinder Valves, Seventh Edition.”

In response to the proposed changes in the NPRM, PHMSA received comments from Dow Chemical, COSTHA, NPGA, and DGAC. While commenters expressed support for the proposed changes, DGAC and Dow were concerned that the proposed requirements may not be appropriate or feasible for materials identified under the Hazardous Materials Table (HMT) entries for “chemical under pressure,” such as UN3500 and UN3503. Specifically, DGAC noted that the valves may not be appropriate for dispensing liquids, since they are more suitable for dispensing a “true gas” and may not be suitable for valves meeting CGA V–9–2012 requirements. As an alternative to the proposed regulatory language, Dow suggested revising the requirement for CGA V–9–2012 valves to exclude “chemical under pressure” from the requirements. Alternatively, Dow suggested revising § 173.335(a) to except these materials from the proposed requirements in § 173.301(a)(11) and (12). In addition, Dow, DGAC, COSTHA, and NPGA requested a sufficient and significant delay to allow time to comply with the retrofit in replacing existing valves. DGAC noted that a May 4, 2015, retrofit date would cause significant cost to industry in order to replace stainless steel valves for these cylinders, with a cost estimate of approximately \$2.3 million. COSTHA also commented that it is unclear if the second sentence in proposed § 173.301(a)(11) and (12) provides mandatory exceptions for UN Pressure Receptacles or additional requirements.

PHMSA’s Office of Hazardous Materials Safety is revising the HMR to ensure that cylinder valves follow uniform construction and performance standards for improved transportation safety of cylinders containing hazardous materials. PHMSA agrees with commenters that an exception from the valve requirements should be made for those chemicals under pressure regulated under § 173.335. Therefore, PHMSA is implementing Dow’s proposal to revise the requirements for chemicals under pressure in § 173.335(a) to provide an exception to conform to the new standards for cylinder valves and caps in the new requirements in § 173.301(a)(11) and (12). PHMSA is also extending the

compliance date to give a grace period of one year after the rulemaking becomes effective to comply with the new valve cap requirements in § 173.301(a)(11) and (12). PHMSA is further clarifying that the second sentence in § 173.301(a)(11) and (12) provides additional requirements for UN Pressure Receptacles.

NPGA noted that CGA’s petition states that Liquefied Petroleum Gas (LPG) cylinder valves and valve protection systems would not be affected by the adoption of CGA V–9–2012 because LPG cylinders are already listed by National Fire Protection Association (NFPA) 58. However, NPGA noted that NFPA 58 does not require cylinder valves to be listed but does require that they comply with ANSI 1769, which is different than being listed. Therefore, NPGA expressed concern that the adoption of CGA V–9–2012 would conflict with the cylinder valve requirement for cylinders used in LPG service under NFPA 58. NPGA also noted that the proposed regulatory text for § 171.7 does not include CGA–V–9–2012.

To address the concerns of NPGA, PHMSA is revising § 173.301(a)(11) to read: “Cylinder valves used on cylinders in liquefied petroleum gas (LPG) service are permitted to comply with the requirements of NFPA 58, Liquefied Petroleum Gas Code.” PHMSA also agrees that the CGA V–9–2012 standard should be cited in § 171.7 and is adding applicable regulatory text to this section.

#### 12. Recordkeeping Requirements for Portable Tanks

In petition P–1644, HAZMAT Resources proposed to add text to § 180.605(l) to address recordkeeping requirements for portable tanks. This revision would harmonize this recordkeeping requirement with § 180.417(a)(3)(ii), which addresses recordkeeping requirements for certain cargo tank motor vehicles constructed and certified in accordance with the ASME Code. The petitioner recommended renaming § 180.605(l) as § 180.605(l)(1) and adding an additional § 180.605(l)(2). This new section would include recordkeeping requirements in line with § 180.417(a)(3)(ii). PHMSA agrees this revision as proposed would provide an alternative means of compliance for portable tanks that has already been provided for cargo tanks. PHMSA believes there is likely economic merit in revising this section without a reduction in safety. In the NPRM, PHMSA proposed to revise § 180.605(l) to allow the owner of a portable tank to contact the National

Board for a copy of the manufacturer’s data report, if the portable tank was registered with the National Board, or copy the information contained on the portable tanks specification plate and ASME Code data plates.

PHMSA received no comments either supporting or opposing this proposal. Therefore, PHMSA is incorporating the changes to § 180.605(l) as proposed to allow the owner of a portable tank to contact the National Board for a copy of the manufacturer’s data report, if the portable tank was registered with the National Board, or copy the information contained on the portable tanks specification plate and ASME Code data plates.

#### 13. Printing Tolerances for Labels and Placards

In petition P–1650, Labelmaster Services proposed to revise §§ 172.407(c) and 172.519(c) of the HMR to allow printing tolerances for labels and placards. Labelmaster noted that the printing tolerances specified for the solid-line inner border that is parallel to the edge is extremely difficult to maintain with standard printing processes.

After a policy review of the petition, PHMSA agrees with Labelmaster that the absence of a tolerance will increase printing costs, as well as lead to inconsistent enforcement practices and confusion on the part of businesses attempting to remain compliant, without providing any increase in safety or hazard communication. In the NPRM, PHMSA proposed to revise §§ 172.407(c) and 172.519(c) to add the word “approximately” to these sections to allow for printing tolerances with respect to the solid inner border for labels and placards. PHMSA believes that this simple fix and small change in the HMR could reduce costs with no degradation in safety.

In response to the NPRM, PHMSA received comments from COSTHA and DGAC in support of the proposed changes. Therefore, PHMSA is revising §§ 172.407(c) and 172.519(c) as proposed to add the word “approximately” to these sections to allow for printing tolerances with respect to the solid inner border for labels and placards.

#### 14. Incorporation of Department of Defense Standards

In petition P–1651, the Department of Defense (DoD) Explosives Safety Board requested that PHMSA amend the citations in § 171.7(o)(1) and (2) to include the latest detailed publications used by the DoD in its examination and classification of explosives. PHMSA



reviewed and provided feedback to DoD on the proposed changes to the manuals. Updating this manual is essential to allowing the DoD to safely move explosives in the interest of national security.

PHMSA received no comments either supporting or opposing this proposal. Therefore, PHMSA is incorporating the latest publications used by the DoD in its examination and classification of explosives in § 171.7(o)(1) and (2) as proposed.

#### 15. Service Pressure Marking for DOT 8 and DOT 8L Cylinders

In petition P-1656, Norris Cylinder proposed that PHMSA revise § 178.35(f)(7) to no longer require the marking of the service pressure on DOT 8 and DOT 8L cylinders. After both a technical and policy review of the petition, PHMSA agrees with Norris Cylinder there is no safety reason to require marking the service pressure on DOT 8 and DOT 8L cylinders. In the NPRM, PHMSA proposed to revise this section as requested by the petitioner.

In response to the proposed changes in the NPRM, PHMSA received comments from Norris Cylinder and COSTHA. Both commenters noted a typographical error in the proposed language in § 178.35(f)(7) specifying “DOT 4 or 4AL cylinders,” which should actually read “DOT 8 and 8AL cylinders.” This correction aligns with the original petition, as well as the preamble text in the NPRM. Therefore, PHMSA is revising § 178.35(f)(7) to no longer require DOT 8 and 8AL cylinders to be marked with the service pressure.

#### 16. Incorporation of CGA Publication

In petition P-1657, CGA proposed IBR updates to the CGA publication “CGA C-7-2014, Guide to Classification and Labeling of Compressed Gases, Tenth Edition” currently listed in § 171.7(n)(7). This publication has been updated to meet requirements for the U.S. Occupational Safety and Health Administration (OSHA) and was previously incorporated into OSHA’s regulations in 2012. CGA requested that PHMSA permit the use of the 2014 edition of CGA C-7 to keep current with industry practices that are incorporated into Appendix A of C-7.

PHMSA’s review of the petition found that there are some editorial changes to the text of Appendix A in the 2014 edition that were added for clarity but do not impact the use of the required labels. In the NPRM, PHMSA proposed the incorporation by reference of “CGA C-7-2014, Guide to Classification and Labeling of Compressed Gases, Tenth Edition” into the HMR.

PHMSA received no comments either supporting or opposing this proposal. Therefore, PHMSA is incorporating by reference “CGA C-7-2014, Guide to Classification and Labeling of Compressed Gases, Tenth Edition” as proposed.

#### 17. Use of Electronic Manifest

In petition P-1659, COSTHA proposed to revise § 172.205 to permit the use of electronic signatures when completing an EPA form 8700-22 and 8700-22A. PHMSA reviewed and concurred with this proposed change, believing there is likely merit without a reduction in safety. In the NPRM, PHMSA proposed to add paragraph (j) to permit the use of electronic signatures when completing an EPA form 8700-22 and 8700-22A.

In response to the proposed changes in the NPRM, PHMSA received comments from HDA, AAR, COSTHA, DGAC, and Clifford Bartley. All commenters expressed support for the proposal. Additionally, AAR noted that “it should be recognized that an electronic copy of the manifest can be used to meet the three-year retention requirement.” Therefore, PHMSA is revising § 172.205 to permit the use of electronic signatures when completing an EPA form 8700-22 and 8700-22A and recognizing that the electronic manifest can be used to meet the 3-year retention requirement.

#### 18. Marked Date of Manufacture on Composite IBCs

In petition P-1662, Rigid Intermediate Bulk Container Association of North America (RIBCA) proposed to amend § 178.703(b) to acknowledge that the marked date of manufacture on a composite IBC may differ from the marked date of manufacture on the inner receptacle of that IBC. RIBCA petitioned PHMSA to propose the substance of the UN adopted note, “The date of manufacture of the inner receptacle may be different from the marked date of manufacture (see 6.5.2.1), repair (see 6.5.4.5.3) or remanufacture (see 6.5.2.4) of the composite IBC,” as a final sentence in § 178.703(b)(6)(i) to read as follows: “The date of manufacture of the inner receptacle may be different from the marked date of manufacture required by § 178.703(a)(1)(iv) or by § 180.352(d)(1)(iv).”

Upon review of the petition, PHMSA found that allowing the inner receptacle and the composite IBC to have different date markings will have no effect on the safety of the use and manufacture of IBCs. Integrating the proposed language into the current HMR will also bring

rules for the marking of dates of manufacture on IBCs in line with current international standards. In the NPRM, PHMSA proposed to revise the HMR to allow the date of manufacture on the inner receptacle to be different than on the composite IBC.

In response to the proposed changes in the NPRM, PHMSA received a comment from RIBCA. RIBCA noted that this change will have no effect on safety when inner receptacles and composite IBCs are stamped with different dates reflecting manufacture or repair of a completed IBC. However, RIBCA disagreed with the language in the NPRM that states “provided that the retest and inspection of the IBCs be based on the earliest marked date.” RIBCA contested that this language should be deleted because it is unnecessary from a safety perspective since inner packagings are sometimes built and stored well before being installed in composite IBCs. Therefore, as proposed, the retest and inspection would apply to an IBC well before an inner package becomes subject to detrimental effects, which begins when it is installed in the IBC. RIBCA noted that this language is inconsistent with other requirements in the regulations and more restrictive than the UN Model Regulations/International Regulations, further noting that it would create an additional complexity for an IBC user because they will need to compare two different dates when determining required periodic tests and inspection dates.

In response to these comment, PHMSA agrees to remove the language stating “provided that the retest and inspection of IBCs be based on the earliest marked date.” While PHMSA believes that including multiple dates may make it confusing to users and may make it difficult to know which to use, the marked date of repair is ultimately the date that must be used to determine the next inspection date. Also, because the repair phase of an IBC includes a leakproofness test, the 2.5-year time period should start from that point. However, comments from members of industry suggest that they are typically replaced in a timeframe less than 2.5 years, so this should not make a difference. Therefore, PHMSA is revising the changes to § 178.703(b) to remove the above language.

#### 19. Basis Weight Tolerances for Liners and Mediums Used in the Manufacture of Specification UN 4G Fiberboard Boxes

In petition P-1663, COSTHA requested PHMSA revise the basis weight tolerance provided in



§ 178.516(b)(7) from  $\pm$  5 percent to  $\pm$  10 percent from the nominal basis weight reported in the initial design qualification test report.

PHMSA conducted a review of the petition and found that the requested change is unlikely to affect safety and is largely following industry practices. The realities of paper manufacturing are such that a wide range of basis weights can be found on any large enough sample of fiberboard run on the same line to the same specification. This revision would only modify the percentage threshold for the allowable nominal basis weight for fiberboard boxes and would not result in any fundamental changes to testing, recordkeeping, or approval processes by either PHMSA or the regulated community. In the NPRM, PHMSA proposed to revise the basis weight tolerance provided in § 178.516(b)(7) from  $\pm$  5 percent to  $\pm$  10 percent from the nominal basis weight reported in the initial design qualification test report.

In response to the proposed changes in the NPRM, PHMSA received comments from DGAC, Clifford Bartley, Fibre Box Association, and COSTHA. All commenters expressed support for the proposal. Therefore, PHMSA is incorporating the changes as proposed to revise the basis weight tolerance provided in § 178.516(b)(7) from  $\pm$  5 percent to  $\pm$  10 percent from the nominal basis weight reported in the initial design qualification test report.

#### IV. Section-by-Section Review

Below is a section-by-section description of the changes being adopted in this final rule.

##### A. Section 171.7

Section 171.7 lists all standards incorporated by reference into the HMR that are not specifically set forth in the regulations. This final rule incorporates by reference publications by the Chlorine Institute, the DoD, and the CGA.

The Chlorine Institute publications include the following:

(1) Chlorine Institute Emergency Kit “A” for 100-lb. & 150-lb. Chlorine Cylinders, Edition 12, Revision 2, July 2014. This publication is freely available on the Chlorine Institute website at: <https://bookstore.chlorineinstitute.org/iba-instruction-booklet-chlorine-institute-emergency-kit-a-for-100-lb-and-150-lb-chlorine-cylinders-166.html>. This publication illustrates the use of Chlorine Institute Emergency Kit “A.” It also includes a complete parts list and instructions on how to apply both generations of

Emergency Kit “A,” those manufactured before December 31, 2012 and after January 1, 2013. The Emergency Kit “A” contains devices and tools to contain leaks in and around the cylinder valve and in the side wall of chlorine cylinders.

(2) Chlorine Institute Emergency Kit “B” for Chlorine Ton Containers, Edition 11, Revision 1, July 2014. This publication is available on the Chlorine Institute website at: [https://bookstore.chlorineinstitute.org/mm5/merchant.mvc?Session\\_ID=832f559635b70c753d7a6780f4876094&Store\\_Code=ci2store&Screen=PROD&Product\\_Code=EPR\\_IB\\_B-HC&](https://bookstore.chlorineinstitute.org/mm5/merchant.mvc?Session_ID=832f559635b70c753d7a6780f4876094&Store_Code=ci2store&Screen=PROD&Product_Code=EPR_IB_B-HC&). This publication illustrates the use of Chlorine Institute Emergency Kit “B.” It also includes a complete parts list and instructions on how to apply both the current and previous kit devices of Emergency Kit “B.” The updates in this edition include depictions of commonly used optional devices and numerous editorial revisions. Emergency Kit “B” contains devices and tools to contain leaks in and around the ton container valves and in the side wall of ton containers.

(3) Pamphlet 57, Emergency Shut-Off Systems for Bulk Transfer of Chlorine, Edition 6, June 2015. This publication is available on the Chlorine Institute website at: [https://bookstore.chlorineinstitute.org/mm5/merchant.mvc?Session\\_ID=832f559635b70c753d7a6780f4876094&Store\\_Code=ci2store&Screen=PROD&Product\\_Code=SPHP0057-HC&](https://bookstore.chlorineinstitute.org/mm5/merchant.mvc?Session_ID=832f559635b70c753d7a6780f4876094&Store_Code=ci2store&Screen=PROD&Product_Code=SPHP0057-HC&). This publication describes recommended practices for emergency shut-off protection during chlorine transfers involving bulk containers. The practices include automatic shut-off upon container movement or utility failure, the ability to activate the system at the bulk container or remotely for any reason, including a chlorine leak, and practical design options for a variety of industry accepted systems.

(4) Pamphlet 168, Guidelines for Dual Valve Systems for Bulk Chlorine Transport, Edition 2, July 2015. Pamphlet 168 is to be added to the HMR at § 178.337–9. This publication is available on the Chlorine Institute website at: [https://bookstore.chlorineinstitute.org/mm5/merchant.mvc?Session\\_ID=832f559635b70c753d7a6780f4876094&Store\\_Code=ci2store&Screen=PROD&Product\\_Code=SPHP0168-HC&](https://bookstore.chlorineinstitute.org/mm5/merchant.mvc?Session_ID=832f559635b70c753d7a6780f4876094&Store_Code=ci2store&Screen=PROD&Product_Code=SPHP0168-HC&). This publication sets forth performance and selection criteria that should be used in identifying dual valve systems for bulk chlorine transportation applications (*i.e.*, tank cars, cargo tanks, and barges). These configurations are intended to meet

DOT and Transport Canada (TC) performance requirements. This pamphlet contains information pertaining to standardizations, performance and design criteria, operational and installation considerations, as well as an appendix that includes valve manufacturer information.

DoD publications include the following:

(1) TB 700–2; NAVSEAINST 8020.8C; TO 11A–1–47; DoD Ammunition and Explosives Hazard Classification Procedures, 30 July 2012, into § 173.56. This publication is freely available on the DoD website at: <https://www.doesb.pentagon.mil/docs/TB700-2.pdf>. This publication sets forth detailed procedures for hazard classifying ammunition and explosives in accordance with DOT regulations, North Atlantic Treaty Organization guidelines, and United Nations Recommendations. Based on reactions obtained, it further provides for assignment of appropriate hazard classifications for transportation and storage. It seeks to assure that under identical conditions, all DoD Components (DODCs) will use identical hazard classifications for ammunition and explosives items.

(2) DLAR 4145.41/AR 700–143/ NAVSUPINST 4030.55D/AFMAN 24–210\_IP/MCO 4030.40C: Packaging of Hazardous Materials, 21 April 2015 into § 173.7. This publication is freely available on the DoD website at: <http://www.dla.mil/Portals/104/Documents/J5StrategicPlansPolicy/PublicIssuances/r4145.41.pdf>. This publication establishes a uniform standard for packaging hazardous materials for safe, efficient, and legal storage, handling, and transportation, to include Department of Transportation Special Permit (DOT–SP), Competent Authority Approval (CAA), Certificate of Equivalency (COE), and Packaging Waivers for Military Air in accordance with AR 700–15/NAVSUPINST 4030.28E/AFJMAN 24–206/MCO 4030.33E/DLAR 4145.7 (Reference (c)) and Defense Transportation Regulation (DTR) 4500.9–R-Part II, Cargo Movement (Reference (d)).

CGA publications include the following:

(1) CGA C–7–2014, Guide to Classification and Labeling of Compressed Gases, Tenth Edition. This publication states the general principles for labels and markings and gives recommended minimum requirements for labeling of compressed gases for many hazardous gases and selected liquids.

(2) CGA V–9–2012, Compressed Gas Association Standard for Compressed

Gas Cylinder Valves, Seventh Edition. This publication specifies general cylinder valve design, design qualification, required markings, and performance requirements such as operating temperature limits, pressure ranges, operating torque limits, and flow capabilities. It also provides testing and maintenance requirements.

#### *B. Section 172.205*

Section 172.205 describes the requirements for the use of hazardous waste manifest. This final rule revises paragraph (j) to permit the use of electronic signatures when completing an EPA form 8700–22 and 8700–22A.

#### *C. Section 172.407*

Section 172.407 describes the label specifications for packages shipping hazardous materials under the HMR. This final rule revises paragraph (c) to allow for size tolerances for the labels by inserting the term “approximately” for the inner border to be 5 mm. This final rule also revises paragraph (f) to address inconsistencies between international and domestic labels.

#### *D. Section 172.519*

Section 172.519 describes placard specification for shipments of hazardous materials that require placards. This final rule revises paragraph (c) to allow for size tolerances for the placards by inserting the term “approximately” for the inner border to be 5 mm. This final rule also revises paragraph (f) to address inconsistencies between international and domestic placards.

#### *E. Section 172.604*

Section 172.604 describes the requirements to have an emergency response number on shipping papers for shipments of hazardous materials. This final rule revises § 172.604(d) to no longer require an emergency response number for excepted quantities of hazardous materials.

#### *F. Section 173.5a*

Section 173.5a outlines the requirements for cargo tank motor vehicles used for roadway striping. This final rule adds proper shipping names in § 173.5a(c)(1) to the list of authorized materials that can be used under this section.

#### *G. Section 173.24a*

Section 173.24a outlines the general requirements for non-bulk packages. This final rule revises each paragraph in this section to allow for packages tested with a liquid material to be filled with a solid material of the equivalent packing group.

#### *H. Section 173.31*

Section 173.31 outlines the specifications for the use of tank cars. Specifically, § 173.31(e) outlines the specifications for tank cars used to transport materials that are poisonous by inhalation. This final rule removes the reference to the 20-year service life for these tank cars in § 173.31(e)(2)(iii), thus extending the service life to the standard for all tank cars set forth at § 215.203 of the FRA regulations.

#### *I. Section 173.150*

Section 173.150 outlines exceptions for Class 3 flammable and combustible liquids. This final rule changes the units in § 173.150(g) from imperial units to the International System of Units and revises all the units in this section to the International System of Units.

#### *J. Section 173.156*

Section 173.156 outlines exceptions for limited quantities and ORM–D materials. This final rule revises § 173.156(b)(2)(iii) to allow for pallets to be made of metal, plastic, or composite materials in addition to wood.

#### *K. Section 173.301*

Section 173.301 outlines the general requirements for the shipment of compressed gases and other hazardous materials in cylinders, UN pressure receptacles, and spherical pressure vessels. This final rule revises § 173.301(a) by adding subparagraphs (11) and (12). Paragraph (11) will require all cylinder valves manufactured on or after May 4, 2015, to conform to the requirements in CGA V–9–2012, as well as requiring UN pressure receptacles to conform to the requirements of § 173.301b(c)(1). Paragraph (12) will require that cylinder valve protection caps manufactured on or after May 4, 2015, conform to the requirements of CGA V–9–2012. Cylinder valve protection caps used on UN cylinders must conform to the requirements in § 173.301b(c)(2)(ii).

#### *L. Section 173.335*

Section 173.335 outlines the requirements for chemicals under pressure, n.o.s. This final rule revises § 173.335(a) to clarify that these materials are not subject to the cylinder valve requirements finalized in § 173.301(a)(11).

#### *M. Section 176.415*

Section 176.415 outlines permit requirements for Division 1.5, ammonium nitrates, as well as certain ammonium nitrate fertilizers. This final rule revises the HMR to no longer require written permission from the

COTP to load or unload limited quantities of ammonium nitrates.

#### *N. Section 178.35*

Section 178.35 outlines the general requirements for specification cylinders. This final rule revises § 178.35 to no longer require the marking of the service pressure for DOT 8 and DOT 8 AL cylinders.

#### *O. Section 178.337*

Section 178.337–9 outlines the requirements for pressure relief devices, piping, valves, hoses, and fittings. This final rule revises § 178.337–9(b)(8) to add a reference to allow the use of “Sections 4 through 6, Pamphlet 168, Guidelines for Dual Valve Systems for Bulk Chlorine Transport, Edition 2, July 2015” under this section.

#### *P. Section 178.516*

Section 178.516 outlines the standards for fiberboard boxes. This final rule revises § 178.516(b)(7) to allow for the paper wall basis weights that vary by not more than +/– 10 percent from the nominal basis weight reported in the initial design qualification test report.

#### *Q. Section 178.703*

Section 178.703 outlines the marking requirements for IBCs. This final rule revises § 178.703(b)(6)(i) by clarifying that the date of manufacture of the inner receptacle may be different from the marked date of manufacturer required by § 178.703(a)(1)(iv) or § 180.352(d)(1)(iv).

#### *R. Section 180.407*

Section 180.407 outlines the requirements for the testing and inspection of specification cargo tanks. This final rule revises the table in § 180.407(g)(1)(iv) to put the words “The test pressure on the name plate or specification plate, or 1.5 times the MAWP, whichever is greater” in the test pressure column before each test pressure specification.

#### *S. Section 180.605*

Section 180.605 outlines the requirements for periodic testing, inspection, and repair of portable tanks. This final rule revises § 180.605(l) by adding § 180.605(l)(2) to allow the owner of a portable tank to contact the National Board for a copy of the manufacture’s data report, if the portable tank was registered with the National Board, or copy the information contained on the portable tank’s specification plate and ASME Code data plates.

**V. Regulatory Analyses and Notices****A. Statutory/Legal Authority for This Rulemaking**

This final rule is published under authority of the Federal Hazardous Materials Transportation Law (Federal Hazmat Law; 49 U.S.C. 5101 *et seq.*). Section 5103(b) of Federal Hazmat Law authorizes the Secretary of Transportation to prescribe regulations for the safe transportation, including security, of hazardous materials in intrastate, interstate, and foreign commerce. The Secretary delegated her authority to PHMSA at 49 CFR 1.97.

**B. Executive Order 12866, Executive Order 13563, Executive Order 13610, Executive Order 13771, and DOT Regulatory Policies and Procedures**

This final rule is not considered a significant regulatory action under section 3(f) of Executive Order 12866, "Regulatory Planning and Review" (58 FR 51735; Oct. 4, 1993), and was not reviewed by the Office of Management and Budget (OMB). This final rule is also not considered a significant rule under the Regulatory Policies and

Procedures order issued by the U.S. Department of Transportation on February 26, 1979. *See* 44 FR 11034.

**Background**

PHMSA has involved the public in the regulatory process in a variety of ways for this final rule. Specifically, in this rulemaking PHMSA is responding to 19 petitions that have been submitted by the public in accordance with the APA and PHMSA's rulemaking procedure regulations (49 CFR 106.95).

Overall, this rulemaking maintains the continued safe transportation of hazardous materials while producing a net cost savings. PHMSA's findings are summarized here and described in further detail in the Regulatory Impact Analysis (RIA), which can be found in the regulatory docket (Docket ID: PHMSA–2015–0102) at [www.regulations.gov](http://www.regulations.gov).

**Summary of Findings**

PHMSA estimates a present value of quantified net cost savings of approximately \$237 million over 10 years and \$16.5 million annualized at a 7 percent discount rate. These estimates

do not include non-monetized and qualitative cost/cost savings discussed in the RIA.

PHMSA's cost/cost savings analysis relies on the monetization of impacts for five petitions included in this final rule. Three of the petitions that were monetized contained cost savings, while two petitions have minor costs. One provision in particular is responsible for the vast majority of the cost savings estimated: The extension of the regulatory life of HM-246-compliant PIH tank cars from 20 years to 50 years, as allowed by FRA regulation, *see* 49 CFR 215.203, for other tank cars in its class. This regulatory life extension is expected to reduce PIH tank car replacement costs that would occur in the absence of rulemaking. Moreover, these tank cars are more robust and less likely to release material than legacy PIH tank cars, resulting in safety benefits such as reduced incident damages. The following table presents a summary of the five petitions that have monetized impacts upon codification and contribute to PHMSA's estimation of quantified net cost savings.

**TABLE 1—SUMMARY OF COST/COST SAVINGS OF PETITIONS FOR REGULATORY REFORM**

Monetized Costs/(Cost Savings) by Petition			
Petition No.	Petition topic	7% discount (if applicable)	3% discount (if applicable)
P-1636 .....	PIH Tank Cars Service Life Extension Relief .....	(\$211,740,704)	(\$985,661,271)
P-1663 .....	Package Weight Tolerances .....	(25,000,000)	(58,333,333)
P-1619 .....	Chlorine Publications .....	(197,644)	(452,676)
P-1641 .....	CGA V-9-2012 Cylinder Values and Caps .....	45,522	47,289
P-1657 .....	CGA C-7-2014 Publications .....	99,320	103,177
Total .....	.....	(236,793,506)	(1,044,296,814)
Annualized ..	.....	(16,575,545)	(31,328,904)

In addition to these five items, PHMSA described an additional 14 items that are deregulatory in nature but lack of monetization of their cost savings impacts. While information gaps prevent quantification of cost savings for these items, PHMSA believes that they relax current requirements or provide additional flexibility, and therefore should be considered deregulatory in nature.

**Conclusion**

In conclusion, PHMSA estimates a present value of quantified net cost savings of approximately \$237 million over a perpetual time horizon and \$16.5 million annualized at a 7 percent discount rate. Please see the RIA in the regulatory docket for additional detail and a description of PHMSA's methods and calculations.

**C. Executive Order 13132**

This final rule was analyzed in accordance with the principles and criteria contained in Executive Order 13132, "Federalism" (64 FR 43255; Aug. 10, 1999). This final rule would preempt State, local, and Indian tribe requirements but does not impose any regulation that has substantial direct effects on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply.

Federal Hazmat Law, 49 U.S.C. 5125(b)(1), contains an express preemption provision (49 U.S.C. 5125(b)) preempting State, local, and Indian tribe requirements on certain covered subjects. Covered subjects are:

- (i) The designation, description, and classification of hazardous materials;
- (ii) The packing, repacking, handling, labeling, marking, and placarding of hazardous materials;
- (iii) The preparation, execution, and use of shipping documents related to hazardous materials and requirements related to the number, content, and placement of those documents;
- (iv) The written notification, recording, and reporting of the unintentional release in transportation of hazardous materials; or
- (v) The design, manufacture, fabrication, marking, maintenance, reconditioning, repair, or testing of a packaging or container which is represented, marked, certified, or sold as qualified for use in the transport of hazardous materials.

This final rule concerns the classification, packaging, marking, labeling, and handling of hazardous materials, among other covered subjects. This rule would preempt any State, local, or Indian tribe requirements concerning these subjects unless the non-Federal requirements are “substantively the same” as the Federal requirements. See 49 CFR 107.202(d).

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

#### *D. Executive Order 13175*

This final rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13175, “Consultation and Coordination with Indian Tribal Governments” (65 FR 67249; Nov. 9, 2000). Because this final rule does not have Tribal implications and does not impose substantial direct compliance costs on Indian tribal governments, the funding and consultation requirements of Executive Order 13175 do not apply, and a Tribal summary impact statement is not required.

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

The Regulatory Flexibility Act, 5 U.S.C. 601 requires an agency to review regulations to assess their impact on small entities unless the agency determines the rule is not expected to have a significant impact on a substantial number of small entities. This final rule amends miscellaneous provisions in the HMR for clarification based on petitions for rulemaking. While maintaining safety, this final rule would relax certain requirements that are overly burdensome and provide clarity where requested by the regulated community. The changes are generally intended to provide relief to shippers, carriers, and packaging manufacturers, including small entities.

The Regulatory Flexibility Act directs agencies to establish exceptions and differing compliance standards for small businesses, where it is possible to do so and still meet the objectives of applicable regulatory statutes. In the

case of hazardous materials transportation, it is not possible to establish exceptions or differing standards and still accomplish our safety objectives.

The changes are generally intended to provide relief to shippers, carriers, and packaging manufacturers and testers, including small entities. Therefore, PHMSA certifies that this final rule will not have a significant economic impact on a substantial number of small entities.

This final rule has been developed in accordance with Executive Order 13272, “Proper Consideration of Small Entities in Agency Rulemaking” (67 FR 53461; Aug. 16, 2002) and DOT’s Policies and Procedures to promote compliance with the Regulatory Flexibility Act to ensure that potential impacts of draft rules on small entities are properly considered.

#### *F. Paperwork Reduction Act*

This final rule does not impose any new information collection requirements and, in one instance, marginally decreases the information collection burden on the regulated community. Specifically, the following information collection requirement is affected by this rulemaking:

*OMB Control No. 2137-0034:*  
Hazardous Materials Shipping Papers and Emergency Response Information.  
*Decrease in Annual Number of Respondents:* 1,000.

*Decrease in Annual Responses:*  
1,666,667.

*Decrease in Annual Burden Hours:*  
4,629.

*Decrease in Annual Burden Cost:*  
\$95,403.69.

PHMSA estimates that no longer requiring the emergency response number for limited quantity shipments by vessel will reduce the number of burden hours by 4,629. PHMSA estimates that no longer requiring the emergency response number on shipping paper will save 10 seconds per shipping paper and affect 1,666,667 shipments per year. PHMSA estimates a savings of \$.06 per shipment resulting in cost savings of \$95,403.69.

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

#### *G. Regulation Identifier Number (RIN)*

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

Service Center publishes the Unified Agenda in spring and fall of each year. The RIN number contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

#### *H. Unfunded Mandates Reform Act*

This final rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. Public Law 104-4 (Mar. 22, 1995). It does not result in costs in any one year of \$141.3 million or more to either State, local, or Tribal governments, in the aggregate, or to the private sector, and is the least burdensome alternative that achieves the objective of the rule.

#### *I. Environmental Assessment*

The National Environmental Policy Act, 42 U.S.C. 4321-4375, requires Federal agencies to analyze proposed actions to determine whether the action will have a significant impact on the human environment. The Council on Environmental Quality (CEQ) regulations require Federal agencies to conduct an environmental review considering: (1) The need for the proposed action; (2) alternatives to the proposed action; (3) probable environmental impacts of the proposed action and alternatives; and (4) the agencies and persons consulted during the consideration process.

#### *Need for the Proposed Action*

In response to petitions for rulemaking submitted by the regulated community, PHMSA is amending the HMR to update, clarify, or provide relief from miscellaneous regulatory requirements. In this final rule, PHMSA is implementing amendments that include, but are not limited to, the following: Incorporating by Reference multiple publications from the CGA, the Chlorine Institute, and DoD; addressing inconsistencies with domestic and international labels and placards; excepting excepted quantities from the emergency response telephone requirement; allowing electronic signatures for EPA manifest forms; and no longer requiring the service pressure to be marked on DOT 8 and 8AL cylinders.

These amendments are intended to promote safety, regulatory relief, and clarity. The proposed changes were identified in response to petitions from stakeholders affected by the HMR. These minor changes will clarify the HMR and enhance safety, while offering some net economic benefits.

This action is necessary to: (1) Fulfill our statutory directive to promote transportation safety; (2) fulfill our

statutory directive under the Administrative Procedure Act (APA) that requires Federal agencies to give interested persons the right to petition an agency to issue, amend, or repeal a rule (5 U.S.C. 553(e)); (3) support governmental efforts to provide regulatory relief to the regulated community; (4) address safety concerns raised by petitioners and remove identified regulatory ambiguity; and (5) simplify and clarify the regulations in order to promote understanding and compliance.

The intended effect of this action is to enhance the safe transportation of hazardous materials and, in conjunction, clarify, simplify, and relax certain regulatory requirements for carriers, shippers, and other stakeholders. These regulatory revisions will offer more efficient and effective ways of achieving PHMSA's goal of safe and secure transportation, protecting both people and the environment, of hazardous materials in commerce.

#### Alternatives

In developing the final rule, PHMSA considered the following alternatives:

##### Alternative 1: No Action

If PHMSA chose this alternative, we would not proceed with any rulemaking on this subject and the current regulatory standards would remain in effect. This option would not address outstanding petitions for rulemaking. We rejected the No Action Alternative.

##### Alternative 2: Go Forward With the Proposed Amendments to the HMR in This NPRM

This alternative is the current proposal as it appears in this final rule, applying to transport of hazardous materials by highway, rail, vessel, and aircraft. The amendments encompassed in this alternative are more fully addressed in the preamble and regulatory text sections of this rulemaking.

##### Probable Environmental Impacts of the Alternatives

When developing potential regulatory requirements, PHMSA considers the environmental impact of each amendment. Specifically, PHMSA evaluates the: Risk of release and resulting environmental impact; risk to human safety, including any risk to first responders; longevity of the packaging; and if the proposed regulation would be carried out in a defined geographic area, the resources, especially any sensitive areas, and how they could be impacted by any proposed regulations. Of the regulatory changes proposed in this rulemaking, most have been determined to be clarification, technology/design updates, harmonization, regulatory flexibility, standard incorporation, or editorial in nature. As such, these amendments have little or no impact on the risk of release and resulting environmental impact; human safety; or longevity of the packaging. None of these amendments would be carried out in a defined geographic area (*i.e.*, this is a nationwide rulemaking).

##### Alternative 1: No Action

If PHMSA were to select the No Action Alternative, current regulations would remain in place and no new provisions would be added. However, efficiencies gained through harmonization in updates to transport standards, lists of regulated substances, definitions, packagings, markings requirements, shipper requirements, modal requirements, etc., would not be realized. Foregone efficiencies in the No Action Alternative also include freeing up limited resources to concentrate on hazardous materials transportation issues of potentially much greater environmental impact. Not adopting the proposed environmental and safety requirements under the No Action Alternative would result in a lost opportunity for reducing negative environmental and safety-related impacts. Greenhouse gas emissions would remain the same under the No Action Alternative.

##### Alternative 2: Go forward With the Proposed Amendments to the HMR in This NPRM

This Preferred Alternative encompasses enhanced and clarified regulatory requirements, which would result in increased compliance and fewer negative environmental and safety impacts. The table below summarizes possible environmental benefits and any potential negative impacts for the amendments in this final rule. A detailed discussion on the potential environmental impacts of each type of amendment is included in the complete Environmental Assessment placed in the docket for this rulemaking.

#### SUMMARY OF PROBABLE ENVIRONMENTAL IMPACTS BY AMENDMENTS

Proposed amendment(s) to HMR (numbered as above herein)	Type of amendment(s)	Probable environmental impact(s) anticipated
1. Cargo Tank Specification .....	Regulatory Clarity .....	No impacts—slightly positive benefits.
2. Chlorine Institute Publications .....	Update (Publications) .....	No impacts—slightly positive benefits.
3. International Label and Placard Consistency .....	Harmonization .....	Slightly positive benefits.
4. Limited Quantities of Ammonium Nitrate by Vessel.	Exception .....	No impacts.
5. Use of Combination Packages Tested with a Liquid.	Regulatory Flexibility .....	Very slight, negligible, or no impacts.
6. Shipping Names for Roadway Stripping Vehicles.	Editorial .....	No impacts.
7. Toxic by Inhalation (TIH) Tank Car Lifespan .....	Regulatory Flexibility .....	No impacts.
8. Limited Quantity Pallets .....	Regulatory Flexibility .....	No impacts—slightly positive benefits.
9. Emergency Response Numbers .....	Harmonization .....	No impacts.
10. Units of Measurement for Limited Quantities of Ethyl Alcohol.	Harmonization/Editorial .....	No impacts.
11. Cylinder Valves and Protection Caps .....	Standard Incorporation .....	No impacts—slightly positive benefits.
12. Recordkeeping Requirements for Portable Tanks.	Regulatory Clarity, Harmonization .....	No impacts—slightly positive benefits.
13. Printing Tolerances for Labels and Placards .....	Regulatory Flexibility .....	Slightly positive benefits.
14. Incorporation of Department of Defense (DoD) Standards.	Standard Incorporation .....	Slightly positive—moderate benefits.
15. Service Pressure Marking for DOT 8 and DOT 8L Cylinders.	Regulatory Flexibility .....	No impacts.

## SUMMARY OF PROBABLE ENVIRONMENTAL IMPACTS BY AMENDMENTS—Continued

Proposed amendment(s) to HMR (numbered as above herein)	Type of amendment(s)	Probable environmental impact(s) anticipated
16. Incorporation of CGA Publications .....	Standard Incorporation .....	No impacts—slightly positive benefits.
17. Use of Electronic Manifest .....	Update (Technology/Design), Regulatory Flexibility.	No impacts—slightly positive benefits.
18. Marked Date of Manufacture on Composite IBCs.	Harmonization .....	No impacts—slightly positive benefits.
19. Basis Weight Tolerances for Liners and Mediums Used in the Manufacture of Specification UN 4G Boxes.	Regulatory Flexibility .....	No impacts.

## Preferred Alternative

PHMSA has selected the Preferred Alternative. As discussed in the table above, we expect no or very slight positive environmental impacts from the Preferred Alternative.

## Agencies Consulted

This final rule would affect some PHMSA stakeholders, including hazardous materials shippers and carriers by highway, rail, vessel, and aircraft, as well as package manufacturers and testers. PHMSA sought comment on the Environmental Assessment contained in the June 30, 2016, NPRM published under Docket No. PHMSA 2015–0102 [81 FR 42609] (HM–219A); however, PHMSA did not receive any comments. In addition, PHMSA sought comment from the following Federal agencies and modal partners:

- Department of Defense
- Environmental Protection Agency
- Federal Aviation Administration
- Federal Motor Carrier Safety Administration
- Federal Railroad Administration
- United States Coast Guard (USCG)

These Federal agencies did not submit to PHMSA any adverse comments on the amendments proposed in the NPRM.

## Conclusion

The revisions in this final rule are intended to update, clarify, or provide relief from certain existing regulatory requirements to promote safer transportation practices; eliminate unnecessary regulatory requirements; facilitate international commerce; and make these requirements easier to understand. These amendments will foster a greater level of compliance with the HMR, and thus the net environmental impact of this proposal will be slightly positive.

The provisions of this final rule build on current regulatory requirements to enhance the transportation safety and security of shipments of hazardous materials transported by highway, rail, aircraft, and vessel, thereby reducing the

risks of an accidental or intentional release of hazardous materials and consequent environmental damage. PHMSA believes that there are no non-negligible environmental impacts associated with this final rule.

*J. Privacy Act*

Anyone is able to search the electronic form of any written communications and comments received into any of our dockets by the name of the individual submitting the document (or signing the document, if submitted on behalf of an association, business, labor union, etc.). DOT posts these comments, without edit, including any personal information the commenter provides, to [www.regulations.gov](http://www.regulations.gov), as described in the system of records notice (DOT/ALL–14 FDMS), which can be reviewed at [www.dot.gov/privacy](http://www.dot.gov/privacy).

*K. Executive Order 13609 and International Trade Analysis*

Under Executive Order 13609, “Promoting International Regulatory Cooperation” (77 FR 26413; May 4, 2012), agencies must consider whether the impacts associated with significant variations between domestic and international regulatory approaches are unnecessary or may impair the ability of American business to export and compete internationally. In meeting shared challenges involving health, safety, labor, security, environmental, and other issues, international regulatory cooperation can identify approaches that are at least as protective as those that are or would be adopted in the absence of such cooperation. International regulatory cooperation can also reduce, eliminate, or prevent unnecessary differences in regulatory requirements.

Similarly, the Trade Agreements Act of 1979 (Pub. L. 96–39), as amended by the Uruguay Round Agreements Act (Pub. L. 103–465), prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the

United States. For purposes of these requirements, Federal agencies may participate in the establishment of international standards, so long as the standards have a legitimate domestic objective, such as providing for safety, and do not operate to exclude imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards.

PHMSA participates in the establishment of international standards in order to protect the safety of the American public, and we have assessed the effects of the final rule to ensure that it does not cause unnecessary obstacles to foreign trade. Accordingly, this rulemaking is consistent with Executive Order 13609 and PHMSA’s obligations under the Trade Agreement Act, as amended.

*L. National Technology Transfer and Advancement Act*

The National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) directs Federal agencies to use voluntary consensus standards in their regulatory activities unless doing so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, specification of materials, test methods, or performance requirements) that are developed or adopted by voluntary consensus standard bodies. This final rule involves multiple voluntary consensus standards which are discussed at length in the “Section-by-Section Review” for § 171.7.

**List of Subjects***49 CFR Part 171*

Exports, Hazardous materials transportation, Hazardous waste, Imports, Incorporation by reference, Reporting and recordkeeping requirements, Definitions and abbreviations.

**49 CFR Part 172**

Education, Hazardous materials transportation, Hazardous waste, Incorporation by reference, Labeling, Markings, Packaging and containers, Reporting and recordkeeping requirements.

**49 CFR Part 173**

Hazardous materials transportation, Incorporation by reference, Training, Packaging and containers, Reporting and recordkeeping requirements.

**49 CFR Part 176**

Hazardous materials transportation, Maritime carriers, Reporting and recordkeeping requirements.

**49 CFR Part 178**

Hazardous materials transportation, Incorporation by reference, Motor vehicle safety, Packaging and containers, Reporting and recordkeeping requirements.

**49 CFR Part 180**

Hazardous materials transportation, Motor carriers, Motor vehicle safety, Packaging and containers, Railroad safety, Reporting and recordkeeping requirements.

In consideration of the foregoing, we are amending 49 CFR chapter I as follows:

# **PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS**

■ 1. The authority citation for part 171 continues to read as follows:

**Authority:** 49 U.S.C. 5101–5128, 44701; Pub. L. 101–410, section 4 (28 U.S.C. 2461 note); Pub. L. 104–121, sections 212–213; Pub. L. 104–134, section 31001; 49 CFR 1.81 and 1.97.

■ 2. Amend § 171.7 by:

■ a. Revising paragraphs (l)(1), (2), and (5), redesignating paragraphs (l)(7) through (11) as (l)(8) through (12) and adding new paragraph (l)(7);

■ b. Revising paragraph (n)(7) and adding new paragraph (n)(23);

■ c. Revising paragraph (o);

■ d. In paragraphs (t)(1) and (v)(2), adding “172.407” to the list of sections in numerical order;

■ e. In paragraph (y)(1), adding “173.301(a)(11)” to the end of the list of sections;

■ f. In the introductory text of paragraph (bb)(1), add “172.407” to the list of sections in numerical order; and

■ g. In paragraph (dd)(1), add “172.519” to the list of sections in numerical order.

The revisions and additions read as follows.

**§ 171.7 Reference material.**

\* \* \* \* \*

(l) \* \* \*

(1) Chlorine Institute Emergency Kit “A” for 100-lb. & 150-lb. Chlorine Cylinders, Edition 12, Revision 2, January 2014, into § 173.3.

(2) Chlorine Institute Emergency Kit “B” for Chlorine Ton Containers, Edition 11, July 2014, into § 173.3.

\* \* \* \* \*

(5) Pamphlet 57, Emergency Shut-Off Systems for Bulk Transfer of Chlorine, Edition 6, June 2015, into § 177.840.

\* \* \* \* \*

(7) Pamphlet 168, Guidelines for Dual Valve Systems for Bulk Chlorine Transport, Edition 2, July 2015, into § 178.337–9.

\* \* \* \* \*

(n) \* \* \*

(7) CGA C–7–2014, Guide to Classification and Labeling of Compressed Gases, Tenth Edition, copyright 2014, into § 172.400a.

\* \* \* \* \*

(23) CGA V–9–2012, Compressed Gas Association Standard for Compressed Cylinder Valves, Seventh Edition, 2012, into § 173.301.

\* \* \* \* \*

(o) *Department of Defense (DoD)*, DoD Explosives Safety Board, 4800 Mark Center Drive, Suite 16E12, Alexandria, VA 22350, <https://www.ddesb.pentagon.mil/>; or Defense Logistics Agency, Technical and Quality Assurance Division, 8725 John J. Kingman Rd., Fort Belvoir, VA 22060, <http://www.dla.mil/Pages/default.aspx>.

(1) TB 700–2; NAVSEAINST 8020.8C/TO 11A–1–47: DOD Ammunition and Explosives Hazard Classification Procedures, July 30, 2012, into § 173.56.

(2) DLAR 4145.41/AR 700–143/NAVSUPINST 4030.55D/AFMAN 24–210 IP/MCO 4030.40C: Packaging of Hazardous Material, April 21, 2015, into § 173.7.

\* \* \* \* \*

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

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

**Authority:** 49 U.S.C. 5101–5128, 44701; 49 CFR 1.81, 1.96 and 1.97.

■ 4. Amend § 172.205 by adding paragraph (j) to read as follows:

**§ 172.205 Hazardous waste manifest.**

\* \* \* \* \*

(j) Electronic manifests that are obtained, completed, and transmitted in

accordance with 40 CFR 262.20(a)(3), and used in accordance with 40 CFR 262.24 in lieu of EPA Forms 8700–22 and 8700–22A are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirements in these regulations to obtain, complete, sign, provide, use, or retain a manifest. Electronic signatures in conformance with 40 CFR 262.25 are therefore acceptable in lieu of handwritten signatures required by paragraphs (c) and (d) of this section provided one printed copy of the electronic manifest bearing the electronic signature is provided to the initial transporter as required by 40 CFR 262.24(d). A copy of the electronic manifest would satisfy the 3-year retention requirement for maintaining a copy of the manifest.

\* \* \* \* \*

■ 5. Amend § 172.407 by revising paragraphs (c) and (f) to read as follows:

**§ 172.407 Label specifications.**

\* \* \* \* \*

(c) *Size.* (1) Each diamond (square-on-point) label prescribed in this subpart must be at least 100 mm (3.9 inches) on each side with each side having a solid line inner border approximately 5 mm inside and parallel to the edge. The 5 mm measurement must be located from the outside edge of the label to the outside of the solid line forming the inner border. The width of the solid line forming the inner border must be at least 2 mm.

(i) If the size of the package so requires, the dimensions of the label and its features may be reduced provided the symbol and other elements of the label remain clearly visible. The solid line forming the inner border must remain approximately 5 mm from the outside edge of the label and the minimum width of the line must remain 2 mm.

(ii) Where dimensions are not specified, all features shall be in approximate proportion to those shown in §§ 172.411 through 172.448 of this subpart, as appropriate.

(iii) Transitional exceptions for domestic transportation, a label in conformance with the requirements of 49 CFR 172.407(c)(1) (revised as of October 1, 2014), may continue to be used until December 31, 2018.

(iv) For domestic transportation, a packaging labeled prior to January 1, 2017, and in conformance with the requirements of this paragraph in effect on December 31, 2014, may continue in service until the end of its useful life.

(2) The CARGO AIRCRAFT ONLY label must be a rectangle measuring at



least 110 mm (4.3 inches) in height by 120 mm (4.7 inches) in width. The words “CARGO AIRCRAFT ONLY” must be shown in letters measuring at least 6.3 mm (0.25 inches) in height.

(3) Except as otherwise provided in this subpart, the hazard class number, or division number, as appropriate, must be at least 6.3 mm (0.25 inches) and not greater than 12.7 mm (0.5 inches).

(4) When text indicating a hazard is displayed on a label, the label name must be shown in letters measuring at least 7.6 mm (0.3 inches) in height. For SPONTANEOUSLY COMBUSTIBLE or DANGEROUS WHEN WET labels, the words “Spontaneously” and “When Wet” must be shown in letters measuring at least 5.1 mm (0.2 inches) in height.

(5) The symbol on each label must be proportionate in size to that shown in the appropriate section of this subpart.

(f) *Exceptions.* Except for materials poisonous by inhalation (see § 171.8 of this subchapter), a label conforming to specifications in the UN Recommendations, the ICAO Technical Instructions, the IMDG Code, or the Transport Canada TDG Regulations (IBR, see § 171.7 of this subchapter) may be used in place of a corresponding label that conforms to the requirements of this subpart.

■ 6. Amend § 172.519 by revising paragraphs (c) and (f) to read as follows:

**§ 172.519 General specifications for placards.**

(c) *Size.* (1) Each diamond (square-on-point) placard prescribed in this subpart must measure at least 250 mm (9.84 inches) on each side and must have a solid line inner border approximately 12.5 mm inside and parallel to the edge. The 12.5 mm measurement is from the outside edge of the placard to the outside of the solid line forming the inner border.

(i) *Transitional exceptions.* A placard in conformance with the requirements of this paragraph in effect on December 31, 2014, may continue to be used until December 31, 2016.

(ii) *Domestic transportation.* A placard manufactured prior to January

1, 2017, in conformance with the requirements of this paragraph in effect on December 31, 2014, may continue in service until the end of its useful life provided the color tolerances are maintained and are in accordance with the display requirements of this subchapter.

(2) Except as otherwise provided in this subpart, the hazard class or division number, as appropriate, must be shown in numerals measuring at least 41 mm (1.6 inches) in height.

(3) Except as otherwise provided in this subpart, when text indicating a hazard is displayed on a placard, the printing must be in letters measuring at least 41 mm (1.6 inches) in height.

(f) *Exceptions.* When hazardous materials are offered for transportation or transported under the provisions of subpart C of part 171 of this subchapter, a placard conforming to the specifications in the UN Recommendations, the ICAO Technical Instructions, the IMDG Code, or the Transport Canada TDG Regulations (IBR, see § 171.7 of this subchapter) may be used in place of a corresponding placard conforming to the requirements of this subpart. However, a bulk packaging, transport vehicle, or freight container containing a material poisonous by inhalation (see § 171.8 of this subchapter) must be placarded in accordance with this subpart (see § 171.23(b)(10) of this subchapter).

■ 7. Amend § 172.604 by revising paragraph (d) to read as follows:

**§ 172.604 Emergency response telephone number.**

(d) The requirements of this section do not apply to—

(1) Hazardous materials that are offered for transportation under the provisions applicable to limited quantities or excepted quantities; or

(2) Materials properly described under the following shipping names:

(i) Battery powered equipment.

(ii) Battery powered vehicle.

(iii) Carbon dioxide, solid.

(iv) Castor bean.

(v) Castor flake.

(vi) Castor meal.

(vii) Castor pomace.

(viii) Consumer commodity.

(ix) Dry ice.

(x) Engines, internal combustion.

(xi) Fish meal, stabilized.

(xii) Fish scrap, stabilized.

(xiii) Krill Meal, PG III.

(xiv) Refrigerating machine.

(xv) Vehicle, flammable gas powered.

(xvi) Vehicle, flammable liquid powered.

(xvii) Wheelchair, electric.

(3) Transportation vehicles or freight containers containing lading that has been fumigated and displaying the FUMIGANT marking (see § 172.302(g)) as required by § 173.9 of this subchapter, unless other hazardous materials are present in the cargo transport unit.

**PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS**

■ 8. The authority citation for part 173 continues to read as follows:

**Authority:** 49 U.S.C. 5101–5128, 44701; 49 CFR 1.81, 1.96 and 1.97.

**§ 173.3 [Amended]**

■ 9. Amend § 173.3 by:

■ a. In paragraph (e)(1), adding “(with the exception of repair method using Device 8 for side leaks)” immediately after the phrase “Chlorine Institute Emergency Kit “A””; and

■ b. In paragraph (e)(2), adding “(with the exception of repair method using Device 9 for side leaks)” immediately after the phrase “Chlorine Institute Emergency Kit “B””.

■ 10. Amend § 173.5a by revising paragraph (c)(1) to read as follows:

**§ 173.5a Oilfield service vehicles, mechanical displacement meter provers, and roadway striping vehicles exceptions.**

\*(\*)

(c) \*\*

(1) *Authorized materials.* Only the hazardous materials listed in the table 1 to this paragraph (c)(1) may be transported in roadway striping vehicles. Cargo tanks may not be filled to a capacity that would be greater than liquid full at 130 °F.

TABLE 1 TO PARAGRAPH (c)(1)—HAZARDOUS MATERIALS DESCRIPTION

Proper shipping name	Hazard class/ division	Identification No.	Packing group
Acetone <sup>a</sup> .....	3	UN1090	II.
Adhesives, containing a flammable liquid .....	3	UN1133	II.
Amines, liquid, corrosive, n.o.s. <sup>b</sup> or Polyamines, liquid, corrosive, n.o.s. <sup>b</sup> .....	8	UN2735	III.
Corrosive liquid, basic, organic, n.o.s. <sup>b</sup> .....	8	UN3267	III.
Corrosive liquids, n.o.s. <sup>b</sup> .....	8	UN1760	III.

TABLE 1 TO PARAGRAPH (c)(1)—HAZARDOUS MATERIALS DESCRIPTION—Continued

Proper shipping name	Hazard class/ division	Identification No.	Packing group
Dichloromethane <sup>a</sup>	6.1	UN1593	III.
Elevated temperature liquid, n.o.s., at or above 100 °C and below its flash point (including molten metals, molten salts, etc.) <sup>c</sup>	9	UN3257	III.
Environmentally hazardous substance, liquid, n.o.s <sup>b</sup>	9	UN3082	III.
Ethyl acetate <sup>a</sup>	3	UN1173	II.
Ethyl methyl ketone or Methyl ethyl ketone <sup>a</sup>	3	UN1193	II.
Flammable liquids, n.o.s <sup>d</sup>	3	UN1993	II.
Gasoline	3	UN1203	II.
Methanol <sup>a</sup>	3	UN1230	II.
Organic peroxide type E, liquid (Dibenzoyl peroxide) <sup>b</sup>	5.2	UN3107	NA.
Paint including paint, lacquer, enamel, stain, shellac solution, varnish, polish, liquid filler, and liquid lacquer base.	3	UN1263	II.
Paint related material including paint thinning drying, removing, or reducing compound	3	UN1263	II.
Petroleum distillates, n.o.s. or Petroleum products, n.o.s <sup>a</sup>	3	UN1268	III.
Toluene <sup>a</sup>	3	UN1294	II.
1,1,1-Trichloroethane <sup>a</sup>	6.1	UN2831	III.
Xylenes <sup>a</sup>	3	UN1307	II, III.

<sup>a</sup>: Solvent.<sup>b</sup>: Catalyst.<sup>c</sup>: Thermoplastic material non-hazardous at room temperature.<sup>d</sup>: Adhesive containing ethyl acetate.

\* \* \* \* \*

**§ 173.7 [Amended]**

■ 11. Amend § 173.7, by removing in the introductory text of paragraph (a) “DLAD 4145.41/AR 700–143/AFJI 24–210/NAVSUPINST 4030.55B/MCO 4030.40B” and adding in its place “DLAR 4145.41/AR 700–143/NAVSUPINST 4030.55D/AFMAN 24–210\_IP/MCO 4030.40C”.

■ 12. Amend § 173.24a by revising paragraphs (b)(1) and (b)(3) to read as follows:

**§ 173.24a Additional general requirements for non-bulk packagings and packages.**

\* \* \* \* \*

(b) \* \* \* (1) A non-bulk packaging not exceeding 400 kg may be filled with a liquid hazardous material only when the specific gravity of the material or gross mass of the package does not exceed that marked on the packaging, or a specific gravity of 1.2 if not marked, except as follows:

(i) A Packing Group I packaging may be used for a Packing Group II material with a specific gravity not exceeding the greater of 1.8, or 1.5 times the specific gravity or gross mass of the package marked on the packaging, provided all the performance criteria can still be met with the higher specific gravity material;

(ii) A Packing Group I packaging may be used for a Packing Group III material with a specific gravity not exceeding the greater of 2.7, or 2.25 times the specific gravity or gross mass of the package marked on the packaging, provided all the performance criteria can still be met with the higher specific gravity material; and

(iii) A Packing Group II packaging may be used for a Packing Group III material with a specific gravity not exceeding the greater of 1.8, or 1.5 times the specific gravity or gross mass of the package marked on the packaging, provided all the performance criteria can still be met with the higher specific gravity material.

\* \* \* \* \*

(3) A non-bulk packaging not exceeding 400 kg which is tested and marked for liquid hazardous materials may be filled with a solid hazardous material to a gross mass, in kilograms, not exceeding the rated capacity of the packaging in liters, or gross mass of the package, multiplied by the specific gravity or gross mass of the package marked on the packaging, or 1.2 if not marked. In addition:

(i) A non-bulk packaging not exceeding 400 kg which is tested and marked for Packing Group I liquid hazardous materials may be filled with a solid Packing Group II hazardous material to a gross mass, in kilograms, not exceeding the rated capacity of the packaging in liters, or gross mass of the package, multiplied by 1.5, multiplied by the specific gravity or gross mass of the package marked on the packaging, or 1.2 if not marked.

(ii) A non-bulk packaging not exceeding 400 kg which is tested and marked for Packing Group I liquid hazardous materials may be filled with a solid Packing Group III hazardous material to a gross mass, in kilograms, not exceeding the rated capacity of the packaging in liters, or gross mass of the package, multiplied by 2.25, multiplied by the specific gravity or gross mass of

the package marked on the packaging, or 1.2 if not marked.

(iii) A non-bulk packaging not exceeding 400 kg which is tested and marked for Packing Group II liquid hazardous materials may be filled with a solid Packing Group III hazardous material to a gross mass, in kilograms, not exceeding the rated capacity of the packaging in liters, or gross mass of the package, multiplied by 1.5, multiplied by the specific gravity or gross mass of the package marked on the packaging, or 1.2 if not marked.

\* \* \* \* \*

■ 13. Amend § 173.31 by revising paragraph (e) to read as follows:

**§ 173.31 Use of tank cars.**

\* \* \* \* \*

(e) *Special requirements for materials poisonous by inhalation*—(1) *Interior heater coils*. Tank cars used for materials poisonous by inhalation may not have interior heater coils.

(2) *Tank car specifications*. A tank car used for a material poisonous by inhalation must have a tank test pressure of 20.7 Bar (300 psig) or greater, head protection, and a metal jacket (e.g., DOT 105S300W), except that—

(i) A higher test pressure is required if otherwise specified in this subchapter; and

(ii) Each tank car constructed on or after March 16, 2009, and used for the transportation of PIH materials must meet the applicable authorized tank car specifications and standards listed in § 173.244(a)(2) or (3) and § 173.314(c) or (d).

(iii) [Reserved]

(iv) A tank car owner retiring or otherwise removing a tank car from service transporting materials poisonous by inhalation, other than because of damage to the car, must retire or remove cars constructed of non-normalized steel in the head or shell before removing any car in service transporting materials poisonous by inhalation constructed of normalized steel meeting the applicable DOT specification.

\* \* \* \* \*

#### **§ 173.56 [Amended]**

■ 14. In § 173.56 amend paragraph (b)(2)(i) by removing “DoD Explosives Hazard Classification Procedures” and adding in its place “DoD Ammunition and Explosives Hazard Classification Procedures”.

■ 15. Amend § 173.150 by revising paragraph (g) to read as follows:

#### **§ 173.150 Exceptions for Class 3 (flammable and combustible liquids).**

\* \* \* \* \*

(g) *Limited quantities of retail products containing ethyl alcohol.* (1) Beverages, food, cosmetics and medicines, medical screening solutions, and concentrates sold as retail products containing ethyl alcohol classed as a flammable liquid or flammable solid containing not more than 70% ethyl alcohol by volume for liquids, by weight for solids are excepted from the HMR provided that:

(i) For non-glass inner packagings:

(A) The volume does not exceed 0.47 liters (0.125 gallons) in capacity for liquids; or

(B) For volumes greater than 0.47 liters (0.125 gallons) but not exceeding 3.8 liters (1 gallon) the company name and the words “Contains Ethyl Alcohol” are marked on the package;

(C) Solids containing ethyl alcohol may be packaged in non-glass inner packagings not exceeding 0.45 kilograms (1 pound) capacity;

(D) For weight greater than 0.45 kilograms (1 pound) up to 3.62 kilograms (8 pounds) the company name and the words “Contains Ethyl Alcohol” are marked on the package.

(ii) For glass inner packagings:

(A) The volume does not exceed 0.23 liters (.063 gallons) in capacity; or

(B) For volumes greater than 0.23 liters (.063 gallons) to 0.47 liters (0.125 gallons) the company name and the words “Contains Ethyl Alcohol” are marked on the package;

(C) Solids containing ethyl alcohol may be packaged in glass inner packagings not exceeding 0.22 kilograms (0.5 pounds);

(D) For weight greater than 0.22 kilograms (0.5 pounds) up to 0.45

kilograms (1 pound) the company name and the words “Contains Ethyl Alcohol” are marked on the package.

(iii) The net liquid contents of all inner packagings in any single outer packaging may not exceed 5.6 liters (1.5 gallons). The net solid contents of all inner packagings in any single outer packaging may not exceed 14.9 kilograms (33 pounds). The gross weight of any single outer package shipped may not exceed 29.9 kilograms (66 pounds); Inner packagings must be secured and cushioned within the outer package to prevent breakage, leakage, and movement.

(2) Beverages, food, cosmetics and medicines, medical screening solutions, and concentrates sold as retail products containing ethyl alcohol classed as a flammable liquid or flammable solid containing more than 70% ethyl alcohol by volume, by weight for solids are excepted from the HMR provided that:

(i) For inner packagings containing liquids the volume does not exceed 0.23 liters (0.063 gallons) in capacity;

(ii) Solids containing ethyl alcohol are not packed in inner packagings exceeding 0.22 kilograms (0.5 pounds) in weight;

(iii) The net liquid contents of all inner packagings in any single outer packaging may not exceed 5.6 liters (1.5 gallons). The net solid contents of all inner packagings in any single outer packaging may not exceed 14.9 kilograms (33 pounds). The gross weight of any single outer package shipped may not exceed 29.9 kilograms (66 pounds). Inner packagings must be secured and cushioned within the outer package to prevent breakage, leakage, and movement.

(3) For transportation by passenger or cargo aircraft, no outer package may be transported which contains an inner packaging exceeding:

(i) 0.47 liters (0.125 gallons) of flammable liquid; or

(ii) 0.45 kilograms (1 pound) of solids containing flammable liquid.

\* \* \* \* \*

■ 16. Amend § 173.156 by revising paragraph (b) to read as follows:

#### **§ 173.156 Exceptions for limited quantity and ORM.**

\* \* \* \* \*

(b) Packagings for limited quantity and ORM–D are specified according to hazard class in §§ 173.150 through 173.155, 173.306, and 173.309(b). In addition to exceptions provided for limited quantity and ORM–D materials elsewhere in this part, the following are provided:

(1) Strong outer packagings as specified in this part, marking

requirements specified in subpart D of part 172 of this subchapter, and the 30 kg (66 pounds) gross weight limitation when—

(i) Unitized in cages, carts, boxes or similar overpacks;

(ii) Offered for transportation or transported by:

(A) Rail;

(B) Private or contract motor carrier; or

(C) Common carrier in a vehicle under exclusive use for such service; and

(iii) Transported to or from a manufacturer, a distribution center, or a retail outlet, or transported to a disposal facility from one offeror.

(2) The 30 kg (66 pounds) gross weight limitation does not apply to packages of limited quantity materials marked in accordance with § 172.315 of this subchapter, or, until December 31, 2020, materials classed and marked as ORM–D and described as a Consumer commodity, as defined in § 171.8 of this subchapter, when offered for transportation or transported by highway or rail between a manufacturer, a distribution center, and a retail outlet provided—

(i) Inner packagings conform to the quantity limits for inner packagings specified in §§ 173.150(b), 173.152(b), 173.154(b), 173.155(b), 173.306(a) and (b), and 173.309(b), as appropriate;

(ii) The inner packagings are packed into corrugated fiberboard trays to prevent them from moving freely;

(iii) The trays are placed in a fiberboard box which is banded and secured to a metal, plastic, composite, or wooden pallet by metal, fabric, or plastic straps, to form a single palletized unit. Hazardous materials should be compatible with the pallet material;

(iv) The package conforms to the general packaging requirements of subpart B of this part; and

(v) The maximum net quantity of hazardous material permitted on one palletized unit is 250 kg (550 pounds).

\* \* \* \* \*

■ 17. In § 173.301, paragraphs (a)(11) and (12) are added to read as follows:

#### **§ 173.301 General requirements for shipment of compressed gases and other hazardous materials in cylinders, UN pressure receptacles and spherical pressure vessels.**

\* \* \* \* \*

(a) \* \* \*

(11) Cylinder valves manufactured on or after November 7, 2019, used on cylinders to transport compressed gases must conform to the requirements in CGA V–9 (IBR; see § 171.7 of this subchapter). A valve for a UN pressure receptacle must conform to the

requirements of § 173.301b(c)(1). Cylinder valves used on cylinders in liquefied petroleum gas (LPG) service are permitted to comply with the requirements of NFPA 58 (IBR; see § 171.7 of this subchapter).

(12) Cylinder valve protection caps manufactured on or after November 7, 2019, must conform to the requirements of CGA V-9.

\* \* \* \* \*

■ 18. In § 173.335, paragraphs (a) is revised as follows:

**§ 173.335 Chemical under pressure n.o.s.**

\* \* \* \* \*

(a) *General requirements.* A cylinder filled with a chemical under pressure must be offered for transportation in accordance with the requirements of this section and § 172.301 of this subchapter. In addition, a DOT specification cylinder must meet the requirements in §§ 173.301a, 173.302, 173.302a, and 173.305, as applicable. UN pressure receptacles must meet the requirements in §§ 173.301b, 173.302b, and 173.304b as applicable. Where more than one section applies to a cylinder, the most restrictive requirements must be followed. These materials are not subject to the cylinder valve cap requirements in § 173.301(a)(11) and (12).

\* \* \* \* \*

**PART 176—CARRIAGE BY VESSEL**

■ 19. The authority citation for part 176 continues to read as follows:

**Authority:** 49 U.S.C. 5101–5128; 49 CFR 1.81 and 1.97.

■ 20. In § 176.415, paragraph (b)(5) is added to read as follows:

**§ 176.415 Permit requirements for Division 1.5, ammonium nitrates, and certain ammonium nitrate fertilizers.**

\* \* \* \* \*

(b) \* \* \*

(5) Ammonium nitrate, Division 5.1 (oxidizer) UN1942, shipped as a limited quantity, if the nearest COTP is notified at least 24 hours in advance of any loading or unloading in excess of 454 kg (1,000 pounds).

\* \* \* \* \*

**PART 178—SPECIFICATIONS FOR PACKAGINGS**

■ 21. The authority citation for part 178 continues to read as follows:

**Authority:** 49 U.S.C. 5101–5128; 49 CFR 1.81 and 1.97.

■ 22. In § 178.35, paragraph (f)(7) is added to read as follows:

**§ 178.35 General requirements for specification cylinders.**

\* \* \* \* \*

(f) \* \* \*

(7) *Marking exceptions.* A DOT 8 or 8AL cylinder is not required to be marked with the service pressure.

\* \* \* \* \*

■ 23. Amend § 178.337–9 by revising paragraph (b)(8) to read as follows:

**§ 178.337–9 Pressure relief devices, piping, valves, hoses and fittings.**

\* \* \* \* \*

(b) \* \* \*

(8) *Chlorine cargo tanks.* Angle valves on cargo tanks intended for chlorine service must conform to the standards of the Chlorine Institute, Inc., Drawing; Dwg. 104–8; or “Section 3, Pamphlet 166, Angle Valve Guidelines for Chlorine Bulk Transportation;” or “Sections 4 through 6, Pamphlet 168, Guidelines for Dual Valve Systems for Bulk Chlorine Transport” (IBR, see § 171.7 of this subchapter). Before installation, each angle valve must be tested for leakage at not less than 225 psig using dry air or inert gas.

\* \* \* \* \*

■ 24. Amend § 178.516 by revising paragraph (b)(7) to read as follows:

**§ 178.516 Standards for fiberboard boxes.**

\* \* \* \* \*

(b) \* \* \*

(7) Authorization to manufacture, mark, and sell UN4G combination packagings with outer fiberboard boxes and with inner fiberboard components that have individual containerboard or paper wall basis weights that vary by not more than plus or minus 10% from the nominal basis weight reported in the initial design qualification test report.

\* \* \* \* \*

■ 25. Amend § 178.703 by revising paragraph (b)(6) to read as follows:

**§ 178.703 Marking of IBCs.**

\* \* \* \* \*

(b) \* \* \*

(6) For each composite IBC, the inner receptacle must be marked with at least the following information:

(i) The code number designating the IBC design type, the name and address or symbol of the manufacturer, the date of manufacture and the country authorizing the allocation of the mark as specified in paragraph (a) of this section. The date of manufacture of the inner receptacle may be different from the marked date of manufacture required by § 178.703(a)(1)(iv) or by § 180.352(d)(1)(iv) of this subchapter; and

(ii) When a composite IBC is designed in such a manner that the outer casing is intended to be dismantled for transport when empty (such as, for the return of the IBC for reuse to the original consignor), each of the parts intended to be detached when so dismantled must be marked with the month and year of manufacture and the name or symbol of the manufacturer.

\* \* \* \* \*

**PART 180—CONTINUING QUALIFICATION AND MAINTENANCE OF PACKAGINGS**

■ 26. The authority citation for part 180 continues to read as follows:

**Authority:** 49 U.S.C. 5101–5128; 49 CFR 1.81 and 1.97.

■ 27. Amend § 180.407 by revising paragraph (g)(1)(iv) to read as follows:

**§ 180.407 Requirements for test and inspection of specification cargo tanks.**

\* \* \* \* \*

(g) \* \* \*

(1) \* \* \*

(iv) Each cargo tank must be tested hydrostatically or pneumatically to the internal pressure specified in the following table. At no time during the pressure test may a cargo tank be subject to pressures that exceed those identified in Table 1 to paragraph (g)(1)(iv):

TABLE 1 TO PARAGRAPH (g)(1)(iv)

Specification	Test pressure
MC 300, 301, 302, 303, 305, 306 ....	The test pressure on the name plate or specification plate, or 1.5 times the MAWP, whichever is greater.
MC 304, 307 .....	The test pressure on the name plate or specification plate, 275.8 kPa (40 psig) or 1.5 times the design pressure, whichever is greater.
MC 310, 311, 312 .....	The test pressure on the name plate or specification plate, 20.7 kPa (3 psig) or 1.5 times the design pressure, whichever is greater.
MC 330, 331 .....	The test pressure on the name plate or specification plate, 1.5 times either the MAWP or the re-rated pressure, whichever is applicable.

TABLE 1 TO PARAGRAPH (g)(1)(iv)—Continued

Specification	Test pressure
MC 338 .....	The test pressure on the name plate or specification plate, 1.25 times either the MAWP or the re-rated pressure, whichever is applicable.
DOT 406 .....	The test pressure on the name plate or specification plate, 34.5 kPa (5 psig) or 1.5 times the MAWP, whichever is greater.
DOT 407 .....	The test pressure on the name plate or specification plate, 275.8 kPa (40 psig) or 1.5 times the MAWP, whichever is greater.
DOT 412 .....	The test pressure on the name plate or specification plate, or 1.5 times the MAWP whichever is greater.

\* \* \* \* \*

■ 28. Amend § 180.605 by revising paragraph (l) to read as follows:

**§ 180.605 Requirements for periodic testing, inspection and repair of portable tanks.**

\* \* \* \* \*

(l) *Record retention.* (1) The owner of each portable tank or his authorized agent shall retain a written record of the date and results of all required inspections and tests, including an ASME manufacturer's data report, if applicable, and the name and address of the person performing the inspection or test, in accordance with the applicable

specification. The manufacturer's data report, including a certificate(s) signed by the manufacturer, and the authorized design approval agency, as applicable, indicating compliance with the applicable specification of the portable tank, and related papers certifying that the portable tank was manufactured and tested in accordance with the applicable specification must be retained in the files of the owner, or his authorized agent, during the time that such portable tank is used for such service, except for Specifications 56 and 57 portable tanks.

(2) If the owner does not have the manufacturer's certificate required by the specification and the manufacturer's

data report required by the ASME, the owner may contact the National Board for a copy of the manufacturer's data report, if the portable tank was registered with the National Board, or copy the information contained on the portable tanks specification plate and ASME Code data plates.

Issued in Washington, DC, on October 29, 2018, under authority delegated in 49 CFR 1.97.

**Drue Pearce,**

*Deputy Administrator, Pipeline and Hazardous Materials Safety Administration.*

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